

# WATERLOO BARRIER® CUTOFF WALL

ACTIVE MANUFACTURING PLANT, HOLLAND, MI

Case History, No. 53

December, 2004

## Problem

A plume of organic and inorganic contaminants was discovered at an active manufacturing plant in Holland, Michigan. The plume was found to be migrating towards the Macatawa River.

## Solution

The Waterloo Barrier® sheet pile system was selected to construct a subsurface cutoff wall along the Macatawa River shoreline in order to intersect the migrating plume. Due to its structural property, the steel sheet pile cutoff wall also served as a slope stabilizing system along the river bank.

One of the challenges was to construct the sheet pile cutoff wall without interrupting the operations of the two existing cooling water and fire water intake pipes. This was achieved by creating two gaps in the sheet pile cutoff wall located at the water intakes. Subsequently, the gaps were closed by injecting grout between the ends of the installed sheet pile walls and around the pipes, see Figure 1. Approximately 10,420 square feet of Waterloo Barrier® WZ75 sheet piling was installed to 25 and 40 feet below ground surface. The project was successful and achieved its containment objective.

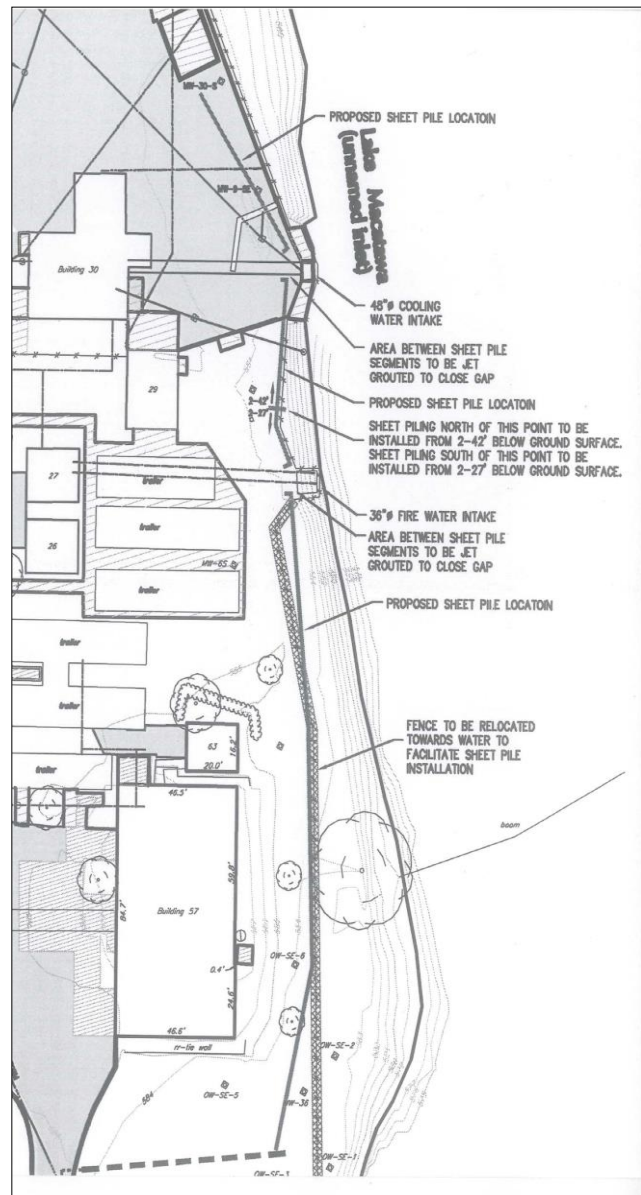


Figure 1. Cutoff Wall Plan View

## SITE SUMMARY

**Barrier:** 10,420 square feet of Waterloo Barrier® WZ75      **Depth:** 25 to 40 feet

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