

GRADATION ANALYSIS REPORT  
TOWN OF PALM BEACH  
TESTED BY: RW ON: 5/11/99

SAMPLE NO.: VC99 10#1  
SAMPLE ELEV. (FT. NGVD): -38.6  
SAMPLE DEPTH (FT.): 1.5  
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 83.35  
SAMPLE WEIGHT AFTER WASH (GRAMS): 81.90

| SIEVE<br>SIZE | PHI<br>SIZE | MESH SIZE<br>(mm) | RETAINED<br>(GRAMS) | RETAINED<br>(%) | PASSED<br>(%) |
|---------------|-------------|-------------------|---------------------|-----------------|---------------|
| 5/8           | -4.00       | 16.000            | 0.00                | 0.00            | 100.00        |
| 5/16          | -3.00       | 8.000             | 0.00                | 0.00            | 100.00        |
| 5             | -2.00       | 4.000             | 0.18                | 0.22            | 99.78         |
| 7             | -1.50       | 2.800             | 0.35                | 0.42            | 99.58         |
| 10            | -1.00       | 2.000             | 0.48                | 0.58            | 99.42         |
| 14            | -0.50       | 1.400             | 0.70                | 0.84            | 99.16         |
| 18            | 0.00        | 1.000             | 0.94                | 1.13            | 98.87         |
| 25            | 0.50        | 0.710             | 1.37                | 1.64            | 98.36         |
| 35            | 1.00        | 0.500             | 2.43                | 2.92            | 97.08         |
| 45            | 1.50        | 0.355             | 4.82                | 5.78            | 94.22         |
| 60            | 2.00        | 0.250             | 9.73                | 11.67           | 88.33         |
| 80            | 2.50        | 0.180             | 10.03               | 12.03           | 87.97         |
| 120           | 3.00        | 0.125             | 56.97               | 68.35           | 31.65         |
| 170           | 3.50        | 0.090             | 80.65               | 96.76           | 3.24          |
| 200           | 3.75        | 0.075             | 81.70               | 98.02           | 1.98          |
| 230           | 4.00        | 0.063             | 82.46               | 98.93           | 1.07          |
| PAN           |             |                   | 83.32               | 99.96           | 0.04          |

PHI(5): 1.36 PHI(16): 2.54 PHI(25): 2.62  
PHI(50): 2.84 PHI(75): 3.12 PHI(84): 3.28  
PHI(95): 3.47

SIEVE LOSS(g): 0.03 SILT/CLAY: 1.98%  
SKEWNESS: -1.137 KURTOSIS: 1.719

GRAPHIC METHOD

MEAN (PHI): 2.70 SORTING: 0.37  
MEAN (mm): 0.15 MEDIAN (mm): 0.14  
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 2.73 SORTING: 0.70  
MEAN (mm): 0.15

DATA FILE NAME: VC99-10#1.TAB

## GRADATION ANALYSIS REPORT

TOWN OF PALM BEACH

TESTED BY: RW

ON: 5/11/99

SAMPLE NO.: VC99 10#2

SAMPLE ELEV. (FT. NGVD): -39.8

SAMPLE DEPTH (FT.): 2.7

SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 91.80

SAMPLE WEIGHT AFTER WASH (GRAMS): 90.62

| SIEVE<br>SIZE | PHI<br>SIZE | MESH SIZE<br>(mm) | RETAINED<br>(GRAMS) | RETAINED<br>(%) | PASSED<br>(%) |
|---------------|-------------|-------------------|---------------------|-----------------|---------------|
| 5/8           | -4.00       | 16.000            | 0.00                | 0.00            | 100.00        |
| 5/16          | -3.00       | 8.000             | 0.00                | 0.00            | 100.00        |
| 5             | -2.00       | 4.000             | 0.11                | 0.12            | 99.88         |
| 7             | -1.50       | 2.800             | 0.38                | 0.41            | 99.59         |
| 10            | -1.00       | 2.000             | 0.87                | 0.95            | 99.05         |
| 14            | -0.50       | 1.400             | 1.70                | 1.85            | 98.15         |
| 18            | 0.00        | 1.000             | 2.86                | 3.12            | 96.88         |
| 25            | 0.50        | 0.710             | 5.15                | 5.61            | 94.39         |
| 35            | 1.00        | 0.500             | 10.95               | 11.93           | 88.07         |
| 45            | 1.50        | 0.355             | 23.34               | 25.42           | 74.58         |
| 60            | 2.00        | 0.250             | 42.82               | 46.64           | 53.36         |
| 80            | 2.50        | 0.180             | 63.01               | 68.64           | 31.36         |
| 120           | 3.00        | 0.125             | 82.14               | 89.48           | 10.52         |
| 170           | 3.50        | 0.090             | 90.09               | 98.14           | 1.86          |
| 200           | 3.75        | 0.075             | 90.53               | 98.62           | 1.38          |
| 230           | 4.00        | 0.063             | 91.15               | 99.29           | 0.71          |
| PAN           |             |                   | 91.77               | 99.97           | 0.03          |

PHI(5): 0.38

PHI(16): 1.15

PHI(25): 1.48

PHI(50): 2.08

PHI(75): 2.65

PHI(84): 2.87

PHI(95): 3.32

SIEVE LOSS(g): 0.03

SILT/CLAY: 1.38%

SKEWNESS: -0.265

KURTOSIS: 1.032

## GRAPHIC METHOD

MEAN (PHI): 1.96

SORTING: 0.86

MEAN (mm): 0.26

MEDIAN (mm): 0.24

NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

## MOMENT METHOD

MEAN (PHI): 1.98

SORTING: 0.91

MEAN (mm): 0.25

DATA FILE NAME: VC99-10#2.TAB

## GRADATION ANALYSIS REPORT

TOWN OF PALM BEACH

TESTED BY: RW

ON: 5/11/99

SAMPLE NO.: VC99 10#3

SAMPLE ELEV. (FT. NGVD): -41.6

SAMPLE DEPTH (FT.): 4.5

SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 96.08

SAMPLE WEIGHT AFTER WASH (GRAMS): 95.09

| SIEVE<br>SIZE | PHI<br>SIZE | MESH SIZE<br>(mm) | RETAINED<br>(GRAMS) | RETAINED<br>(%) | PASSED<br>(%) |
|---------------|-------------|-------------------|---------------------|-----------------|---------------|
| 5/8           | -4.00       | 16.000            | 0.00                | 0.00            | 100.00        |
| 5/16          | -3.00       | 8.000             | 2.47                | 2.57            | 97.43         |
| 5             | -2.00       | 4.000             | 8.00                | 8.33            | 91.67         |
| 7             | -1.50       | 2.800             | 12.38               | 12.89           | 87.11         |
| 10            | -1.00       | 2.000             | 19.72               | 20.52           | 79.48         |
| 14            | -0.50       | 1.400             | 31.62               | 32.91           | 67.09         |
| 18            | 0.00        | 1.000             | 43.02               | 44.78           | 55.22         |
| 25            | 0.50        | 0.710             | 57.98               | 60.35           | 39.65         |
| 35            | 1.00        | 0.500             | 75.96               | 79.06           | 20.94         |
| 45            | 1.50        | 0.355             | 83.87               | 87.29           | 12.71         |
| 60            | 2.00        | 0.250             | 88.02               | 91.61           | 8.39          |
| 80            | 2.50        | 0.180             | 89.61               | 93.27           | 6.73          |
| 120           | 3.00        | 0.125             | 92.23               | 95.99           | 4.01          |
| 170           | 3.50        | 0.090             | 94.89               | 98.76           | 1.24          |
| 200           | 3.75        | 0.075             | 95.01               | 98.89           | 1.11          |
| 230           | 4.00        | 0.063             | 95.53               | 99.42           | 0.58          |
| PAN           |             |                   | 96.04               | 99.96           | 0.04          |

PHI (5): -2.58

PHI (16): -1.30

PHI (25): -0.82

PHI (50): 0.17

PHI (75): 0.89

PHI (84): 1.30

PHI (95): 2.82

SIEVE LOSS (g): 0.04

SILT/CLAY: 1.11%

SKEWNESS: -0.037

KURTOSIS: 1.293

## GRAPHIC METHOD

MEAN (PHI): 0.08

SORTING: 1.30

MEAN (mm): 0.94

MEDIAN (mm): 0.89

NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

## MOMENT METHOD

MEAN (PHI): 0.05

SORTING: 1.44

MEAN (mm): 0.96

DATA FILE NAME: VC99-10#3.TAB

## GRADATION ANALYSIS REPORT

TOWN OF PALM BEACH

TESTED BY: RW ON: 5/11/99

SAMPLE NO.: VC99 10#4

SAMPLE ELEV. (FT. NGVD): -43.6

SAMPLE DEPTH (FT.): 6.5

SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 96.42

SAMPLE WEIGHT AFTER WASH (GRAMS): 95.20

| SIEVE<br>SIZE | PHI<br>SIZE | MESH SIZE<br>(mm) | RETAINED<br>(GRAMS) | RETAINED<br>(%) | PASSED<br>(%) |
|---------------|-------------|-------------------|---------------------|-----------------|---------------|
| 5/8           | -4.00       | 16.000            | 0.00                | 0.00            | 100.00        |
| 5/16          | -3.00       | 8.000             | 0.00                | 0.00            | 100.00        |
| 5             | -2.00       | 4.000             | 0.90                | 0.93            | 99.07         |
| 7             | -1.50       | 2.800             | 2.14                | 2.22            | 97.78         |
| 10            | -1.00       | 2.000             | 4.07                | 4.22            | 95.78         |
| 14            | -0.50       | 1.400             | 7.77                | 8.06            | 91.94         |
| 18            | 0.00        | 1.000             | 13.40               | 13.90           | 86.10         |
| 25            | 0.50        | 0.710             | 23.59               | 24.47           | 75.53         |
| 35            | 1.00        | 0.500             | 41.52               | 43.06           | 56.94         |
| 45            | 1.50        | 0.355             | 52.54               | 54.49           | 45.51         |
| 60            | 2.00        | 0.250             | 62.09               | 64.40           | 35.60         |
| 80            | 2.50        | 0.180             | 70.12               | 72.72           | 27.28         |
| 120           | 3.00        | 0.125             | 85.21               | 88.37           | 11.63         |
| 170           | 3.50        | 0.090             | 94.82               | 98.34           | 1.66          |
| 200           | 3.75        | 0.075             | 95.05               | 98.58           | 1.42          |
| 230           | 4.00        | 0.063             | 95.74               | 99.29           | 0.71          |
| PAN           |             |                   | 96.40               | 99.98           | 0.02          |

PHI(5): -0.90

PHI(16): 0.10

PHI(25): 0.51

PHI(50): 1.30

PHI(75): 2.57

PHI(84): 2.86

PHI(95): 3.33

SIEVE LOSS(g): 0.02

SILT/CLAY: 1.42%

SKEWNESS: -0.063

KURTOSIS: 0.842

## GRAPHIC METHOD

MEAN (PHI): 1.34

SORTING: 1.38

MEAN (mm): 0.40

MEDIAN (mm): 0.41

NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

## MOMENT METHOD

MEAN (PHI): 1.36

SORTING: 1.32

MEAN (mm): 0.39

DATA FILE NAME: VC99-10#4.TAB

## GRADATION ANALYSIS REPORT

TOWN OF PALM BEACH

TESTED BY: RW ON: 5/11/99

SAMPLE NO.: VC99 10#5

SAMPLE ELEV. (FT. NGVD): -45.6

SAMPLE DEPTH (FT.): 8.5

SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 91.53

SAMPLE WEIGHT AFTER WASH (GRAMS): 89.86

| SIEVE<br>SIZE | PHI<br>SIZE | MESH SIZE<br>(mm) | RETAINED<br>(GRAMS) | RETAINED<br>(%) | PASSED<br>(%) |
|---------------|-------------|-------------------|---------------------|-----------------|---------------|
| 5/8           | -4.00       | 16.000            | 0.00                | 0.00            | 100.00        |
| 5/16          | -3.00       | 8.000             | 0.00                | 0.00            | 100.00        |
| 5             | -2.00       | 4.000             | 0.00                | 0.00            | 100.00        |
| 7             | -1.50       | 2.800             | 0.01                | 0.01            | 99.99         |
| 10            | -1.00       | 2.000             | 0.11                | 0.12            | 99.88         |
| 14            | -0.50       | 1.400             | 0.29                | 0.32            | 99.68         |
| 18            | 0.00        | 1.000             | 0.49                | 0.54            | 99.46         |
| 25            | 0.50        | 0.710             | 0.90                | 0.98            | 99.02         |
| 35            | 1.00        | 0.500             | 1.95                | 2.13            | 97.87         |
| 45            | 1.50        | 0.355             | 3.55                | 3.88            | 96.12         |
| 60            | 2.00        | 0.250             | 8.17                | 8.93            | 91.07         |
| 80            | 2.50        | 0.180             | 19.39               | 21.18           | 78.82         |
| 120           | 3.00        | 0.125             | 58.28               | 63.67           | 36.33         |
| 170           | 3.50        | 0.090             | 88.70               | 96.91           | 3.09          |
| 200           | 3.75        | 0.075             | 89.72               | 98.02           | 1.98          |
| 230           | 4.00        | 0.063             | 90.64               | 99.02           | 0.98          |
| PAN           |             |                   | 91.50               | 99.97           | 0.03          |

PHI(5): 1.61

PHI(16): 2.29

PHI(25): 2.54

PHI(50): 2.84

PHI(75): 3.17

PHI(84): 3.31

PHI(95): 3.47

SIEVE LOSS(g): 0.03

SILT/CLAY: 1.98%

SKEWNESS: -0.586

KURTOSIS: 1.219

## GRAPHIC METHOD

MEAN (PHI): 2.70

SORTING: 0.51

MEAN (mm): 0.15

MEDIAN (mm): 0.14

NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

## MOMENT METHOD

MEAN (PHI): 2.75

SORTING: 0.60

MEAN (mm): 0.15

DATA FILE NAME: VC99-10#5.TAB

## GRADATION ANALYSIS REPORT

TOWN OF PALM BEACH

TESTED BY: RW ON: 5/11/99

SAMPLE NO.: VC99 10#6

SAMPLE ELEV. (FT. NGVD): -48.0

SAMPLE DEPTH (FT.): 10.9

SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 90.04

SAMPLE WEIGHT AFTER WASH (GRAMS): 88.47

| SIEVE<br>SIZE | PHI<br>SIZE | MESH SIZE<br>(mm) | RETAINED<br>(GRAMS) | RETAINED<br>(%) | PASSED<br>(%) |
|---------------|-------------|-------------------|---------------------|-----------------|---------------|
| 5/8           | -4.00       | 16.000            | 0.00                | 0.00            | 100.00        |
| 5/16          | -3.00       | 8.000             | 0.00                | 0.00            | 100.00        |
| 5             | -2.00       | 4.000             | 0.66                | 0.73            | 99.27         |
| 7             | -1.50       | 2.800             | 1.55                | 1.72            | 98.28         |
| 10            | -1.00       | 2.000             | 2.96                | 3.29            | 96.71         |
| 14            | -0.50       | 1.400             | 5.60                | 6.22            | 93.78         |
| 18            | 0.00        | 1.000             | 10.23               | 11.36           | 88.64         |
| 25            | 0.50        | 0.710             | 16.26               | 18.06           | 81.94         |
| 35            | 1.00        | 0.500             | 26.38               | 29.30           | 70.70         |
| 45            | 1.50        | 0.355             | 35.24               | 39.14           | 60.86         |
| 60            | 2.00        | 0.250             | 42.33               | 47.01           | 52.99         |
| 80            | 2.50        | 0.180             | 51.10               | 56.75           | 43.25         |
| 120           | 3.00        | 0.125             | 75.59               | 83.95           | 16.05         |
| 170           | 3.50        | 0.090             | 88.01               | 97.75           | 2.25          |
| 200           | 3.75        | 0.075             | 88.37               | 98.15           | 1.85          |
| 230           | 4.00        | 0.063             | 89.21               | 99.08           | 0.92          |
| PAN           |             |                   | 90.04               | 100.00          | 0.00          |

PHI(5): -0.71

PHI(16): 0.35

PHI(25): 0.81

PHI(50): 2.15

PHI(75): 2.84

PHI(84): 3.00

PHI(95): 3.40

SIEVE LOSS(g): 0.00

SILT/CLAY: 1.85%

SKEWNESS: -0.608

KURTOSIS: 0.831

## GRAPHIC METHOD

MEAN (PHI): 1.64

SORTING: 1.33

MEAN (mm): 0.32

MEDIAN (mm): 0.22

NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

## MOMENT METHOD

MEAN (PHI): 1.75

SORTING: 1.32

MEAN (mm): 0.30

DATA FILE NAME: VC99-10#6.TAB

## GRADATION ANALYSIS REPORT

TOWN OF PALM BEACH

TESTED BY: RW ON: 5/11/99

SAMPLE NO.: VC99 10#7

SAMPLE ELEV. (FT. NGVD): -52.6

SAMPLE DEPTH (FT.): 15.5

SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 87.78

SAMPLE WEIGHT AFTER WASH (GRAMS): 85.82

| SIEVE<br>SIZE | PHI<br>SIZE | MESH SIZE<br>(mm) | RETAINED<br>(GRAMS) | RETAINED<br>(%) | PASSED<br>(%) |
|---------------|-------------|-------------------|---------------------|-----------------|---------------|
| 5/8           | -4.00       | 16.000            | 0.00                | 0.00            | 100.00        |
| 5/16          | -3.00       | 8.000             | 0.00                | 0.00            | 100.00        |
| 5             | -2.00       | 4.000             | 0.07                | 0.08            | 99.92         |
| 7             | -1.50       | 2.800             | 0.24                | 0.27            | 99.73         |
| 10            | -1.00       | 2.000             | 0.41                | 0.47            | 99.53         |
| 14            | -0.50       | 1.400             | 0.64                | 0.73            | 99.27         |
| 18            | 0.00        | 1.000             | 0.86                | 0.98            | 99.02         |
| 25            | 0.50        | 0.710             | 1.19                | 1.36            | 98.64         |
| 35            | 1.00        | 0.500             | 1.76                | 2.01            | 97.99         |
| 45            | 1.50        | 0.355             | 2.79                | 3.18            | 96.82         |
| 60            | 2.00        | 0.250             | 6.48                | 7.38            | 92.62         |
| 80            | 2.50        | 0.180             | 17.63               | 20.08           | 79.92         |
| 120           | 3.00        | 0.125             | 53.47               | 60.91           | 39.09         |
| 170           | 3.50        | 0.090             | 84.05               | 95.75           | 4.25          |
| 200           | 3.75        | 0.075             | 85.69               | 97.62           | 2.38          |
| 230           | 4.00        | 0.063             | 86.78               | 98.86           | 1.14          |
| PAN           |             |                   | 87.78               | 100.00          | 0.00          |

PHI(5): 1.72

PHI(16): 2.34

PHI(25): 2.56

PHI(50): 2.87

PHI(75): 3.20

PHI(84): 3.33

PHI(95): 3.49

SIEVE LOSS(g): 0.00

SILT/CLAY: 2.38%

SKEWNESS: -0.531

KURTOSIS: 1.132

## GRAPHIC METHOD

MEAN (PHI): 2.75

SORTING: 0.50

MEAN (mm): 0.15

MEDIAN (mm): 0.14

NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

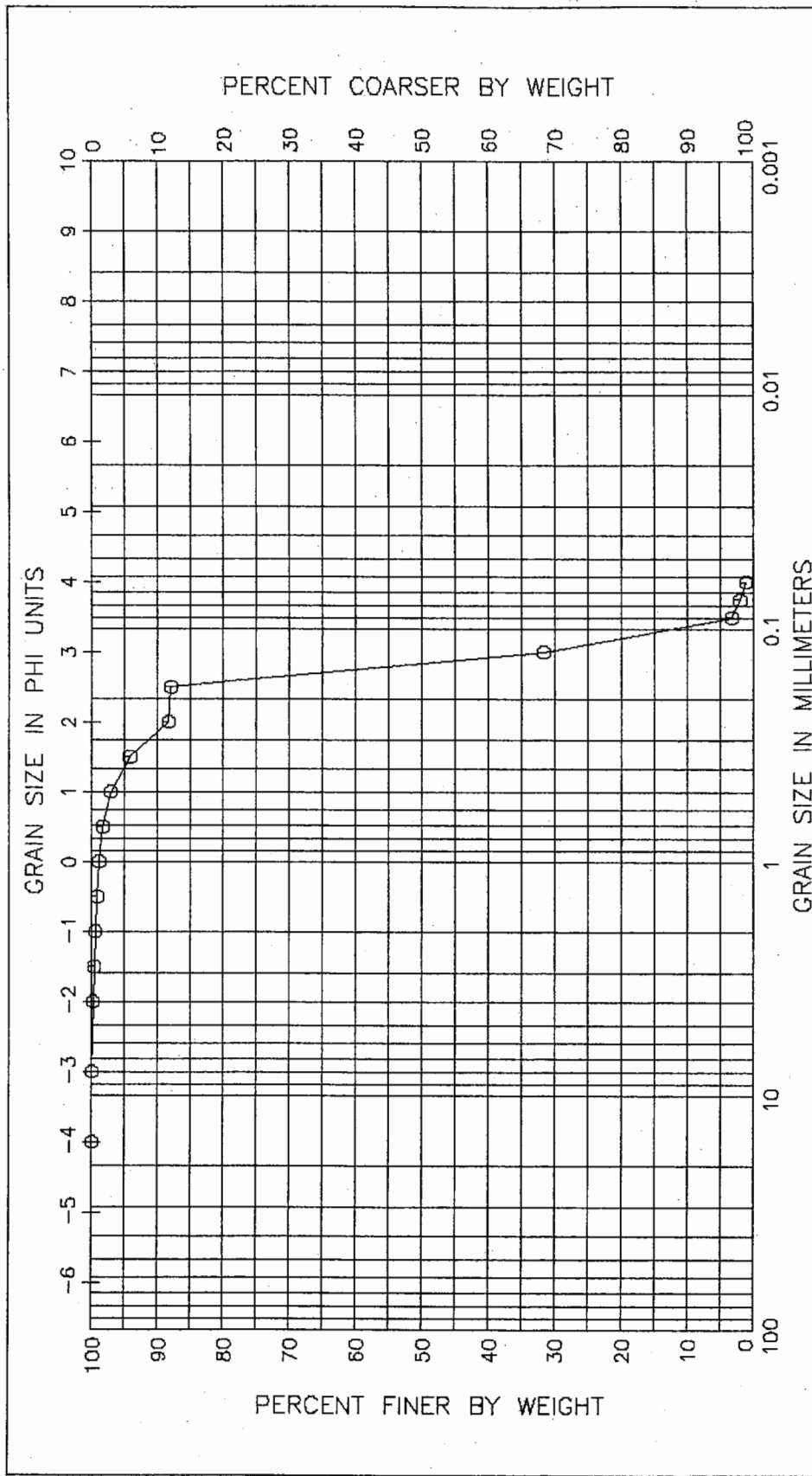
## MOMENT METHOD

MEAN (PHI): 2.77

SORTING: 0.65

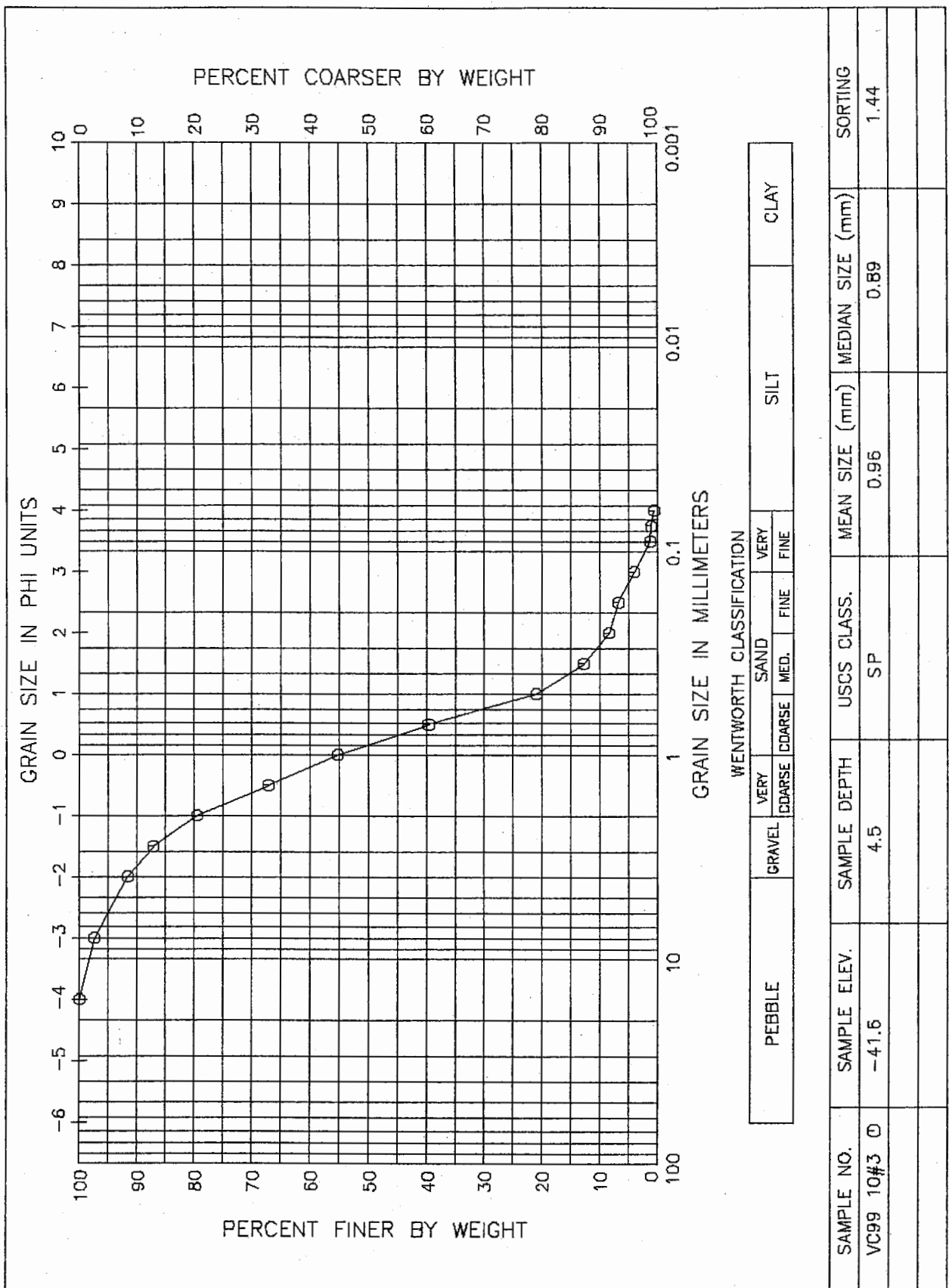
MEAN (mm): 0.15

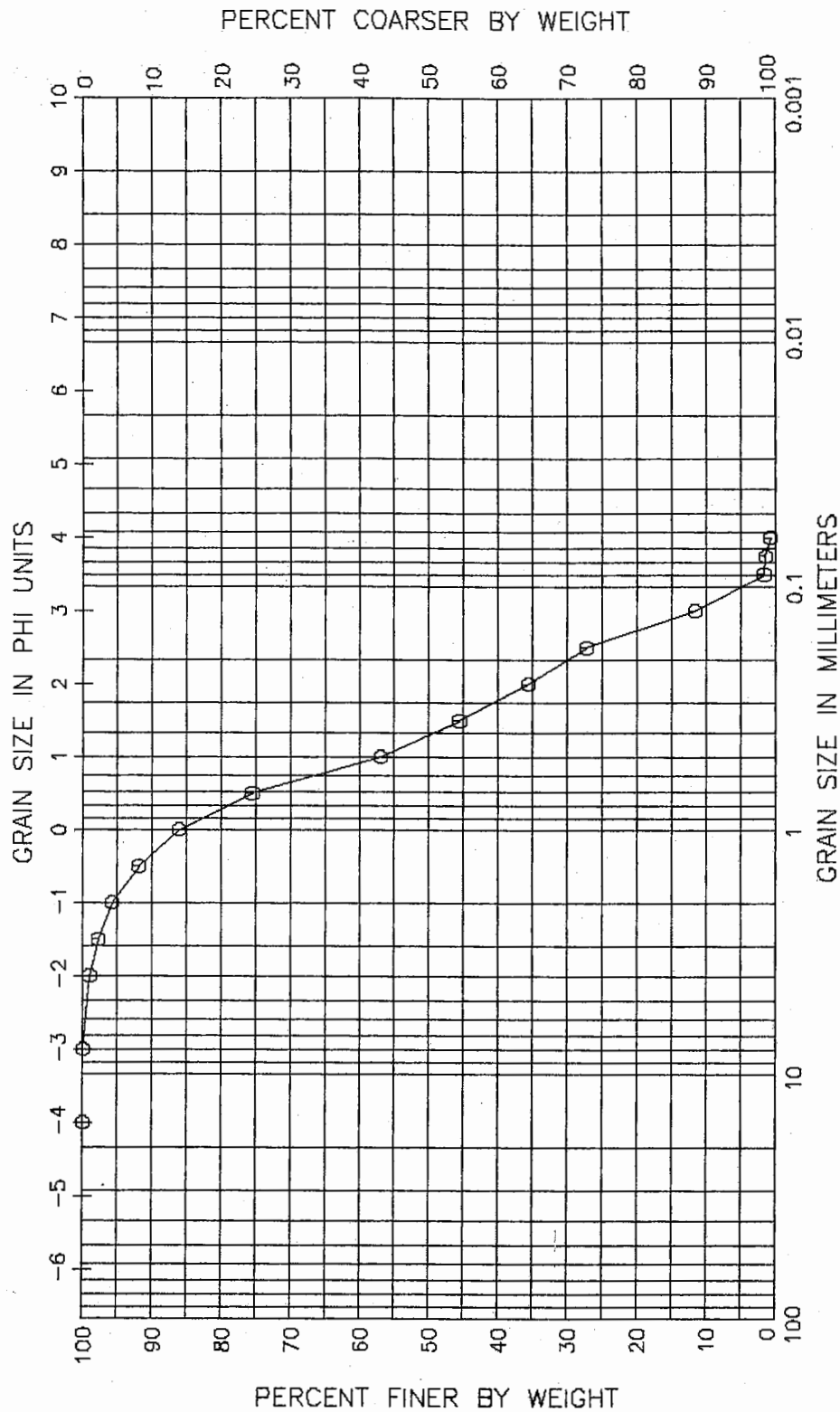
DATA FILE NAME: VC99-10#7.TAB









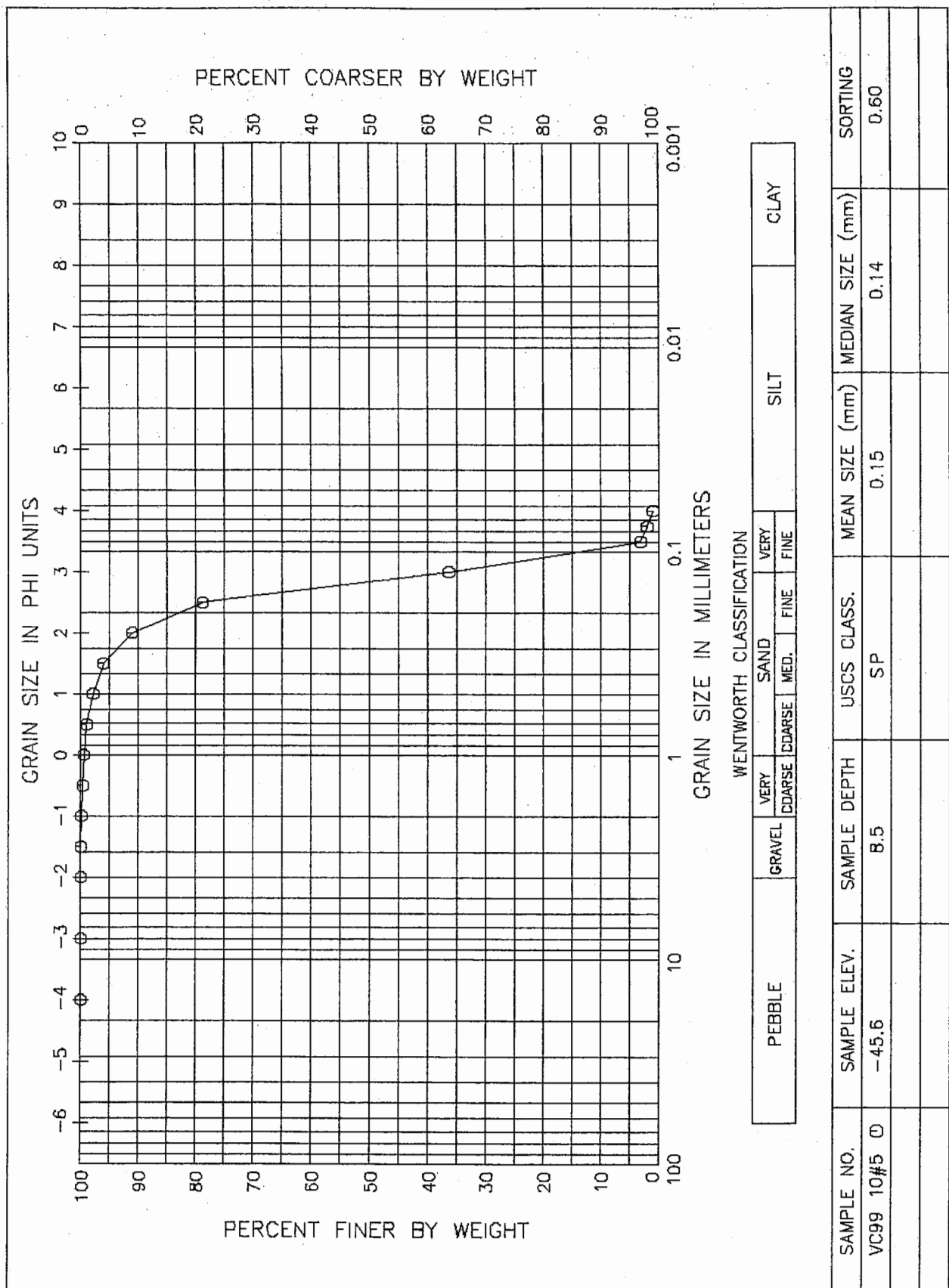


WENTWORTH CLASSIFICATION

| PEBBLE | GRAVEL | SAND        |        |      |      | SILT      |      | CLAY |
|--------|--------|-------------|--------|------|------|-----------|------|------|
|        |        | VERY COARSE | COARSE | MED. | FINE | VERY FINE | FINE |      |

| SAMPLE NO. | SAMPLE ELEV. | SAMPLE DEPTH | USCS CLASS. | MEAN SIZE (mm) | MEDIAN SIZE (mm) | SORTING |
|------------|--------------|--------------|-------------|----------------|------------------|---------|
| VC99 10#4  | -43.6        | 6.5          | SP          | 0.39           | 0.41             | 1.32    |
|            |              |              |             |                |                  |         |
|            |              |              |             |                |                  |         |

GRAIN SIZE DISTRIBUTION CURVE  
TOWN OF PALM BEACH



GRAIN SIZE DISTRIBUTION CURVE  
TOWN OF PALM BEACH

