Environmental NEWS

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Eurofins Air Toxics' Air Chamber Lab

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Wheatstone brings vast industry expertise to US Environment Testing Division

Keith C. Wheatstone, Ph.D., President of Eurofins Environment Testing US

As the President of Eurofins Environment Testing US, Keith C. Wheatstone, Ph.D., is responsible for the strategic development of Eurofins' comprehensive range of environmental testing services in new and existing markets for all of Eurofins environmental testing laboratories in North America. These include Eurofins Lancaster Laboratories Environmental, Eurofins Air Toxics, Eurofins Eaton Analytical and Eurofins Frontier Global Sciences.

He succeeds J. Wilson Hershey, Ph.D., Chairman of the Board and past President of Eurofins Lancaster Laboratories who transitions into retirement following a 40-year career with the company. Dr. Hershey will remain in a consulting capacity to support the Division as needed.

Eurofins embraces a culture of innovation while delivering the most complete, consistent range of global testing services, and Dr. Wheatstone's business acumen and commitment to quality testing and customer service will transcend this vision. With his stellar credentials and extensive industry experience, Dr. Wheatstone has the drive and expertise to expand Eurofins' US Environment Testing business while maintaining its reputation for high quality and service to customers.

Read more on Dr. Wheatstone's industry experience:

While the Eurofins Environmental US Labs have been around individually for decades, united within the Eurofins network in 2012, it is a relatively new collaboration. What are the advantages of these four US sister labs partnering to serve clients?

As you say, the four labs – Air Toxics, Eaton, Frontier and Lancaster – have been around for decades and because of that they have very strong brand recognition in their respective markets. Each one is extremely well known and respected as a market leader, which is why they fit so well into the Eurofins 'Center of Excellence' concept.

There are several advantages to them partnering to serve clients, the most important of which is that we can now offer clients a complete package in-house – so whatever the test or method or matrix – we have a lab that can fulfill their project needs. Also, the four labs have many clients in common, which makes it easier for clients since instead of say for a complex project that involves air, water and soil and trace metals testing–which would in the past have meant them placing separate contracts with the four labs–they can now place one contract, and we'll take care of the rest. We can also offer clients smarter solutions to their problems by calling on a wider range of technical expertise and capabilities. Overall, there are many synergies between the four labs that add value to a client's experience of using the Eurofins environmental labs network rather than the former individual labs.

To that, what are the challenges?

I believe there are two main challenges – one internal and one external. The first is internal, where we need to get to the position where everyone in all four laboratories – not just the people who interface with clients such as the lab leaders, the sales team and PMs – but everyone, thinks 'Eurofins' and not their individual former names. We will do this by internal marketing, building infrastructure and presenting ourselves to clients as one coherent unit – as Eurofins Environment Testing US.

This will help us with the second challenge, which is to educate clients that Eurofins Environment Testing US is one company with separate locations that work closely together to meet their needs. Since the former brand names are so strong in the US, it will take time for clients to recognize that Eurofins is also a strong brand. And so by a combination of external marketing, serving clients as one company and thinking of ourselves internally as one company, clients will come to recognize Eurofins as a strong brand and market leader. Having worked in the UK and Europe for many years, I can personally attest that Eurofins is not one of, but is the most widely recognized name over there.

What has been the most positive industry trend(s) for the environment?

I'd say that it's people's growing awareness of the link between health and the environment. This has been there for years, but increasingly through more exposure in the media, the presence of chemicals of concern in the environment is more 'mainstream' than ever before. People have known for decades of the harmful effects of say asbestos and lead but only in recent years have they become aware of the potential hazards with everyday items such as plastics, furniture, plastic baby bottles, cling wrap, electronic components, pharmaceutical products, non-stick saucepans…the list goes on. Each of these items contains one or more chemicals that, once entered into the environment, could have a deleterious effect, directly or indirectly (for example via the food chain) on our health. This awareness is driving more regulation as well as more testing on a wider range of chemicals and at lower levels – which is good for the environment and our health!

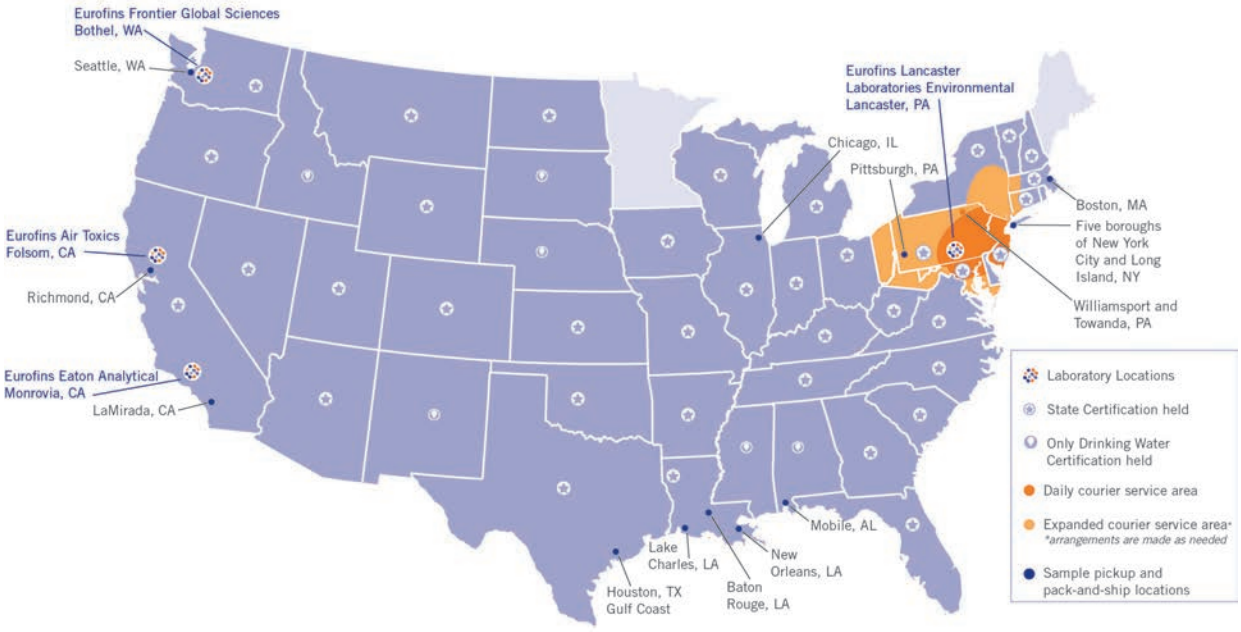
What do you foresee for Eurofins Environment Testing US during the next decade and beyond?

First, I foresee increasing demands for testing of a wider range of chemicals at lower and lower levels which will require highly skilled scientists operating very sophisticated instruments. Not all labs in our industry will be able to afford to invest in such leading edge technology as Eurofins does, and so I see us becoming the technology leader of our industry.

Second, partially driven by growing organically through being the technology leader of our industry and by outperforming the competition on quality and client service and also perhaps via selected acquisitions, Eurofins Environment Testing US will become recognized as the market leader of the industry. It's going to be an exciting time!

US Environmental Labs collaborate to deliver improved TATs, cost savings, seamless service experience

As part of its strategy to exceed EUR 2bn revenue objective in 2017 through 5% organic growth and an impressive acquisition schedule, Eurofins has been expanding its US environmental testing presence. Indeed, it added four best-in-class environmental labs to its global network with the goal of delivering a broader range of services to customers. US environmental laboratory acquisitions began in 2011 with Lancaster Laboratories in Lancaster, PA. 2012 brought in Air Toxics, Folsom, CA; MWH Labs, Monrovia, CA; followed by Frontier Global Sciences, Seattle, WA.



The ability to draw on the expertise of Eurofins' expanding scale and collaboration between labs has proved to be beneficial to all the US testing sites. Cross-selling and sharing best practices have and will continue to deliver improved turnaround times, cost savings, revenue growth and a seamless, harmonized service experience to customers.

For example, while Eurofins Eaton Analytical has been testing potable water for more than 40 years and was always a national laboratory in scope, having facilities across the US has allowed the lab to present itself as a true "local" lab. Eaton has capitalized on other sites' national courier service centers in regions that are geographically very removed from its testing facility. This capability led to the capture of several significant UCMR3 clients in the Pennsylvania region. The establishment of the SEATAC service center at the Frontier Global location, has also allowed Eaton to serve a significant number of drinking water clients in the Pacific Northwest for its UCMR3 offering.

Equally important for the sites has been the ability to cross-sell among environmental labs but also to reach out to the US Food labs to expand service opportunities for clients. Following are several examples.

- Eurofins Eaton has had significant contracts with a few major beverage companies for many years, but its offerings have been restricted to the water side of their business. With the addition of the extensive array of global food testing labs in the Eurofins network, Eaton began to open new doors and expand testing offerings for clients.
- New for Eurofins Lancaster Labs, it can now provide dioxin/furan and PCB congener testing in foods for various Eurofins food labs and in drinking water for Eurofins Eaton, further expanding capabilities options for clients.
- Also, Eurofins Lancaster Labs sends specialty metals analyses to Frontier Global and drinking water analyses to Eaton (about $50K annually), which was previously being subcontracted to a competitor, streamlining the analytical process for clients.
- Reciprocally Eaton's hazardous waste work that was subbed to others is now going to Eurofins Lancaster Labs, providing clients with one-stop shopping.
- Another example is Air Toxics assisted Eurofins Lancaster Labs with additional Summa air canisters for a recent large project, improving TAT for the client.
- Finally, Eurofins Air Toxics also entered a partnership with its cousin Eurofins lab in Australia to deliver testing services there, further increasing its footprint.

All these examples speak to the concept of Centers of Excellence to benefit clients as opposed to the traditional lab network where labs compete against each other.

Regarding purchasing supplies and services, Eurofins US Environmental is currently transitioning to a new commercial courier, pooling its spend throughout Eurofins, resulting in a 20% cost reduction.

Finally, a large benefit of the network and the reach of Eurofins' expertise has been the ability to share best practices between labs and to look at re-engineering processes to improve turnaround time. This latter approach is being accomplished with the help of Eurofins process engineers and consultants out of Europe, including Ton Grotens and David Neal. Both of them bring a new perspective to the laboratory environment and allow the labs to learn from processes that have been implemented at multiple Eurofins labs in Europe.

Eurofins Eaton Analytical achieves comprehensive ISO 17025 accreditation for environmental & food testing

Eurofins Eaton Analytical (EEA), the leading potable water testing laboratory in the US, announced that it has successfully achieved ISO 17025 accreditation for both environmental and food testing methodologies in its Monrovia, CA, laboratory. ISO 17025 is a global standard applicable for testing laboratories that is based on a comprehensive review of a laboratory's quality system and method performance. Achieving this accreditation for accurate, consistent testing and calibration strengthens Eurofins Scientific's worldwide leadership in food and environmental testing.

Adding ISO 17025 accreditation to its drinking water lab testing approval by 45 US States, TNI (NELAP) and USEPA UCMR3, demonstrates EEA's commitment to meeting the most stringent international standards for water testing. The attainment of ISO 17025 accreditation also demonstrates its capability to produce precise and consistent results down to sub parts per billion levels for clients. This also enables the laboratory to help international businesses in particular meet global demands for consistent quality in processes and results. Water continues to be recognized as critical for public health protection, whether in public water supplies or as a component of food and beverages, and with the continued interest in emerging contaminants and the development of ever more stringent standards, having a laboratory focused on water that meets ISO standards helps to ensure reliable results.

"ISO17025 has become the gold standard for accreditation of laboratories, both within the US and amongst global food and beverage companies," said Dr. Andy Eaton, Technical Director of Eurofins Eaton Analytical. "We are pleased that we achieved this accreditation for a large number of analytical methods in very short order. It reflects both our commitment to our clients to produce a quality product and the dedication of our staff in their day-to-day activities in the lab. Having ISO 17025 accreditation demonstrates our competency to conduct testing to standards that go far beyond traditional EPA criteria and illustrates the strength of our quality management system. This will help our increasingly global clients by offering them the services of a laboratory that tests according to stringent standards that are recognized worldwide, allowing analytical results to be accepted in multiple regulatory environments We are pleased to join the rest of Eurofins Scientific's food and environmental laboratories around the world in offering ISO 17025 certified methods for those clients."

Eurofins Air Toxics' ISO 17025 accreditation for environmental chamber emissions testing serves clients' global compliance needs

Eurofins Air Toxics has successfully achieved ISO 17025 accreditation for its new Environmental Chamber emissions testing facility in Folsom, CA. Achieving this accreditation for accurate, consistent testing and calibration strengthens Eurofins' worldwide leadership in Environmental Chamber emissions testing services.

For over two decades, environmental chambers have been used to test and measure manufacturers' product/material volatile organic compounds (VOCs), including aldehyde, emissions. Reducing emission levels of these chemicals can positively impact indoor air quality and help achieve healthier indoor environments. The attainment of ISO 17025 accreditation demonstrates Eurofins Air Toxics' capability to produce precise and consistent results down to the parts per billion level for clients. This will enable Eurofins Air Toxics to help manufacturers meet the growing customer demand for low emitting products and support their sustainability initiatives.

"Product manufacturers need a partner with the comprehensive portfolio to address a variety of global VOC testing requirements," says Robert Mitzel, President of Eurofins Air Toxics. "Our investment in Environmental Chamber emissions testing technology in Folsom, combined with existing capabilities of our analytical laboratory to measure and detect chemicals, establishes Eurofins as a strong global solution provider for manufacturers."

To remain competitive in a global market, product manufacturers need to be able to demonstrate that their products' chemical emissions comply with numerous governmental regulations and green building related market requirements. To address this need, Eurofins Air Toxics' ISO 17025 accreditation for chamber emissions testing encompasses US and international standards for testing and assessment from ASTM, ANSI, and ISO, helping manufacturers consolidate their testing programs to a single laboratory.

Eurofins began offering Environmental Chamber testing services in Galten, Denmark, in 1989. Since then, Eurofins increased the capacity of the Galten facility, opened a testing facility in Shenzhen, China, and added the testing services in Folsom, California, providing services on three continents. Product manufacturers may now use any of these laboratories to test their products in line with standardized testing programs, such as:

- **CDPH SM V1.1 (CA 01350)**
- **ANSI BIFMA M7.1/X7.1**
- **AgBB/DiBt**
- **French VOC Label Regulations**
- **VOC testing requirements of 3rd party IAQ certification programs**

For more information about the Environmental Chamber emissions testing services available from Eurofins, please visit www.eurofinsus.com/industries/product_testing.html and http://www.eurofins.com/voc-contacts.aspx.

SCS Global Services accredits Eurofins Air Toxics for VOC emissions testing

SCS Global Services (SCS), trusted leader in third-party environmental, sustainability and food quality certification, has accredited Eurofins Air Toxics an ISO 17025 credentialed Environmental Chamber emissions testing facility in Folsom, CA, to conduct volatile organic compound (VOC) emissions testing for the SCS Indoor Advantage, SCS Indoor Advantage Gold, and FloorScore® certification programs. Additionally, SCS will accept Eurofins Air Toxics' test results to confirm conformance with industry-recognized sustainability and environmental claims standards, such as the popular California standard for indoor VOC emissions (CDPH SM V1.1, CA 01350), and the US commercial furniture industry sustainable manufacturing standard (ANSI/BIFMA e3).

Accurate, reproducible data are critical to indoor air quality certification. Accreditation by SCS verifies that Eurofins Air Toxics meets stringent quality management system guidelines. Manufacturers of furniture, flooring and building materials can use Eurofins Air Toxics to build data sets that can be leveraged towards SCS certification. Certified products are routinely specified for LEED-rated buildings, government institutions, healthcare facilities, and schools that meet green building guidelines.

"Achieving SCS Global Services' accreditation not only affirms our stellar quality of testing standards but also furthers our drive to assist manufacturers in delivering safer, greener products to the marketplace," said Dr. Stephany Mason, Vice-President of Product Testing at Eurofins Air Toxics. "Alignment of our portfolio of VOC emissions testing services and SCS' certification programs creates a valuable platform for manufacturers to market the indoor air quality attributes of their products."

"Our indoor air quality certifications allow certified clients to prove that their products contribute to creating a safer, healthier indoor environment for their customers," said Stowe Beam, Managing Director of SCS Environmental Certification Services division. "This partnership will allow us to better serve manufacturers globally with faster turnaround time and increased choices for high quality testing solutions."

SCS Global Services has been providing global leadership in third-party environmental and sustainability certification, auditing, testing, and standards development for three decades. Its programs span a wide cross-section of industries, recognizing achievements in green building, product manufacturing, food and agriculture, forestry, retail, and more. SCS provides services under a wide range of internationally recognized certification programs, and is a chartered benefit corporation and Certified B Corp™, reflecting its commitment to socially and environmentally responsible business practices.

Eurofins Air Toxics is the leading US air testing laboratory, specializing in the analysis of air using a wide range of EPA, ASTM, and ISO methods. Founded in 1989 and based in Folsom, CA, its capabilities range from parts per trillion volume (pptv) analysis of ambient air to identifying organics in high level sources, and from routine analysis to sophisticated special technical services. A continuing commitment to data integrity, investment in advanced instrumentation and technologies, and dedicated client service have made Eurofins Air Toxics the premier test facility for the analysis of air samples.

For more information, contact Michael Crook, Director of Business Development, Eurofins Air Toxics, at MichaelCrook@eurofinsus.com.

Emergency response testing–when you really need it

Eurofins Lancaster Laboratories Environmental (ELLE) possesses a long history of helping clients meet their deadlines during routine testing. Yet, when an unfortunate disaster occurs, the importance to deliver rush testing intensifies. Few clients feel the crunch as much as those living through an unfortunate disaster, and therefore, turn to only the serious labs who can deliver legally defensible data in an excruciatingly tight timeline.

The exceptional emergency response capabilities of ELLE are very broad and far reaching with the ability to respond immediately to emergency situations and operate fully on a 24/7 timeline, including weekends and holidays. Analytical capabilities, experienced personnel, breadth of services, and storage capacity are unmatched in the industry. The following examples lend a general overview of two past events that outline the emergency response capabilities of Lancaster Laboratories.

#1: A large petroleum company had a pipeline burst. Public exposure was high and tremendous pressure for fast, accurate, data was essential. As a result of the potential impact to the public, the analytical results for this project had to be provided within 24 hours on samples that were collected daily. We were identified as a company who could handle the capacity, hit the strict turnaround times, produce legally defensible data, and deliver electronic data packages consistently. Again, ELLE mobilized all areas of the laboratory immediately. In this case however, the customer had no time to set up an account with an air carrier. We provided our air account and filled out all the paperwork for the customer to get their samples back to the lab right away. The 24/7 operations of the laboratory spanned three holidays over the course of this project. We seamlessly handled all aspects of this extremely complex and time sensitive project over several holidays.

#2: A large petroleum company encountered a complex, emergency response need after an explosion. The public exposure on this project was high, and the analysis required was extremely complicated. The customer was under pressure to act fast and maintain the highest level of defensibility. ELLE immediately responded. All areas of the laboratory were mobilized to meet each requirement of the project. We rapidly and accurately developed methodology to meet the complex testing requirements of the project. We established offsite pack and ship centers that handled multiple sampling events. Many times, the individual sampling events included more than 100 samples. Samples began to arrive daily at all hours of the day and night, seven days a week. Our shipping department quickly developed a courier team in response to the need. The development of work cells within the laboratory effectively handled each portion of the internal process. Daily huddle meetings were held, allowing staff to discuss and immediately respond to any issues that were identified with communication between all laboratory staff, highly coordinated. This allowed for immediate and accurate communications back to the customer with customized, error free, electronic deliverable packages that were streaming back to the customer daily. After, six months and approximately 8,000 samples, the project was nearly completed. Due to the potential future litigation concerning this project, our final responsibility was to pack and ship approximately 36,000 sample containers back to the customer. Our long term storage capacity and ability to maintain temperature and custody controls over a large volume of samples played a significant role in the overall success of the project.

Our team of highly trained personnel, electronic data reporting capabilities, and extensive resources, coupled with the capacity for large volume projects are all unique strengths and make Eurofins Lancaster Laboratories Environmental the single choice for emergency response testing support.

Project Spotlight on the Importance of Data Quality

Data generated through the analysis of environmental samples is essential to the decision making process for assessing, planning and remediating potentially hazardous sites. Data packages containing raw data and quality control summaries are often required to ensure that client, method and agency requirements were met during the analytical process. Invalid data can lead to delays, resampling and fines. Ripple effects of invalid or questionable testing results include unnecessary cleanup, downtime while data is validated, and expensive litigation.

With a proven track record of providing high quality testing with concise, valid data packages to support the results, Eurofins Lancaster Laboratories Environmental (ELLE) frequently gets kudos from clients who appreciate the quality and service they've received for their work on high profile projects. Here are a few project anecdotes from the ELLE client files.

It's not unusual for regulatory agencies to require third party validation for their projects. However, data validation by a third party to ensure that project plans were followed and data is useable for its intended purpose can be a significant cost in a remediation project. Such was the case for a multi-year Superfund site that included ELLE as the contract laboratory.

Originally, the USEPA regional authorities required 100% of the analytical data from the site to be reviewed by a third party. Based on the amount of data generated annually for the project, validation costs approached the six-figure range. Validators for the project regularly issued positive reports to the agency affirming the quality of ELLE's data. Based on consistent reports of compliant data, the agency reduced the number of packages required to be reviewed from 100% to just a sampling of two packages per year. The ability to use the data without extensive review saved time and significant cost for the responsible parties.

At another site involving a pipeline spill cleanup which occurred near a waterway, ELLE was drawn into the project after other environmental laboratories failed to produce valid results. In this case, local laboratories were used to expedite testing rather than shipping samples to one of the pipeline owner's approved laboratories, which includes ELLE. Results generated from that initial testing did not pass the scrutiny of data validators, and much of it had to be re-worked because there was no opportunity to collect additional samples. In order to prevent further problems, ELLE was selected to perform subsequent testing for the site.

Timeliness, in addition to quality, can be a key to avoiding costly litigation and fines. With its emergency service, ELLE is always ready to help clients quickly and correctly assess problems associated with natural or manmade disasters.

One client recently sent a note of appreciation for the emergency service he received following a petrochemical spill. Samples from the site were submitted to the laboratory on Friday and analysts stayed late that day to perform the testing needed to determine how to proceed at the spill site. By Saturday, the results were generated, approved and transmitted to the client. His note said, "We received results and closed the incident before the (regulatory agency) could even get to the site. This was the best closure we ever had."

To learn more about data deliverables and emergency services, contact Environmental Business Development at 717-656-2300.

Disaster emergency testing support at your fingertips

When an untimely disaster strikes--whether human error or Mother Nature doling out a wicked punch--Eurofins Lancaster Laboratories' Emergency Response can solve your most daunting environmental testing challenges 24/7.

By dialing 717-556-7300, you'll immediately get an expert disaster response team who can deliver sample containers, emergency TAT lab testing, online reports and electronic data deliverables backed by an unmatched breadth of capabilities, three-shift capacity, and regulatory compliance.

For soil, water and air--in collaboration with West Coast sister lab Eurofins Air Toxics--contact the industry's first choice in environmental testing support of stray gas, petroleum spill, pipeline leak, or natural disaster concerns. Just a phone call away, let Eurofins Lancaster Laboratories Environmental eliminate your disaster testing worries.

Contact us
For information on services: Environmental Business Development, 717-656-2300 env@lancasterlabs.com

For literature requests or address changes: Susan Wike, 717-656-2300, ext. 1835 slwike@lancasterlabs.com

California Department of Public Health Proposes MCL for Hexavalent Chromium in Drinking Water

California is the first state in the nation to propose a drinking water maximum contaminant limit (MCL) for hexavalent chromium, the compound made famous by Julia Roberts in the 2000 movie Erin Brockovich. In 1999, California started down a path towards establishing an MCL specific for hexavalent chromium, also known as Cr (VI), when California required all utilities to test their source waters for Cr (VI) using the then newly developed ion chromatography method (USEPA 218.6). California finalized a public health goal of 0.02 ug/L in July of 2011, which started the clock ticking for the California Department of Public Health (CADPH) to propose an MCL.

In August 2013, the State proposed an MCL of 10 ug/L, five times lower than the current total chromium California limit and 10 times lower than the current EPA limit. Public comment on this proposal was open until October 11, 2013, and CA is expected to finalize an MCL in early 2014.

Hexavalent chromium has been shown to be widespread in drinking waters both in California and across the nation and is included in the USEPA Unregulated Contaminant Monitoring Rule 3 (UCMR3) program, which began in January 2013. Once the Rule is finalized, all drinking water utilities in the State of California will have to demonstrate compliance by testing for hexavalent chromium. If total chromium is below the MCL, compliance with hexavalent chromium is assumed. However if the value is above the MCL, a utility must do a study to also evaluate the potential for conversion of trivalent chromium, also known as Cr(III) to Cr (VI) in the distribution system due to the presence of oxidizing disinfectants.

Eurofins Eaton Analytical has been involved in the testing and treatment evaluation of Cr (VI) for nearly 15 years and has analyzed over 50,000 samples for low level Cr (VI). They are also one of the few labs to be approved by the USEPA under the UCMR3 program for analysis of both Cr (VI) by the newly developed method 218.7 and for low level total chromium using method 200.8.

New York State Department of Health Delists Methods

Effective 10/1/13, NYSDOH delisted older versions of SW-846 methods, mandating that the delisted methods can no longer be used for projects in New York. Eurofins Lancaster Laboratories Environmental (ELLE) is accredited for the current versions of the methods, applicable to their scope of accreditation. A full listing of ELLE's accreditations and certifications is available at http://env.lancasterlabs.com/resources/certifications.

Department of Defense Updates Manual

The U.S. Department of Defense (DoD) has finalized an update to the Quality Systems Manual (QSM). The updated document, version 5.0, is based on Volume 1 of the TNI Standards Modules, ISO 17025 and also incorporates requirements from the Department of Energy (DOE). The QSM provides baseline requirements for the establishment and management of quality systems for laboratories performing analytical testing services the DoD and the DOE.

Because there is a two year implementation period, ELLE expects to be assessed against the new QSM in the fall 2014. Among the new requirements is an updated and expanded list of Laboratory Control Sample (LCS) limits that laboratories must achieve under the DoD approval program.

States Add Water Source Requirements for Drilling Sites

West Virginia and Colorado are among the most recent additions to the list of states requiring water testing prior to any new drilling for oil and gas wells. Intended to verify that water sources are not contaminated by drilling and hydraulic fracturing, the laws typically require testing to be performed before and after the drilling process. ELLE is capable of performing most of the tests required to monitor drilling operations and regulatory agencies in both West Virginia and Colorado have approved ELLE to perform water testing in their states.

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1,4-Dioxane: an emerging issue for drinking water?

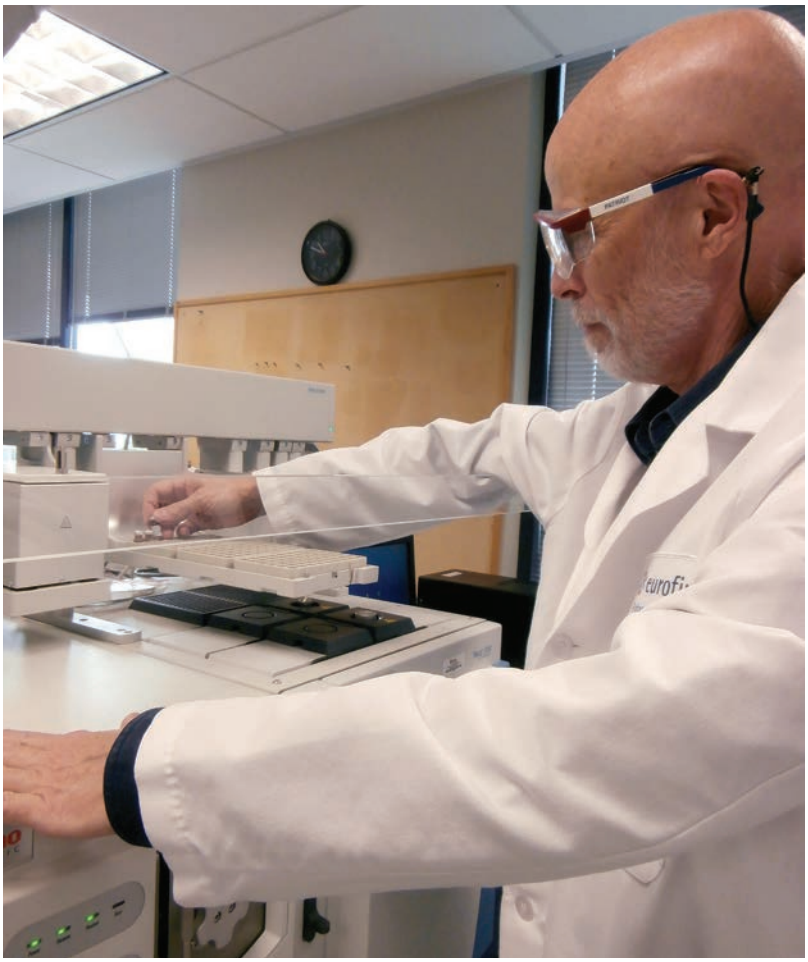
1,4-dioxane is listed in the candidate contaminant list and EPA listed it as a probable carcinogen (B2). In late 2013, EPA completed an update to their Integrated Risk Information system (IRIS) assessment for 1,4-dioxane and established a 1 x 10^{-6} risk level for drinking water at 0.35 ug/L.

1,4-dioxane is used for a byproduct of many industrial and manufacturing processes. Historically the largest use was as a stabilizer for chlorinated solvents, in particular 1,1,1-trichloroethane. It is also used in the production of many other products, including paint strippers, varnishes and waxes, dyes, and greases as well as a purifying agent in pharmaceutical production and has been found even in vine-ripened tomatoes (as a contaminant in applied pesticides). It may also be a by-product of polyethylene terephthalate (PET) plastic manufacturing, an impurity in antifreeze and aircraft de-icing fluids (HCAA), and it is found in nearly 25% of cosmetics and other personal care products such as shampoos, toothpastes, and deodorants. However, it is not listed as an ingredient in most of those personal care products because it is actually a contaminant of the manufacturing process when ethylene oxide is used. In short, it is a ubiquitous chemical in many products.

1,4-dioxane is miscible and highly mobile in groundwater and is not biodegradable to any significant extent. If it is found in water at levels of concern, the only current effective treatment is advanced oxidation with either UV-peroxide or ozone-peroxide, both extremely expensive treatment techniques.

There are numerous analytical methods for analysis of 1,4-dioxane, but by far the most sensitive method is EPA 522, a solid phase extraction (SPE) GC-MS method that uses selected ion monitoring to achieve a reporting limit of 0.07 ug/L.

EPA has included 1,4-dioxane in the latest round of the Unregulated Contaminant Monitoring Rule (UCMR3), which requires all utilities serving more than 10,000 people to collect one year of semi-annual (groundwaters) or quarterly (surface waters) samples from the entry point to the distribution system.



Analyst Craig Weed performs 1,4-dioxane testing using the most sensitive detection method, EPA 522.

Eurofins Eaton Analytical has conducted UCMR3 1,4-dioxane monitoring for more than 400 PWS across the country and the findings raise significant concerns about the potential for widespread occurrence at levels above the EPA 10^{-6} risk level. Results to date of over 1,500 samples finds detectable 1,4-dioxane in more than 10% of samples, including both groundwater and surface waters. Nearly 5% are above the 0.35 ug/L level. The highest value detected by EEA so far in finished drinking water is just over 9 ug/L. It seems likely with an anthropogenic contaminant that is so widespread there will be significant pressure for EPA to regulate 1,4-dioxane in drinking water if these results continue to be representative of UCMR3 monitoring. This high degree of detection will also encourage utilities and regulators to begin identifying specific sources, which may prove to be industrial operations, wastewater plants, or legacies of past practices. Currently there are numerous states that have established action levels for 1,4-dioxane, some as low as 0.3 ug/L.

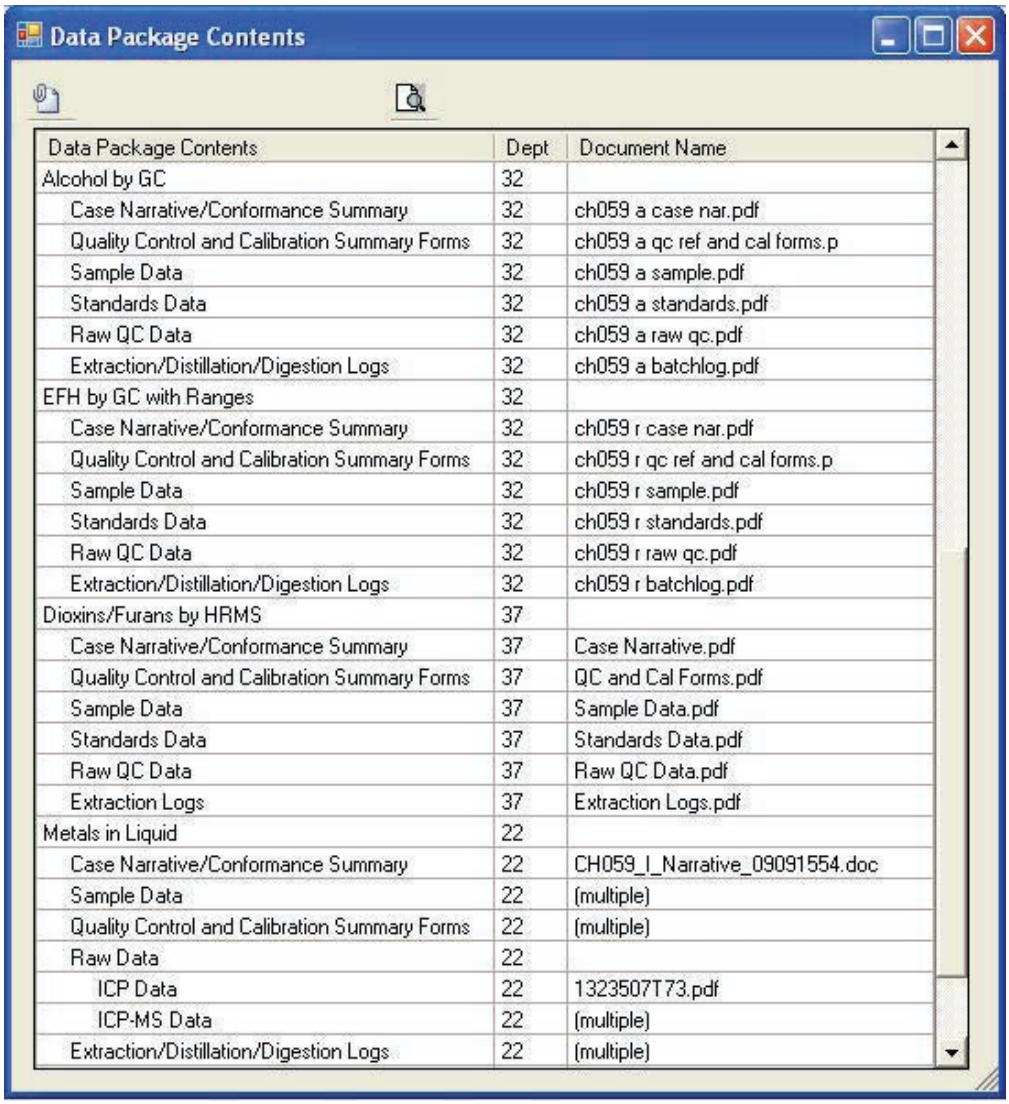
If you are interested in testing for this compound in your source water or finished potable water, please contact us at us20_sales@eurofinsus.com.

Data Package Production Streamlined

Early data packages were unwieldy paper documents constructed from hundreds of printed pages originating from multiple sources, presenting many opportunities for error. In addition to labor intensive preparation, hours of internal review time were required to ensure that the final product accurately reflected the data generated in the laboratory. No wonder the difficult process of data package preparation was the target of some of ELLE's earliest process improvement efforts. Those efforts have been ongoing and with the latest version of Laboratory Information Management Software (LIMS), the data package preparation process couldn't be more different, or more improved from those early efforts.

When a client requests data deliverables for their project, the assembly process actually begins as samples arrive at the laboratory and are logged into the LIMS. At this point, the data package content requirements are built based on the tests scheduled and the client requested level of information. As analysis proceeds, data needed for the requested deliverables is captured on a real time basis, including raw data, summary forms and electronic notebook pages. Case narrative comments are entered by the laboratory staff as the results are generated and reviewed.

When the analysis is completed, an "audit verification tool" within the LIMS is used to define and locate all the pieces of information needed to populate the summary forms. The data package is compiled simultaneously for all fractions from the LIMS files into a pdf. This results in a deliverable that is easier to read and looks consistent, regardless of whether the results were generated from a basic pH meter or the most high tech mass spectrometer. The information presented is more accurate because there is less opportunity for the errors that occur if data are re-typed or manually selected for inclusion in the package. Summary forms will match the analytical reports exactly because they are generated from the same analyst-verified database.



Data Package Contents	Dept	Document Name
Alcohol by GC	32	
Case Narrative/Conformance Summary	32	ch059 a case nar.pdf
Quality Control and Calibration Summary Forms	32	ch059 a qc ref and cal forms.p
Sample Data	32	ch059 a sample.pdf
Standards Data	32	ch059 a standards.pdf
Raw QC Data	32	ch059 a raw qc.pdf
Extraction/Distillation/Digestion Logs	32	ch059 a batchlog.pdf
EFH by GC with Ranges	32	
Case Narrative/Conformance Summary	32	ch059 r case nar.pdf
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Screen shot from the LLabWeb application, showing the components of data packages available via a secure window on the internet.

Years ago, ELLE replaced the piles of paper being mailed to clients with compact discs containing electronic copies of all the forms and notebook pages needed to verify analytical compliance with client requirements. The current system takes that idea a step further by being truly paperless. Data packages are available in LLabWeb, a secure window to extensive project information. Clients are emailed a link for each data package as it becomes available in LLabWeb. Clicking on the link takes the client directly to the data package, which is available after secure log-in. The data packages are displayed with page numbers and are bookmarked making it easier to locate specific information. Client service representatives have access to the same data package, which is helpful when addressing questions about the data.

Metrics maintained by the Data Package Group show the improvements enabled by the system. In 2013, the error rate found in review has been cut in half, while the on time delivery rate jumped by 26%. This progress was possible even though the number of packages processed increased significantly during the last year.

For access to this and other features of LLabWeb, contact your client service representative at 717-656-2300.

People are the chemistry

We believe that our people provide our strength. Their dedication to quality, professional competence and hard work are the key elements in the company's success. In this regular feature, we introduce you to some of the people who have helped make our lab an industry leader.

Andrew D Eaton, PhD, is the Technical Director-Vice President of Eurofins Eaton Analytical (EEA), the largest potable water testing laboratory in the United States located in Monrovia, CA. Dr. Eaton has over 35 years of experience in the field of geochemistry and analytical chemistry related to environmental problems. His expertise and experience have focused on analytical methods development and issues of detection, quantitation, and monitoring programs. Dr. Eaton provides technical direction for a staff of over 100 chemists and microbiologists performing compliance and R&D testing for utilities, government agencies, and private companies across the nation. Dr. Eaton has over 75 publications and presentations in the area of analytical chemistry, quality assurance, monitoring, and detection and quantitation issues, most recently focusing on PPCPs, Cr(VI), and UCMR3. He earned both a PhD in Geochemistry and a MS/MSc in Geology from Harvard University.

Andy Eaton with a few of his passions

What does your current job entail?

I wear multiple hats – one is to be the face of EEA as far as presentations at national conferences, participation in industry workgroups, and serving as a member of the Joint Editorial Board of Standard Methods for the Examination of Water and Wastewater (the "bible" of the water/wastewater industry as far as methods). In general this helps our clients stay informed of what is going on in the regulatory arena, so they can proactively be prepared for that. A second hat is to provide technical direction for the laboratory, by working with our operations groups and analytical services managers to make sure we are staying on the leading edge and providing useful and accurate data for our clients. A third hat is to serve directly as the analytical services manager or principle in charge for critical projects for major programs such as our EPA analytical contract to support UCMR3 monitoring for small systems nationwide, or projects looking at water reuse with a focus on emerging contaminants. I also am involved in spearheading new initiatives, such as the work we have been doing together with some of the Eurofins food labs. The final hat is to provide guidance to our R&D Group.

What process improvements does your group initiate to serve clients better?

A lot of our focus is on developing and validating new tests so that our clients can stay ahead of the curve in responding to Nongovernmental Organizations (NGOs). While not a process improvement per se, it is a way for clients to be assured that we can help them when the need arises. The other key process improvement deals with streamlining reporting formats to ensure that our clients outside the municipal drinking water sector get reports that easily meet their needs for data. Our Client Access Portal (CAP) is one key element of this. It allows clients to perform data mining for trend analysis or comparison to internal project limits and many of our clients use it routinely to immediately answer questions about historical information.

You've been here for three decades and seen countless changes. Is there anything that hasn't changed during your tenure?

In the last 33 years, the one thing that has never gotten better is the pile of paper in my office. The one thing that really hasn't changed is the fact that our clients have always looked to us to provide high quality results and services that go beyond just reporting results, to helping them put those results in context.

What kind of volunteer activities have you been involved with?

I've been active in the lay leadership of our church for a number of years, serving as treasurer, chair of the planned giving committee, chair of our stewardship campaign, and currently serve as a member of the finance committee. I have also gone down to Mexico a few times to help build houses, again under the auspices of our church. On the professional volunteer side, I've been involved with Standard Methods for the Examination of Water and Wastewater for more than 25 years, currently serving as a member of the Joint Editorial Board and also serve on a number of industry workgroups both for the American Water Works Association and the International Bottled Water Association.

How does you group's work impact/ benefit society?

The most important thing that our analysts do is to protect public health. When we work for municipalities the vast majority of the work that we do is to demonstrate compliance with water quality standards. Outside of that, we try to help them to be aware of emerging contaminants and help them put those results in perspective. For our food related clients, the most important thing we do is to help them protect the integrity of their brand, by demonstrating that they meet or exceed relevant standards, and again are prepared for questions that may arise as a result of news reports.

And when you're not working?

What, that actually occurs? I have two passions in life outside of work – my granddaughters, currently ages 3 and 6, and our Labrador Retrievers; we currently have a 3 year old yellow Lab and a 4 month old black Lab, both descendants of our first Lab.

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Look for Eurofins' US Environmental Labs at these conferences and industry events:

Event	Date	Location	Attending
CWUA Annual Conference	12/10-11/13	Las Vegas, NV	Eurofins Eaton Analytical
GRA CECs Conference	2/4-5/14	Concord, CA	Eurofins Eaton Analytical
IBWA Committee Meetings	2/4-6/14	Long Beach, CA	Eurofins Eaton Analytical
Pittcon	3/2-6/14	Chicago, IL	Eurofins Lancaster Laboratories Environmental
AMTA Annual Conference	3/10-14/14	Las Vegas, NV	Eurofins Eaton Analytical
WateReuse California Annual Conference	3/16-18/14	Newport Beach, CA	Eurofins Eaton Analytical
AEHS West Coast Conference	3/17-20-14	San Diego, CA	Eurofins Lancaster Laboratories Environmental
AWWA CA/NV Sectional	3/24-27/14	Anaheim, CA	Eurofins Eaton Analytical
ISBT Annual Conference	4/28-30/14	San Antonio, TX	Eurofins Eaton Analytical
CWEA Annual Conference	4/30-5/1/14	Santa Clara, CA	Eurofins Eaton Analytical
TCEQ	5/6-7/14	Austin, TX	Eurofins Lancaster Laboratories Environmental
WateReuse Desalination Conference	5/19-20/14	Las Vegas, NV	Eurofins Eaton Analytical
AWWA ACE	6/8-12/14	Boston, MA	Eurofins Eaton Analytical
IBWA Committee Meetings	6/9-12/14	Alexandria, VA	Eurofins Eaton Analytical
ASMS Conference on Mass Spectrometry	6/15-19/14	Baltimore, MD	Eurofins Lancaster Laboratories Environmental
A&WMA Annual Conference & Exhibition	6/24-27/14	Long Beach, CA	Eurofins Lancaster Laboratories Environmental

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