Propane Tank Test Procedures

Measuring Tank-to-Soil Cathodic Protection Potentials

**Equipment:** Multi-volt meter
Test leads
Reference Electrode (Copper/Copper Sulfate half cell)

**STEP 1**

Using a digital volt meter, set multi-volt meter to the 2 volt D/C scale, contact red test lead to tank test point or area, (contact area of tank must be to metal preferably to uncoated fill pipe, (do not connect to shroud).

Note: When using a two-input analog meter, black lead will be connected to tank.

**STEP 2**

Using a digital volt meter, contact black test lead to charged reference electrode.

Note: When using a two-input analog meter, contact red lead to reference electrode.

**STEP 3**

Remove rubber protection cap from porous plug end. (see charging electrode below) Place porous plug end of reference electrode in native earth directly above buried tank. (if conditions are dry it may be necessary to wet the area before placing the electrode)

**STEP 4**

Observe meter reading and record. Reading should be at least -.850v or more negative. For other applicable criteria refer to NACE Standards RP0285-95 and RP0169-96, Corrosion Control of Underground Storage Tank Systems and Control of External Corrosion on Underground or Submerged Metallic Piping Systems.

Note: It is recognized through NACE that all readings be recorded as negative

**Charging Reference Electrode**

**Step 1**

Unscrew and remove porous plug end of new reference electrode.

Using deionized or distilled water fill electrode completely. The solution will turn blue in color and there should always be excess crystals at the bottom of the tube.

DO NOT USE TAP WATER.

**Step 2**

Replace end of electrode and place in an upright position so that the porous plug end is facing in the down position and let stand for 15 minutes before use. This will allow the porous plug to become completely saturated before use.

**Caution:**

Do not allow electrode to contact oil or other substances that may contaminate the solution by absorption through porous plug. Do not allow electrode to freeze.