

# Project Profile



## *East Liberty, Ohio – Midwest Express AD26 Arsenic / Iron Treatment System*

### Background

AdEdge Technologies Inc. (AdEdge) was selected in 2006 by Midwest Express Group to design and fabricate a full-scale AD26 arsenic and iron treatment system for their manufacturing facility in East Liberty, Logan County, Ohio to meet the new EPA arsenic standard. This facility system serves approximately 150 employees with an average daily flow of 4,000 gallons per day. The treatment system is rated for 60 gallons per minute (gpm). Incoming iron concentrations range from 2-4.7 milligrams per liter (mg/L) while arsenic ranges from 8-17 micrograms per liter (ug/L). The AdEdge system was selected over the other options including manganese greensand. No pilot testing was deemed necessary for the AD26 system based on successful performance of the technology at AdEdge's EPA full scale demonstration site in Springfield, Ohio. AdEdge and its team including LJB Inc. and Blessing Water prepared the design documents and obtained all regulatory permits from Ohio EPA to install the treatment system to meet the performance objectives. The system was permitted, fabricated, installed and started up in five weeks. The system was installed and placed into full time operation in April 2006.



### Treatment System

The innovative AD26 oxidation / filtration treatment system consists of a completely integrated packaged and skid-mounted treatment system capable of treating up to 60 gpm design flow. The system consists of three 18-inch diameter vessels in parallel, control valves, control panel, pressure gauges, and automatic controls (shown at the right) and the AD26 oxidation/filtration media. The AD26 system includes a chlorine feed module prior to the treatment system to enhance the process for simultaneous removal of iron, arsenic and manganese. Raw water is pumped from the groundwater-supply well through the AD26 treatment unit, to pressure (hydropneumatic) tanks, and then subsequently to the distribution network. AdEdge has used AD26 media in many small community and non-community public water system applications and residential applications throughout the U.S. and Canada. The AD26 media is certified under NSF Standard 61.



### Performance

The skid-mounted system is equipped with automatic controls, backwashing features, switches, gauges, flow meters, and sample ports for a complete functioning packaged unit. The arsenic, iron, and manganese are removed in a single process step. Since commissioning the system in early April, 2006 treating approximately 4,000 gallons per day, weekly results indicate removal of iron and arsenic to below detection (<0.03 mg/L arsenic). Ohio EPA has recognized the AD26 treatment technology as a viable iron/manganese removal system design for Ohio sites.

### For More Information Contact

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