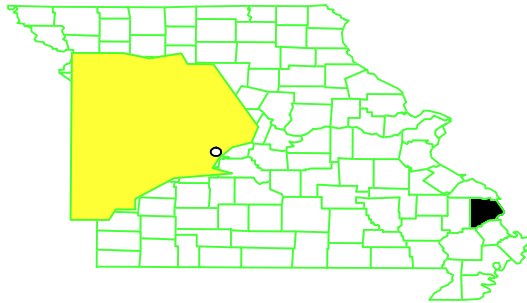


**MISSOURI ELECTRIC
WORKS**
MISSOURI
EPA ID# MOD980965982

EPA Region 7
City: Cape Girardeau
County: Cape Girardeau County
Other Names:

02/20/2009



SITE DESCRIPTION

Missouri Electric Works operated on this 6 1/2-acre site from 1954 until 1992. Missouri Electric Works sold, serviced, and reconditioned electric motors, transformers, and transformer controls. In addition, it recycled transformer oil and copper wire. The transformer oil was filtered and reused, with about 90 percent being salvaged. The remaining waste oil either was sold to local residents for dust control purposes, disposed of by a contractor, or simply allowed to leak or spill onto the ground around the facility. Some waste oil reportedly was burned on site. The total amount of waste oil generated was about 28,000 gallons. The facility was issued an order in 1988, prohibiting the company from accepting electrical equipment containing oil with polychlorinated biphenyl (PCB) levels in excess of 1 part per million (ppm). Approximately 37,800 people live within 3 miles of the site, while 1,000 people live within 1 mile of the site. The land around the site is used for industrial and commercial purposes. Prime agricultural land is located less than 1 mile away. The Mississippi River, located 2 miles from the site, is used for fishing, recreational and commercial boating, and swimming. The Cape La Croix Creek, which flows into the Mississippi, receives runoff from the site through a series of drainage ditches. Most of the water needs of the city of Cape Girardeau are provided by the Mississippi River. However, ground water from a public well 2 miles south of the site supplements river water during peak demand periods. A wetland area is located immediately to the south of the site.

Site Responsibility:

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

NPL LISTING HISTORY	
Proposed Date:	06/24/88
Final Date:	02/21/90

Deleted Date:

THREATS AND CONTAMINANTS



The EPA found PCBs from site operations in on- and off-site air sampling during 1987. The soils in the area are somewhat permeable, and the bedrock is highly fractured. These conditions have made it easier for PCBs and volatile organic compounds (VOCs) such as trichloroethylene (TCE) to migrate into the ground water. VOCs, chlorinated hydrocarbons, and PCBs have been found in the ground water below the site. Sediments in channels draining the site and areas off-site contain PCBs. PCB contamination of the soil is widespread and occurs to a depth of at least 5 feet. Residents who eat produce from gardens at the site could be at risk from the contaminated soil. Breathing contaminated airborne dust near the site could affect the health of those on or near the site.

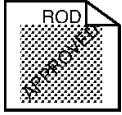
The focused ground water investigation, completed during 2005, confirmed the presence of PCBs at depth in the fractured bedrock aquifer. Chlorobenzenes were also detected in the bedrock aquifer. The wetland area south of the MEW property is underlain by saturated alluvium. The alluvium receives ground waters from the adjacent bedrock aquifer. TCE was detected at concentrations above the maximum contaminant level (MCL) in this aquifer.

CLEANUP APPROACH

Response Action Status

Immediate Actions: The site owner erected barriers to stop PCBs from migrating off-site via drainage ditches and conducted sampling of a structure on-site. After determining that the site owner did not adequately perform these activities, the EPA resampled the structure and erected new barriers across the drainage ditches to reduce the migration of PCB-contaminated soil off-site.

Entire Site: In 1990, the EPA selected a remedy including on-site incineration of the PCB-contaminated soil, and pumping and treating of the ground water via air stripping, followed by carbon adsorption. After the site soils have been incinerated, a further investigation of ground water contamination is planned. The design for incinerating contaminated materials began in the fall of 1994. On-site thermal desorption of contaminated soils was completed during July 2002.



Remedy Selected: During February 1994, an Explanation of Significant Differences (ESD) was issued. The ESD expanded the technologies available to treat the PCB-contaminated soils to include on-site thermal desorbition. An availability session and comment period were held during late 1993; no adverse comments were received.

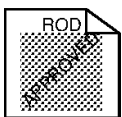


The 8th Circuit Court of Appeals concurred with the Federal District Court's 1996 approval of the Consent Decree during December 1997. The Federal District Court notified the Environmental Protection Agency (EPA) and the Missouri Electric Works Site Trust Donors (MEWSTD) of the approval during March 1998. The project specifications were advertised and Williams Environmental (Williams) of Stone Mountain, Georgia was selected to perform the remedial action for the PCB-contaminated soils. Williams proposed using an on-site thermal desorber with high temperature treatment of the off-gases. The thermal desorber unit was erected during the summer of 1999. PCB-contaminated soils were excavated and stock-piled in preparation for treatment. Performance tests were conducted during October 1999, December 1999 and early Spring 2000. Full-scale operation of the thermal desorber began during April 2000. Treatment of the 30,000+ tons of PCB-contaminated soils was complete by July 25, 2002.

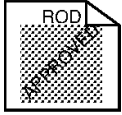
The remedial action was slowed due the discovery PCB contamination to depths greater than 20 feet. A modification of the design was required. A pair of Red-Tailed Hawks nested near the thermal desorber unit during the winter of 1999 - 2000. The original plan identified that all trees located on the eastern perimeter of the Site be removed. Since the Red-Tailed Hawks had fledglings in their nest that could not be disturbed, modifications to the design approach were made.



Site Studies: During 1991, PCB contamination was detected at depths greater than 300 feet below ground surface. Further investigations to clarify the source, rate and extent of PCB and chlorobenzene contamination of the ground water were required in the Consent Decree. Subsequent to the completion of the soil remedial action, existing and newly installed ground water wells were monitored for up to 48 months to identify the impact of the source removal on ground water contamination. New wells have been installed on the site and within the wetland area south of the site. Data gathering has been completed. Two distinct ground water regimes were identified during the ground water investigation: one within the fractured bedrock and the second in the alluvium below the wetland area. The focused ground water investigation was completed with the signing of the Record of Decision for Operable Unit 2 on September 28, 2005.

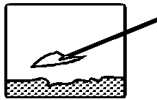


Remedy Selected: The Ground water Operable Unit RI/FS was accepted by EPA during 2005. EPA developed the proposed plan for public comment prior to issuing a ROD for the ground water. The public meeting was held in Cape Girardeau, Missouri on September 8, 2005. No comments were received. The ROD was issued on September 28, 2005.



Remedy Selected: The EPA selected remedies to address ground water contamination during September 2005. There are two ground water regimes that have been impacted by site activities. Ground water contamination within the fractured bedrock will be addressed using institutional controls, well-head treatment, long-term monitoring and a technical impracticability (TI) waiver for the applicable or relevant and appropriate requirements (ARARs) that cannot be met. Ground water contamination in alluvium below the wetland area will be addressed using institutional controls, well-head treatment, long-term monitoring and enhanced biodegradation. Additional data gathering activities are on-going; data to evaluate whether or not natural attenuation processes are occurring in the alluvium is being obtained. Should analytical data indicate that natural attenuation is occurring; enhanced biodegradation will be replaced with monitored natural attenuation.

An investigation to determine whether or not the site represents an ecological risk to the wetland area is to be performed.



Initial Actions: A small pond is located within the wetland area. Fish from this pond were collected and analyzed for PCBs. PCBs were detected in all fish. Reports of pond use for recreational fishing were received. A fence, 8 feet high, was constructed around the perimeter of the pond. The fence was posted with signs indicating there was to be no trespassing or no fishing. This action was completed during March 2007.

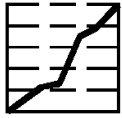


Site Studies: It is anticipated that additional studies of the wetland area will be performed to assess what impact, if any, the PCB contamination has made.

Site Facts:

More than 100 potentially responsible parties signed an Administrative Order on Consent to study site contamination and the feasibility of various cleanup technologies. In late 1991, a Consent Decree was signed between EPA and 175 potentially responsible parties (PRPs) to design the remedy and cleanup the soil under EPA supervision. The Federal District Court approved the Consent Decree on August 29, 1994. The Consent Decree approval was subsequently appealed by a group of PRPs. The 8th Circuit Court of Appeals remanded the Consent Decree back to the Federal District Court during August 1995. After complying with the instructions from the Appellate Court, the Federal District Court again approved the Consent Decree during August 1996. The approval was again appealed. The 8th Circuit Court of Appeals concurred with the Federal District Court's ruling during December 1997.

ENVIRONMENTAL PROGRESS



Erecting barriers across drainage ditches to reduce the migration of contaminated soil have reduced the potential for exposure to hazardous substances at the Missouri Electrical Works site while final remedies are being designed to clean up the soil and an additional ground water investigation is being conducted.

Soil contamination at the site has been addressed. Over 30,000 tons of PCB-contaminated soil were treated to remove and destroy the PCBs. Thermal treatment of the PCB-contaminated soils was completed on July 25, 2000. A vegetative cover has been established. Some erosion problems persist along the steepest portions of the site. These erosion areas are being monitored, maintained and restored as needed.

A design ground water investigation began during 2001. Mapping of regional joints and fractures was conducted. New monitoring wells were installed. Quarterly sampling of monitoring wells was conducted until mid-2005. Ground water in the bedrock is contaminated with PCBs and chlorobenzenes. Ground water in the alluvium found in the wetland area is contaminated with TCE.

A five-year review was completed during the summer of 2004. The purpose of a five-year review is to evaluate the protectiveness of the response action. The 2004 five-year review indicated that ecological risk in the area south of the MEW property needs to be evaluated.

A fence, surrounding the wetland pond, was erected during March 2007. The fence was erected to prevent unauthorized access to the pond and the fish contained in the pond waters. The fence is posted with warnings. The fence is being monitored, maintained and repaired as needed.

A second five-year review was initiated during February 2009. The purpose of the five-year review is to evaluate the protectiveness of the response action. Sampling of the site soils, ground water, wetland sediment and organisms will be performed.

COMMUNITY INVOLVEMENT

Community Involvement - Missouri Electric Works

Community Involvement Plan
November 18, 1997

EPA Hosted Community Meetings
08/90 - Public Meeting for Soil Proposed Plan

12/15/94 - Availability Session: Proposed inclusion of Thermal Desorption as a remedial technology

10/12/99 - Availability Session: Site update/Low temperature Thermal Desorber unit

09/08/05 - Public Meeting for Ground water Proposed Plan

Fact Sheets

12/96 - Site Update/Pilot Study

11/98 - Consent Decree Approved

2/99- Site Update/Remedial Design/Remedial Action

6/99 - Site Update/Remedial Design/Remedial Action

9/99 - Site Update/Low temperature Thermal Desorber

10/99 - Site Update/Low temperature Thermal Desorber Unit w/pictures

03/04 - Five Year Review begins

09/04 - Five Year Review complete

08/05 - Ground water Proposed Plan available for review and comment (ad placed in Southeast Missourian on August 21, 2005)

11/05 - Announced Record of Decision approved (ad placed in Southeast Missourian on November 16, 2005)

Congressional Districts

State: State Senator Peter Kinder District 7, State Representative Jason Crowell District 158

Federal: U.S. Senator Christopher Bond, U.S. Senator Claire McCaskill, U.S. Representative Jo Ann Emerson 8th District

SITE REPOSITORY



Cape Girardeau Public Library, 711 N. Superfund Records Center
Clark Street, Cape Girardeau, MO 63701
901 N. 5th St.
Kansas City, KS 66101
Mail Stop SUPR
(913)551-7166

REGIONAL CONTACTS

SITE MANAGER:	Pauletta France-Isetts/SUPR/R7/USEPA/US
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COMMUNITY INVOLVEMENT COORDINATOR:	Dianna Whitaker
PHONE NUMBER:	(913) 551-7598
E-MAIL ADDRESS:	whitaker.dianna@epa.gov
STATE CONTACT:	Don van Dyke
PHONE NUMBER:	(573) 751-8393

MISCELLANEOUS INFORMATION

STATE:	MO
	076R
CONGRESSIONAL DISTRICT:	08
EPA ORGANIZATION:	SFD-SPEB/SUPR

MODIFICATIONS

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