



WASTE MANAGEMENT

PROJECT DATA:

PROJECT:

**On-Site Water Treatment
and Discharge**

LOCATION:

Cleveland, Ohio

SERVICES:

**On-Site Water Treatment
Design/Implementation
Compliance Monitoring**

PERFORMANCE PERIOD:

2001-2002

PROJECT COST:

\$600,000

PROJECT DESCRIPTION:



Emerald staff controlled, managed, and treated approximately 13.1 million gallons of slag-impacted water. The slag-impacted water lowered pH to a point detrimental to aquatic life. Surface water discharge was intercepted prior to entering a nearby stream and sequestered in a large retention basin. Impacted water was pumped from the retention basin to several 10 or 20,000-gallon treatment tanks. The contaminated water was treated within the tanks via injections of compressed air (i.e., aeration) to drive-off hydrogen sulfide. When the hydrogen sulfide concentration was excessively elevated, hydrogen peroxide was added to neutralize the water more effectively and expeditiously. Once the hydrogen sulfide concentration was below 1 ppm, the water was subsequently pumped from the treatment tanks aboveground to a permitted sanitary sewer discharge point nearly 0.5 mile away. Treated effluent discharge was limited to a maximum of 144,000-gallons per day. Therefore, treatment occurred on a 24-hour basis and during subzero temperatures.