Supplementary Table 6. SPT-N value ranges and predicted Competency, Consistency and approximate unconfined compressive strength, friction angle and relative density of soils in shell of earth dams in the dry zone

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Soil Group** | **Depth from Surface (m)** | **Ranges of “N’**  **Values** | **Competency** | **Consistency** | **Approximate Unconfined Compressive Strength (kN/m2)** | **Friction Angle**  **(Ø0)** | **Relative Density (%)** |
| SM | 1.00 – 6.00 | 20 - 32 | Medium dense - Dense | Very stiff or hard – Hard | 200-400 to >400 | 30-35 to 35 – 40 | 65 – 85 |
| 6.00 – 12.00 | 20 - 42 | Dense - | Hard | >400 | 35 – 40 | 85 |
| 12.00 – 16.00 | >50 | Very dense | Hard | >400 | 38-43 | 100 |
| SC | 1.00 – 6.00 | 34 - 44 | Dense | Hard | >400 | 35-40 | 85 |
| 6.00 – 12.00 | - | - | - | - | - | - |
| 12.00 – 16.00 | - | - | - | - | - | - |
| SW-SC | 1.00 – 6.00 | 19 - 38 | Medium dense - Dense | Very stiff or hard - Hard | 200-400 to >400 | 30-35 to 35-40 | 65 - 85 |
| 6.00 – 12.00 | 44 - >50 | Dense | Hard | >400 | 35 – 40 | 85 |
| 12.00 – 16.00 | 46 | Dense | Hard | >400 | 35 – 40 | 85 |
| GM | 1.00 – 6.00 | >50\* | Very dense | Hard | >400 | 38-43 | 100 |
| 6.00 – 12.00 | - | - | - | - | - | - |
| 12.00 – 16.00 | - | - | - | - | - | - |
| GW | 1.00 – 6.00 | >50\* | Medium dense | Stiff | 100-200 | 30-35 | 65 |
| 6.00 – 12.00 | - | - | - | - | - | - |
| 12.00 – 16.00 | - | - | - | - | - | - |