Behind the Numbers

Direct access to the people and information you need.

Winter 2017

The newsletter of REI Consultants, Inc., your full service environmental laboratory

BECKLEY, WV • ROANOKE, VA • STAUNTON, VA • MORGANTOWN, WV | 800.999.0105 | reiclabs.com

Certified?… What else can you show me?

Lab certification is only a necessary first step…

By Dr. James L. Hern, President & CEO

Passing the bar exam will make you a lawyer; yet it won't make you a great lawyer, or even a good one. That next step is up to you. Likewise, laboratory certification is a necessary first step that establishes competence, but does not confer excellence.

Any client that deals with regulatory monitoring is certainly familiar with the term "certified": a requirement for any laboratory providing environmental monitoring data. Thus, the term "certified" or "accredited" has become a cornerstone requirement in the environmental laboratory industry. Environmental laboratory certification programs administered by state and federal agencies are among the most rigorous and demanding regulatory challenges for any industry. The margin for error can be small or non-existent, however, the cost of non-compliance can be heavy in the extreme: civil suits, official sanctions, fines, even incarceration.

Even a seemingly straightforward phrase like "certified laboratory" can have different meanings in different contexts. An environmental laboratory can be certified by its state government, or through NELAP (National Environmental Laboratory Accreditation Program) , or a combination of both. The theory behind certification, at least from my perspective, is an attempt by regulatory agencies to assure fellow regulators, as well as the public, that, by satisfying their criteria a laboratory possesses the requisite level of competence to produce scientific data that is valid and defensible. However, certification merely indicates that the organization providing the testing "has demonstrated the ability to provide technically sound data", should they so choose. As with the lawyer analogy at the beginning of this article, capability does not guarantee performance. Accountability comes down to each individual product and the ability of the organization to stand behind its work in a technically defensible manner, certified or not.

Although I believe certification programs are valuable and necessary, such administered accreditation is not a badge of unapproachable validity and unquestionable technical astuteness. Choosing a provider that is "certified" may satisfy the initial requirement of regulatory monitoring, but it is certainly not a blanket defense against impacts that may result from technically unsound and indefensible data. "Certified" is not a get out of jail free card.

In choosing a provider for environmental services, "certification" is an obvious first criterion to be satisfied. Equally important, however, is the demonstrated ability of an organization (staff, facilities, equipment, etc.) and its record of defending its work. These subsequent qualities are necessities in the selection process that, if overlooked, are potentially fatal. Of course, then service, price and value added products are critical benefits to be weighed. Partnering with an organization that demonstrates consistent excellence in technical competence, gives you confidence in their product, and provides valuable before and after service is the true recipe for success.

So, when someone says to you, "We're Certified", ask them point-blank "So? What else have you got?

Also in this issue…

REIC adds some mussel…

Meet Ben Humphrey…

REIConnect…

Continued on Back

REIC adds some mussel…

REIC's biological division now offers accredited survey studies for freshwater mussels.

If a project requires a mussel survey, REIC's experienced team is capable of conducting surveys on large and small streams. REIC can also assist by working in cooperation with state and federal agencies to perform these important studies.

Benjamin Humphrey is REIC's resident malacologist. Ben studied environmental science and biology at Gardner-Webb University, with a focus on malacology (the science and study of mussels) and conducts accredited freshwater mussel surveys in the mid-Atlantic region including Virginia and West Virginia.

It is of the utmost importance that freshwater mussels receive the protection for the role they play. Each mussel filters water at a rate of one liter per hour per individual, taking in small zooplankton, phytoplankton, bacteria, fine organic detritus, fungal spores, and dissolved organic matter. During this activity, pollutants are also taken in and either bio-accumulate in the mussel itself, or are deposited into the substrate leaving the water cleaner, and clearer than it was initially. Mussels also serve as an important food source to otters, raccoons, muskrats, fish, and birds.

North America has the highest diversity of freshwater mussels in the world. In the past, mussels were used by Native Americans for tools, and were an important food source. After European settlement, mussel shells were harvested to make mother-of-pearl buttons. This industry grew to be a multi-million dollar industry along the Mississippi River by the 1900's.

With no control on this industry, mussels were over-harvested and numbers of many species dwindled.

Currently 38 of North America's 300 species are now extinct with another 77 considered critically impaired, making mussels the most imperiled group of animals in the country. Today, the largest threats to mussels are habitat destruction and pollutants such as heavy metals and ammonia.

Although mussels are mostly sedentary, mussels can move and adapt to the constantly changing conditions in rivers and streams. Mussels can also close their shells to avoid short term exposure to toxins. As filter feeders, mussels bio-accumulate toxins leading to high concentrations and mortality.

REIConnect™ is our powerful web portal that allows clients secure and efficient electronic access to their project data. Clients can log on to view the status of their projects and download project documents, including final reports, invoices, and chain-of-custody records.

Analysis results can also be viewed for tests completed and validated, but not yet reported. Since results and documents are updated directly from REIC's LIMS in real-time, client data is always current.

Clients can also configure their account to automatically e-mail notification of new projects, final reports, and invoices. Many REIC clients elect to go "paperless" and receive all reports electronically.

Meet Benjamin Humphrey, malacologist

Ben Humphrey is REIC's new in-house specialist for conducting survey studies for freshwater mussels.

His interest in biology is rooted in his growing up in the Appalachian region. "A truly fascinating area for biodiversity, culture, and art," said Ben. "I first became interested in malacology while studying at Gardner-Webb University. Here, my research consisted of analysis of the *cox1* and *nad1* genes of mitochondrial DNA to evaluate phenotypic plasticity in *Elimia* species."

Contact us:

Corporate Headquarters: 800-999-0105 • info@reiclabs.com

Roanoke Service Center: 540-777-1276 • Roanoke, VA

Shenandoah Service Center: 540-248-0183 • Verona, VA

Morgantown Service Center: 304-241-5861 • Morgantown, WV