

GROUND WATER MONITORING

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What is it?

Ground water monitoring consists of shallow well(s) checked monthly for product floating on the water. Observation wells should be installed into the tank pit/line trench backfill. The wells should not penetrate beyond the bottom of the tank pit/line trench by more than two feet. Spacing of wells depends on the backfill material. The wells should be located so as to intercept any release. This means that at least one well should be down gradient ('downstream') of the tanks. Installation of observation wells on all sides of the tank pit is recommended.

It is a leak if any amount of product is detected in any well.

Requirements:

1. The well is clearly marked and has tamper-proof cap.
2. The product floats on water.
3. The water is less than 20 feet below the surface and the soils between the well and UST are gravel or coarse to medium sand, etc.
4. The well is built with the proper screen and gravel pack.
5. The well is screened for both high and low water conditions.
6. The well is sealed from surface contamination.
7. The wells are in the tank pit or as close as possible.
8. Detector must detect at least 1/8 inch of product.
9. Keep a record of monthly readings plus a file showing that the above requirements are met.

Advantages: A simple system to maintain after construction. The wells can be used to help clean up the site if a leak occurs. Can be applied to the piping.

Disadvantages: Installation at contaminated sites may trigger assessment and corrective action. Ground water clean up may be required because the product, at detection time, has reached the water table. The wells can be costly to install. There have been reports of product accidentally delivered to monitoring wells.

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Ground Water Monitoring Data Requirements

A. As-builts or drill logs for each well (labeled separately) indicating:

1. Materials drilled through
2. Depth to bottom of well
3. Depth to bottom of screen
4. Depth to top of screen
5. Depth to top of filter pack
6. Depth to bottom of seal
7. Depth to top of seal
8. Water tight cap
9. Tamper-proof cap
10. Well identification number
11. Initial depth to groundwater

B. Map or plans with dimensions that indicate:

1. Location of each well
2. Location of tank/line trench boundaries
3. Location of tank/line equipment
4. Groundwater gradient (must be based on water level meas.)

C. Data & interpretation that indicate:

1. Gradient of groundwater
2. Rationale for location of wells
3. Initial readings of well -- is product present?