



Iowa Department of Public Health

Hazardous Waste Site Health Assessment Program

Silver City Petroleum Release and Municipal Wells Fact Sheet

Highlights: A resident of Silver City, Iowa requested the Iowa Department of Public Health (IDPH) Hazardous Waste Site Health Assessment Program evaluate the health impacts of a petroleum release in their town and the health impacts from the presence of chemicals detected in wells utilized as the source of municipal water for the citizens of Silver City and in the treated municipal water supply. A health consultation has been drafted to address these issues. The health consultation determined, from the data available so far, that the petroleum release and other chemicals detected within the municipal water supply of Silver City currently pose **no public health threat** to the residents of Silver City through the ingestion of drinking water. The health consultation also concluded that there are insufficient data to assess the health impacts from vapor intrusion into basements and homes.

Background

At various times between 1987 and 1994, nine different organic chemicals have been found at very low levels in the municipal well in Silver City, Iowa. In 1990 a petroleum release was discovered in Silver City. It was determined that the petroleum release came from the former Farm Service Co-op located at 510 Main Street in Silver City, Iowa. The Underground Storage Tank Section of the Iowa Department of Natural Resources (IDNR) has overseen the investigation of this petroleum release.

Since the time of the initial gasoline release, groundwater and soil samples have been collected in and around the release site to determine the extent and degree of contamination from petroleum chemicals. Some free-product (liquid gasoline) has been recovered from some of the groundwater monitoring wells within the contamination area.



What are the chemicals in Gasoline? Have they contaminated the municipal well?

Gasoline is primarily made up of four different chemicals, benzene, toluene, ethylbenzene, and xylenes (commonly referred to as BTEX). Although BTEX has been found in soil and monitoring wells near the original spill site at fairly high concentrations, it has not been found in the wells that serve the municipal water system (with the exception of one low level detection of xylenes, which may not be attributable to the gasoline spill).

What chemicals were found in the municipal well?

Nine different organic chemicals have been found at very low levels in the municipal well. Those chemicals include: cis-1, 2-dichloroethylene, trans-1, 2-dichloroethylene, trichloroethylene, xylenes, bromodichloromethane, bromoform, chlorodibromomethane, chloroform and 1,1-dichloroethane. These chemicals have a variety of uses including as solvents or degreasers. Some of them are formed as a by-product of chlorination of water.

Is drinking water the only way that I could be exposed to these chemicals?

No. There is a potential for people to be exposed to chemicals through contact with contaminated water on their skin. Because BTEX and the organic chemicals that were detected in the monitoring wells are volatile in nature, there is a potential for people to inhale the chemicals in the form of vapor.

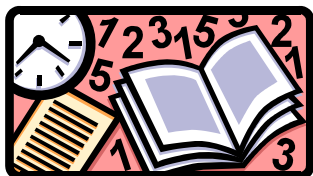
From the data that has been collected, skin exposures are not expected to be harmful to the health of residents in Silver City. It is difficult to determine what health effects, if any, would be caused by exposures to vapors, because of a lack of sampling data for chemical vapors.

Why was a Health Consultation for Silver City needed?

The Health Consultation was completed to address community health concerns. IDPH was asked to determine if exposures, to chemicals either from the petroleum spill or those found in the wells that supply the municipal water system, have adversely affected the health of residents in the past, present or future.

What did the Health Consultation conclude?

- The petroleum release from the former Farm Service Co-op and other chemicals detected within the municipal water supply of Silver City currently pose **no public health threat** to the residents of Silver City through the ingestion of drinking water.
- There are insufficient data to assess the health impacts from vapor intrusion into basements and homes.



What recommendations are made in the Health Consultation?

- It is strongly urged that consideration be given to having indoor air samples collected within the basements and first floors of residences and analyzed for benzene and toluene concentrations to determine if there is ongoing exposures to vapors.

Where can I get a copy of the Health Consultation?

The Health Consultation has not yet been finalized by the Agency for Toxic Substances and Disease Registry. A sign-up sheet will be available to request a copy at the Town Hall Meeting on January 10, 2005 or a request can be made to the individuals listed below.

When the document is finalized it will be posted on the IDPH website:
<http://www.idph.state.ia.us>.

Hazardous Waste Site Health Assessment Program Staff

Staff are available to answer your questions or provide more information.

Stuart Schmitz, P.E.

Health Assessor

Phone: (515) 281-8707

Email: sschmitz@idph.state.ia.us

Sara Colboth

Health Educator

Phone: (515) 281-5894

Email: scolboth@idph.state.ia.us



Written requests should be made to:

Charles Barton, Ph.D., DABT
Hazardous Waste Site Health
Assessment Program
Iowa Department of Public Health
321 E. 12th Street
Des Moines, IA 50319-0075