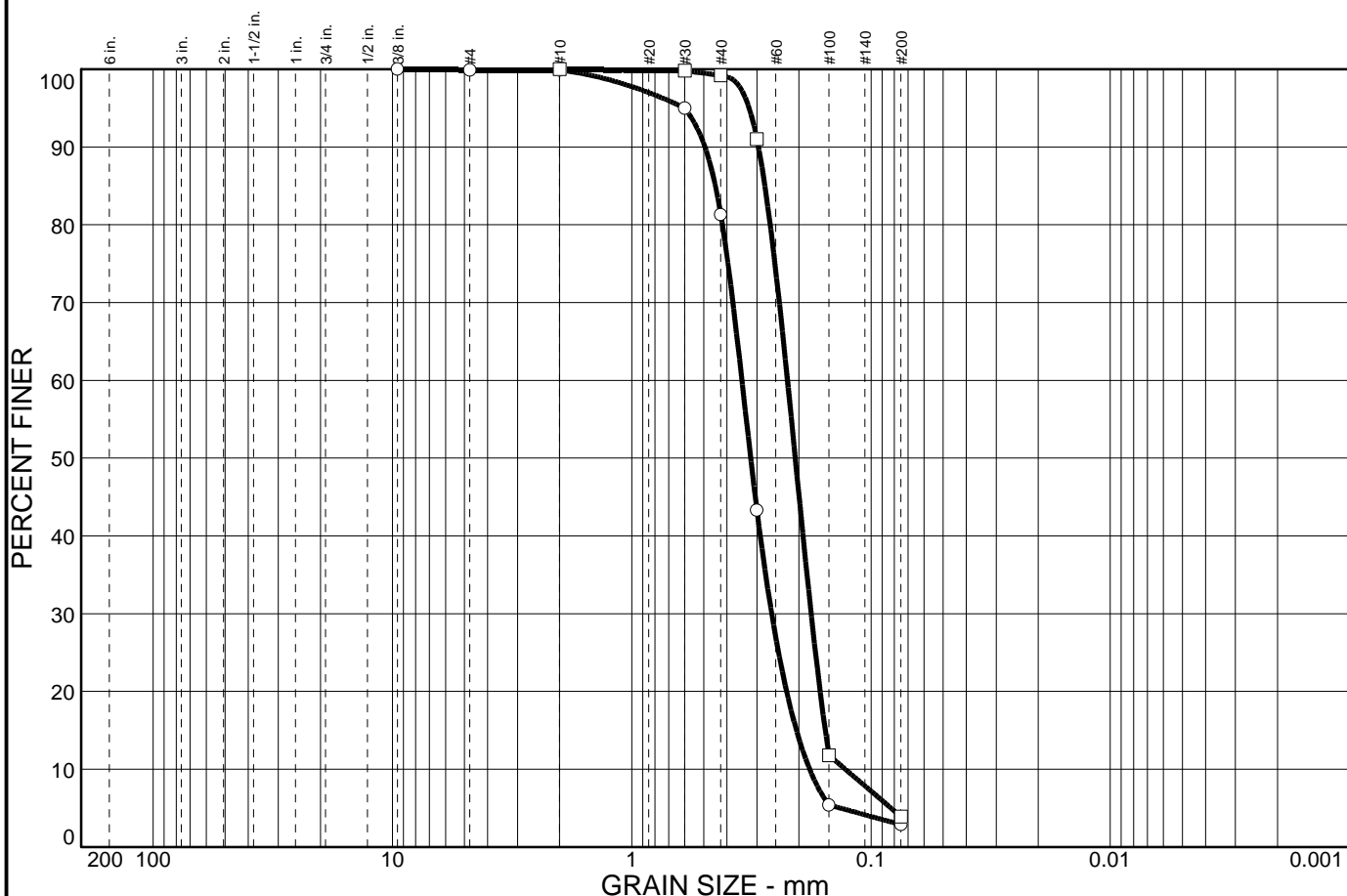


## APPENDIX C

# Particle Size Distribution Report

# Particle Size Distribution Report



|   | % COBBLES | % GRAVEL | % SAND | % SILT | % CLAY | USCS | AASHTO | PL | LL |
|---|-----------|----------|--------|--------|--------|------|--------|----|----|
| ○ |           | 0.1      | 97.0   |        | 2.9    |      |        |    |    |
| □ |           |          | 96.1   |        | 3.9    | SP   |        |    |    |

| SIEVE<br>inches<br>size | PERCENT FINER |       |
|-------------------------|---------------|-------|
|                         | ○             | □     |
| 3/8"                    | 100.0         |       |
| GRAIN SIZE              |               |       |
| D <sub>60</sub>         | 0.347         | 0.224 |
| D <sub>30</sub>         | 0.260         | 0.178 |
| D <sub>10</sub>         | 0.181         | 0.128 |
| COEFFICIENTS            |               |       |
| C <sub>c</sub>          | 1.08          | 1.11  |
| C <sub>u</sub>          | 1.92          | 1.75  |

| SIEVE<br>number<br>size | PERCENT FINER |       |
|-------------------------|---------------|-------|
|                         | ○             | □     |
| #4                      | 99.9          |       |
| #10                     | 99.9          | 100.0 |
| #30                     | 95.0          | 99.8  |
| #40                     | 81.3          | 99.2  |
| #50                     | 43.3          | 91.0  |
| #100                    | 5.4           | 11.8  |
| #200                    | 2.9           | 3.9   |

**SOIL DESCRIPTION**

○ Olive Poorly Graded SAND

□ Olive Poorly Graded SAND

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**REMARKS:**

○

□

○ Source: BSC-1  
 □ Source: SZC-1



**Constant Head Permeability Test  
ASTM D2434**

**CTL Job No:** 461-300      **Boring:** SZC-1      **Date:** 7/30/2015  
**Client:** Geosyntec Consultants      **Sample:** \_\_\_\_\_      **By:** PJ  
**Project Name:** West Basin Coastal Subsurface Intake Feasibility Study      **Depth, ft:** \_\_\_\_\_  
**Project No.:** \_\_\_\_\_  
**Soil Description:** Olive Poorly Graded SAND  
**Remolding Data:** 6 lifts tamped in with moderate effort

| Constant Head Calculation, K=QL/thA |                       |                |                  |                 |                    |                                   |
|-------------------------------------|-----------------------|----------------|------------------|-----------------|--------------------|-----------------------------------|
| Test #                              | Elapsed Time t, (sec) | Volume Q, (cc) | Head Loss h (cm) | Water Temp (°C) | Hydraulic Gradient | Coef. Of Permeability K, (cm/sec) |
| 1                                   | 115                   | 23             | 2.5              | 24.6            | 0.39               | 0.016                             |
| 2                                   | 85                    | 18             | 2.5              | 24.6            | 0.39               | 0.016                             |
| 3                                   | 120                   | 33             | 3.3              | 24.6            | 0.52               | 0.016                             |
| 4                                   | 80                    | 26             | 3.9              | 24.6            | 0.61               | 0.016                             |
| 5                                   | 160                   | 67             | 4.9              | 24.6            | 0.77               | 0.017                             |

|                                       |  |  |  |  |  |             |
|---------------------------------------|--|--|--|--|--|-------------|
| <b>Average Permeability (cm/sec):</b> |  |  |  |  |  | <b>0.02</b> |
| <b>Average Permeability (in/hr):</b>  |  |  |  |  |  | <b>23</b>   |

| Sample Data:    |                   | Initial      | Final         |
|-----------------|-------------------|--------------|---------------|
| Height, (L)     | in.:              | 6.00         | 5.88          |
| Diameter,       | in.:              | 2.39         | 2.39          |
| Area, (A)       | in <sup>2</sup> : | 4.49         | 4.49          |
| Volume,         | in <sup>3</sup> : | 26.92        | 26.38         |
| Total Volume.   | cc:               | 441          | 432           |
| Vol. of Solids, | cc:               | 243          | 243           |
| Vol. of Voids,  | cc:               | 198          | 190           |
| Void Ratio      | e:                | 0.82         | 0.78          |
| Porosity,       | %:                | 45.0         | 43.9          |
| Saturation,     | %:                | 58.4         | 100.0 assumed |
| Sp. Gravity:    |                   | 2.65 assumed | 2.65 assumed  |
| Wet Weight,     | gm:               | 758.9        | 832.7         |
| Dry Weight      | gm:               | 643.1        | 643.1         |
| Moisture,       | %:                | 18.0         | 29.5          |
| Density,        | pcf:              | 91.0         | 92.9          |

**Remarks:** The final moisture content was calculated to force 100% saturation. All final numbers dependant on the moisture content should be considered approximate.