Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project | Lab No. | Boring No. | Date
---|---|---|---|---|---|---|---|---|---|---
3 | 49.2-50.7' | Gray inorganic silt high LL (MH), clayey micaceous, with a trace of sand. Specific gravity = 2.78 | 66.2 | 111 | 58 | 53 | Savannah Harbor | 97/1628 | SH-167 | 05/11/92
**Classification**

Sample No. 1

- Depth/Elev: 53.5-55.0
- Classification: Gray inorganic silt high LL (MH), clayey micaeous, with some sand
- Specific gravity = 2.75

**Test Results**

- Natural w%: 66
- LL: 51
- PL: 35

**Project** Savannah Harbor Preliminary Borings

**Lab No.** 97/1635

**Boring No.** SH-168A

**Date** 05/12/92
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>40.8-42.3</td>
<td>Gray inorganic silt high LL (MH), clayey, micaceous, sandy, Specific gravity = 2.75</td>
<td></td>
<td>77</td>
<td>37</td>
<td>40</td>
<td>Savannah Harbor</td>
<td>Preliminary Borings, Lab No. 97/1637, Boring No. SH-169, Date 05/12/92</td>
</tr>
</tbody>
</table>

**GRADATION CURVES**
### Sample No. 1

**Depth/Elev:** 41.8-43.3

**Classification:**

- Gray inorganic silt high LL (MH), clayey
- with a little sand and with a trace of mica and shell.
- Specific gravity = 2.79

**Natural w%**: 152

**LL**: 78

**PL**: 73

**Plastic Limit**

**Project:** SAVANNAH HARBOR

**Preliminary Borings**

**Lab No.** 97/1363

**Boring No.** SH-170

**Date:** 02/12/92
# Gradation Curves

**Sample No.** 3  
**Depth/Elev.** 48.3-50.8'  
**Classification**  Gray inorganic silt high LL (MH), clayey, micaceous, with some sand. Specific gravity = 2.80  
**Net w%**  124  
**LL**  72  
**PL**  52  

**Project**  SAVANNAH HARBOR  
**Type**  PRELIMINARY BORINGS  
**Lab No.**  97/1365  
**Boring No.**  SH-170  
**Date**  02/12/92

---

<table>
<thead>
<tr>
<th>COBBLES</th>
<th>GRAVEL</th>
<th>SAND</th>
<th>SILT OR CLAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>COARSE</td>
<td>FINE</td>
<td>COARSE</td>
<td>MEDIUM</td>
</tr>
</tbody>
</table>

---

**U.S. Standard Sieve Opening in Inches**  
8  
4  
3  
1  
1/2  
1/4  
3/8  
3/10  
1  
2  
3  
4  
5  
6  
8  
10  
14  
18  
20  
30  
40  
50  
70  
100  
140  
200

**U.S. Standard Sieve Numbers**  
100  
90  
80  
70  
60  
50  
40  
30  
20  
10  
5  
3  
2  
1  
1/4  
3/8  
3/10  
1/2  
1  
2  
3  
4  
5  
6  
8  
10  
14  
18  
20  
30  
40  
50  
70  
100  
140  
200

**Hydrometer**  
0  
10  
20  
30  
40  
50  
60  
70  
80  
90  
100  
0.1  
0.05  
0.01  
0.005  
0.001

**Percent Finer by Height**  
100  
90  
80  
70  
60  
50  
40  
30  
20  
10  
5  
3  
2  
1  
1/2  
1/4  
3/8  
3/10  
1/2  
1  
2  
3  
4  
5  
6  
8  
10  
14  
18  
20  
30  
40  
50  
70  
100  
140  
200

---

**Percent Coarser by Height**  
500  
100  
50  
10  
5  
2  
1  
1/2  
1/4  
3/8  
3/10  
1/2  
1  
2  
3  
4  
5  
6  
8  
10  
14  
18  
20  
30  
40  
50  
70  
100  
140  
200

---

**Grain Size in Millimeters**  
500  
100  
50  
10  
5  
2  
1  
1/2  
1/4  
3/8  
3/10  
1/2  
1  
2  
3  
4  
5  
6  
8  
10  
14  
18  
20  
30  
40  
50  
70  
100  
140  
200

---

**Notes:**
- The classification of the material is determined by the sieve analysis.
- The specific gravity is an important property for geotechnical engineering.
- The lab number and boring number are recorded for reference.
- The date of the analysis is also noted.
### Gradation Curves

**Sample No.** | Depth/Elev | Classification | Nat w/k | LL | PL | PI | Project | Boring No. | Date
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
1 | 39.5-44.5' | Dk. gray fat clay (CH), slightly organic with some sand and with a trace of mica, Specific gravity = 2.59 | 156 | 56 | 102 | SAVANNAH HARBOR | SH-171 | 04/29/92

**U.S. Standard Sieve Opening in Inches**
- 6
- 3
- 2
- 1 1/4
- 1 3/8
- 3/4
- 1/2
- 3/8
- 6
- 3
- 2
- 1

**U.S. Standard Sieve Numbers**
- 8
- 10
- 14
- 16
- 20
- 30
- 40
- 50
- 70
- 100
- 140
- 200

**Hydrometer**

**Percent Finer by Weight**

**Grain Size in Millimeters**

**Percent Coarser by Weight**
DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

WORK ORDER: 6585
REQUISITION: EN-GG-92-37

U.S. STANDARD SIEVE OPENING IN INCHES  U.S. STANDARD SIEVE NUMBERS  HYDROMETER

PERCENT FINER BY WEIGHT

GRAIN SIZE IN MILLIMETERS

COBBLES  GRAVEL  SAND  SILT OR CLAY
COARSE  FINE  COARSE  MEDIUM  FINE

Sample No.  Depth/Elev  Classification  Nat w%  LL  PL  PI  Project  Lab No.  Boring No.  Date
3  45.5-47.0'  Tan & gray inorganic silt high LL (MH), clayey, with a little sand and with a trace of mica.  100.0  114  63  51  SAVANNAH HARBOR  97/1516  SH-171  04/30/92

GRADATION CURVES
Sample No. | Depth/Elev. | Classification | Nat w% | LL | PL | PI | Project | Preliminary Borings | Lab No. | Boring No. | Date |
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
1 | 44.4-47.5' | Dk. gray inorganic silt high LL (MH), clayey, slightly organic, with a little sand and with a trace of mica. Specific gravity = 2.62 | - | 152 | 57 | 85 | Savannah Harbor | Preliminary Borings | 97/1646 | SH-173 | 05/12/92
Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project | Lab No. | Boring No. | Date
---|---|---|---|---|---|---|---|---|---|---
2 | 43.1-44.6' | Gray inorganic silt high LL (MH), clayey, micaeous, sandy. Specific gravity = 2.75 | - | 71 | 38 | 35 | Savannah Harbor | 97/1851 | SH-174 | 05/12/92
Sample No. Depth/Elev Classification Nat w% LL PL PI Project Location
1 43.6-45.1' Gray inorganic silt high LL (MH), clayey 82 45 37 PRELIMINARY BORINGS
micaceous, sandy
Specific gravity = 2.74

DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

WORK ORDER: 6552
REQUISITION: EN-66-92-25

GRADATION CURVES
### Gradation Curves

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Lab No.</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>44.2-45.7</td>
<td>Gray inorganic silt high LL (MH), clayey</td>
<td></td>
<td>128</td>
<td>73</td>
<td>55</td>
<td>Savannah Harbor</td>
<td>97/1658</td>
<td>SH-176</td>
<td>05/12/92</td>
</tr>
</tbody>
</table>
Note: The requested specific gravity test was not performed due to an insufficient amount of spoil.

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Net w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Preliminary Borings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>43.0-45.2&quot;</td>
<td>Greenish gray inorganic silt high LL (MH), micaceous, with a little sand and a trace of gravel size weathered rock fragments and with decayed wood.</td>
<td>-</td>
<td>140</td>
<td>63</td>
<td>77</td>
<td>Savannah Harbor</td>
<td>Preliminary Borings</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>GRADATION CURVES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Project Savannah Harbor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Preliminary Borings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab No. 97/178</td>
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<tr>
<td></td>
<td></td>
<td>Boring No. SH-178</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Date 08/07/92</td>
</tr>
<tr>
<td>Sample No.</td>
<td>Depth/Elev</td>
<td>Classification</td>
</tr>
<tr>
<td>------------</td>
<td>------------</td>
<td>----------------</td>
</tr>
<tr>
<td>3</td>
<td>52.7-54.2'</td>
<td>Greenish gray inorganic silt high LL (MH), clayey, with a little sand and with a trace of mica.</td>
</tr>
</tbody>
</table>

**GRADATION CURVES**
### Gradation Curves

**Sample No.** 2  
**Depth/Elev.** 45.4-46.9'  
**Classification.** Greenish gray inorganic silt high LL (MH), with some sand and with a trace of mica and organic matter.  
**Specific gravity.** 2.73  
**Nat w% LL PL PI.** 94 56 38

**Project.** Savannah Harbor  
**Preliminary Borings.**

- **Lab No.** 97/1793  
- **Boring No.** SH-179

**Date.** 06/07/92
DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

U.S. STANDARD SIEVE OPENING IN INCHES  U.S. STANDARD SIEVE NUMBERS  HYDROMETER

PERCENT FINER BY HEIGHT

GRAIN SIZE IN MILLIMETERS

PERCENT COARSER BY HEIGHT

COBBLES | GRAVEL | SAND | SILT OR CLAY
---|---|---|---
COARSE | FINE | COARSE | MEDIUM | FINE

Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project | BORINGS
---|---|---|---|---|---|---|---|---
2 | 47.4-48.9' | Greenish gray inorganic silt, high LL, clayey, micaceous, with some sand | 53.2 | 70 | 47 | 32 | SAVANNAH HARBOR | PRELIMINARY BORINGS

Specific gravity = 2.75

Date 04/30/92
Sample No. | Depth/Elev | Classification                                      | Nat w% | LL | PL | PI | Project                  | Lab No. | Boring No. | Date
---|---|---|---|---|---|---|---|---|---
1 | 42.1-43.5' | Grav inorganic silt high LL' (MH), clayey, with some sand and with a trace of mica. | 130 | 60 | 62 | | Savannah Harbor | 97/1798 | SH-181 | 06/07/92

**GRADATION CURVES**
Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project | Boring No | Date
---|---|---|---|---|---|---|---|---|---
1 | 44.8-46.3' | Greenish gray inorganic silt high LL (Mti), clayey, with a little sand and with a trace of mica. | 62.0 | 108 | 60 | 48 | SAVANNAH HARBOR | SH-182 | 04/30/92

GRAVITY CURVES

GRADATION CURVES

PRELIMINARY BORINGS

Lab No. 97/1525
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elevation</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>41.5-43.0'</td>
<td>Greenish gray inorganic silt high LL (MH), clayey, micaceous, with some sand. Specific gravity = 2.73</td>
<td>-</td>
<td>89</td>
<td>54</td>
<td>45</td>
<td>Savannah Harbor</td>
<td>97/1803</td>
<td>06/07/92</td>
</tr>
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</table>

**Gradation Curves**
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>Pi</th>
<th>Project</th>
<th>Preliminary Borings</th>
<th>Lab No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>42.9-44.4'</td>
<td>Gray inorganic silt high LL (MH), clayey</td>
<td>71.5</td>
<td>102</td>
<td>55</td>
<td>47</td>
<td>Savannah Harbor</td>
<td>Preliminary Borings</td>
<td>97/1888</td>
<td>08/07/92</td>
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</table>

**Specific gravity = 2.72**
### Grading Curves

#### U.S. Standard Sieve Numbers

<table>
<thead>
<tr>
<th>Percent Finer by Height</th>
<th>U.S. Standard Sieve Opening in Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>80</td>
<td>7/16</td>
</tr>
<tr>
<td>40</td>
<td>3/8</td>
</tr>
<tr>
<td>20</td>
<td>1/2</td>
</tr>
<tr>
<td>10</td>
<td>3/4</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>1</td>
<td>1/16</td>
</tr>
</tbody>
</table>

#### Grain Size in Millimeters

<table>
<thead>
<tr>
<th>Percent Coarser by Height</th>
<th>Grain Size in Millimeters</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>80</td>
<td>7/16</td>
</tr>
<tr>
<td>40</td>
<td>3/8</td>
</tr>
<tr>
<td>20</td>
<td>1/2</td>
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<td>10</td>
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<tr>
<td>5</td>
<td>1/16</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
</tr>
</tbody>
</table>

#### Classification

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elevation</th>
<th>Classification</th>
<th>Project</th>
<th>Lab No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>51.9-53.4'</td>
<td>Gray fat clay (CH), sandy, with a trace of mica.</td>
<td>Savannah Harbor Preliminary Borings</td>
<td>97/1810</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Specific gravity = 2.74</td>
<td></td>
<td>SH-184</td>
</tr>
</tbody>
</table>

#### Date

Date: 06/07/92
### Gradation Curves

**U.S. Standard Sieve Opening in Inches**

<table>
<thead>
<tr>
<th>Opening</th>
<th>6</th>
<th>4</th>
<th>3</th>
<th>2 1/2</th>
<th>1 3/4</th>
<th>1 1/8</th>
<th>1 3/8</th>
<th>3/4</th>
<th>1/2</th>
<th>3/8</th>
<th>1/4</th>
<th>1/8</th>
<th>1/16</th>
<th>1/32</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>2 6</td>
<td>1 8</td>
<td>1 2</td>
<td>3 16</td>
<td>4 32</td>
<td>6 64</td>
<td>3 8</td>
<td>2 16</td>
<td>1 32</td>
<td>6 128</td>
<td>4 256</td>
</tr>
</tbody>
</table>

**Hydrometer**

<table>
<thead>
<tr>
<th>Percent finer by weight</th>
<th>100</th>
<th>90</th>
<th>80</th>
<th>70</th>
<th>60</th>
<th>50</th>
<th>40</th>
<th>30</th>
<th>20</th>
<th>10</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent coarser by weight</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
</tr>
</tbody>
</table>

**Grain Size in Millimeters**

<table>
<thead>
<tr>
<th>Coarse</th>
<th>Fine</th>
<th>Coarse</th>
<th>Medium</th>
<th>Fine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample No.</td>
<td>Depth/Elev</td>
<td>Classification</td>
<td>Nat w%</td>
<td>LL</td>
</tr>
<tr>
<td>2</td>
<td>48.8-48.3'</td>
<td>Gray inorganic silty high LL (MH), clayey, sandy, with a trace of mica. Specific gravity = 2.75</td>
<td>75</td>
<td>35</td>
</tr>
</tbody>
</table>

**Project** Savannah Harbor

**Lab No.** 97/1871

**Boring No.** SH-185

**Date** 05/12/92
DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

U.S. STANDARD SIEVE OPENING IN INCHES U.S. STANDARD SIEVE NUMBERS

COBBLES GRAVEL SAND SILT OR CLAY

Sample No. Depth/Elev Classification Nat w% LL PL PI Project
1 37.7 44.0' Bluish gray fine clay (CH), slightly
organic, with a trace of sand and mica.
Specific gravity = 2.57

Preliminary Borings

Lab No. 97/1675
Boring No. SH-186
Date 05/14/92

GRADATION CURVES
Note: The requested specific gravity test was not performed due to an insufficient amount of sample.

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev.</th>
<th>Classification</th>
<th>Nat. w%</th>
<th>LL</th>
<th>PL</th>
<th>Pi</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>44.0-44.3'</td>
<td>Greenish gray fat clay (CH), sandy, with a trace of mica.</td>
<td>88.3</td>
<td>110</td>
<td>42</td>
<td>68</td>
<td>Savannah Harbor</td>
</tr>
</tbody>
</table>

Preliminary Borings

Lab No. 97/1876

Boring No. SH-186

Date 05/11/92

GRADATION CURVES
Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project | Lab No. | Boring No. | Date
---|---|---|---|---|---|---|---|---|---|---
2 | 41.1'-42.1' | Gray silty sand high LL (SM-H), with a trace of mica. | - | 52 | 32 | 20 | SAVANNAH HARBOR | 97/1374 | SH-187 | 02/12/92

GRADATION CURVES
Note: The requested specific gravity test was not performed due to an insufficient amount of soil.

Note: There was insufficient material to perform the requested atterberg limits test.

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Visual Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>41.0-42.2'</td>
<td>Gray silty sand (SM), with a trace of mica and organic matter.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Project: Savannah Harbor
Preliminary Borings
Lab No. 97/1682
Boring No. SH-188
Date 05/11/92
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Lab No.</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>43.3-44.8'</td>
<td>Gray silty sand high LL (SM-H), with a trace of mica. Specific gravity = 2.72</td>
<td>42.3</td>
<td>65</td>
<td>36</td>
<td>29</td>
<td>Preliminary Borings</td>
<td>97/1887</td>
<td>SH-189</td>
<td>05/11/92</td>
</tr>
</tbody>
</table>
Note: There was insufficient material to perform the requested Atterberg limits test.

Note: The requested specific gravity test was not performed due to an insufficient amount of spoil.

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Visual Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Lab No.</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>42.5-42.6&quot;</td>
<td>Gray silty sand high LL (SM-H), with a trace of gravel &amp; sand size decayed wood fragments and with a trace of mica.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Savannah Harbor</td>
<td>97/1693</td>
<td>SH-190</td>
<td>05/11/92</td>
</tr>
</tbody>
</table>
Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project | Date
---|---|---|---|---|---|---|---|---
1 | 41.6-43.1' | Greenish gray silty sand high LL (SM-H), with a trace of mica, shell and gravel size wood fragments. | - | 88 | 36 | 32 | Preliminary Borings | 05/13/92

Project: Savannah Harbor

Specific gravity = 2.73

GRADATION CURVES
Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project | Lab No. | Date  
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---  
1 | 43.9-45.4' | Gray silty sand high LL (SM-H), with a trace of organic matter and mica. Specific gravity = 2.72 | - | 72 | 39 | 33 | Savannah Harbor | 97/1705 | 05/12/92
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Preliminary Borings</th>
<th>Lab No.</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>52.954'</td>
<td>Gray silty sand high LL (SM-H), with a trace of mica, Specific gravity = 2.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Savannah Harbor</td>
<td>Preliminary Borings</td>
<td>97/1707</td>
<td>SH-192</td>
<td>05/12/92</td>
</tr>
</tbody>
</table>

**GRADATION CURVES**
### Gradation Curves

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>48.449'</td>
<td>Brown silty sand high LL (SM-H), with a trace of roots, mica and organic matter. Specific gravity = 2.74</td>
<td>-</td>
<td>75</td>
<td>37</td>
<td>38</td>
<td>PRELIMINARY BORINGS</td>
<td>SH-195</td>
<td>04/28/92</td>
</tr>
</tbody>
</table>
### Gradation Curves

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>39.0-42.0'</td>
<td>Dk. gray poorly graded silty, clayey sand (SP-SM-SC), with a trace of gravel and a trace of mica and roots. Specific gravity = 2.68</td>
<td></td>
<td>47</td>
<td>23</td>
<td>24</td>
<td>Preliminary Borings</td>
<td>06/07/92</td>
</tr>
</tbody>
</table>

**Notes:**
- **Project:** Savannah Harbor
- **Lab No.:** 97/1814
- **Boring No.:** SH-197

**U.S. Standard Sieve Opening in Inches:**
- 6, 4, 3, 2.5, 1 3/4, 1/2, 3/8, 3, 4, 6, 8, 10, 14, 16, 20, 30, 40, 50, 70, 100, 140, 200

**U.S. Standard Sieve Numbers:**
- 0.01, 0.005, 0.001

**Hydrometer:**
- 100, 90, 80, 70, 60, 50, 40, 30, 20, 10, 0

**Percent Finer by Height:**
- 100, 90, 80, 70, 60, 50, 40, 30, 20, 10, 0

**Percent Coarser by Weight:**
- 100, 90, 80, 70, 60, 50, 40, 30, 20, 10, 0

**Grain Size in Millimeters:**
- 500, 100, 50, 10, 5, 1, 0.5, 0.1, 0.05, 0.01, 0.005, 0.001
Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project | Date
---|---|---|---|---|---|---|---|---
2 | 43.5-45.0' | Tannish gray poorly graded sand (SP), with a trace of gravel size weathered rock fragments and with decayed wood fragments. | NP | NP | NP | NP | Savannah Harbor Preliminary Borings | 05/07/92

Specific gravity = 2.67

GRADATION CURVES
### Gradation Curves

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Lab No.</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>49.5-51.0'</td>
<td>Greenish gray silty sand high LL (SM-H), with a trace of mica.</td>
<td>57.1</td>
<td>88</td>
<td>52</td>
<td>46</td>
<td>Preliminary Borings</td>
<td>97/1822</td>
<td>SH-199</td>
<td>06/07/92</td>
</tr>
</tbody>
</table>

**Notes:**
- Sample No. 4 is described as a greenish gray silty sand high LL (SM-H), with a trace of mica.
- The specific gravity is 2.72.
- Project: Savannah Harbor
- Lab No.: 97/1822
- Boring No.: SH-199
- Date: 06/07/92
Sample No. | Depth/Elev | Visual Classification | Nat w% | LL | PL | PI | Project | Lab No. | Boring No. | Date
---|---|---|---|---|---|---|---|---|---|---
1 | 38.9-40.7" | Gray clayey sand (SC), with a trace of roots and mica. Specific gravity = 2.65 | - | - | - | - | SAVANNAH HARBOR | 97/1380 | SH-200 | 02/14/92
## Gradation Curves

**Sample No.** 4  
**Depth/Elev.** 452.467'  
**Classification:** Tannish gray well graded sand (SH), with some gravel size weathered rock fragments and with a trace of mica. Specific gravity = 2.67  
**Project:** SAVANNAH HARBOR  
**Lab No.:** 97/1383  
**Boring No.:** SH-200  
**Date:** 02/14/92

<table>
<thead>
<tr>
<th>Grain Size in Millimeters</th>
<th>Percent Coarser by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROMETER</td>
<td>Percent Finer by Weight</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td></td>
</tr>
<tr>
<td>90</td>
<td></td>
</tr>
<tr>
<td>80</td>
<td></td>
</tr>
<tr>
<td>70</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

### U.S. Standard Sieve Opening in Inches

<table>
<thead>
<tr>
<th>Opening (inches)</th>
<th>Sieve Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2.15</td>
<td>3/4</td>
</tr>
<tr>
<td>1.5</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>8</td>
</tr>
</tbody>
</table>

### U.S. Standard Sieve Numbers

<table>
<thead>
<tr>
<th>Numbers</th>
<th>6</th>
<th>3</th>
<th>1.5</th>
<th>3/4</th>
<th>1</th>
<th>0.5</th>
<th>0</th>
<th>0.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
<td>90</td>
<td>80</td>
<td>70</td>
<td>60</td>
<td>50</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>80</td>
<td>70</td>
<td>60</td>
<td>50</td>
<td>40</td>
<td>30</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>60</td>
<td>50</td>
<td>40</td>
<td>30</td>
<td>20</td>
<td>10</td>
<td>00</td>
<td>0.25</td>
</tr>
</tbody>
</table>

### Grain Size in Millimeters

- **Cobbles**
- **Gravel**
- **Sand**
- **Coarse**
- **Fine**
- **Silt or Clay**

**Test Results**

- **Natural w% LL PL PI**
  - NP NP NP

**Project:** PRELIMINARY BORINGS
Note: There was insufficient material to perform the requested Atterberg limits test.

Note: The requested specific gravity test was not performed due to an insufficient amount of soil.

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Visual Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>42.4-43.3&quot;</td>
<td>Dk., gray inorganic silt high LL (MH), with a trace of sand.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Preliminary Borings</td>
<td>06/07/92</td>
</tr>
</tbody>
</table>

Lab No. 97/1826
Boring No. SH-203
**Sample No.** 3  
**Depth/Elev.** 45.4-46.9'  
**Classification:** Tannish gray inorganic silt high LL (MH), sandy, clayey, with a trace of mica.  
**Nat w%** 44.9  
**LL** 61  
**PL** 32  
**PI** 29  
**Project:** Savannah Harbor  
**Preliminary Borings**  
**Lab No.** 97/1828  
**Boring No.** SH-203  
**Date** 06/07/92
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>43.8-45.3'</td>
<td>Greenish gray silty sand high LL (SM-H)</td>
<td>47.0</td>
<td>64</td>
<td>36</td>
<td>28</td>
</tr>
</tbody>
</table>

**Project:** Savannah Harbor  
**Preliminary Borings**  

**Lab No.:** 97/1834  
**Boring No.:** SH-204  
**Date:** 06/07/92
### Sample No. 1

**Depth/Elev:** 40.8-42.3'

**Classification:** Greenish gray silty sand, high LL (SM-H), with a trace of gravel size weathered rock fragments and a trace of mica.

**Natural %:**
- LL: 69
- PL: 38
- PI: 31

**Project:** Savannah Harbor

**Lab No.:** 97/1938

**Boring No.:** SH205

**Date:** 06/16/92

---

**Gradation Curves**
## Sample No. 4

**Depth/Elev:** 54.3-55.8'  
**Classification:** Gray inorganic silt, high LL (MH), clays, with a trace of sand, organic matter and mica.

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Net w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>54.3-55.8'</td>
<td></td>
<td>-</td>
<td>162</td>
<td>83</td>
<td>79</td>
</tr>
</tbody>
</table>

**Project:** Savannah Harbor  
**Preliminary Borings**  
**Lab No.:** 97/1941  
**Boring No.:** SH205  
**Date:** 06/16/92
**Sample No.** | **Depth/Elev.** | **Classification** | **Nat. w%** | **LL** | **PL** | **PI** | **Project** | **Notes** |
---|---|---|---|---|---|---|---|---|
1 | 40.5-42.0' | Greenish gray silty sand, high LL (SM-H) with a trace of mica. | - | 67 | 35 | 32 | Savannah Harbor | Preliminary Borings |

**Lab No.** 97/1943

**Boring No.** SH206

**Date** 08/16/92
Note: There was insufficient material to perform the requested Atterberg limits test.

Sample No. | Depth/Elev  | Classification | Nat w% | LL | PL | PI | Project          | Lab No. | Boring No. | Date  
---|---|---|---|---|---|---|---|---|---|---  
3 | 46.0-48.9' | Tan poorly graded silty sand (SP-SM); with a little gravel size weathered rock fragments and with a trace of mica. | 21.6 | -- | -- | -- | Savannah Harbor | 97/1945 | SH206 | 06/16/92
**Sample No.** 1  
**Depth/Elev.** 45-146.6'  
**Classification.** Brown silty sand high LL (SM-H), with a trace of mica. Specific gravity = 2.72  
**Project.** SAINT JOHN HARBOR  
**Preliminary Borings.**  
**Lab No.** 97/1534  
**Boring No.** SH-208  
**Date.** 04/29/92

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev.</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Lab No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>45-146.6'</td>
<td>Brown silty sand high LL (SM-H), with a trace of mica. Specific gravity = 2.72</td>
<td>-</td>
<td>53</td>
<td>33</td>
<td>20</td>
<td>SAINT JOHN HARBOR</td>
<td>97/1534</td>
</tr>
</tbody>
</table>

**DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY**  
**CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060**  
**WORK ORDER: 6585  **  
**REQUISITION: EN-GG-92-37**

---

**U.S. STANDARD SIEVE OPENING IN INCHES**  
- 6  
- 4  
- 3  
- 1  
- 1/2  
- 3/8  
- 1/4  
- 1/8  
- 3/16  
- 1/32  

**U.S. STANDARD SIEVE NUMBERS**  
- 6  
- 4  
- 3  
- 1  
- 3/8  
- 1/4  
- 1/8  
- 3/16  
- 1/32  
- 1/64  

**HYDROMETER**  
- 0  
- 0.01  
- 0.005  
- 0.001

**PERCENT FINER BY WEIGHT**  
- 0  
- 10  
- 20  
- 30  
- 40  
- 50  
- 60  
- 70  
- 80  
- 90  
- 100

**PERCENT COARSER BY WEIGHT**  
- 0  
- 10  
- 20  
- 30  
- 40  
- 50  
- 60  
- 70  
- 80  
- 90  
- 100

**GRAIN SIZE IN MILLIMETERS**  
- 0.001  
- 0.005  
- 0.01  
- 0.05  
- 0.1  
- 0.5  
- 1  
- 5  
- 10  
- 50  
- 100

**GRADATION CURVES**

---

**COBBLES**  
**GRAVEL**  
**SAND**  
**FINE**  
**MEDIUM**  
**COARSE**  
**SILT OR CLAY**
Sample No.: 2
Depth/Elev: 49.6-51.1'
Classification: Greenish gray silty sand high LL (SM-H), with a trace of mica.
Specific gravity = 2.69

Project: SAVANNAH HARBOR

PRELIMINARY BORINGS

Lab No.: 97/1535
Boring No.: SH-200
Date: 04/28/92
**DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY**
**CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060**

**WORK ORDER:** 6552  
**REQUISITION:** EN-66-92-25

---

**U.S. STANDARD SIEVE OPENING IN INCHES**
1-0.5 0.5-0.25 0.25-0.125 0.125-0.063 0.063-0.031 0.031-0.015 0.015-0.008 0.008-0.004

**U.S. STANDARD SIEVE NUMBERS**
6 4 3 2.15 1 1/2 3/8 3/16

**HYDROMETER**
0 0.01 0.005 0.001 0.01 0.05 0.1 0.5 1 5 10 20 30 50 60 70 80 90 100

**PERCENT FINER BY WEIGHT**
0 10 20 30 40 50 60 70 80 90 100

**PERCENT COARSER BY WEIGHT**
0 10 20 30 40 50 60 70 80 90 100

---

**GRAIN SIZE IN MILLIMETERS**
0.001 0.005 0.01 0.02 0.03 0.04 0.05 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.5 2.0 5.0 10.0

**SAND**

<table>
<thead>
<tr>
<th>COBBLES</th>
<th>GRAVEL</th>
<th>SAND</th>
<th>SILT OR CLAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>COARSE</td>
<td>FINE</td>
<td>COARSE</td>
<td>MEDIUM</td>
</tr>
</tbody>
</table>

---

**Sample No.** 2  
**Depth/Elev:** 53.5-55.0'  
**Classification:** Tan poorly graded silty sand (SP-SM), with a trace of gravel size weathered rock fragments and with a trace of mica.  
**Specific gravity:** 2.69  
**Nat w%**  
**LL** NP  
**PL** NP  
**PI** NP  

**Project:** SAVANNAH HARBOR  
**PRELIMINARY BORINGS**  
**Lab No.** 97/1389  
**Boring No.** SH-209  
**Date** 02/12/92

---

**GRADATION CURVES**
PARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
RPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

U.S. STANDARD SIEVE OPENING IN INCHES  U.S. STANDARD SIEVE NUMBERS

HYDROMETER

GRAIN SIZE IN MILLIMETERS

PERCENT COARSER BY WEIGHT

0.001

0.01

0.005

0.05

0.1

0.5

1

10

50

100

GRAVEL

SAND

COBBLES

COARSE  FINE  COARSE  MEDIUM  FINE

SILT OR CLAY

Sample No.  Depth/Elev  Classification  Nat w%  LL  PL  PI

1  44.6-46.2'  Greenish gray clauvy sand, high LL  111.5  101  37  64

(5C-H), with a trace of wood fragments.

Project Savannah Harbor

Preliminary Borings

Lab No. 97/1955

Boring No. SH214

Date 06/17/92

GRADATION CURVES
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Net w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Boring No.</th>
<th>Lab No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>52.5-54.0'</td>
<td>Tan poorly graded sand (SP), with a trace of gravel size weathered rock fragments.</td>
<td>-</td>
<td>NP</td>
<td>NP</td>
<td>NP</td>
<td>PRELIMINARY BORINGS</td>
<td>SH-215</td>
<td>97/1393</td>
<td>02/13/92</td>
</tr>
</tbody>
</table>

**GRADATION CURVES**
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>58.5-60.0'</td>
<td>Gray silty sand high LL (SM-H), with a trace of mica, specific gravity = 2.72</td>
<td>48.3</td>
<td>71</td>
<td>37</td>
<td>34</td>
<td>PRELIMINARY BORINGS</td>
<td>SH-215</td>
<td>02/14/92</td>
</tr>
</tbody>
</table>

**GRADATION CURVES**

**U.S. STANDARD SIEVE OPENING IN INCHES**

| 6 | 4 | 3 | 2 | 1 2/3 | 1 1/2 | 1 1/4 | 1 1/8 | 1 1/16 | 1 1/32 |

**U.S. STANDARD SIEVE NUMBERS**

| 60 | 40 | 30 | 20 | 16 | 14 | 10 | 8 | 6 | 4 | 3 | 2 | 1 | 1/2 | 3/4 | 1 1/8 | 1 1/4 | 1 1/2 | 2 1/2 | 3 1/2 | 4 1/2 | 6 1/2 |

**PERCENT FINER BY WEIGHT**

| 100 | 90 | 80 | 70 | 60 | 50 | 40 | 30 | 20 | 10 | 5 | 2 | 1 | 0.5 | 0.1 | 0.05 | 0.01 | 0.005 | 0.001 |

**PERCENT COARSER BY HEIGHT**

**GRAIN SIZE IN MILLIMETERS**

- **COBBLES**
- **GRAVEL**
- **SAND**
- **SILT OR CLAY**

**COARSE**

**FINE**

**HYDROMETER**

**Project:** SAVANNAH HARBOR

**Lab No.: 97/1394**

**Date:** 02/14/92
Note: The requested specific gravity test was not performed due to an insufficient amount of soil.

Sample No. Depth/Elev Classification Nat w% LL PL PI
1 41.0-42.5' Dk. gray fat clay (CH), sandy 146.9 123 43 80

Project Savannah Harbor Preliminary Borings
Lab No. 97/1710
Boring No. SH-218
Date 05/11/92

GRADATION CURVES
Note: The requested specific gravity test was not performed due to an insufficient amount of soil.

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Preliminary Borings</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>44.0-45.0'</td>
<td>Dk. gray clayey sand high LL (SC-H), with a trace of mica.</td>
<td>-</td>
<td>90</td>
<td>34</td>
<td>56</td>
<td>Project Savannah Harbor</td>
<td>Preliminary Borings</td>
</tr>
</tbody>
</table>

**GRADATION CURVES**
### Sample Information

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>42.8-45.1'</td>
<td>Dark gray fat clay (CH), with a little sand and a trace of mica and organic matter.</td>
<td>0</td>
<td>176</td>
<td>60</td>
<td>118</td>
</tr>
</tbody>
</table>

**Project:** Savannah Harbor Preliminary Borings

**Lab No.:** 97/1961

**Boring No.:** SH219

**Date:** 06/16/92
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>56.8-60.1'</td>
<td>Greenish gray silt s sand, high LL (SM-H)</td>
<td>93</td>
<td>47</td>
<td>48</td>
<td></td>
</tr>
</tbody>
</table>

**Project**: Savannah Harbor

**Preliminary Borings**

**Lab No.**: 97/1966

**Boring No.**: SH219

**Date**: 06/16/92
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Lab No.</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>38.3-43.5'</td>
<td>Ok, gray fat clay (CH), slightly or-</td>
<td></td>
<td>176</td>
<td>60</td>
<td>116</td>
<td>Savannah Harbor</td>
<td>97/1718</td>
<td>SH-220</td>
<td>05/14/92</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ganic, with a trace of sand and mica.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Preliminary Borings</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Note: The requested specific gravity test was not performed due to an insufficient amount of soil.

Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI |
--- | --- | --- | --- | --- | --- | --- |
1 | 45.8 - 48.1' | Dk. gray inorganic silt high LL (MH), with some sand and with a trace of mica and gravel size rusty metal fragments. | 224.3 | 143 | 55 | 68 |

Project: Savannah Harbor
Preliminary Borings
Lab No. 97/1723
Boring No. SH-221
Date 05/11/92
PARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
ERS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

WORK ORDER: 6552
REQUISITION: EN-GG-92-25

U.S. STANDARD SIEVE OPENING IN INCHES  U.S. STANDARD SIEVE NUMBERS

6  3  2  1 5  1/4  1/2  3/8  3  4  6  8  10  14  16  20  30  40  50  70  100  140  200

HYDROMETER

PERCENT COARSER BY WEIGHT

GRAIN SIZE IN MILLIMETERS

COBBLES
COARSE
FINE

GRAVEL
COARSE
FINE

SAND
COARSE
MEDIUM
FINE

SILT OR CLAY

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Visual Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Lab No.</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>42.9-44.9'</td>
<td>Gray silty sand high LL (SM-H), with a trace of mica and organic matter.</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td>SAVANNAH HARBOR</td>
<td>97/1395</td>
<td>SH-222</td>
<td>02/14/92</td>
</tr>
</tbody>
</table>

GRADATION CURVES
Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project | Lab No. | Boring No. | Date
---|---|---|---|---|---|---|---|---|---|---
2 | 46.3-48.6' | Tan poorly graded sand (SP), with a trace of gravel size weathered rock fragments. | - | NP | NP | NP | Savannah Harbor | 97/1839 | SH-223 | 08/07/92

GRADATION CURVES

U.S. STANDARD SIEVE OPENING IN INCHES  U.S. STANDARD SIEVE NUMBERS  HYDROMETER

GRAIN SIZE IN MILLIMETERS  PERCENT FINER BY WEIGHT  PERCENT COARSER BY WEIGHT

COBBLES  GRAVEL  SAND  SILT OR CLAY

COARSE  FINE  COARSE  MEDIUM  FINE
Sample No. 1

Depth/Level: 41.5-44.3'
Classification: Ok. gray fat clay (CH), with a little sand and with a trace of mica and organic matter.

Specific gravity = 2.68

Project: Savannah Harbor
Preliminary Borings

Lab No. 97/1943
Boring No. SH-224
Date: 08/07/92
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Lab No.</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>45.5-46.6'</td>
<td>Greenish gray silty sand high LL (SM-H), with a trace of mica.</td>
<td>-</td>
<td>53</td>
<td>37</td>
<td>16</td>
<td>Savannah Harbor</td>
<td>97/1850</td>
<td>SH-225</td>
<td>06/07/92</td>
</tr>
</tbody>
</table>
GRADATION CURVES

Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project | Lab No. | Boring No. | Date
---|---|---|---|---|---|---|---|---|---|---
4 | 51.5-53.0' | Greenish gray inorganic silt high LL | - | 165 | 63 | 102 | Savannah Harbor | 97/1858 | SH-228 | 06/07/92
**Note:** There was insufficient material to perform the requested Atterberg limits test.

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev.</th>
<th>Visual Classification</th>
<th>Nat %</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>45.8-46.5'</td>
<td>Greenish gray silty sand high LL (SM-H) with a trace of mica</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Specific gravity = 2.76</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Project: Savannah Harbor

Preliminary Boring

Lab No. 97/1862

Boring No. SH-227

Date 06/07/92
Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project | Date
---|---|---|---|---|---|---|---|---
1 | 33.2'-36.2" | Ok. gray clayey sand (SC), with a trace of mica, roots and shell. Specific gravity = 2.67 | - | 49 | 24 | 25 | SAVANNAH HARBOR | 04/29/92

PRELIMINARY BORINGS

Lab No. 97/1539
Boring No. SH-228
Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project | Lab No.   | Boring No. | Date  
---|---|---|---|---|---|---|---|---|---|---
4 | 452.487" | Greenish gray silty sand high LL (SM-H), with a trace of mica and roots. | - | 89 | 49 | 40 | PRELIMINARY BORINGS | 97/1542 | SH-228 | 04/29/92
Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project          | Preliminary Borings                  | Lab No. | Boring No. | Date
---|---|---|---|---|---|---|---|---|---|---|---|---
1   | 45.5-47.5' | Ok. gray fat clay (CH), with a little sand and with a trace of mica and organic matter. | 215.9 | 157 | 56 | 101 | Savannah Harbor | Preliminary Borings                  | 97/1867 | SH-229     | 06/07/92

DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

WORK ORDER: 6601
REQUISITION: EN-GG-92-54

GRADATION CURVES
### Depositional Environments

**Sample No.** 4  
**Depth/Elev.** 53.0-54.5'  
**Classification:** Greenish gray inorganic silt high LL (MH), clayey, sandy, with a trace of mica.  
**Specific gravity = 2.74**

<table>
<thead>
<tr>
<th>COBBLES</th>
<th>GRAVEL</th>
<th>FINE</th>
<th>COARSE</th>
<th>MEDIUM</th>
<th>FINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample No.</td>
<td>Depth/Elev.</td>
<td>Classification</td>
<td>Net w%</td>
<td>LL</td>
<td>PL</td>
</tr>
<tr>
<td>4</td>
<td>53.0-54.5'</td>
<td>Greenish gray inorganic silt high LL (MH), clayey, sandy, with a trace of mica.</td>
<td>-</td>
<td>75</td>
<td>45</td>
</tr>
</tbody>
</table>

**Project:** Savannah Harbor  
**Lab No.:** 97/1870  
**Boring No.:** SH-229  
**Date:** 06/07/92
**U.S. Standard Sieve Opening in Inches**

<table>
<thead>
<tr>
<th>Opening</th>
<th>U.S. Standard Sieve Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>10</td>
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<tr>
<td>3.15</td>
<td>14</td>
</tr>
<tr>
<td>1.90</td>
<td>18</td>
</tr>
<tr>
<td>1.60</td>
<td>20</td>
</tr>
<tr>
<td>1.25</td>
<td>30</td>
</tr>
<tr>
<td>1.00</td>
<td>40</td>
</tr>
<tr>
<td>0.80</td>
<td>50</td>
</tr>
<tr>
<td>0.63</td>
<td>60</td>
</tr>
<tr>
<td>0.50</td>
<td>70</td>
</tr>
<tr>
<td>0.375</td>
<td>80</td>
</tr>
<tr>
<td>0.315</td>
<td>90</td>
</tr>
<tr>
<td>0.250</td>
<td>100</td>
</tr>
<tr>
<td>0.190</td>
<td>140</td>
</tr>
<tr>
<td>0.160</td>
<td>200</td>
</tr>
</tbody>
</table>

**Hydrometer**

**Grain Size in Millimeters**

**Percent Finer by Weight**

**Percent Coarser by Weight**

**Note:** The requested hydrometer test was not performed.

**Gradation Curves**

**Sample No.** | **Depth/Elev.** | **Classification** | **Nat. w%** | **LL** | **PL** | **PI** | **Project** | **Notes** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>42.9-49.5'</td>
<td>Gray inorganic silt high LL (MH), clayey, sandy, with a trace of gravel size shell and with a trace of mica. Specific gravity = 2.74</td>
<td>-</td>
<td>84</td>
<td>47</td>
<td>37</td>
<td>SAVANNAH HARBOR</td>
<td>PRELIMINARY BORINGS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lab No. 97/1401</td>
<td>Boring No. SH-231</td>
<td>Date 02/15/92</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

**WORK ORDER:** 6552  
**REQUISITION:** EN-66-92-25

---

#### U.S. STANDARD SIEVE OPENING IN INCHES

| 6 | 4 | 3 | 2 1/2 | 1 3/4 | 1 1/2 | 3/8 | 3 | 2 1/4 | 1 3/16 | 0.16 | 0.08 | 0.04 |

#### U.S. STANDARD SIEVE NUMBERS

| 80 | 40 | 20 | 10 | 5 | 2 | 1 |

#### HYDROMETER

| 0 | 0.01 | 0.005 | 0.001 |

---

#### PERCENT FINER BY HEIGHT

| 100 | 90 | 80 | 70 | 60 | 50 | 40 | 30 | 20 | 10 | 5 | 2 | 1 |

---

#### GRAIN SIZE IN MILLIMETERS

| 500 | 100 | 50 | 10 | 5 | 1 |

---

#### COBBLES

<table>
<thead>
<tr>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 54.0-55.5&quot; Gray silty sand high LL (SM-H), with a trace of mica and gravel size weathered rock fragments.</td>
<td>45.7</td>
<td>78</td>
<td>43</td>
<td>33</td>
</tr>
</tbody>
</table>

#### GRAVEL

<table>
<thead>
<tr>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
</tr>
</thead>
</table>

#### SAND

<table>
<thead>
<tr>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
</tr>
</thead>
</table>

#### SILT OR CLAY

<table>
<thead>
<tr>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
</tr>
</thead>
</table>

---

#### Project: SAVANNAH HARBOR

**PRELIMINARY BORINGS**

**Lab No:** 97/1483  
**Boring No:** SH-231

Date: 02/14/92

---

#### GRADATION CURVES
Sample No. | Depth/Elev | Classification                        | Nat w% | LL | PL | PI |
-----------|------------|----------------------------------------|--------|----|----|----|
1          | 44.0-47.7" | Ok, gray clayey sand high LL (SC-H), with a trace of mica. | 57     | 28 | 31 |    |

Project: Savannah Harbor
Preliminary Borings
Lab No. 97/1877
Boring No. SH-233
Date 06/07/92
Sample No. 3

Depth/Elev. 50.7-51.9'

Classification: Gray silty sand high LL (SM-H), Specific gravity = 2.76

Nat w%  LL  PL  PI
-  66  42  24

Project: Savannah Harbor
Preliminary Borings

Lab No. 97/1879
Boring No. SH-233

Date: 06/07/92

GRADATION CURVES
Note: The requested specific gravity test was not performed due to an insufficient amount of soil.
### Gradation Curves

**Sample No.**: 1  
**Depth/Elev**: 42.9'  
**Classification**: Gray inorganic silt high LL (MH), with some sand and with a trace of shell and mica.  
**Specific gravity**: 2.73  

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat %</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>42.9'</td>
<td>Gray inorganic silt high LL (MH), with some sand and with a trace of shell and mica.</td>
<td></td>
<td>142</td>
<td>84</td>
<td>58</td>
</tr>
</tbody>
</table>

**Project**: SAVANNAH HARBOR  
**Lab No.**: 97/1411  
**Boring No.**: SH-246  
**Date**: 02/13/92
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Preliminary Borings</th>
<th>Lab No.</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>45.5-47.5'</td>
<td>Gray clayey sand, high LL (SC-H), with a trace of mica and a trace of organic matter.</td>
<td>140.0</td>
<td>116</td>
<td>43</td>
<td>75</td>
<td>Savannah Harbor</td>
<td>Preliminary Borings</td>
<td>97/1977</td>
<td>SH249</td>
<td>06/16/92</td>
</tr>
</tbody>
</table>
**Project:** Savannah Harbor

**Sample No. 4**

- Depth/Elev: 52.0-53.5'
- Classification: Gray inorganic silt, high LL (MH), clays 112.5
- Nat w%: 167
- LL: 70
- PL: 89

**Notes:**
- With a little sand and a trace of mica.

**Boring No. SH249**

**Date:** 06/16/92

**Laboratory No.:** 97/1980

**Preliminary Borings**
### Gradation Curves

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Leb No.</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>45.2-46.5&quot;</td>
<td>Gray silty sand high LL (SM-H), with trace of mica and organic matter, Specific gravity = 2.83.</td>
<td>-</td>
<td>78</td>
<td>44</td>
<td>34</td>
<td>PRELIMINARY BORINGS</td>
<td>97/1415</td>
<td>SH-253</td>
<td>02/13/92</td>
</tr>
</tbody>
</table>
### Gradation Curves

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>54.0-55.5'</td>
<td>Gray inorganic silt high LL (MH), with some sand and with a trace of organic matter and mica.</td>
<td>118.2</td>
<td>170</td>
<td>108</td>
<td>62</td>
</tr>
</tbody>
</table>

**Project:** SAVANNAH HARBOR

**Preliminary Borings**

- Lab No. 97/1417
- Boring No. SH-253
- Date: 02/14/92
Gray silty sand high LL (SM-H), with a trace of mica, roots and shell. Specific gravity = 2.71
### Sample No. 1

**Description:**
Ok. gray fat clay (CH), slightly organic, with some sand and with a trace of mica.

**Specific Gravity:** 2.61

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>38.8472'</td>
<td></td>
<td>136</td>
<td>47</td>
<td>89</td>
<td></td>
</tr>
</tbody>
</table>

**Project:** Savannah Harbor

**Preliminary Boring:** Lab No. 97/1729

**Boring No.:** SH-266

**Date:** 05/14/92

---

### Gradation Curves

The graph shows the distribution of grain sizes in the sample. The x-axis represents grain size in millimeters, ranging from 0.001 to 100. The y-axis represents percent finer by weight, ranging from 0 to 100.

- **Cobbles:**
  - COARSE
  - FINE

- **Gravel:**
  - COARSE
  - MEDIUM
  - FINE

- **Sand:**

- **Silt or Clay:**

---

### Note

The graph also includes a table for U.S. standard sieve openings in inches and U.S. standard sieve numbers.
**DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY**
**CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060**

**U.S. STANDARD SIEVE OPENING IN INCHES**

| 6 | 4 3 2 | 3/4 | 1/2 | 1/4 | 1/8 | 1/16 | 2/16 | 3/16 | 4/16 | 8/16 | 16/32 | 32/64 | 64/128 | 128/256 | 256/512 | 512/1024 | 1024/2048 | 2048/4096 |
| 0.600 | 0.400 | 0.300 | 0.200 | 0.150 | 0.125 | 0.100 | 0.075 | 0.060 | 0.050 | 0.040 | 0.030 | 0.020 | 0.010 | 0.005 | 0.001 |

**U.S. STANDARD SIEVE NUMBERS**

| 6 | 4 3 2 | 3/4 | 1/2 | 1/4 | 1/8 | 1/16 | 2/16 | 3/16 | 4/16 | 8/16 | 16/32 | 32/64 | 64/128 | 128/256 | 256/512 | 512/1024 | 1024/2048 | 2048/4096 |
| 600 | 400 | 300 | 200 | 150 | 125 | 100 | 75 | 60 | 50 | 40 | 30 | 20 | 10 | 5 | 1 | 0.5 | 0.1 | 0.05 | 0.01 |

**HYDROMETER**

**PERCENT FINE BY WEIGHT**

**GRAIN SIZE IN MILLIMETERS**

**PERCENT COARSER BY HEIGHT**

**GRADATION CURVES**

**Sample No.** | **Depth/Elev.** | **Classification** | **Nat Wt** | **LL** | **PL** | **PI** | **Project** | **Preliminary Borings** | **Lab No.** | **Boring No.** | **Date** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>46.7-47.6'</td>
<td>Greenish gray fat clay (CH), with some sand.</td>
<td>63.6</td>
<td>147</td>
<td>46</td>
<td>101</td>
<td>Savannah Harbor</td>
<td>Preliminary Borings</td>
<td>97/1736</td>
<td>SH-267</td>
<td>05/11/92</td>
</tr>
<tr>
<td>Sample No.</td>
<td>Depth/Elev</td>
<td>Classification</td>
<td>Nat w%</td>
<td>LL</td>
<td>PL</td>
<td>PI</td>
<td>Project</td>
<td>Preliminary Borings</td>
<td>Lab No.</td>
<td>Boring No.</td>
<td>Date</td>
</tr>
<tr>
<td>-----------</td>
<td>------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>--------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>-----------------</td>
<td>---------------------</td>
<td>---------</td>
<td>------------</td>
<td>---------</td>
</tr>
<tr>
<td>1</td>
<td>454-45.9'</td>
<td>Greenish gray inorganic silt high LL (MH), clayey, slightly organic, with a little sand and with a trace of mica. Specific gravity = 2.62</td>
<td>119.7</td>
<td>205</td>
<td>73</td>
<td>132</td>
<td>Project Savannah Harbor</td>
<td>Preliminary Borings</td>
<td>97/1741</td>
<td>SH-273</td>
<td>05/11/92</td>
</tr>
</tbody>
</table>
Sample No. | Depth/Elev | Classification                                                                 | Nat w% | LL  | PL  | PI  | Project          | Preliminary Borings | Lab No. | Boring No. | Date    |
<table>
<thead>
<tr>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>48.2-49.7</td>
<td>Greenish gray inorganic silt high LL (MH), clayey, with a trace of sand.</td>
<td>136.0</td>
<td>281</td>
<td>93</td>
<td>188</td>
<td>Savannah Harbor</td>
<td>Preliminary Borings</td>
<td>97/1748</td>
<td>SH-275</td>
<td>05/11/92</td>
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**Specific gravity = 2.66**
### Gradation Curves

<table>
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<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Lab No.</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>449.472'</td>
<td>Grayish tan poorly graded sand (SP), with a trace of gravel size weathered rock fragments and with a trace of mica and shell. Specific gravity = 2.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PRELIMINARY BORINGS</td>
<td>97/1430</td>
<td>SH-279</td>
<td>02/13/92</td>
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</table>
### Sample No. 2

<table>
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<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>47.2-48.7&quot;</td>
<td>Greenish gray inorganic silt high LL (MH), clayey, with a little sand and with a trace of mica.</td>
<td>235</td>
<td>108</td>
<td>127</td>
<td></td>
<td>PRELIMINARY BORINGS</td>
<td>02/14/92</td>
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</table>

**Specific gravity = 2.60**

**Silt or Clay**

- **Project:** SAVANNAH HARBOR
- **Lab No.:** 97/1431
- **Boring No.:** SH-279

**Gradation Curves**
### Sample Information

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PI</th>
<th>PI</th>
<th>Project</th>
<th>Lab No.</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>51.7-53.2'</td>
<td>Gray inorganic silt high LL (MH), clayey, sandy, with a trace of mica and organic matter. Specific gravity = 2.67</td>
<td></td>
<td>140</td>
<td>61</td>
<td>79</td>
<td>SAVANNAH HARBOR</td>
<td>97/1432</td>
<td>SH-279</td>
<td>02/13/92</td>
</tr>
</tbody>
</table>

### Gradation Curves

The graph shows the percentage finer by height and percent coarser by height as a function of grain size in millimeters. The scale for the U.S. Standard Sieve Opening in Inches and U.S. Standard Sieve Numbers is also provided. This is likely a chart used for soil or mineral analysis, indicating the distribution of particle sizes in a sample.
Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project | Date
---|---|---|---|---|---|---|---|---
1 | 43.445.3' | Gray poorly graded sand (SP), with a trace of gravel size weathered rock & asphalt and with a trace of mica and shell. | - | NP | NP | NP | PRELIMINARY BORINGS | 02/13/92

Specific gravity = 2.66

GRADATION CURVES
**Note:** The depth shown represents the depth recorded from the sample container. The depth shown on the sample inventory was 51.3-52.3'.

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Lab No.</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>48.3-49.9&quot;</td>
<td>Grayish tan poorly graded sand (SP), with a trace of mica.</td>
<td>-</td>
<td>NP</td>
<td>NP</td>
<td>NP</td>
<td>SAVANNAH HARBOR</td>
<td>97/1436</td>
<td>SH-282</td>
<td>02/15/92</td>
</tr>
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</table>

**GRADATION CURVES**
<table>
<thead>
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<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>55.8-57.3'</td>
<td>Greenish gray fat clay (CH), with a trace of sand and mica.</td>
<td>71.9</td>
<td>191</td>
<td>58</td>
<td>133</td>
<td>SAVANNAH HARBOR</td>
<td>SH-282</td>
<td>02/15/92</td>
</tr>
</tbody>
</table>

Note: The requested hydrometer test was not performed.
DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

U.S. STANDARD SIEVE OPENING IN INCHES  U.S. STANDARD SIEVE NUMBERS  HYDROMETER

100  6  4  3  2.15  1  3/4  1/2  3/8  3  4  6  8  10  14  16  20  30  40  50  70  100  140  200

PERCENT FINER BY HEIGHT

PERCENT COARSER BY HEIGHT

COBBLES  GRAVEL  SAND  SILT OR CLAY
COARSE  FINE  COARSE  MEDIUM  FINE

Sample No.  Depth/Elev  Classification  Nat w%  LL  PL  PI
1  39.4-45.8'  Gray fat clay (CH), with a little sand and with a trace of organic matter and mica.
  Specific gravity = 2.60

Project  SAVANNAH HARBOR
PRELIMINARY BORINGS
Lab No. 97/1441
Boring No. SH-283
Date 02/13/92

GRADATION CURVES
**Sample No.** | **Depth/Elev.** | **Classification** | **Nat w%** | **LL** | **PL** | **PI** | **Project** | **Lab No.** | **Boring No.** | **Date**
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
1 | 40.0-43.0' | Gray poorly graded sand (SP), with a trace of gravel size quartz & shell and with a trace of mica. | - | 24 | 21 | 3 | SAVANNAH HARBOR | 97/1547 | SH-289 | 04/28/92

**Gradation Curves**
Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project          | Lab No. | Boring No. | Date  
---|---------|----------------|--------|-----|----|----|-----------------|--------|------------|------ 
3   | 47.5-49.0' | Greenish gray inorganic silt high LL (MH), clayey, with a trace of roots, mica and sand. | 141.7 | 250 | 88 | 164 | PRELIMINARY BORINGS | 97/1549 | SH-289 | 04/30/92 

**GRADATION CURVES**
Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project | Lab No. | Boring No. | Date  
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  
1 | 38.9-40.5' | Tan poorly graded silty sand (SP-SM), with a trace of gravel size weathered rock & rusty metal fragments and with a trace of mica and shell. | - | NP | NP | NP | SAVANNAH HARBOR | 97/1446 | SH-291 | 02/13/92  

**GRADATION CURVES**

<table>
<thead>
<tr>
<th>COBBLES</th>
<th>GRAVEL</th>
<th>SAND</th>
<th>SILT OR CLAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>COARSE</td>
<td>FINE</td>
<td>COARSE</td>
<td>MEDIUM</td>
</tr>
</tbody>
</table>

**U.S. STANDARD SIEVE OPENING IN INCHES**

| 100 | 90 | 80 | 70 | 60 | 50 | 40 | 30 | 20 | 10 | 5 | 3 | 2 | 1 1/2 | 2 1/8 | 1 3/4 | 2 | 3 | 4 | 6 | 8 | 10 | 14 | 16 | 20 | 30 | 40 | 50 | 70 | 100 | 140 | 200 |

**U.S. STANDARD SIEVE NUMBERS**

| 6 | 4 | 3 | 2 | 1 1/4 | 1 1/2 | 3/8 | 3/4 | 1 | 4 | 6 | 8 | 10 | 14 | 16 | 20 | 30 | 40 | 50 | 70 | 100 | 140 | 200 |

**PERCENT FINER BY WEIGHT**

**PERCENT COARSER BY WEIGHT**

**GRAN SIZE IN MILLIMETERS**

**HYDROMETER**

**WORK ORDER:** 8552  
**REQUISITION:** EN-66-92-25
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Lab No.</th>
<th>Boring No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>46.5-48.0'</td>
<td>Greenish gray fat clay (CH), with a trace of sand and mica.</td>
<td></td>
<td>212</td>
<td>65</td>
<td>147</td>
<td>PRELIMINARY BORINGS</td>
<td>97/1448</td>
<td>SH-291</td>
<td>02/13/92</td>
</tr>
</tbody>
</table>

**GRADATION CURVES**
DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

U.S. STANDARD SIEVE OPENING IN INCHES  U.S. STANDARD SIEVE NUMBERS  HYDROMETER

PERCENT FINER BY WEIGHT

COBBLES  GRANULARITY  SAND  SILT OR CLAY
COARSE  FINE  COARSE  MEDIUM  FINE

Sample No.  Depth/Elev  Classification  Nat w%  LL  PL  PI  Project  Lab No.  Boring No.  Date
1  40.7-43.7'  Gray poorly graded sand (SP), with a 17.8  NP  NP  NP  Savannah Harbor  97/1752  SH-303  05/11/92
   trace of mica, shell and gravel size quartz.
   Specific gravity = 2.71

GRADATION CURVES
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>41.1441'</td>
<td>Ok. gray poorly graded silty sand (SP-SM), with a trace of shell &amp; mica.</td>
<td>-</td>
<td>NP</td>
<td>NP</td>
<td>NP</td>
<td>Savannah Harbor</td>
<td>Preliminary Borings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Specific gravity = 2.67</td>
<td></td>
<td></td>
<td></td>
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<td>Lab No. 97/1763</td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>Boring No. SH-312</td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Date: 05/12/92</td>
<td></td>
</tr>
</tbody>
</table>
DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

WORK ORDER: 6552
REQUISITION: EN-66-92-25

U.S. STANDARD SIEVE OPENING IN INCHES   U.S. STANDARD SIEVE NUMBERS

|   6 | 4 3 | 2.5 | 1 3/4 | 1 1/2 3/8 | 3 4 | 6 | 8 10 | 14 16 | 20 | 30 | 40 | 50 | 70 | 100 | 140 | 200 |

HYDROMETER

PERCENT FINER BY HEIGHT

100
90
80
70
60
50
40
30
20
10
0

GRAIN SIZE IN MILLIMETERS

0.001
0.005
0.01
0.05
0.1
0.5
1
5
10
50
100

PERCENT COARSER BY HEIGHT

COBBLES | GRAVEL | SAND | SILT OR CLAY

COARSE | FINE | COARSE | MEDIUM | FINE

Silt or Clay Classification: Gray clayey sand (SC), with a little gravel size shell, rusty metal and weathered rock fragments.
Specific gravity = 2.71

Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project | Lab No. | Boring No. | Date
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
1 | 41.6-43.1' | Gray clayey sand (SC), with a little gravel size shell, rusty metal and weathered rock fragments. | - | 42 | 22 | 20 | SAVANNAH HARBOR | 97/1452 | SH-316 | 02/13/92

GRADATION CURVES
Sample No. | Depth/Elev. | Classification | Nat w% | LL | PL | PL | FI | Project | Remarks |
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
4 | 52.1-53.8' | Grayish tan poorly graded silty sand (SP-SH), with a trace of gravel size shell, rusty metal and weathered rock fragments. | - | NP | NP | NP | | PRELIMINARY BORINGS | Specific gravity = 2.76 |
### Gradation Curves

#### Sample No. 3

**Depth/Elev:** 43.3-44.8'

**Classification:**
- Gray poorly graded silty sand (SP-SM)
- With a trace of gravel size quartz and a trace of shell and roots
- Specific gravity = 2.69

**Laboratory Information:**
- Project: Savannah Harbor
- Preliminary Borings
- Lab No.: 97/1776
- Boring No.: SH-319
- Date: 05/11/92
Sample No. | Depth/Elev | Classification | Nat w% | LL | PL | PI | Project | Date
--- | --- | --- | --- | --- | --- | --- | --- | ---
2 | 43.5-45.0' | Dk, gray poorly graded silty sand (SP-SH), with a trace of roots, mica and shell. | - | 22 | 22 | NP | Savannah Harbor Preliminary Borings | 05/12/92

**GRADATION CURVES**
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth/Elev</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>52.2-53.7&quot;</td>
<td>Greenish gray clayey sand high LL (SC-H), with a trace of mica. Specific gravity = 2.66</td>
<td></td>
<td>52</td>
<td>28</td>
<td>24</td>
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</tbody>
</table>

**Project:** SAVANNAH HARBOR  
**PRELIMINARY BORINGS**  
**Lab No.** 97/1450  
**Boring No.** SH-323  
**Date** 02/13/92  

**GRADATION CURVES**
DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

WORK ORDER: 6601
REQUISITION: EN-GG-92-54

U.S. STANDARD SIEVE OPENING IN INCHES  U.S. STANDARD SIEVE NUMBERS  HYDROMETER

PERCENT FINER BY WEIGHT

PERCENT COARSER BY WEIGHT

GRAIN SIZE IN MILLI METERS

COBBLES  GRAVEL  SAND  SILT OR CLAY

COARSE  FINE  COARSE  MEDIUM  FINE

Sample No.  Depth/Elev  Classification  Nat w%  LL  PL  PI  Project  Lab No.  Boring No.  Date
1  43.3-44.8'  Ok. gray clayey sand high LL (SC-H), with a trace of gravel size weathered rock fragments.  Specific gravity = 2.66  -  89  32  57  Savannah Harbor  97/1899  SH-324  06/07/92

GRADATION CURVES
<table>
<thead>
<tr>
<th>Lab Number</th>
<th>Boring Number</th>
<th>Sample No.</th>
<th>Depth (ft)</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>%Pass No. 4</th>
<th>%Pass No. 200</th>
<th>MC (%)</th>
<th>SPG</th>
<th>USCIS Class</th>
<th>Color</th>
<th>Description</th>
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<tbody>
<tr>
<td>K6/45</td>
<td>SH413</td>
<td>1</td>
<td>33.8</td>
<td>35.3</td>
<td>--</td>
<td>--</td>
<td>94.8</td>
<td>5.9</td>
<td>15.0</td>
<td>2.69</td>
<td>--</td>
<td>(Visual) Dark Grayish Brown</td>
<td>Poorly Graded Silty Sand (SP-SM), with a trace of gravel.</td>
</tr>
<tr>
<td>K6/46</td>
<td>SH413</td>
<td>4</td>
<td>38.3</td>
<td>39.8</td>
<td>28</td>
<td>21</td>
<td>7</td>
<td>80.9</td>
<td>9.6</td>
<td>16.1</td>
<td>--</td>
<td>SP-SC</td>
<td>Dark Gray</td>
</tr>
<tr>
<td>K6/47</td>
<td>SH413</td>
<td>5</td>
<td>40.4</td>
<td>41.9</td>
<td>94</td>
<td>31</td>
<td>63</td>
<td>99.8</td>
<td>34.1</td>
<td>54.9</td>
<td>2.79</td>
<td>SC</td>
<td>Olive</td>
</tr>
<tr>
<td>K6/48</td>
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<td>10</td>
<td>47.9</td>
<td>49.4</td>
<td>118</td>
<td>45</td>
<td>73</td>
<td>100.0</td>
<td>70.4</td>
<td>75.7</td>
<td>--</td>
<td>CH</td>
<td>Olive</td>
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<tr>
<td>K6/49</td>
<td>SH414</td>
<td>3</td>
<td>30.5</td>
<td>32.0</td>
<td>--</td>
<td>--</td>
<td>85.1</td>
<td>7.9</td>
<td>13.9</td>
<td>--</td>
<td>--</td>
<td>(Visual) Light Brownish Gray</td>
<td>Well Graded Silty Sand (SW-SM), with a trace of gravel.</td>
</tr>
<tr>
<td>K6/50</td>
<td>SH414</td>
<td>8</td>
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<td>39.5</td>
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<td>23</td>
<td>4</td>
<td>95.0</td>
<td>9.0</td>
<td>17.3</td>
<td>--</td>
<td>SW-SM</td>
<td>Dark Gray</td>
</tr>
<tr>
<td>K6/51</td>
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<td>9</td>
<td>39.5</td>
<td>41.0</td>
<td>46</td>
<td>32</td>
<td>14</td>
<td>100.0</td>
<td>19.5</td>
<td>29.5</td>
<td>--</td>
<td>SM</td>
<td>Olive Gray</td>
</tr>
<tr>
<td>K6/52</td>
<td>SH414</td>
<td>12</td>
<td>44.0</td>
<td>45.5</td>
<td>76</td>
<td>33</td>
<td>43</td>
<td>97.7</td>
<td>40.1</td>
<td>48.0</td>
<td>--</td>
<td>SC</td>
<td>Grayish Brown</td>
</tr>
<tr>
<td>K6/53</td>
<td>SH414</td>
<td>15</td>
<td>48.5</td>
<td>50.0</td>
<td>76</td>
<td>29</td>
<td>42</td>
<td>100.0</td>
<td>39.1</td>
<td>43.1</td>
<td>--</td>
<td>SC</td>
<td>Dark Grayish Brown</td>
</tr>
<tr>
<td>K6/54</td>
<td>SH415</td>
<td>4</td>
<td>29.1</td>
<td>30.6</td>
<td>NP</td>
<td>NP</td>
<td>NP</td>
<td>100.0</td>
<td>6.4</td>
<td>20.2</td>
<td>--</td>
<td>SP-SM</td>
<td>Brown</td>
</tr>
<tr>
<td>K6/55</td>
<td>SH415</td>
<td>7</td>
<td>33.6</td>
<td>35.1</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>100.0</td>
<td>3.5</td>
<td>20.5</td>
<td>--</td>
<td>SP</td>
<td>(Visual) Gray</td>
</tr>
<tr>
<td>K6/56</td>
<td>SH415</td>
<td>11</td>
<td>39.6</td>
<td>41.1</td>
<td>93</td>
<td>32</td>
<td>61</td>
<td>100.0</td>
<td>56.5</td>
<td>53.2</td>
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<td>51.0</td>
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<td>65</td>
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<td>Sample No.</td>
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<td>PL</td>
<td>PI</td>
<td>%Pass No. 4</td>
<td>%Pass No. 200</td>
<td>MC (%)</td>
<td>SPG</td>
<td>USCS Class</td>
<td>Color</td>
<td>Description</td>
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<tr>
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<tr>
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<td>SM</td>
<td>Olive Gray</td>
<td>Silty Sand (SM).</td>
</tr>
<tr>
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<td>SH439</td>
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<td>47</td>
<td>24</td>
<td>23</td>
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<td>NP</td>
<td>NP</td>
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<td>12.5</td>
<td>28.7</td>
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<td>Dark Olive Gray</td>
<td>Silty Sand (SM), with a trace of sand size shell fragments.</td>
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<tr>
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<td>6</td>
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<td>--</td>
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<td>(Visual)</td>
<td>Dark Gray</td>
<td>Well Graded Sand (Sw).</td>
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<td>NP</td>
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<td>15.7</td>
<td></td>
<td>--</td>
<td>SW-SM</td>
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<td>57.9</td>
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<td>99.0</td>
<td>6.0</td>
<td>20.7</td>
<td>--</td>
<td>SP-SM</td>
<td>Poorly Graded Silty Sand (SP-SM), with a trace of gravel size and sand size shell fragments. Plots near the A-Line.</td>
</tr>
<tr>
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<td>20.5</td>
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<td>53.3</td>
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<td>33</td>
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<td>CH</td>
<td>Dark Gray</td>
<td>Fat Clay (CH), with a trace of sand.</td>
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<tr>
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<td>56.3</td>
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<td>38</td>
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<td>99.3</td>
<td>38.3</td>
<td>55.3</td>
<td>--</td>
<td>SC</td>
<td>Clayey Sand, High Liquid Limit (SC-H), with a trace of sand size shell fragments.</td>
</tr>
</tbody>
</table>
### Gradation Curves

**U.S. Standard Sieve Opening in Inches** | **U.S. Standard Sieve Numbers**
--- | ---
100 | 100
90 | 90
80 | 80
70 | 70
60 | 60
50 | 50
40 | 40
30 | 30
20 | 20
10 | 10
5 | 5
3 | 3
1 | 1
1/2 | 0.5
3/8 | 0.375
1/4 | 0.25
5/32 | 0.156
3/32 | 0.094
1/16 | 0.062

**Hydrometer**

**Percent Finer by Weight** | **Percent Coarser by Weight**
--- | ---
0 | 0
0.001 | 100
0.005 | 90
0.01 | 80
0.05 | 70
0.1 | 60
0.5 | 50
1 | 40
10 | 30
100 | 20
500 | 10

**Grain Size in Millimeters**

### Table

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth (ft)</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
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<tbody>
<tr>
<td>3</td>
<td>30.5 - 32.0</td>
<td>(Visual) Light Brownish Gray, Well Graded Silty Sand (SW-SM), with a little gravel.</td>
<td>13.9</td>
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**Notes:**

- Tests Conducted in General Accordance with ASTM's D42, D438, D458, & D3487
- Project: Savannah Harbor
- Harbor Expansion, Savannah, Georgia
- Lab No. K649
- Boring No. SH414
- Date: 10/7/02
<table>
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<th>Sample No.</th>
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<th>LL</th>
<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Harbor Expansion, Savannah, Georgia</th>
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</thead>
<tbody>
<tr>
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<td>33.6 - 35.1</td>
<td>(Visual) Gray, Poorly Graded Sand (SP.)</td>
<td>20.5</td>
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<td>Savannah Harbor</td>
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**Tests Conducted in General Accordance with ASTM's D422, D423, D854, & D2487**

**Date** 10/7/02
### GRADATION CURVES

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<th>Sample No.</th>
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<th>PL</th>
<th>PI</th>
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</thead>
<tbody>
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<td>11</td>
<td>39.6 - 41.1</td>
<td>Grayish Brown, Sandy Fat Clay (CH)</td>
<td>53.2</td>
<td>93</td>
<td>32</td>
<td>61</td>
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**Project:** Savannah Harbor  
**Harbor Expansion, Savannah, Georgia**  
**Lab No.:** K6/56  
**Boring No.:** SH415

**Specific Gravity = 2.758.**

**Date:** 10/7/02
<table>
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<th>PL</th>
<th>PI</th>
<th>Project</th>
<th>Harbor Expansion, Savannah, Georgia</th>
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</thead>
<tbody>
<tr>
<td>14</td>
<td>44.1 - 45.6</td>
<td>Dark Grayish Brown, Sandy Fat Clay (CH)</td>
<td>62.7</td>
<td>110</td>
<td>39</td>
<td>71</td>
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**GRADATION CURVES**

Tests Conducted in General Accordance with ASTM D422, D428, D434, & D437.
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<th>PL</th>
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<th>Project</th>
<th>Location</th>
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<tr>
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<td>Grayish Brown, Sandy Fat Clay (CH)</td>
<td>37.1</td>
<td>66</td>
<td>23</td>
<td>43</td>
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<td>Harbor Expansion, Savannah, Georgia</td>
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Specific Gravity = 2.807.

Tests Conducted in General Accordance with ASTM's D422, D4318, D554, & D2487.
### U.S. STANDARD SIEVE OPENING IN INCHES

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<tr>
<td>4</td>
<td>3</td>
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<tr>
<td>3</td>
<td>4</td>
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</tr>
<tr>
<td>1</td>
<td>7</td>
<td>0.05</td>
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<tr>
<td>0.8</td>
<td>8</td>
<td>0.1</td>
</tr>
<tr>
<td>0.6</td>
<td>10</td>
<td>0.2</td>
</tr>
<tr>
<td>0.4</td>
<td>14</td>
<td>0.5</td>
</tr>
<tr>
<td>0.3</td>
<td>16</td>
<td>1.0</td>
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<tr>
<td>0.2</td>
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<td>10.0</td>
</tr>
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<td>0.12</td>
<td>40</td>
<td>20.0</td>
</tr>
<tr>
<td>0.1</td>
<td>50</td>
<td>40.0</td>
</tr>
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<td>60</td>
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<td>0.06</td>
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<td>100.0</td>
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<tr>
<td>0.05</td>
<td>100</td>
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### PERCENT FINE BY WEIGHT

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth (ft)</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
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</thead>
<tbody>
<tr>
<td>4</td>
<td>39.5 - 41.0</td>
<td>(Visual) Light Yellowish Brown, Poorly Graded Silty Sand (SP-SM).</td>
<td>20.1</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Insufficient Material for Atterberg Limits, Visual Conducted.</td>
<td></td>
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**Project:** Savannah Harbor

**Harbor Expansion, Savannah, Georgia**

**Lab No.:** K6/59

**Boring No.:** SH416

**Date:** 10/7/02

Tests Conducted in General Accordance with ASTM D422, D423, D2948, & D2487.
### GRADATION CURVES

**Sample No.** | **Depth (ft)** | **Classification** | **Nat w/%** | **LL** | **PL** | **PI** | **Project** | **Lab No.** | **Boring No.** | **Date**
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
9 | 47.0 - 48.5 | Olive Gray, Fat Clay (CH), with some sand. | 76.6 | 124 | 48 | 76 | Savannah Harbor Expansion, Savannah, Georgia | K6/60 | SH416 | 10/7/02

Tests Conducted in General Accordance with ASTM D422, D4318, D854, & D2487.
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Depth (ft)</th>
<th>Classification</th>
<th>Nat w%</th>
<th>LL</th>
<th>PL</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>51.5 - 53.0</td>
<td>Olive Gray, Clayey Inorganic Silt, High Liquid Limit (MH), with a trace of sand.</td>
<td>91.3</td>
<td>199</td>
<td>89</td>
<td>110</td>
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</tbody>
</table>

**Project**: Savannah Harbor

**Harbor Expansion**, Savannah, Georgia

**Lab No.**: K6/61

**Boring No.**: SH416

**Date**: 10/7/02

Tests Conducted in General Accordance with ASTM's D422, D4318, D454, & D2487
Sample No. 7
Depth (ft) 30.0 - 31.5
Classification (Visual) Grayish Brown, Poorly Graded Silty Sand (SP-SM)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Nat w%</th>
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<th>PL</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Visual) Grayish Brown, Poorly Graded Silty Sand (SP-SM)</td>
<td>22.6</td>
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Insufficient Material for Atterberg Limits, Visual Conducted
Specific Gravity = 2.663

Project: Savannah Harbor
Harbor Expansion, Savannah, Georgia
Lab No. K6/62
Boring No. SH417
Date 10/7/02

Tests Conducted in General Accordance with ASTM D422, D4318, D854 & D2487

GRADATION CURVES
Sample No. | Depth (ft) | Classification | Nat w% | LL | PL | PI |
---|---|---|---|---|---|---|
20 | 49.5 - 51.0 | Olive Gray, Clayey Sand, High Liquid Limit (SC-H), with a trace of gravel | 51.0 | 96 | 31 | 65 |

**Silt or Clay**

**Cobble**

**Gravel**

**Sand**

**Coarse**

**Fine**

**Coarse**

**Medium**

**Fine**

**Project:** Savannah Harbor

**Harbor Expansion, Savannah, Georgia**

**Lab No.:** K6/63

**Boring No.:** SH417

**Date:** 10/7/02

Texts Conducted in General Accordance with ASTM's D422, D4318, D454, & D2447.

**Gradation Curves**