# Vibrational Core NJV-650 R2

U.S. Army Corps of Engineers
Vibrational Cores–Long Beach Island
Contract Number DACW61-02-D-0004
Task Order 09
Long Beach Island PED

| | |
|---|---|
| Date | : May 30, 2002 |
| Weather | : Sun, 70's |
| Contractor | : Alpine Ocean Seismic Sur. |
| Location | : Long Beach Island, NJ |
| Northing Coord. | : N 305,609.5 NJ-NAD 83 |
| Easting Coord. | : E 612,946.2 NJ-NAD 83 |

| | |
|---|---|
| Uncorrected Depth | : 55.2 feet |
| Tide | : feet |
| Corrected Depth | : feet (1) |
| Vibration time | : 10'10" |
| Core penetration | : 8.5 feet |
| Core recovery | : 7.4 feet |
| Percent recovery | : 87 % (4) |

Depth in Feet: 0, 5, 10, 15, 20, 25 — Soil Surf. Elev. (ft) (1): 0, -5, -10, -15, -20

| USCS | GRAPHIC | DESCRIPTION | Core interval | Sample No./Interval |
|---|---|---|---|---|
| | | Jet to approximately 9.4 feet. Start vibration. | | |
| SP | | Gray medium SAND, some fine sand, some gravel, trace coarse sand, trace silt/clay. | 1 | 1/9.4-12.0 (NOT TESTED) (Overap with NJV-650 R1) |
| ML/CL | | Gray SILT/CLAY, trace fine sand. | | 2/12.0-12.7 (NOT TESTED) (Predominantly fine-grained) |
| SP | | Gray medium SAND, some fine sand, some gravel, trace coarse sand, trace silt/clay. Gray fine to medium SAND, trace coarse sand, trace silt/clay, trace gravel, trace shell fragments. | | 3/12.7-13.3 4/13.3-16.8 |

Notes:
1. Corrected water depth and soil surface elevation datum is NGVD.
2. Sample depths are based on core recovery lengths.
3. Soil descriptions & USCS classifications according to Visual-Manual Procedure (ASTM D 2488) and/or mechanical sieve analysis if analysis performed.
4. Actual sample collection from 9.4 feet to 17.9 feet, total sampled length 8.5 feet. Percent recovery based on this length.

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# Vibrational Core NJV-651

U.S. Army Corps of Engineers
Vibrational Cores–Long Beach Island
Contract Number DACW61-02-D-0004
Task Order 09
Long Beach Island PED

| | |
|---|---|
| Date | : May 30, 2002 |
| Weather | : Sun, 70's |
| Contractor | : Alpine Ocean Seismic Sur. |
| Location | : Long Beach Island, NJ |
| Northing Coord. | : N 305,879.7 NJ-NAD 83 |
| Easting Coord. | : E 610,912.7 NJ-NAD 83 |

| | |
|---|---|
| Uncorrected Depth | : 41.8 feet |
| Tide | : +1.4 feet |
| Corrected Depth | : 40.4 feet (1) |
| Vibration time | : 6'03" |
| Core penetration | : 19.0 feet |
| Core recovery | : 19.8 feet |
| Percent recovery | : 104 % |

Depth in Feet: 0, 5, 10, 15, 20, 25 — Soil Surf. Elev. (ft) -40.4 (1): -41, -46, -51, -56, -61

| USCS | GRAPHIC | DESCRIPTION | Core interval | Sample No./Interval |
|---|---|---|---|---|
| SP | | Light-brown medium to fine SAND, trace coarse sand, trace silt/clay, trace shell fragments. | 1 | 1/0.0-5.0 |
| SP | | Light-brown fine to medium SAND, trace coarse sand, trace gravel, trace shell fragments. | 2 | 2/5.0-10.0 |
| SP | | Gray fine SAND, some medium sand, trace silt/clay, trace coarse sand, trace shell fragments. | 3 | 3/10.0-15.0 |
| SP | | Gray fine SAND, little medium sand, trace silt/clay, trace coarse sand, trace gravel, trace shell fragments. | 4 | 4/15.0-18.2 |
| ML/CL | | Gray SILT/CLAY, little fine sand. | | 5/18.2-19.8 (NOT TESTED) (predominantly fine-grained) |

Notes:
1. Corrected water depth and soil surface elevation datum is NGVD.
2. Sample depths are based on core recovery lengths.
3. Soil descriptions & USCS classifications according to Visual-Manual Procedure (ASTM D 2488) and/or mechanical sieve analysis if analysis performed.

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# Vibrational Core NJV-652 R1

U.S. Army Corps of Engineers
Vibrational Cores–Long Beach Island
Contract Number DACW61-02-D-0004
Task Order 09
Long Beach Island PED

| | |
|---|---|
| Date | : May 30, 2002 |
| Weather | : Sun, 70's |
| Contractor | : Alpine Ocean Seismic Sur. |
| Location | : Long Beach Island, NJ |
| Northing Coord. | : N 304,193.5 NJ-NAD 83 |
| Easting Coord. | : E 611,228.8 NJ-NAD 83 |

| | |
|---|---|
| Uncorrected Depth | : 61.0 feet |
| Tide | : +0.7 feet |
| Corrected Depth | : 60.3 feet (1) |
| Vibration time | : 3'17" |
| Core penetration | : 9.5 feet |
| Core recovery | : 7.0 feet |
| Percent recovery | : 74 % |

Depth in Feet: 0, 5, 10, 15, 20, 25 — Soil Surf. Elev. (ft) -60.3 (1): -61, -66, -71, -76, -81

| USCS | GRAPHIC | DESCRIPTION | Core interval | Sample No./Interval |
|---|---|---|---|---|
| SP-SM | | Gray fine SAND, trace medium sand, trace silt/clay, trace shell fragments. | 1 | 1/0.0-2.1 |
| SP | | Light-brown fine to medium SAND, trace gravel, trace shell fragments. | | 2/2.1-7.0 |

Notes:
1. Corrected water depth and soil surface elevation datum is NGVD.
2. Sample depths are based on core recovery lengths.
3. Soil descriptions & USCS classifications according to Visual-Manual Procedure (ASTM D 2488) and/or mechanical sieve analysis if analysis performed.
4. Practical refusal met at approximately 9.5 feet.

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# Vibrational Core NJV-652 R2

U.S. Army Corps of Engineers
Vibrational Cores–Long Beach Island
Contract Number DACW61-02-D-0004
Task Order 09
Long Beach Island PED

| | |
|---|---|
| Date | : May 30, 2002 |
| Weather | : Sun, 70's |
| Contractor | : Alpine Ocean Seismic Sur. |
| Location | : Long Beach Island, NJ |
| Northing Coord. | : N 304,196.9 NJ-NAD 83 |
| Easting Coord. | : E 611,214.6 NJ-NAD 83 |

| | |
|---|---|
| Uncorrected Depth | : 61.8 feet |
| Tide | : +1.0 feet |
| Corrected Depth | : 60.8 feet (1) |
| Vibration time | : 10'44" |
| Core penetration | : 13.5 feet |
| Core recovery | : 15.6 feet |
| Percent recovery | : 115 % (4) (5) |

Depth in Feet: 0, 5, 10, 15, 20, 25 — Soil Surf. Elev. (ft) -60.8 (1): -61, -66, -71, -76, -81

| USCS | GRAPHIC | DESCRIPTION | Core interval | Sample No./Interval |
|---|---|---|---|---|
| | | Jet to approximately 5.0 feet, then start vibration. | | |
| SP | | Gray fine SAND, some medium sand, trace coarse sand, trace silt/clay, trace shell fragments. | 1 | 1/5.0-10.0 |
| SP | | Gray fine SAND, some medium sand, trace coarse sand, trace silt/clay, trace shell fragments. | 2 | 2/10.0-15.0 |
| SP | | Gray fine SAND, some medium sand, trace silt/clay, trace coarse sand, trace gravel, trace shell fragments. | 3 | 3/15.0-20.6 |

Notes:
1. Corrected water depth and soil surface elevation datum is NGVD.
2. Sample depths are based on core recovery lengths.
3. Soil descriptions & USCS classifications according to Visual-Manual Procedure (ASTM D 2488) and/or mechanical sieve analysis if analysis performed.
4. Actual sample collection from 5.0 feet to 18.5 feet, total sampled length 13.5 feet. Percent recovery based on this length.
5. Percent recovery reflects "over recovery" possibly due to sample heave in liner and/or difficulty of penetration through dense strata.

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# Vibrational Core NJV-654

U.S. Army Corps of Engineers
Vibrational Cores–Long Beach Island
Contract Number DACW61-02-D-0004
Task Order 09
Long Beach Island PED

| | |
|---|---|
| Date | : June 3, 2002 |
| Weather | : Sun, 70's |
| Contractor | : Alpine Ocean Seismic Sur. |
| Location | : Long Beach Island, NJ |
| Northing Coord. | : N 306,412.6 NJ-NAD 83 |
| Easting Coord. | : E 609,192.0 NJ-NAD 83 |

| | |
|---|---|
| Uncorrected Depth | : 41.7 feet |
| Tide | : -1.9 feet |
| Corrected Depth | : 43.6 feet (1) |
| Vibration time | : 7'31" |
| Core penetration | : 17.1 feet |
| Core recovery | : 17.9 feet |
| Percent recovery | : 105 % (4) |

Depth in Feet: 0, 5, 10, 15, 20, 25 — Soil Surf. Elev. (ft) -43.6 (1): -44, -49, -54, -59, -64

| USCS | GRAPHIC | DESCRIPTION | Core interval | Sample No./Interval |
|---|---|---|---|---|
| SP | | Gray fine SAND, some medium sand, trace coarse sand, trace silt/clay, trace gravel, trace shell fragments. | 1 | 1/0.0-5.0 |
| SP | | Gray fine SAND, some medium sand, trace coarse sand, trace silt/clay, trace shell fragments. | 2 | 2/5.0-10.0 |
| SP | | Gray fine SAND, some medium sand, trace coarse sand, trace gravel, trace silt/clay, trace shell fragments. | 3 | 3/10.0-15.0 |
| SP | | Gray fine SAND, some medium sand, trace coarse sand, trace silt/clay, trace shell fragments. | 4 | 4/15.0-17.9 |

Notes:
1. Corrected water depth and soil surface elevation datum is NGVD.
2. Sample depths are based on core recovery lengths.
3. Soil descriptions & USCS classifications according to Visual-Manual Procedure (ASTM D 2488) and/or mechanical sieve analysis if analysis performed.
4. Percent recovery reflects "over recovery" of sample possibly due to sample heave in liner and/or difficulty of penetration through dense strata.

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# Vibrational Core NJV-655

U.S. Army Corps of Engineers
Vibrational Cores–Long Beach Island
Contract Number DACW61-02-D-0004
Task Order 09
Long Beach Island PED

| | |
|---|---|
| Date | : June 2, 2002 |
| Weather | : Sun, 70's |
| Contractor | : Alpine Ocean Seismic Sur. |
| Location | : Long Beach Island, NJ |
| Northing Coord. | : N 303,104.2 NJ-NAD 83 |
| Easting Coord. | : E 608,439.8 NJ-NAD 83 |

| | |
|---|---|
| Uncorrected Depth | : 62.5 feet |
| Tide | : +0.7 feet |
| Corrected Depth | : 61.8 feet (1) |
| Vibration time | : 2'01" |
| Core penetration | : 19.2 feet |
| Core recovery | : 19.3 feet |
| Percent recovery | : 100 % |

Depth in Feet: 0, 5, 10, 15, 20, 25 — Soil Surf. Elev. (ft) -61.8 (1): -62, -67, -72, -77, -82

| USCS | GRAPHIC | DESCRIPTION | Core interval | Sample No./Interval |
|---|---|---|---|---|
| SP | | Gray fine SAND, some medium sand, trace silt/clay, trace coarse sand, trace shell fragments. | 1 | 1/0.3-5.0 |
| SP | | Gray fine SAND, some medium sand, trace silt/clay, trace coarse sand, trace shell fragments. | 2 | 2/5.0-10.0 |
| SP | | Gray fine SAND, some medium sand, trace coarse sand, trace silt/clay, trace shell fragments. | 3 | 3/10.0-15.0 |
| SP | | Gray fine SAND, trace medium sand, trace silt/clay, trace coarse sand, trace gravel, trace shell fragments. | 4 | 4/15.0-16.0 |
| SP-SM | | Gray fine SAND, little medium sand, trace silt/clay, trace coarse sand, trace gravel, trace shell fragments. | | 5/16.0-16.7 |
| SP | | Gray fine SAND, trace medium sand, trace silt/clay, trace coarse sand, trace gravel, trace shell fragments. | | 6/16.7-19.3 |

Notes:
1. Corrected water depth and soil surface elevation datum is NGVD.
2. Sample depths are based on core recovery lengths.
3. Soil descriptions & USCS classifications according to Visual-Manual Procedure (ASTM D 2488) and/or mechanical sieve analysis if analysis performed.

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US Army Corps of Engineers
Philadelphia District

| Mark | Description | Date | Appr. |
|---|---|---|---|

| Mark | Description | Date | Appr. |
|---|---|---|---|

U.S. ARMY ENGINEER DISTRICT, PHILADELPHIA
CORPS OF ENGINEERS
PHILADELPHIA, PENNSYLVANIA

**FEASIBILITY STUDY PLANS**

Designed by: LAM
Dwn by: LAM | Ckd by: DCL
Reviewed by: CPC
Submitted by: ATR
Chief, Arch. Branch

Date: OCT/31/2006 | Rev.
IFB W912BU-06-B-0000
Drawing code:
File name: LBIVIBCORES
Plot date:
Plot scale: 1in to 1 ft

BARNEGAT INLET TO LITTLE EGG INLET
OCEAN COUNTY, NEW JERSEY
BEACHFILL

**VIBRACORE LOGS**
**NJV-650 TO NJV-655**

Sheet reference number:
XXXXX
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