

Title: Monitoring of Volatile Organic Compounds (VOC) in Tomah, Wisconsin (Study No. 31)

Investigators: Principal Investigator
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La Crosse Area
(currently Milwaukee area)

Objectives: To verify the existence of hydrocarbons in Tomah, Wisconsin.

Background/Need: Dissolved and adsorbed phase hydrocarbons were previously detected with a soil gas survey at a service station.

Methods: Monitoring wells were installed and soil samples taken during tank excavation to quantify the amount of adsorbed phase hydrocarbons in the station tank pad. Soil samples were analyzed with gas chromatography and mass spectroscopy. Fluid level monitoring and a site survey of all monitoring well elevations was then done.

Results: Strata beneath the project area consists of medium-grained unconsolidated sand. Acetone, naphthalene, alkylated naphthalene and alkylated benzenes and other hydrocarbons were detected in most of the soil samples. VOC detections in water analyses include benzene and xylene in most of the samples taken, with ethylbenzene and toluene less frequently.

Conclusions: Dissolved phase hydrocarbons exist in monitoring wells adjacent to the service station tank pad and the abandoned tank pad at an armed services recruiting center. Normal groundwater flow directions over the project area have been altered by a cone of depression created by a municipal well in service from 1983 to 1986.

Recommendations/Implications: The investigator recommends groundwater depression, product recovery, air stripping and in-situ soil venting to reduce vapors and remediate adsorbed hydrocarbons above the water table.

Availability of Report: This report is available for viewing and loan at:

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