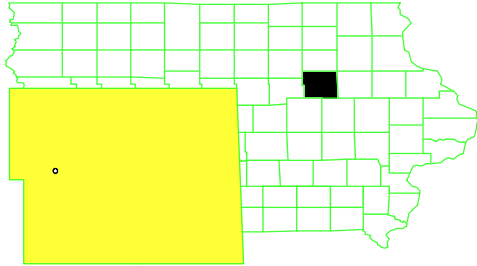


**WATERLOO COAL
GASIFICATION PLANT
IOWA
EPA ID# IAD984566356**

**EPA Region 7
City: Waterloo
County: Black Hawk County
Other Names:**

06/10/2011



SITE DESCRIPTION

The Waterloo Coal Gasification Plant Site (Site) is the location of a former manufactured gas plant that manufactured gas for lighting and heating purposes from 1901 to 1956 in Waterloo, Black Hawk County, Iowa. The Site is situated along the Cedar River about one mile downriver (i.e., southeast) of downtown Waterloo. The majority of the Site is bound by Sycamore Street on the north, the former Rath Packing facility on the east, a railroad track on the west, and railroad tracks, a floodwall, and the Cedar River on the south. When operational, the coal gasification operation occupied approximately five acres. An area located north of Sycamore Street and east of Union Street housed gas holders. During the time period that operations occurred, several power companies held title to the parcels that comprise the Site. Since the discontinuation of operations in 1956, certain parcels have been sold to public and private parties. The majority of the Site is presently owned by a utility company, MidAmerican Energy Company. The plant was dismantled between 1964 and 1967. Two waste streams generally associated with former manufactured gas plant sites are of primary concern: coal tar residuals from the gasification process and inorganic residuals from the purification process. Exact disposal methods for these wastes are unknown; however, initial investigations indicated soil and ground water contamination. The nearest downgradient water wells servicing Waterloo and nearby Evansdale are located 1 3/4 miles south and 3 miles southeast of the site, respectively. Approximately 74,800 people obtain drinking water from public and private wells located within a 4-mile radius of the site. The Cedar River is used for recreational activities and wetlands are located downriver of the Site.

Site Responsibility:

The Site is being addressed through Federal and potentially responsible parties' actions.

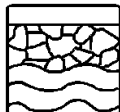
NPL LISTING HISTORY

Proposed Date: 10/14/92

Final Date:

Deleted Date:

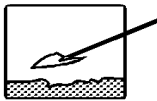
THREATS AND CONTAMINANTS



Polycyclic aromatic hydrocarbons (PAHs), benzene, ethylbenzene, toluene and xylene (BETX compounds), and inorganic compounds have been detected in surface and subsurface soils. PAHs, BETX compounds, and inorganic compounds have also been detected in ground water samples collected from monitoring wells. Ingestion of or direct contact with contaminated soil or ground water may pose health threats to individuals. Water well survey results indicate that domestic water supply wells are not located in the immediate vicinity of the Site. Response actions have been implemented to address the potential for exposure to contaminated soil and ground water. Impacts on wetlands and wildlife due to contaminant migration from the Site to the Cedar River is possible. However, surface water and sediment samples collected in the Cedar River adjacent to the Site indicate that the Cedar River does not appear to be adversely impacted by site-related contamination.

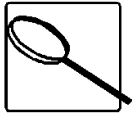
CLEANUP APPROACH

Response Action Status

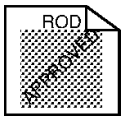


Initial Actions: MidAmerican Energy Company, the potentially responsible party, performed removal activities pursuant to a 1993 Administrative Order on Consent (AOC). The removal activities were initiated in August 1994 and included excavation of coal tar, coal-tar impacted soils, and coal-tar impacted materials. A total of 10,000 tons of contaminated material were excavated in 1994, 1995, and 1996 during Phase I of the removal action. This excavated material was processed on the Site and transported to the George Neal Power Generation Station at Sioux City, Iowa, for incineration. The removal action was initiated to mitigate potential impact to ground water by coal tar and coal tar-impacted materials, and to remove hazardous substances in soils at or near the surface. In December 1997, a thermal desorption unit was located at the site and an additional 14,000 tons of contaminated soil from the Waterloo Coal Gas Plant Site was thermally treated from December 1997 to February 1998, during Phase II of the removal action. The thermal desorption unit was also used to thermally treat coal tar-impacted soils transported from former manufactured gas plant sites located in Charles City,

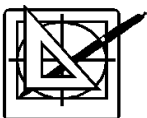
Hampton, Independence, and Waverly. These former manufactured gas plant sites are being addressed by MidAmerican Energy under the supervision of the Iowa Department of Natural Resources. The thermally treated soil was used as backfill at the Waterloo Coal Gas Plant Site. Phase I and Phase II removal activities are summarized in the September 24, 2001 Removal Action Report. In July 2003, Phase III removal activities involved limited excavation of surface soil (400 tons) as summarized in the Phase III Removal Action Report dated August 12, 2003. Excavation activities have reduced the potential for exposure to contaminated soils and reduced the impact of contaminated soils on ground water.



Site Studies: MidAmerican Energy has also performed work pursuant to a 1995 AOC that required a Remedial Investigation/Feasibility Study (RI/FS) to determine the nature and extent of contamination in ground water and soil. The Remedial Investigation (RI) for the site was primarily conducted during 1996 through 1998. The RI activities consisted of collecting surface soil samples, subsurface soil samples, ground water samples, and sediment and surface water samples from the Cedar River. The results of this investigation are reported in the August 2000 RI Report. An August 2002 Baseline Risk Assessment (BLRA) Report was prepared by EPA and Iowa Department of Public Health to select chemicals of potential concern (COPCs) and evaluate relevant exposure scenarios for current and future receptors based upon soil and ground water data collected during sampling activities. EPA also prepared a Screening Level Ecological Risk Assessment to evaluate ecological risk at the site. Sediment (2002), surface water (2004) and ground water sampling events (2001 - 2006) were also conducted to obtain additional information for the purpose of site characterization.



Remedy Selected: MidAmerican Energy prepared a May 2004 Feasibility Study (FS) Report that presented and compared remedial alternatives. The FS Report was used to support the September 2004 Record of Decision (ROD). The remedial alternative that was selected in the ROD was revised in accordance with the August 2006 Explanation of Significant Differences (ESD). The revised remedy, Institutional Controls and Monitored Natural Attenuation with Ground Water Monitoring, is being implemented at the Site and includes: 1) the use of property restrictions and existing regulations to address potential future exposure to soil and ground water; and 2) monitoring ground water for COPCs and natural attenuation parameters to evaluate ground water plume stability and compliance with ground water performance standards. The remedy takes into account the technical impracticability of restoring ground water to the performance standards within certain areas of the aquifer.



Remedy Design: On July 17, 2007, the United States and the MidAmerican Energy Company entered into a Remedial Design/Remedial Action (RD/RA) Consent Decree that requires MidAmerican Energy to implement the remedy at the Waterloo Coal Gas Plant Site. The August 2008 RD/RA Work Plan describes the activities that will be taken at the Site during the Remedial Action. A ground water

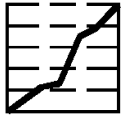
monitoring program has been designed to monitor ground water for COPCs and natural attenuation parameters. Ground water monitoring events will initially be conducted on a quarterly basis. The data will be used to evaluate compliance with ground water performance standards, ground water plume stability, and remedial progress over time. The Institutional Controls component of the remedy includes placing an environmental covenant on the MidAmerican Energy property to prohibit installation of water wells, prohibit residential development of the property, and require the owner of the property to notify Iowa Department of Natural Resources and EPA in the event of a change in land use or transfer of the property. The environmental covenant also requires that any structure constructed on the property shall be engineered to address vapor intrusion unless testing demonstrates that the vapor intrusion pathway will not present a health risk.



Cleanup Ongoing: As part of the Remedial Action, additional ground water monitoring wells were installed in September 2008, to provide a more complete ground water monitoring well network. The initial ground water monitoring event under the Remedial Action was conducted in December 2008. Groundwater sampling was conducted on a quarterly basis through September 2010. Based on an evaluation of historical data and the initial eight rounds of quarterly groundwater data collected under the Remedial Action, a decision was made to reduce the frequency of groundwater monitoring to semiannual sampling events. Beginning in 2011, groundwater sampling will be conducted in the spring (e.g., March) and fall (e.g., September) of each year. Groundwater monitoring will continue as a component of the ongoing Remedial Action and based on the evaluation of site data the groundwater monitoring frequency may be further adjusted in the future. The Environmental Covenant for the MidAmerican Energy property has been recorded at the Black Hawk County Recorder of Deeds office.

Site Facts:

ENVIRONMENTAL PROGRESS



A three-phased removal action was conducted to mitigate potential impact to ground water and soil by site-related contaminants, including coal tar and coal tar-impacted materials. A total of 25,000 tons of coal tar, coal tar-impacted soils, and coal tar-impacted materials were excavated during the removal action activities. Prior to being backfilled, the primary excavation was approximately 100' wide x 300' long x 15' deep (i.e., just above the ground water table). Excavation limits were determined either by a visual screening method or engineering constraints that were associated with excavating material from below the ground water table and/or in close proximity to railroad tracks.

MidAmerican Energy conducted a Remedial Investigation/Feasibility Study (RI/FS) to determine the nature and extent of contamination in ground water and soil. The remedial alternative that was selected to address ground water and soil contamination was described in the September 2004 Record of Decision (ROD), and subsequently revised in accordance with the August 2006 Explanation of Significant Differences (ESD).

On July 17, 2007, the United States and the MidAmerican Energy Company entered into a Remedial Design/Remedial Action (RD/RA) Consent Decree that requires MidAmerican Energy to implement the remedy at the Waterloo Coal Gas Plant Site. The MidAmerican Energy Company has completed the Remedial Design. The Remedial Action is currently being conducted by MidAmerican Energy. The August 2008 RD/RA Work Plan describes the activities that will be taken at the Site during the Remedial Action phase.

COMMUNITY INVOLVEMENT

11/97 - Fact Sheet discussing thermal desorption unit

12/97 - Community Involvement Plan

4/98 - Fact Sheet discussing status of soil removal activities and status of RI/FS.

6/04 - Fact Sheet announcing Proposed Plan and Public meeting (6/16/04) and comment period.

10/04 - Fact Sheet announcing September 2004 Record of Decision.

9/06 - Fact Sheet announcing August 2006 Explanation of Significant Differences.

9/08 - Fact Sheet announcing Completion of Remedial Design.

Congressional Districts:

Senator Charles Grassley

Senator Tom Harkin

Senators Dotzler District 11 and Danielson District 10

Representative Bruce Braley

Representatives Berry District 22, Rogers District 20, Kajtaovic District 21

SITE REPOSITORY



Waterloo Public Library
Information Department
415 Commercial
Waterloo, Iowa 50701

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

REGIONAL CONTACTS

SITE MANAGER:

E-MAIL ADDRESS:

PHONE NUMBER:

Jim Colbert
colbert.jim@epa.gov.
(913) 551-7489

COMMUNITY INVOLVEMENT

COORDINATOR:

PHONE NUMBER:

E-MAIL ADDRESS:

Ben Washburn

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STATE CONTACT:

PHONE NUMBER:

Matt Culp
Iowa Dept. of Natural Resources
Matt.Culp@dnr.iowa.gov
(515) 242-5087

MISCELLANEOUS INFORMATION

STATE:

CONGRESSIONAL DISTRICT:

EPA ORGANIZATION:

IA
07EM
01
SFD-IANE/SUPR

MODIFICATIONS

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