



A Rapid Response Solution to Determining Lead in Drinking Water

Proven measures to handle a variety of emergencies

Background

Unsafe levels of lead in drinking water are again making national headlines and threatening the health and welfare of citizens, including thousands of children under the age of six. Many are raising questions about the presence of lead in a number of American cities, leading to an even greater need for rapid response to water testing.¹

Thirty years ago, lead pipes were banned for use, but today in many cases lead pipes have not been replaced and still continue to feed water into millions of American homes, especially in the older cities along the East Coast and Midwest.² While most of these pipes are treated to prevent lead from leeching into drinking water, the U.S. Environmental Protection Agency estimates that there are up to 10 million lead water pipes still in use throughout the United States. The Center for Disease Control defines five parts per billion or more as an elevated blood lead level. For comparison's sake, one part per billion is equivalent to one millionth of an ounce in a pint of blood. That may not seem like much, but its effects on human health in any amount, say medical experts, can be devastating.³

In response to the recent water concerns, many federal and state officials are working to test their cities' drinking water for trace amounts of lead. One water testing facility already uses PerkinElmer's analytical equipment—including a number of NexION® ICP-MS instruments—and reached out with an urgent request for another NexION ICP-MS to help with testing overflow.

A Rapid Response Strategy

"Normally, it takes up to two months after receiving an order to manufacture, ship, install, and train users on the NexION 350 ICP-MS," Tim Cuff, Americas Product Line Leader at PerkinElmer, says. In situations like this one, however, Cuff says that PerkinElmer adopts a rapid response approach to get needed instruments, services, and training in place as soon as possible.

First implemented after the Fukushima Daiichi nuclear power plant disaster in 2011, PerkinElmer's rapid response protocol assembles team members based on the type of equipment, expertise, and training needed to accomplish specific tasks as the name implies – rapidly.

"In this case, manufacturing first needed to identify an available NexION 350 instrument that could be diverted to meet the need," Cuff explains. "At the same time, we had to make special arrangements for the instrument's expedited delivery, installation, and testing. That required one of our specialists to be on site to help with the preparations for the new instrument, including its location, hook-up and venting needs, and the like."

Simultaneously, Cuff says arrangements were made to coordinate logistics and user training to take place on site right up to actually running water samples on a new NexION 350 ICP-MS. "And all of this—from start to finish -- took place within 12 days of first receiving the order," Cuff says. "Can we do it again? I am confident in our ability to respond rapidly but also effectively to critical customer needs."

There When It Counts

PerkinElmer's trusted reputation for helping to improve the health and welfare of people and the environment are not just words on paper. The company's continued extraordinary response to customers' needs is a case in point. "Depending upon availability, we can get a NexION 350 ICP-MS up and running at a customer's site very quickly," Cuff says. That same level of extraordinary service is true for every item in the PerkinElmer portfolio, "That's why we created the rapid response approach in the first place," Cuff says.

References

1. Rob Curran, "Alarms For America's Aging Cities, FORTUNE Magazine, January 25, 2016.
2. Michael Wines, Jonathan Schwartz, "Unsafe Lead Levels In Tap Water Not Limited To Flint," New York Times, February 8, 2016.
3. Michael Wines, "Flint Is in the News, but Lead Poisoning Is Even Worse in Cleveland," New York Times, March 6, 2016.