30-Day Vapor Monitoring Log for Underground Storage Tanks

Facility Name/Address: _____ **Facility DEQ ID:** _____ **Year:** _____

Fill in the year, the ID and upper tolerance limit of each vapor monitoring well, and the vapor monitoring device model, last calibration date, unit of measurement (must be in ppm of specified substance), and whether it has a PID, DEQ approval, or third-party certification. Every 30 days, write in the date, inspector name, and vapor measurements (ppm) taken from each well. Measurements should be taken from the lowest possible point in each well.

Monitoring Device Model:		**PID, DEQ-approved, or third-party certified?** *Circle one.*	PID DEQ Approved 3rd Party Certified
Date of Last Annual Calibration:		**Unit of Measure (ppm of _)?** *(e.g., VOCs, hexane)*	

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Date													
Inspector													
Well ID *Ex: SW Tank Field*	**Upper Tolerance Limit** *(ppm)*												

Any monthly vapor measurements higher than the Upper Tolerance Limit (UTL) must be investigated; suspected releases must be reported to DEQ within 24 hours of discovery (contact your DEQ regional office: https://www.deq.virginia.gov/get-involved/about-us/contact-us; submit the ERP form found here via email if possible). For detailed instructions on taking background measurements and calculating the UTL for each well, and on investigating and reporting suspected releases, please see Appendix L of the Underground Storage Tank Inspections Manual at https://townhall.virginia.gov/L/ViewGDoc.cfm?gdid=6026.

Vapor Monitoring for Underground Storage Tanks

Set-Up *(For Passive/Non-Tracer Monitoring)*

1. Ensure you have a valid site assessment on file to confirm that VM is an acceptable monitoring method for your UST system. (All vapor monitoring site assessments performed after January 1, 2018, must be signed by a professional engineer or geologist.)
2. Ensure your vapor monitoring device either has a photoionization detector (PID) or has been evaluated and certified by a third party (e.g., NWGLDE) for the substance being monitored. All other devices must be submitted to DEQ for approval.
3. On the 30-Day Vapor Monitoring Log, record the vapor monitoring device model, date of last annual calibration, unit of measure (ppm of _) and whether it has a PID, DEQ Approval, or 3rd Party Certification.
4. If you are using a handheld vapor monitoring device, perform a background assessment of each monitoring well.
    a. You must perform a background assessment within the first month of beginning vapor monitoring.
    b. A background assessment should also be performed if you begin using a new monitoring device.
    c. If there is a confirmed release, you must have a qualified professional evaluate whether the contamination is too great to continue conducting vapor monitoring (e.g., high background contamination may prevent the device from detecting a new release).

Background Vapor Assessment

1. Take at least 20 vapor measurements from each monitoring well during the first month of conducting VM with a handheld device. This background data should be collected with the same equipment and procedures that will be used to monitor the well monthly. *Measurements should be taken from the lowest possible point in each well.*
2. Using these measurements, calculate the Upper Tolerance Limit (UTL) for each monitoring well. Use the *Vapor Monitoring UTL Calculation & Release Investigation Workbook* – create a separate copy of this workbook for each monitoring well and follow the instructions.
    a. For assistance, contact DEQ (tank@deq.virginia.gov; https://www.deq.virginia.gov/get-involved/about-us/contact-us).
3. On the 30-Day Vapor Monitoring Log, record the ID and UTL for each monitoring well.

Monthly Monitoring Process

1. Ensure the vapor monitoring device is calibrated in accordance with manufacturer's recommendations.
2. Obtain readings from the lowest possible portion of the well.
3. On the 30-Day Vapor Monitoring Log, record the following in the corresponding month's column:
    A. Inspection date
    B. Inspector's initials/name
    C. Measured vapor concentration in parts per million (ppm) for each well

If you receive a measurement exceeding the Upper Tolerance Limit for a given well, and it cannot be explained by a non-release cause, you must report a suspected release to DEQ within 24 hours of discovery. To investigate, take at least 4 follow-up vapor samples over the next 5 days. Use the *Vapor Monitoring UTL Calculation & Release Investigation Workbook* to analyze these additional samples. You may report releases by email or phone call to your DEQ Regional Office (https://www.deq.virginia.gov/get-involved/about-us/contact-us). If possible, please submit the Environmental Pollution Report (EPR) form found here via email.

Annual Device Calibration

At least once per year, all electronic and mechanical components of the vapor monitoring device must be inspected for proper operation. Consult the device's manual to find the manufacturer's recommended maintenance and calibration procedures. These will generally include calibrating the vapor sensor with a known vapor sample and inspecting, cleaning, and replacing (as needed) filters or other parts which affect the device's operation.

Keep a written record of the procedure used to test the device, including invoices for any vapor tubes (for calibration), replacement parts, or other repairs to the device. To meet annual release detection equipment testing requirements, be prepared to show these testing/calibration records and the device's manual to DEQ upon request.

It is highly recommended to contact DEQ (tank@deq.virginia.gov; https://www.deq.virginia.gov/get-involved/about-us/contact-us) **to determine whether your annual testing/calibration procedure and records are sufficient.**