

**PEOPLES NATURAL GAS
CO.**

IOWA

EPA ID# IAD980852578

EPA Region 7

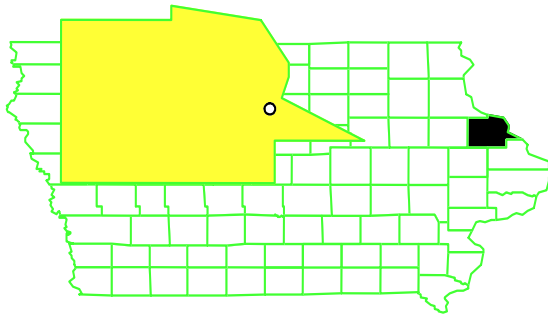
City: Dubuque

County: Dubuque County

Other Names:

Key City Coal Gasification Plant

02/23/2009



SITE DESCRIPTION

The Peoples Natural Gas Co. site is located in Dubuque and covers approximately 5 acres. From 1890 until 1954, the Key City Gas Company owned and operated this gas plant, where a natural gas substitute was produced from coal. In 1954, the North Central Public Service Company took over operations until 1957, when Peoples Natural Gas Company assumed ownership of the site. Peoples used the site as a storage and maintenance area and did not manufacture gas. It later sold a portion of the site to the City of Dubuque, which operated the Dubuque Municipal Garage on the site until 2006. The Iowa Department of Transportation owns the remainder of the site. Two waste products resulting from coal gasification are of primary concern: coal tar sludges and spent iron oxide. Coal tar sludges were produced during the coal or coke combustion and during the oil injection processes, and spent iron oxide wastes were produced during the gas purification process. Spent iron oxide wastes, removed from the three gas cleaning boxes (purifiers), were dumped behind two gas holding tanks on site at least twice a year. Spent iron oxide and other wastes were deposited in the northeastern section of the site. Coal tars were removed from the gas in the wash box and condenser. These wastes either were sold or disposed of in pits or holding tanks. Two coal tar waste storage tanks were used at the gas plant, one aboveground and one below. Both tanks have since been removed. Evidence of materials left in the underground tank, as well as migration of waste out of the tank, is supported by a study done by the Iowa Department of Transportation in 1983, while conducting a right-of-way survey for the proposed extension of U.S. Highway 61. An estimated 60,000 people obtain drinking water from municipal wells located within 3 miles of the site. Approximately 2,400 people live within a mile of the site, and 21,000 people live within 3 miles. The Mississippi River is approximately 500 feet east of the site. Surface water downstream is used for industrial and recreational activities. A wildlife and fish refuge is 2 miles downstream, and wetlands are located within 1/2 mile of the site.

Site Responsibility:

This site is being addressed through Federal and potentially responsible parties' actions.

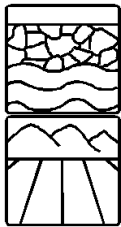
NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 08/30/90

Deleted Date:

THREATS AND CONTAMINANTS



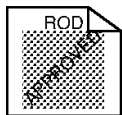
Volatile organic compounds (VOCs), phenols, polycyclic aromatic hydrocarbons (PAHs), and inorganic chemicals from the gasification process wastes were detected by the State in on-site wells. Soil samples collected at the site in 1983 also contained VOCs, phenols, PAHs, and inorganic chemicals. Accidental ingestion of or direct contact with contaminated soil or ground water may pose health threats to individuals. No private drinking water wells have been identified in the area. The wetlands and the wildlife and fish refuge may be threatened by runoff from the site.

CLEANUP APPROACH

Response Action Status



Initial Actions: Prior to implementation of the Remedial Action, a Removal Action was initiated to excavate and incinerate contaminated soil and wastes that were in the area of a highway construction project. Ultimately, 6,850 cubic yards of contaminated soil and wastes were removed and incinerated off site under the removal action.



Remedy Selected: Soil and Ground water: An investigation into the nature and extent of ground water and soil contamination was completed by the potentially responsible parties in 1991. A final cleanup remedy that prescribes excavation and incineration of contaminated soils, and pumping and treating contaminated ground water was selected by EPA in 1991. Restrictions on land and ground water use were implemented. Design of the remedy was completed in early 1994. Excavation

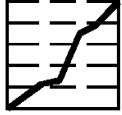
of contaminated soils from the remaining portions of the site was initiated in the spring of 1995, and was completed in 1998. An additional 10,400 cubic yards of contaminated soil and wastes were excavated and incinerated under the remedial action. This was completed in 1998, thus removing the possibility of anyone coming into direct contact with contaminated soil.

Installation of a ground water extraction system in the shallowest aquifer found at the site, which is referred to as the silty sand aquifer, was completed in January 1996. The ground water extraction system consisted of two recovery wells. The extracted water was treated through an air stripper and disposed into the City of Dubuque sanitary sewer system. The ground water extraction and treatment system operated until March 2003, when it was determined that the system could no longer function due to severe fouling. Quarterly ground water monitoring began in 1996, and continued through 2003. Ground water monitoring has been conducted semiannually since 2004. Construction of an ozone sparging system was completed in September 2000. The ozone sparge system operated until October 2002, when it was turned off and disassembled.

The deeper, alluvial aquifer is separated from the shallow, silty sand aquifer by a low permeability layer. It was determined during the Remedial Design that the contaminant concentrations in the alluvial aquifer did not warrant installation of a ground water extraction system in that aquifer. This change in the remedy was documented in an Explanation of Significant Differences.

Site Facts: EPA signed an Administrative Order on Consent with Midwest Gas, a successor corporation of Key City Gas Co., the Iowa Department of Transportation, and the City of Dubuque in 1989. The Order required the parties to remove or treat any contaminated soil. It also required completion of an investigation to determine the need for treatment of residual soil and for ground water treatment. EPA signed a Consent Decree with Midwest Gas (currently MidAmerican Energy Company), the Iowa Department of Transportation, the City of Dubuque, and Enron Corporation on December 28, 1992, requiring the parties to conduct the design of the remedy and cleanup activities.

ENVIRONMENTAL PROGRESS



By removing contaminated coal tar sludges and soils, the potential for exposure to hazardous materials at the People's Natural Gas Co. site has been reduced while final cleanup activities continue. EPA conducted a Five-Year Review for this site in March 2000. The conclusion of the Five-Year Review is that the remedy remains protective of human health and the environment.

The ozone sparging system, which was installed in 2000 as a bioenhancement to the ground water treatment system, was shut down in October 2002. The effectiveness of the system in removing contaminants from the subsurface was minimal relative to the costs associated with operation of the system. The ground water extraction and treatment system was turned off in March 2003. Evaluation of alternatives to meet the ground water objectives for the site is on-going.

A Second Five-Year Review for the site was completed in September 2005. The conclusion of that review was that the site is protective of human health and the environment in the short term. To ensure that the remedy will be protective in the long term, the follow-up actions listed in the review need to be taken. These include: additional investigation and possibly modeling leading to a Focused Feasibility Study to evaluate remedial alternatives to be followed by a Record of Decision amendment; and revised environmental covenants to limit exposure to soil and ground water.

Additional site characterization activities were conducted in 2007. Three soil borings and a monitoring well were installed to collect information beneficial to determine appropriate remedial alternatives to be evaluated in a Record of Decision amendment. Semiannual ground water monitoring continues to ensure that the site poses no threat until such time as the remedy is revised.

COMMUNITY INVOLVEMENT

- 1/05 - Fact sheet announcing start of second five-year review. Display ad in the Dubuque Telegraph-Herald
 - 4/05 - Fact sheet announcing Second Explanation of Significant Differences
 - 8/05 - Fact sheet announcing completion of second five-year review. Display ad in the Dubuque Telegraph-Herald
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SITE REPOSITORY



Carnegie Stout Public Library
Eleventh and Bluff
Dubuque, IA 52001

Superfund Records Center
901 N. 5th St.
Kansas City, KS 66101
Mail Stop SUPR
(913)551-7166

REGIONAL CONTACTS

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MISCELLANEOUS INFORMATION

STATE:

IA
07BP

CONGRESSIONAL DISTRICT:

01

EPA ORGANIZATION:

SFD-IANE/SUPR

MODIFICATIONS

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