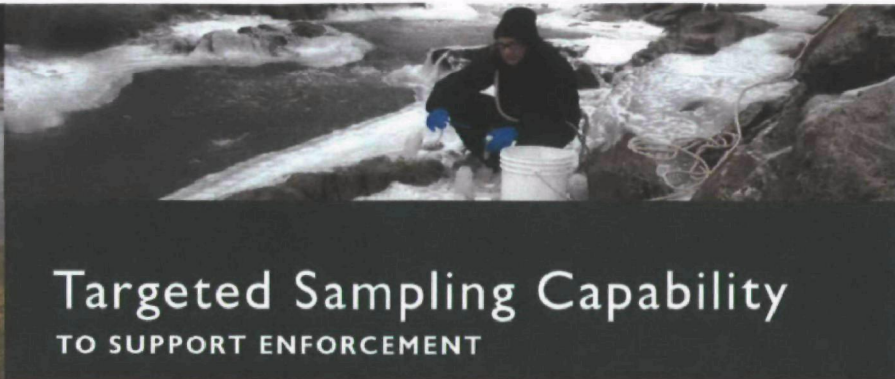


Science TO RESULTS

Using science to create a healthier environment



Targeted Sampling Capability TO SUPPORT ENFORCEMENT

U.S. EPA | SCIENCE AT THE EPA NEW ENGLAND REGIONAL LABORATORY

SCIENCE lies at the heart of the mission of the U.S. Environmental Protection Agency (EPA). The Agency must rely on cutting edge research, accurate measurements and effective technology to implement its programs to protect the environment and human health. Without sound science and credible data, EPA can not wisely set environmental and health standards, clean up contaminated sites, measure ambient air and water quality conditions, or identify the new technologies or practices that will reduce releases to the environment. These fact sheets share with you some of our EPA New England's laboratory capabilities and exemplify some of the very best science we do to meet our agency mission.

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GOAL:

Many violations of environmental regulations are revealed by reporting and self-disclosure requirements or by visual inspection of facility conditions and operations. However, often the most egregious violations require sampling to show that discharge or emission requirements have been violated, evaded, or ignored or that hazardous wastes have been misidentified and mishandled. EPA New England's sampling teams are there to provide regulatory compliant, scientifically sound sampling of water, soil, sediment, air, and wastes.

SCIENCE:

The regional laboratory's Investigations Team maintains standard operating procedures for sampling a variety of scenarios from the discharges in a sewer system to the contents of a tank or drum. When contacted to support a project the team works with program staff and our chemistry and biology laboratory teams to develop a sampling and analysis plan. The planning process identifies the target materials to be sampled and the analyses that need to be performed to determine compliance with an environmental regulation and/or facility specific permit requirements. From that starting point the team determines a sampling strategy that will collect representative samples of the target materials. They capture that strategy and sample collection, preservation, storage, transport and custody requirements as well as analytical requirements into the sample and analysis plan which serves as the blueprint that ensures the adequacy, integrity, and validity of the final data. The team also plans the logistics of the sampling operation, prepares a health and safety plan to minimize and control risks, and arranges the necessary analytical services.



Monitoring device deployed in
a sewer to detect illegal discharge
of industrial wastewater.

Meeting these objectives can be a challenge. At one site, it may mean studying drainage systems to pick sample points and then tracking the weather for weeks to be able to quickly deploy and collect samples during a storm of the right size to evalu-

ate a facility's wet weather discharges. At another site, it may require determining how to deploy an autosampling device at the right point in a sewer system with the right sampling triggers to detect an illicit discharge while managing the logistics of discreetly deploying and retrieving the device.

BENEFITS:

There is no substitute for physical evidence that

someone is evading environmental laws. The Investigations Team's ability to collect and analyze samples provides critical support to our enforcement programs in their efforts to identify and correct significant violations involving releases of hazardous substances into the environment.



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