

# Kentucky Avenue Well Field

## New York

EPA ID#: NYD980650667

### EPA REGION 2

Congressional District(s): 29

Chemung  
Near Horseheads

#### NPL LISTING HISTORY

Proposed Date: 7/1/1982

Final Date: 9/1/1983

## Site Description

The Kentucky Avenue Wellfield (KAW) was developed in 1962 as part of the Elmira Water Board system, which supplies water to over 60,000 residents in Elmira, Elmira Heights, and Horseheads. The site is at the confluence of two major valleys within the Chemung River Basin in the south-central part of the county. The wellfield overlies the Newtown Creek aquifer and includes three test wells and a production well. The wellfield was closed in 1980 with the discovery of trichloroethylene (TCE) in the water supply. Private water wells in the area and a second wellfield, the Sullivan Street Wellfield, located downgradient of the KAW, were also found to be contaminated with TCE. The Elmira Water Board is using alternative water supplies instead of the KAW to supply residents. There are an estimated 11,000 people living within a mile of the site. The area surrounding the site is a combination of residential, commercial, and industrial areas, with little or no agricultural activity.

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

## Threat and Contaminants

Private wells were contaminated with volatile organic compounds (VOCs), including TCE, benzene, and chloroform. Soils at the Westinghouse Electric Corporation's (Westinghouse) manufacturing facility were contaminated with VOCs, PAHs, PCBs and heavy metals. Potential health threats included drinking, inhaling VOCs, or direct contact with contaminated ground water by users of private wells, direct contact with contaminated soils, and the consumption of fish from the pond and streams. Sediment and surface water samples from Kopper Pond, located south of the Old Horseheads Landfill, are contaminated with heavy metals, polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs). Fish tissue samples collected from the pond are also contaminated with PCBs and arsenic. The contaminated sediments and surface water at the pond and streams may harm aquatic and terrestrial wildlife inhabiting the area.

## Cleanup Approach

The site is being addressed in four stages: immediate actions and three long-term remedial phases directed at cleanup of ground water, soil and sediment.

#### Response Action Status

Immediate Actions: Between 1985 and 1996, EPA provided alternate water supplies to residences affected by groundwater contamination. These actions involved temporarily supplying 25 residences with bottled water and connecting 95 affected residences to the public water distribution system. Disconnected wells were closed to prevent further use. In 1995 and 1996, under an EPA order, Westinghouse removed from its facility 179 buried drums containing magnesium and titanium turnings and 1,300 tons of hazardous soil contaminated with cadmium and other heavy metals for off-site disposal.

Groundwater: Groundwater contamination is being addressed at the KAW and Sullivan Street Wellfield by using air strippers to remove contaminants from drinking water. The Sullivan Street Wellfield air stripper was completed in 1994. The KAW air stripper was completed in 1997. A groundwater pump and treat system located at the Westinghouse facility is also used to prevent the further spread of contamination within the Newtown Creek aquifer. The pump and treat system was completed and started operating in 1997.

Source Control: Actions selected by EPA to address two areas of soil contamination at the Westinghouse facility include (1) excavation and off-site disposal, and (2) soil vapor extraction. The contaminated soils were source areas for the

groundwater contamination at the KAW. Construction activities for the soil remedies were completed in 2000. EPA also selected excavation and off-site disposal to clean up PCB-contaminated sediments in the industrial drainageway. These construction activities began on September 2002 and were completed in January 27, 2003.

The last long-term remedial phase is to address the contaminated sediments in Koppers Pond.

## **Cleanup Progress**

Providing a safe drinking water source to the residents affected by contaminated well water has reduced the risk of exposure to hazardous chemicals in the ground water. The water treatment facilities completed at the Sullivan Street Wellfield in 1994 and the KAW in 1997 restore those wellfields as part of the Elmira Water Board's public water supply. The operation of the pump-and-treat system at the Westinghouse facility, beginning in late 1997, is preventing the ground-water contaminant plume from migrating through the subsurface soil from that facility. Its operation, along with source control measures implemented at the Westinghouse facility and other remedial efforts undertaken at the nearby Facet Enterprises NPL site, will help restore water quality within the Newtown Creek aquifer. The pump-and-treat system is currently extracting and treating approximately two million gallons of contaminated ground water per day. Since December of 1997, over 850 million gallons of contaminated ground water have been treated. The treated water is used as production water for the Westinghouse facility, then discharged to the industrial drainageway via two permitted outfalls. The removal of 179 buried drums and 1,300 tons of hazardous soils from the Westinghouse facility in 1995/96 has reduced the potential health threats to site employees and workers through exposure to subsurface soils. The removal also eliminated several potential sources of pollution to ground water at the site. The excavation and disposal of contaminated sediments from the industrial drainageway reduced the health threat from consumption of fish from the pond.

In February 2007, EPA took soil vapor samples from underneath the basement floor slabs and also indoor air samples in several homes to determine if the tested homes were being impacted by the intrusion of VOC vapors from contaminated groundwater beneath the properties. Two of the homes indicated the need to install mitigation systems. The systems are currently in place and working effectively. The other sampling determined that the levels of site-related contaminants were below health-based screening levels. A screening level is the level at which, if exceeded, further evaluation and/or action is necessary. Evaluation of additional residential properties, not previously tested, was conducted in October 2007 and again no screening levels were exceeded.

## **Site Repositories**

Town Clerk, Horseheads Town Hall, 150 Wygant Road, Horseheads, New York, 14845