EPA United States Environmental Protection Agency

Water Laboratory Alliance

Purpose The EPA **Water Laboratory Alliance (WLA)** provides the Water Sector with an integrated nationwide network of laboratories. This network offers the capabilities and capacity to analyze water samples in the event of natural, intentional, or unintentional water contamination involving chemical, biological, or radiochemical contaminants. The WLA is composed of public health, environmental, and select commercial laboratories. The WLA focuses solely on drinking water and wastewater and is an integral part of EPA's Environmental Response Laboratory Network (ERLN).

Benefits

Participating in the WLA includes many benefits, such as improved laboratory preparedness for response to emergency situations; improved communications with peer laboratories to help address emerging analytical, laboratory security, or laboratory operation challenges; and access to validated methods for unregulated contaminants of interest to the Water Sector. In addition, WLA members have access to water security-related training opportunities, analytical support to address analyses not conducted by their laboratory, and standardized analytical methods.

WLA Development

The WLA leverages existing laboratory network capability, capacity, and infrastructure and is designed to fill gaps in national laboratory preparedness for water analyses. Prior to its launch in the Fall of 2009, EPA and its partners developed 11 laboratory response plans, one plan for each of the 10 EPA Regions and a separate plan for Hawaii. These plans, which were tested using functional exercises, provided the basis for development of the WLA-Response Plan (WLA-RP). The WLA-RP serves as the foundation document for the WLA program.

WLA Activities

Ongoing WLA activities include:

Ultrafiltration Quality Control (QC) Criteria Development Project.

The WLA currently relies on the Centers for Disease Control and Prevention (CDC) Laboratory Response Network (LRN) for concentration and analysis of select agents and toxins from large volumes (10-100 liters) of drinking water using the LRN *Filter Concentration for the Detection of Bioterrorism Threat Agents in Potable Water Samples* protocol. EPA and CDC are developing Quality Control (QC) criteria for the ultrafiltration portion of this LRN protocol. Once implemented, these QC criteria will allow LRN laboratories to confirm acceptable ultrafiltration performance and maintain ultrafiltration proficiency between rounds of the CDC Proficiency Testing (PT) program. The QC Criteria Development study is also enhancing laboratory capacity and capability for select agent water analyses by improving ultrafiltration proficiency at more than a dozen LRN laboratories. This increased capacity and capability helps ensure the

continued on back

Water Laboratory Alliance Response Plan (WLA-RP)

The WLA-RP establishes a comprehensive, national laboratory response approach to water contamination events including preparedness, response, remediation, and recovery. Specifically, the WLA-RP addresses incidents that, due to their suspected cause or size, may require additional analytical support and a broader response than a typical utility, state, or federal laboratory alone can provide. The WLA-RP provides laboratories with a structure for a systematic, coordinated response to a water contamination incident that can be used in conjunction with existing Incident Command System (ICS) structures and procedures. In addition, key principles of the WLA-RP can be applied to responses that only involve a single laboratory.

Training and Full Scale Exercises (FSEs)

In an effort to support Water Sector preparedness, the WLA provides training opportunities (e.g., Laboratory Chain of Custody and Evidence Preservation) and conducts exercises to support laboratory preparedness on an ongoing basis. FSEs are being conducted to test integration of the WLA-RP with the National Incident Management System, as well as other federal network emergency response procedures and to provide opportunities to practice multi-regional coordination during large-scale incidents. These FSEs include participants from EPA Regions, CDC, the Federal Bureau of Investigation (FBI), state public health and state environmental laboratories, drinking water utilities, law enforcement, and federal, state, and local first responders. These multi-regional exercises allow participants to practice procedures related to providing support to an environmental and public health incident that includes actual sample analyses, communication, coordination, and data reporting.

Current WLA Activities *continued from front*

Water Sector's ability to respond to potential drinking water contamination events.

Chemical Method Development and Validation.

EPA is continuing its chemical method development and validation efforts in support of WLA. Evaluation of a liquid chromatography-mass spectrometry (LC-MS) protocol has been initiated in collaboration with the EPA Region 5 Laboratory to develop a direct injection rapid screening method for several unregulated contaminants of interest to the Water Sector. EPA efforts provide laboratories with a way to analyze drinking water for hazardous chemicals that would have the potential for major public health impacts or infrastructure damage to water utilities. Also, since EPA is adapting methods that are already being used in drinking water laboratories (e.g., utility laboratories, State laboratories, EPA Regional laboratories), there is minimal cost burden associated with monitoring these additional unregulated contaminants, if desired.

Home Base for Environmental Laboratories.

EPA has funded a cooperative agreement with the Association of Public Health Laboratories (APHL) to develop a "Home Base" for environmental laboratories and to disseminate educational programs and tools. This Home Base provides a platform for laboratories, and State and Federal agencies to exchange information. As a result, environmental laboratories have a voice in the development and implementation of the WLA and also have an increased awareness of water security issues.

CONTACT US: For additional information on the Water Laboratory Alliance, please contact **WLA@epa.gov** or see **http://cfpub.epa.gov/safewater/watersecurity/wla.cfm**.