LEAK DETECTION METHODS

I. TANKS - monitoring must occur at least once every 30 days. Choose one.

1. **Vapor Monitoring Wells.** Effective radius of each well is 20 feet. **A site assessment must be completed by an OCC Licensed Environmental Consultant and approved by OCC for any site using monitor wells as release detection.** Only an OCC Licensed Monitor Well Technician can take and record well readings on the OCC Vapor Monitoring form. A passing result must be documented at least once every 30 days. Vapor monitoring should be used when water is below tank bottoms. Readings must be available for inspection for at least the last 12 months, along with site assessment approval letter.

OR

2. **Groundwater Monitoring Wells**. Number of wells depends on number & size of tanks. **A site assessment must be completed by an OCC Licensed Environmental Consultant and approved by OCC for any site using monitor wells as release detection.** Only an OCC Licensed Monitor Well Technician can check wells for product and record depth to water measurements on the OCC Groundwater Monitoring form. A passing result must be documented at least once every 30 days. Groundwater monitoring should be used when groundwater is at or above the bottom of the tanks. Results must be available for inspection for at least the last 12 months, along with site assessment approval letter.

OR

3. **Automatic Tank Gauging and Inventory Reconciliation**. Print passing results of 0.1 gph tank tightness test for each tank at least once every 30 days**. If the ATG is programmed for 0.2 gph test, then Inventory Control must also be kept on the OCC form or an electronic equivalent for each 30 day monitoring period.** Be sure your ATG software/equipment is certified for the size of your tank(s). If you are using CSLD, SCALD, or another form of continuous leak detection, verify that the ATG is set to 99% operating mode in system setup and keep Inventory Control. **CSLD and SCALD are certified as .2gph, so Inventory Control must be kept on the OCC form or an electronic equivalent.** Keep a copy of the National Work Group Leak Detection Evaluation (NWGLDE) third-party certification for your equipment with your records. You must keep one passing test for each tank for the last 12 months.

OR

4. **Statistical Inventory Reconciliation.** A computerized analysis of the **Inventory Control** form. Stick readings MUST be recorded and kept separately if you have manifolded tanks. If you have an ATG to use for inventory, you do not have to collect stick readings. The SIR vendors must use a **quantitative method** approved by National Work Group. Keep at least 12 months of SIR results and keep your copies of the MIR forms.

OR

5. **Manual Tank Gauging.** Tanks with a total capacity of 1,000 gallons or less may use manual tank gauging as their sole method of release detection according to EPA procedure (https://www.epa.gov/sites/production/files/2014-03/documents/manltank.pdf). Tanks with a capacity of 1,001 to 2,000 gallons may use manual tank gauging along with tank tightness testing (every 5 yrs). Tanks up to 1,000 gallons must have weekly reconciliations for the past 12 months. Tanks up to 2,000 gallons must have weekly readings along with a tank tightness test.

OR

6. **Interstitial Monitoring.** Monitoring for fuel or water in the interstice, or the area between the primary tank and a secondary tank (double wall). **Interstitial monitoring must be the primary form of release detection for tanks installed after July 1, 2008.** Records must be available that show measurements/checks every 30 days in accordance with manufacturer's instructions for the last 12 months. You may use the form provided by manufacturer.

II. PIPING SYSTEM – monitoring must occur at least once every 30 days. Choose one.

1. **Pressure** Piping
   A. Automatic Line Leak Detectors (mechanical) and Annual Line Tightness Testing – keep last test of both lines and leak detectors completed within last 12 months.
   B. Automatic Line Leak Detectors (mechanical) with Sump Sensors – Test of mechanical LLD along with sensor and alarm history reports every 30 days to verify operation. Sensors must also be function tested annually in accordance with manufacturer's instructions.
   C. Electronic Line Leak Detector – May be sole method of line leak detection only if detector performs 3 gph test before or after each submersible pump activation; 0.2 gph test at least once each month for each line; and 0.1 gph test once annually for each line. Must be function tested annually in accordance with manufacturer's instructions. Keep records for 12 months of tests.

2. **Suction** Piping – Piping must be tightness tested every three years. **No test** is required for Safe Suction if piping operates at atmospheric pressure, it's sloped to drain back into the tank when suction is released, and only one check valve is installed as close as practical to the suction pump.

III. CORROSION PROTECTION – Steel underground tanks, piping, and unprotected flex connectors require protection from corrosion.

1. Keep records of the engineered installation design, suitability study, and the last two 3-year recertifications of the cathodic protection system for both sacrificial and impressed current systems. Keep installation records to verify STI3P tanks with factory installed anodes.

2. For impressed current cathodic protection systems record the last 12 months of 60-day rectifier readings on the OCC form and recertify every cathodic protection system every 3 years or within 6 months of repair or new installation.

3. For interior lined tanks, keep the original dated installation certificate. The tanks must be reinspected by physical manned entry within 10 years of initial application, and every five years after that, using the **OCC Interior Lining Inspection** form unless cathodic protection was added prior to ten-year date. If cathodic protection was added, see 1 & 2 above.

IV. SPILL AND OVERFILL PREVENTION

1. Required for all tanks if the transfer of product is more than 25 gallons at a time. If spill buckets become damaged and no longer hold water/fuel they must be replaced.

2. Spill containment (buckets) must be kept free of debris, water, or product.

3. Overfill (flow restrictor) device – either the flapper valve type, ball float, or alarm must be installed and working properly. Ball floats that become inoperable may not be repaired and must be replaced. Ball floats may not be used with suction systems. Overfill devices must be inspected by an OCC Licensed Installer to verify proper function as requested by OCC Fuel Inspector.