

Kansas Department of Health and Environment

Bureau of Environmental Remediation, Remedial Section

Site Assessment Program



North Flora Street Site

Background:

KDHE's Site Assessment Program initiated work at this site in 2001 in response to the discovery of a volatile organic compound called perchloroethylene or PCE in a drinking water well located on Flora Street in Wichita, Kansas.

This part of Flora Street and an adjacent street do not have city water service and residents rely on private wells for potable water. An initial survey of the site concluded that PCE in the local ground water could effect several drinking water wells.

Solution:

KDHE's Site Assessment Program planned and implemented an investigation of the area to determine the threat posed to human health and the environment and to identify potential sources for the contamination.

The investigation included the collection of ground water samples at the site using a Geoprobe, which is a hydraulically-powered machine that utilizes both static force and percussion force to advance sampling tools into subsurface.

The samples were analyzed using field-based gas chromatography to provide real-time data in an effort to trace the contamination back to the source.



Collecting soil samples with KDHE's Geoprobe to be analyzed using field-based gas chromatography in KDHE's mobile laboratory.



Collecting ground water with KDHE's Geoprobe to be analyzed using field-based gas chromatography in KDHE's mobile laboratory.

The field team traced the contaminated ground water back to a vacant lot. Soil samples were collected from the vacant lot and from the road ditch in front of the lot to pinpoint the source. Results of the analysis indicated that PCE was present in the soils below the ditch, leading to the conclusion that the private wells were contaminated with PCE as the result of clandestine dumping in the road ditch.

The field team also collected and analyzed water samples from several drinking water wells in the area and provided the analytical results to residents.

Benefits:

- Identified the source for contamination of ground water impacting at least one drinking water well and threatening many others.
- Provided documentation to direct the site to an appropriate State program for response.
- Provided area residents with laboratory analysis of their well water.