



WATERLOO BARRIER[®]

CUTOFF WALL

FORMER MGP, BELVIDERE, IL

Case History, No. 51

May, 2005

Problem

A plume of petroleum hydrocarbon contamination was discovered at a recreational area adjacent to a former MGP site in Belvidere, Illinois.

Solution

A Waterloo Barrier[®] coffer dam was driven to facilitate the excavation and disposal of the contaminated soil (see Figure 1). The excavation was adjacent to Kishwaukee River, therefore, a low-permeability coffer dam was required to minimize the dewatering and subsequent treatment of contaminated water during excavation. The Waterloo Barrier[®] was selected due to the low hydraulic conductivity provided by the system (10^{-7} cm/sec maximum). Following the installation of the Waterloo Barrier[®] coffer dam and sealing of the joints with a cementitious grout, lateral supports were installed and excavation and disposal of the contaminated soil was completed (see Figure 2).

The sheet piles were driven to between 30 and 45 feet. The soil excavation extended to a depth of approximately 22 feet below the existing ground surface. The coffer dam was backfilled with clean soil and the sheet piles remained in place.



Figure 1. Cofferdam Prior to Excavation



Figure 2. Cofferdam During Excavation

SITE SUMMARY

Barrier: 11,450 square feet of Waterloo Barrier[®] WEZ95 **Depth:** 30 to 45 feet

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