

## Standard Operating Procedure 211 Field Soil Classification

### *Purpose*

As soil samples are collected in the field, a visual identification and description will be completed in accordance with ASTM D2488-93. Logs are later prepared from the field notes, and since soil samples are not commonly sent to a lab for further identification and verification of the field classification, the proper description of soils in the field becomes even more important.

### *Required Equipment*

- Log form (boring, sampling probe, trench, etc.) or field notebook.

### *Procedure*

When visually describing soils in the field, the following information should be included (in the order shown):

1. A description of the main soil group within the sample in all capital letters (e.g., SILTY SAND, CLAY, SILT, etc.).
2. If the soil group is sand or gravel (coarse-grained), include a brief description of the particle grain size (e.g., fine, medium, coarse).
3. Any other soil group present should be described based on the percentages present within the sample (e.g., with few gravel, with trace sand).
4. Describe the color of the main soil group (e.g., brown, gray, etc.).
5. Describe the overall moisture of the soil sample using dry, moist, or wet.
6. Describe the consistency of fine-grained soil (e.g., very soft, soft, firm, hard, very hard).
7. If any unusual occurrences are encountered, information should also be included (e.g., bricks, glass, petroleum odor present, fill).

### *Examples*

The following are examples of correct visual soil classifications:

- *SILTY SAND: fine to medium grained, with few gravel, dark brown, moist.*
- *SANDY CLAY: with trace silt, gray, wet, soft, petroleum odor.*

*ASTM Group Symbol*

Once a field soil classification is completed, a group symbol (e.g., CL, MH) should be assigned to each soil sample in accordance with ASTM D 2488-93. This group symbol should be included on the final sampling log.