

February 6, 2003

Lowell Gas Spill

This report gives a brief history of the Jet Gas Tanker Spill at Lowell in Henry County, Iowa. It describes what the department has done and where the investigation is headed.

On January 8, 2001 at 6 AM a Jet Gas Tanker released approximately 2,200 gallons of gasoline into the east ditch along Highway X23 at 203 Clark Street, Lowell, Iowa. A consulting firm, Enviromark arrived on site at 10:45 AM on January 8, 2001. Enviromark excavated contaminated soil they could identify under the wintry conditions at both ends of the east and west running culvert between Hwy. X23 and a farmer's drainage ditch. Approximately a total of 315 cubic yards of soil were excavated. The soil removal was completed on January 12, 2001. Removal was conducted under FO #6 oversight.

Geotechnical Services, Inc. (GSI) conducted a preliminary assessment by in May 2001. Soil and groundwater samples were taken from three borings. While soil samples from a depth of 6 feet showed no detects for BTEX, groundwater samples showed benzene concentration at 19.5 ug/L, toluene at 15.9 ug/L and xylene at 59.8 ug/L. The benzene level is above the statewide standard in Chapter 137 and Iowa RBCA groundwater ingestion pathway standard of 5 ug/L. Therefore, GSI recommended further investigation to determine the extent of groundwater contamination. Again, this assessment and review were done under FO #6 oversight.

In April 2002 the Contaminated Sites Section received a work plan dated March 28, 2002 from GSI. After review I wrote a letter to the responsible party, Mr. Larry Bentler to proceed with the plan, if he had not done so already. This letter was dated July 24, 2002.

Around August 8, 2002 I received a call from Mark Heiderchceit of FO #6. He told me that some residents of Lowell called the Field Office and complained of smelling gas in their water. This was the first instance that anyone in the town informed the department of actual drinking water exposure. I wrote another letter to Mr. Bentler on August 12, 2002, requiring that he expedite the site investigation. Simultaneously, we got Ed Farley, Henry County Emergency Management Agency and Jody Sutter; Henry County Public Health involved in our activities. We collected water samples from homes that had reported odor in their water and also from other homes near the spill. GSI did the same and the samples were analyzed by UHL. Specifically, the Contaminated Sites Section (CSS) collected water samples from the following homes (kitchen taps and basement taps and/or outside spigots):

David Williams ---- 208 Clark Street
Frank R. McCannon – 209 Third Street
Crystal (Newland) Dudley – 209 Second Street
Sherilyn Alden -- 203 Second Street
Thomas Doggett – 303 First Street

GSI collected samples from the residences of Williams, Alden, Dudley and Doggett on 8/8/02.

The lab analysis detected petroleum products ((benzene (12 ug/L), xylene (36 ug/L) and trimethylbenzene (16 ug/L)) in the Dudley residence only. This home also showed total extractable hydrocarbons of 270 ug/L. Residents told me that the odors in their homes were not always noticed. It would come and go. This probably varied with groundwater level.

As soon as we confirmed the existence of petroleum contaminants in drinking water, we required Mr. Bentler to immediately arrange for bottled water for the Dudleys. The Dudleys were advised to not drink water from their well. At the same time, the department required Mr. Bentler to arrange for these homes to be connected to Rathbun Rural Water Supply. In the letter all homes north of Main Street were to be connected to rural water. However, the homes, which had complained of gas odor, were to receive priority treatment. Rathbun Rural Water had indicated they could not handle all the jobs right away because of lack of materials and commitment to other jobs. I have been informed that these residences have now been connected to rural water. Mr. Doggett's home had already been connected to rural water before this incident. So he was not affected by the order.

In August 2002, GSI conducted a more comprehensive assessment to determine the extent of contamination, groundwater flow direction and hydraulic conductivity. The study indicated that calculated groundwater flow direction was generally toward the Skunk River in a south-southwestern direction. This investigation showed no BTEX in soil but it indicated benzene level as high as 6,890 ug/L, which far exceeds MCL of 5 ug/L for benzene. Toluene was detected at 12,800 ug/L (action level of 1,000 ug/L) and ethylbenzene at 1,020 ug/L (action level of 700 ug/L). Xylenes were detected at a maximum level of 6,360 ug/L compared to 10,000 ug/L standard.

The Hawk Eye newspaper published an article on the site on Wednesday, September 4, 2002; based on an interview I granted the paper. An attorney, who claims to represent some of the residents, has contacted me about three times, asking for information and/or progress on the investigation.

The next stage of the investigation can be divided into two phases. The first phase will fully define the horizontal and vertical extent of groundwater contamination, acquire quarterly groundwater level measurements and continue to hook up homes that are identified to be affected by the petroleum plume. The second phase will be to design and implement a corrective action for the site that will reduce contaminant concentrations to levels below IDNR action levels.