

The Stormwater Challenge

Apyron, Keystone Launch Arsenic Remediation Project for Wood Preservation Company

Apyron Technologies, Inc., a material synthesis company in Atlanta, and Keystone Environmental, an environmental engineering consulting company in Vancouver, B.C., recently worked together to launch an arsenic remediation project for J.H. Baxter, one of the nation's leading wood preservation companies.

In order to continue honoring the company's commitment to meet state and federal stormwater quality standards, J.H. Baxter retained the services of Keystone Environmental to enhance the performance of its existing stormwater treatment system located at a Eugene, Ore., wood preserving facility. Keystone Environmental approached applied technology experts at Apyron to evaluate its technologies for removal of metals from the stormwater. Utilizing

Apyron's Aqua-Bind Arsenic XP adsorption media, the team members designed a water purification system capable of meeting current and proposed quality standards for collected stormwater on arsenic and copper.

To meet the discharge standards, applied technology experts at Apyron were challenged to assist Keystone Environmental in selecting adsorption media and in designing a system capable of achieving more than 95 percent removal of arsenic and copper from the facility's collected stormwater. After completion of week-long pilot tests by Keystone Environmental, the full-scale system was designed and constructed in less than four months. The system, designed to remove influent arsenic levels of 250 ppb and copper levels of 360 ppb at a flow rate of 2 gpm/ft², incorporated adsorption vessels



This system arsenic- and copper-removal system surpassed the required performance goals reducing both copper and arsenic to non-detectable levels.

containing approximately 18,000 pounds of Apyron's metal oxide composite material. Not only did the system surpass the required performance goals, it reduced both the copper and arsenic to non-detectable levels.

"This project not only has helped J.H. Baxter surpass its performance goals but also has elevated Apyron's presence within the Oregon Department of Environmental Quality, which will evaluate J.H. Baxter's new system," said Rom Papadopoulos, Apyron chairman and chief executive officer. Apyron will continue its work for Baxter as well as creating various solutions for other challenges.

"J.H. Baxter site personnel together with Keystone Environmental worked diligently to find a company with the

right solutions to enable us to meet very stringent effluent limitations," said Georgia Baxter, J.H. Baxter's executive vice president of environment and safety. "Apyron Technologies has allowed us to enhance our system so we are confident that effluent limitations are consistently being met." **WQP**

About the Author:

Greg Gilles is vice president of applied technology for Apyron Technologies, Inc., in Atlanta. Apyron is a materials creation company developing solutions for a wide range of industries including water purification, pharmaceuticals and alternative fuels. Gilles led Apyron's efforts in identifying the correct arsenic removal technology for J.H. Baxter's project and can be reached at gcgilles@apyron.com.

For more information on this subject, write in 1015 on the reader service card.

Just the Facts

- Location:** Eugene, Oregon
- Problem:** Needed to enhance the existing stormwater system to remove metals from the water.
- Solution:** Apyron's Aqua-Bind Arsenic XP adsorption media utilized in the design of a purification system.
- Results:** Water that meets state and federal discharge standards for arsenic, copper and zinc.