STEP 5 – TAKE MEASUREMENTS

Always begin with handle in SAFE position. Ensure that the handle is in the SAFE position by firmly tapping down on the handle without engaging the trigger.

We recommend 2 minute for measurement time and 1 minute for background time. (Setup menu)

The gauge can be set to receive moisture values from an outside device or by keypad entry. You can also choose to perform the moisture measurement before or after the density measurement. Press Setup, choose 5. Options, 3. Moisture Input, then choose your method / order desired.

Prepare the test site as described on page 3. If using the moisture probe, drive the drill rod to at least 8

PERFORMING DENSITY MEASUREMENTS

1. Place the gauge on the test site with the handle in the Safe position and press <ENTER/START>. Follow the prompts on the screen to either lower the handle into the prepared hole to the desired measure depth or to wait for the 15-second initialization phase to complete (this will occur approx. every 10 min. or as programmed). Then lower handle and press <ENTER/START>.

2. After count time, (when prompted) select the Active background count or choose to take a New background count. If taking a new background count, lower the source rod to background position and press <ENTER/START>. A new Background count should be performed at a new jobsite and when the soil material properties change.

3. After the measurement, raise the handle. The gauge displays the measurement results. To store the reading, press <STORE>. After taking readings, lift the gauge from the test site by the source rod handle. This returns the source rod to the SAFE position. When not taking readings, always keep the source rod in the SAFE position.

PERFORMING MOISTURE MEASUREMENTS

1. Press <Enter/Start> to begin.

2. When prompted by the 4590 gauge, insert moisture probe into the hole until the base plate contacts soil surface.

3. Power the probe on (green light illuminates on probe when On). The blue light will be solid when the BlueTooth connection is made.

4. Press Enter on gauge keypad to perform moisture reading, wait a few seconds then press Enter on the keypad again to accept the moisture reading (Do not touch the probe during the reading).

5. Carefully remove the probe and set aside.

USING THE OFFSET FUNCTION

The gauge readings can be adjusted using an offset. The gauge applies the offset to measurements until the offset is disabled or the gauge is turned off. The gauge provides both density and trench offsets.

Press <OFFSET> to access the Offset menu.

MORE INFORMATION

The user manual provides more information about the gauge’s functions and use.

**STEP 1 – START THE GAUGE**

To turn on the gauge, press the power switch. After briefly displaying the model number, software version, and serial number, the gauge performs a self-test, followed by a display test. The gauge then enters a 300-sec. warm-up then displays the Ready screen.

**Note:** Be sure no other nuclear sources (gauges) are within 10 m (30 ft.) of EGauge while in use.

**STEP 2 – SET UP THE GAUGE**

**SET UNITS**

The gauge can display measurement results in either U.S. units (pcf) or metric (SI) units (kg/m³ or g/cm³). To select the units, press (SETUP) to display the Setup menu. Press (3) to display the Units menu. Select the new units using the corresponding number key. Then press (ESC) to return to the Ready screen.

**TARGET VALUES**

To select or change a Proctor value, press (TARGET). The gauge displays the Target Value menu.

```
PR: #.#  pcf
1: 0.0  2: 0.0
3: 0.0  4: 0.0
5: New  6: Disable
```

To enter a new target value, press (5). At the prompt, use the number keys to enter the desired target value. To select a stored target value, press the number key that matches the displayed target value.

After entering a new value press (ENTER/START). The gauge displays the value entered and asks if you want to store the value. To store the value, press (YES) and select one of the four locations. Storing a new value in an occupied location will erase the old value. Press (NO) if storing the value is not desired. This will enable the value and return to the Ready screen. This value will remain enabled until changed or disabled.

**STEP 3 – PREPARE THE TEST SITE**

To ensure measurement accuracy, properly prepare the test site before taking gauge measurements or standard counts.

**CAUTION**

Safety glasses must be worn during this procedure.

1. Locate a smooth site on the compacted soil free from any large holes, cracks, or debris. Place the scraper plate on the surface and press down slightly or scrape lightly if needed to smooth the surface.
2. As shown in Chapter 4 of the user manual, put the drill rod through the extraction tool and then through the guide tube on the scraper plate.
3. Step on the scraper plate and hammer the drill rod to at least 50 mm (2 in.) deeper than the desired test depth. The drill rod increments include the additional depth. If only a standard count is to be performed, make a 50 mm (2 in.) deep hole (minimum).
4. Trace the plate to mark the test area. Remove the drill rod by pulling straight up on the extraction tool. Do not loosen the drill rod by moving it from side to side.

**STEP 4 – TAKE A STANDARD COUNT**

To compensate for the source decay, adjust for background influences and to check proper operation of the gauge, take a standard count each day that the gauge is used. It is recommended that the standard count be performed at the first test site at a particular job site.

Keep any other nuclear gauge or radioactive source at least 10 m (30 ft.) from test site.

**Note:** This gauge does not require a reference block to take the standard count. Ensure that the source rod is in the SAFE position by firmly tapping down on the handle of the source rod.

1. **Prepare the test site** as described in Step 3 of this guide and place the gauge on the marked area. The prepared hole is required to perform the second step of the standard count (bkgrnd count)
2. Press (STD). The gauge displays the last standard count. To take a new standard count, press (YES). With the gauge in the standard count (safe) position, press (ENTER/START) to begin the standard count.
3. When prompted, **lower the gauge handle to the background position** (slightly below the safe position) to begin the second phase of the standard count. Press (ENTER/START) as prompted.

Troxler recommends keeping a daily log of the standard count results. An example log is provided in the appendix of the user manual.