



# Iowa Department of Public Health

## Hazardous Waste Site Health Assessment Program

### Jet Gas Spill Site - Lowell, Iowa

**Highlights:** Gasoline contamination has been detected in the shallow groundwater located below Lowell, Iowa. Several shallow private drinking water wells were contaminated with **Gasoline** after a tanker truck carrying the fuel, owned by Jet Gas Corporation, overturned and spilled gasoline into a ditch. The Iowa Department of Public Health's (IDPH) Hazardous Waste Site Health Assessment Program has completed a Health Consultation about the Jet Gas Spill site. This consultation contains information concerning the potential and likely health effects due to exposure to gasoline from the spill. The chemicals of concern at this site are **Benzene** and **Methyl Tertiary-Butyl Ether (MTBE)** which are both components of the gasoline that was spilled.

#### Background

The Jet Gas Spill Site, located in Lowell, Iowa is the result of an overturned gasoline tanker truck that spilled about 2,200 gallons of gasoline into a ditch alongside County Road X23 in Henry County. The spill occurred January 8, 2001, and subsequently contaminated several private drinking water wells in Lowell. IDPH has completed a Health Consultation which addresses the contaminants of concern **Benzene** and **Methyl Tertiary-Butyl Ether (MTBE)** at this site.

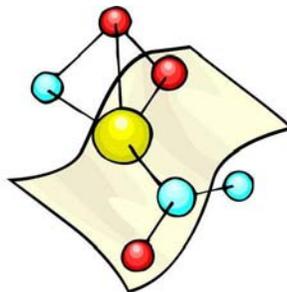
#### Why was a Health Consultation Written?

Community members have expressed concerns about adverse health conditions that may have been caused by ingesting well water that was contaminated with gasoline. In order to address these concerns, and answer questions posed by residents, a Health Consultation was written.



#### What is Benzene?

Benzene is a colorless liquid with a sweet odor. Benzene evaporates into air very quickly and dissolves slightly in water. Benzene is highly flammable. Most people can begin to smell benzene in air at about 3 parts of benzene per million parts of air (ppm) and smell benzene in water at 2 ppm. Benzene is a part of crude oil, gasoline and cigarette smoke. Benzene is known to cause cancer in humans.



#### What is Methyl Tertiary-Butyl Ether (MTBE)?

Methyl Tertiary-Butyl Ether (MTBE) is an additive in gasoline. MTBE is a flammable liquid with a disagreeable odor. MTBE is added to gasoline as an oxygenating agent to make the fuel burn more cleanly. MTBE is sometimes used in medicine to treat gallstones. It has not been determined if MTBE can cause cancer in humans.

### **What were the Conclusions of the Health Consultation?**

The Health Consultation concluded that the Jet Gas Spill Site poses an **Indeterminate Public Health Hazard**. The contamination of groundwater in Lowell that occurred as a result of the Jet Gas spill in January 2001 may have posed a short-term public health hazard to Lowell residents who utilized contaminated private well water in the past for their personal use. This possible public health hazard was due to the potential for inhalation of benzene vapors during activities such as showering and bathing. Definitive conclusions are limited because of the uncertainty regarding the possible length of exposure for residents of Lowell and the lack of available toxicologic information on human oral exposure to benzene and MTBE.

### **Were there any Recommendations made in the Health Consultation?**

Yes. The following four recommendations were made in the Health Consultation:

- All residents whose private wells have been impacted from the spill are encouraged to use water from the rural water system for all personal uses such as drinking and showering or bathing.
- A survey of residences in the pathway of the benzene plume should be completed to ensure that they are connected to the rural water system.
- IDNR should continue to monitor levels of benzene in private wells in Lowell along with the monitoring wells in the ongoing investigation.



- IDNR should consider having soil-gas samples taken from soil surrounding homes in Lowell or consider having indoor air samples from basements and first floors of Lowell residences collected and analyzed for benzene to determine whether benzene levels are elevated and whether there is a potential or ongoing exposure to elevated benzene vapors.

### **What if I have additional questions or need more information?**

The following Hazardous Waste Site Health Assessment Program Staff are available to answer your questions or provide more information.

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