

Table 3.2
Methods of Geotechnical Analysis and Physical Parameters
for Soil Samples SWMU B-3
Camp Stanley Storage Activity, Texas

Parameter	Test Method Number
Bulk Density (core or clod methods)	ASTM D2937
Intrinsic Permeability (undisturbed)	ASTM D2434
Particle Size Distribution	ASTM D422
Soil Moisture	ASTM D-2216
Total Organic Carbon (TOC)	Modified SW 9060 ⁽¹⁾
pH	SW9045

- (1) Method SW9060 is modified as described for analysis of TOC in a nonaqueous sample. This method determines the TOC as the difference between total carbon (TC) and carbonate (inorganic) carbon (CC). This method is recommended for soil samples because it is difficult to acid pretreat soil samples to completely remove carbonates while not losing organic carbon. Therefore, CC is determined on an aliquot and mathematically subtracted from TC determined from a separate aliquot of sample. TC analysis combusts a sample in a high temperature furnace with an oxygen carrier gas. Carbon is oxidized to CO₂ which is then measured by infrared detection. This method is described in ASTM D5373 and is the same instrument technology used in SW9060. CC analysis consists of acidifying a sample with 0.1 N perchloric acid to convert carbonate and bicarbonate to CO₂. The CO₂ is then sparged to a CO₂ coulometer for quantification. This method, which is reference in ASTM D-513, Method G, has been used by the USEPA