

Waukesha Water Utility Well 10 Radium Removal

The Challenge:



Waukesha Water Utility needed to act quickly to comply with the Safe Drinking Water Act's Radionuclides Rule. The challenge was to remove high levels of radium with a reliable facility designed for unattended operation. CH2M HILL implemented hydrous manganese oxide (HMO) filtration on an accelerated schedule to meet compliance deadlines.

“It was nice to celebrate our successes and to see a finished product operating to its potential. CH2M HILL was a professional team from the start and we thank them for their leadership and expertise during the design and construction.”

Nancy Quirk, *Technical Services Manager,*
Waukesha Water Utility,
on the Well 10 Open House Event

Well 10 Before...



...and After:



CH2M HILL proved to the Wisconsin Department of Natural Resources that HMO filtration operated at higher than standard rates could be used to reliably remove radium. This reduced the filters' size by half, enabling the facility to fit on its small residential site and blend with the neighborhood.

Innovative Solutions:



CH2M HILL and the Utility conducted a pilot test to define design criteria for full-scale facilities. This collaboration proved to be a great learning opportunity for both operators and design engineers. It produced accurate information needed to treat Waukesha's high-radium water.

Construction:



Being a good neighbor and safety are of utmost importance to the Utility. CH2M HILL provided a design the neighbors liked and developed an accelerated sequence of construction to deliver the project as safely and quickly as practical.

Easy Maintenance:



A prefabricated well enclosure, manufactured to the Utility's specific requirements, is completely removable to provide workable access to one of the Utility's largest assets: An 800-horsepower submersible well pump located 800-feet below ground.

CLIENT/OWNER:

Waukesha Water Utility; Waukesha, Wisconsin

ENGINEERING FIRM:

CH2M HILL



CH2MHILL