



Environmental **NEWS**

Fall 2011

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**Lancaster
Laboratories**
Celebrating **50** Years

Looking back to look forward



by J. Wilson Hershey, Ph.D., Lancaster Laboratories chairman of the board

As another successful year at Lancaster Laboratories comes to a close, we look back to look forward. Every day we listen to clients' project challenges and ideas, learn from the past and continually look to implement system improvements and new specialty services, making yesterday's suggestions tomorrow's success stories. Many of our services have come from hearing clients' thoughts and adapting to deliver more customized service experiences. My goal at the end of every year is to look back on all the clients we've delighted and ensure that satisfaction continues to grow for next year.

As we look forward to serving everyone even better next year, allow me to share a few of our new service enhancements that are highlighted in this issue. For instance, while clients are fond of the conveniences of our online data access portal LLabWeb 1.0, we've further tailored the service to deliver more data retrieval options, more efficiently. Specifically, using their own secure web based log-in, LLabWeb 2.0 gives clients more functionality options; sample submission paperwork, COCs, invoices,

analytical reports, historical data, etc., are all now available 24/7. And LLabWeb's sophisticated search, sort and filter feature enables clients' data searching by keyword parameters, and clients can export results to their preferred application. LLabWeb 2.0 will be available in the winter quarter and will add EDDs and Data Packages. For a greater breadth of LLabWeb's updates, please see the article on the opposite page.

Also on the horizon for next year, Lancaster Labs' Specialty Services Group has some exciting new services underway, such as:

- The Group has developed a new analytical protocol for performing dioxin/furan and dioxin-like PCB congener testing in foods and feeds.
- They've also expanded the pesticide/herbicide test list to 150 compounds traditionally performed under methods 8081, 8141 and 8151, which can now be done using sophisticated LC/MS/MS and GC/MS/MS, providing greater sensitivity and selectivity.
- The Group has set up a new analysis for the 209 PCB congeners by EPA Method 1668C for water, soil and sediments by HRGC/HRMS and expects certification by spring 2012.
- Additionally, they've doubled capacity for perchlorate analytical projects and have redeveloped reporting limits, achieving lower levels. The Group has also been asked to begin research on perchlorate analysis in food and dairy. We already offer the analysis in infant formula.

You'll find all the new developments the Specialty Services Team has in store for you on pages 4 & 5 in this issue.

Another way clients help us reflect on what we're doing well and how we can do things better is by participating in our annual Customer Satisfaction Survey. See how respondents rated us on the next page.

Finally, during every past acquisition, our values have remained constant, and we've been able to maintain our brand. Now as we continue our integration with Eurofins, they too see value in the Lancaster Laboratories brand. Yet one of the distinguishing factors Eurofins has from our previous owners is Eurofins is in the laboratory business and also has strong brand awareness in Europe. So we therefore have two outstanding companies, providing a greater geographic scope. Consequently, the best way to capitalize on this brand recognition is to combine our logos. Even though our legal name will remain Lancaster Laboratories, beginning early next year, our new combined logo will have both the Eurofins and Lancaster Labs names and will look like this:



Most of all, we look forward to working with you this coming year and discovering all the new ways we'll become smarter and more proficient in serving you better each day.

Contact us

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

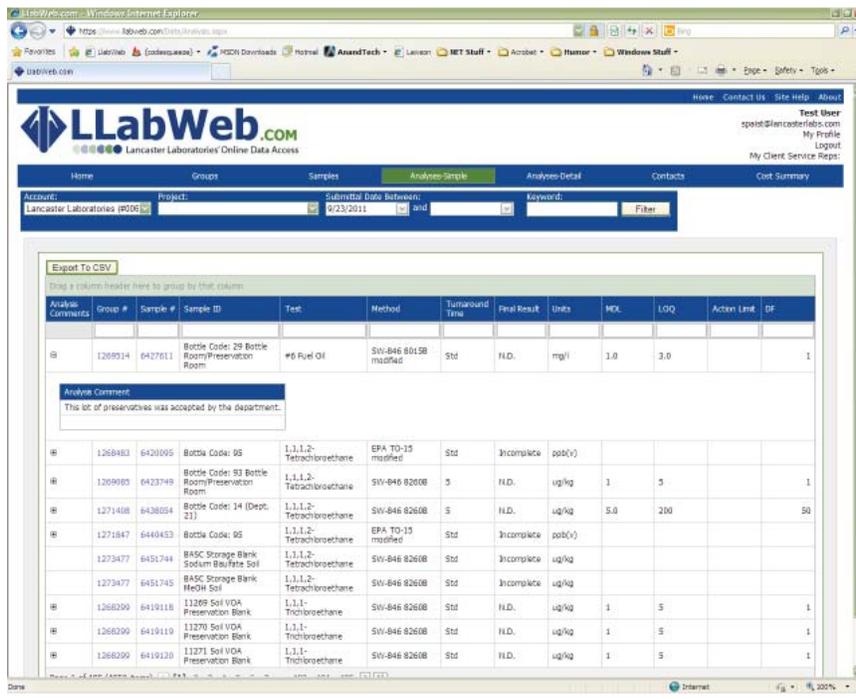
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New LLabWeb 2.0 offers clients more options, saves time

LLabWeb Version 2.0 is a secure web-based service available at no additional cost to environmental clients. This new release provides users with even more functionality, including signed analytical reports, sample submission paperwork, sample custody documents and invoices. Clients are able to retrieve these documents as a .pdf file at any time of the day or night using their own secure web-based log in. Details of sample groups, samples, and tests, including historical data, are quickly accessible.

Clients with large sample groups being analyzed for multiple parameters will appreciate LLabweb's sophisticated search, sort and filter functionality that allows efficient display of data searching by keyword parameters, which include sample name and test name. The ability to export results directly into a spreadsheet or other application is a much requested enhancement that is available with the new release. Clients will also appreciate the "splash page," which allows users to see the most recently submitted and most recently reported groups at a glance. This page allows users to click on an account, project or submittal group to quickly access the data associated with their choice.

To access LLabweb, clients log onto the site and request an account. Their client service representative will activate the account and manage the permissions for the users. Once the account is established, clients will be able to manage their own profiles (including passwords) and access data through a secure web-based interface. Data will be available as soon as it is approved by the analyst. For more information about LLabweb, contact your client service representative at 717-656-2300.



Survey says...

Lancaster Laboratories conducted its annual Customer Satisfaction Survey, which always provides valuable customer insight on positive service offerings and experiences, as well as areas for improvement. Overall in all categories, including: Responsiveness, Communication, Technical Knowledge, Timeliness & Contents of Bottles, Report Accuracy, Turnaround Time, EDD Accuracy and Turnaround Time, Data Package Accuracy and Turnaround Time and Technical Satisfaction, 95 percent of our clients rate us as Meeting, Exceeding or Outstanding in terms of their requirements. Thanks to the nearly 500 clients who offered feedback. Here's a small sampling of what you had to say:

What is Lancaster Laboratories doing well?

- Customer service is excellent.
- Technical knowledge is strong.
- The response time is great; the availability to help or answer questions is fantastic.
- Bottle order deliveries are always perfect; reports are always on time and accurate; issues with samples are communicated quickly and effectively.
- Good turnaround time of lab reports,

report format is clear and user friendly; bottle delivery is on time.

- Lancaster Labs is a reliable business partner.
- Just about everything.

Of course we'd lead with a few positives, now here are some improvement/suggestions you had:

- Price, but I feel that we do get our money's worth.
- Faster turnaround time.
- Control of their subcontractors.
- Expanded courier service.
- At times, Lancaster may be expensive but you get what you pay for and paying more for better technical services is acceptable at times.
- I receive multiple e-mails about the same analytical results sometimes.
- Should think about giving gifts for surveys!

While we very much appreciate your positive feedback, we are also extremely interested in your suggestions for improvement and therefore will actively follow up on all comments provided. Thank you for taking the time to help us serve you better.

New protocol developed for dioxin/furan & dioxin-like PCB congeners

Lancaster Laboratories' Specialty Services Group has developed a new analytical protocol for performing dioxin/furan and dioxin-like PCB congener testing in foods and feeds.

On the heels of getting into the market with their PADEP accredited EPA Method 1613 for dioxin/furans in soil and water, the Specialty Services Group can now analyze dioxin/furans and the World Health Organization's (WHO) dioxin-like PCB congeners in foods, feeds and tissue (fats, oils). Out of the 209 PCB congeners, WHO has identified 12 of the congeners that possess toxic characteristics similar to dioxins and furans. These 12 dl-PCB congeners

PCBs with plans to eventually be able to analyze all 209 PCB congeners by EPA Method 1668. (See accompanying article on PCB 209 news.)

With this new protocol, the Specialty Services Group intends to deliver some benefit to clients through a single sample preparation step followed by, analysis on HRGC/HRMS.

First, with a single sample preparation step for analysis, the Group hopes to reduce turnaround times.

Secondly, the analysis on HRGC/HRMS uses a two column set-up, thereby reducing the likelihood of false positive detections, important when analyzing food and feed samples.

The Group believes that they may be one of only a few commercial laboratories offering this kind of service in the U.S.

The European Union has established dioxin/furan and dioxin-like PCB congener limits

for food and feed sold in their countries, and this new protocol meets those standards for customers exporting to Europe. When Lancaster Labs is accredited for this testing, it will be among a limited number of laboratories capable of offering this service.

For more information, contact Environmental Business Development at 717-656-2300.

Certification pending for new PCB congener analysis

As a natural extension of the expertise developed with analysis for dioxins and furans, Lancaster Laboratories Specialty Services Group has developed a new analysis offering for the analysis of the 209 PCB congeners by EPA Method 1668C for water, soil and sediments. Like the dioxin and furan analysis, the new analysis is performed by high resolution gas chromatography/high resolution mass spectrometry (HRGC/HRMS), providing state-of-the-art sensitivity and selectivity.

Common PCB methods determine the PCBs as Aroclors, such as EPA SW-846, Method 8082. The total of 209 congeners are all of the possible isomers of PCBs, many of which make up Aroclors. The analysis for the 209 includes the 12 WHO dl-PCBs as well as the 21 NOAA chlorinated biphenyls, which are important to assessing the toxic effects of biological exposure. Analysis and fingerprinting of the 209 congeners can also help with point-source identification and forensic determinations. Known carcinogens in animals, PCBs likely have similar repercussions on humans and are widely speculated to have adverse developmental, endocrine and reproductive effects.

The new PCB congener analysis is expected to be certified by PADEP this spring 2012 according to Chuck Neslund, manager of the Specialty Services Group. "The addition of this new service really augments our commitment to providing support for really complex environmental projects," he says. "A client is now able to request analyses that range from the difficult PCB congener to the simplest wet chemistry test, all under one roof with the capacity to do large projects, quickly. There aren't many labs where you can do the kind of one-stop shopping that you can at Lancaster Labs."

For more information, contact Environmental Business Development at 717-656-2300.



Using HRGC/HRMS, analyst Joe Anderson tests food samples for dioxin-like PCB congeners.

have Toxic Equivalency Factors (TEFs) established for them like the toxic dioxin/furan isomers do. Therefore, they are typically requested to be analyzed for in foods, feeds and tissues. Client interest in dioxin/furan testing by Method 1613 has been tremendous, and offering 1613 analysis for food and feeds will broaden the monitoring for these classes of compounds. The Group is dove-tailing the addition of the 12 dl-

Lancaster Labs doubles capacity for perchlorates; LC/MS/MS improves turnaround time

Perchlorate is used in the manufacture of rocket fuel, explosives and some fertilizers. Perchlorate salts are not readily affected by pH and temperature and are persistent in aqueous systems. Perchlorate's water solubility makes it very mobile in soil. Research has indicated that perchlorate can disrupt the thyroid's ability to produce hormones needed for normal growth and development.

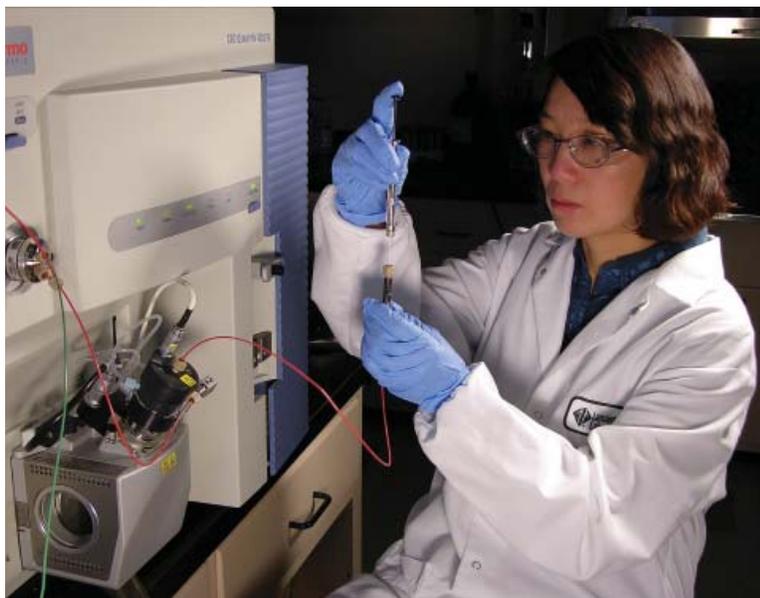
Even though EPA does not have an established Maximum Contaminant Limit (MCL) for perchlorate, in the Unregulated Contaminant Monitoring Regulation 1 (UCMR1) program, the contaminant was detected in approximately 4 percent of public drinking water supplies. EPA has proposed an action level of 15 ug/l for perchlorate.

In response to the health concern and client needs, Lancaster Labs has doubled its capacity to perform perchlorate analysis by EPA SW-846 Method 6850.

Method 6850 uses LC/MS/MS with an isotopically labeled surrogate, so the analysis is very selective and sensitive. In addition to expanding the instrument capacity, the Specialty Services Group made improvements to the chromatography column and elution profile so that ion suppression is greatly reduced, which adds to the specificity of the analysis. These improvements have allowed for more rapid turnaround on sensitive drinking water sample analysis as well as increased the number of samples processed in a day.

Based on client need the Specialty Services Group has also worked to achieve lower limits for the analysis of perchlorate in soil as well as an analysis for perchlorate in milk and milk products.

For more information, contact Environmental Business Development at 717-656-2300.



Principal Chemist Meng Yu uses a triple quad to test rush drinking water samples for perchlorate contamination.

Agricultural chemicals analytical list expanded; instrumentation enhanced

Increased requests for agricultural chemical testing have prompted the Specialty Services Group to expand the pesticide/herbicide testing list. The expansion broadens the scope of service offerings beyond the more traditional testing list for soil and water typically performed using methods 8081, 8141 and 8151 from the Environmental Protection Agency's SW-846 Manual.

Lancaster Laboratories has expanded the service offering to approximately 150 compounds, which can now be analyzed in foods and feeds. The range of compounds covers traditional Persistent Organic Pollutants (POPs) such as DDT and metabolites as well as more current use compounds such as carbaryl, 2,4-D and diuron. Plans are to add to the diversity of the offering as client needs and regulations may dictate.

Several points of interest have facilitated the development of this analysis by the Specialty Services Group. First, is the advent of the Quechers Extraction Method--a simplified and broader-ranging extraction. Quechers reduces the need for additional prep cleanups and sample handling and can allow

for the extraction of a broader range of compound chemistries. The second is the more routine application of tandem mass spectrometry technology. The Specialty Services Group has successfully applied the use of LC/MS/MS and GC/MS/MS to projects where the greater sensitivity and selectivity of this instrumentation was a great advantage. Therefore, the Specialty Services Group combined their expertise in tandem mass spectrometry with the simplified Quechers extraction to develop a method that addresses a large number of compounds with a wide range of chemistries at very low limits. In many cases, preparing an extract without extra cleanups and coupling that with the greater sensitivity and selectivity of the triple quad mass spectrometer, reporting limits better than those obtained with SW846 methods can be achieved.

"Addressing clients' requests for broader service offerings with more sophisticated instrumentation, we hope to continually send the message that we are listening to clients and expanding with their needs," says Chuck Neslund, manager of the Specialty Services Group.

Shale oil & gas testing services support clients' exploration & development 24/7, at any location

With newly developed drilling and processing technologies driving shale oil and gas development, the energy industry is now tapping into the United States' vast natural gas resources, moving closer to independence from foreign resources.

With this national upsurge in shale oil and gas exploration and development, particularly in the Marcellus Shale area, comes a greater demand for environmental monitoring surrounding the well pad. Pre-drill evaluations, emergency response, 24/7 analytical testing, rush turnaround and legally defensible data support is paramount to meeting regulatory criteria and protecting our customers. Irrefutably to that, Lancaster Laboratories is the largest single-site environmental lab in the U.S. and essentially in Marcellus Shale's back yard--able to deliver testing support anytime, anywhere.

With 50 years of environmental testing experience, Lancaster Laboratories offers a comprehensive scope of analytical testing services and technical expertise to serve the needs of gas drillers, consulting firms, homeowners and regulatory agencies to support shale oil and gas exploration efforts. From baseline survey water testing to wastewater characterization and analytical method development, Lancaster Labs offers testing for all phases of the drilling and exploration process, including:

- Pre-drilling Survey of Residential Wells
- Spill and Emergency Response
- Ambient Air Quality
- Disposal
- Hazardous Waste Characterization
- Wastewater Characterization

Why is Lancaster Labs the best choice for analytical outsourcing?

• As the largest single-site environmental laboratory in the United States, Lancaster Labs' 225,000-square-foot facility provides the capacity to meet demanding sampling events.

- Three shifts of operation working 24/7 and 850 technical and support staff



An environmental chemist performs wastewater characterization.

members allow accommodation of rush turnaround times for spill, emergency response disposal and other projects.

- With accreditations held in 40 states (NELAP), including PA, NY, WV, OH, MD and TX and rigorous internal quality standards, Lancaster Labs provides the regulatory support needed to comply with local, state and federal regulations.
- A single point of contact for all clients' analytical needs and 24/7 online data access with LLabWeb 2.0 provide the highest level of trouble-free communication with data in Excel and PDF formats.
- 120 Electronic Data Deliverable (EDD) formats, including EQUIS.

Sample Pick-Up Services

Lancaster Labs offers sample pickup and pack-and-ship services throughout the shale gas exploration areas of the United States. Couriers will pick up samples at

a client's office or project site and deliver them to the laboratory the same day. Lancaster Labs also offers pack-and-ship services where samples are packed in coolers with ice and shipped to the laboratory via overnight a.m. delivery.

- Coolers are expertly prepared and easy to use. They include all sample containers and a detailed inventory list with holding time, method reference and preservative, as well as pre-printed labels and return shipment forms.
- Lancaster Labs' sample packing process ensures that samples arrive at the Lab safely, in a timely manner and within temperature specifications.
- Each pack-and-ship location also maintains an emergency supply of coolers, COCs, bottles and packing materials for those projects that just can't wait.

For more information, call Environmental Business Development at 717-656-2300.

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

With Lancaster Laboratories for one half of the company's 50-year existence, Anneliese Owen has seen tremendous growth in the company as well as her career. When she began her career in 1986, the Lab employed 180 people and the facility was 50,000 square feet as compared to today's 850 employees housed in a 225,000 complex. Currently a manager for Environmental Sample Administration, Anneliese brings a wealth of knowledge from many areas of the business, having worked in data deliverables, client services and business development. Clients can have faith in knowing their samples are in good hands as every day Anneliese and her team ensure each and every container gets to where it needs to go in order to meet turnaround-time and holding time requirements and allow the technical centers ample time to schedule their analytical work.

The Environmental Sample Administration team has more than 150 years of combined experience at the lab, ranging from 26 to at least 3 years of service. Often her work on clients' samples begins long before they arrive as her team works closely with client services and the technical centers troubleshooting for any potential challenges and resolving issues preemptively. "I like to ensure a seamless start to the analytical process," says Anneliese. "Given a project's many technical and scheduling requirements, a little planning goes a long way towards making it successful for both the client and the lab. That is why we encourage clients to e-mail their COCs to the lab when they are shipping so that we can address any questions and clarify any ambiguity to the analytical requests before the samples arrive."

People are the chemistry



Anneliese Owen

Given all of your responsibilities, how would you describe a typical workday?

We are triaging incoming coolers from commercial couriers in order to identify and prioritize rush and short hold-time analyses and also coordinate multiple cooler groups. We assist with the entry of priority samples and answer questions from technical centers, entry staff and client services groups about what samples have arrived and resolve any discrepancies with submittal groups. We also spend time balancing workload with staffing levels since everything that arrives each day must get entered that same day. At times I'm looking for additional help in unpacking or with labeling samples, and then other times, I'm looking for my staff to assist in other areas that may be working with a higher backlog of samples.

How would you characterize your leadership style?

I'm definitely an involved, hands-on leader. I don't want my entry and interpretation skills to get rusty so I am right in there to help with rush and priority sample entry in the mornings. I also enjoy prioritizing the samples in the morning so that I know what arrived each day and can answer the calls efficiently from client services or management staff, who inquire about certain submittal groups each day. But on the other hand, I have a very experienced staff who do not need anyone telling them what to do each minute. They understand the prioritization of tasks and very efficiently share the workload and pitch in to help one another get through the sample volume. My office is only a few steps away if they have questions or want to run something by me.

You've been here for 25 years and seen countless changes. Is there anything that hasn't changed during your tenure?

That would be the can-do attitude of the staff. Our workload fluctuates from day to day but no one gets ruffled; everyone just pitches in and efficiently unpacks, enters and labels the incoming samples each day no matter what the volume.

What is the thrust of your group's work as it relates to clients?

We are the first step in the entire analytical process, and therefore, I think the most critical. The entire success of a project, no matter how large or small, depends on identifying discrepancies between the client's submittal paperwork and the actual samples before the analytical work begins. If we do not have the correct samples or properly identify them, the client's report could be worthless. What is really rewarding is with such an experienced staff, we are often able to recognize inconsistencies in submittal paperwork simply because we have been performing certain projects for so many years. We will flag analytical requests that look incomplete or inaccurate and have client services contact the client for clarification. The clients really appreciate when we are able to catch an error before a hold time is missed.

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See us at...

AEHS West Coast Conference	San Diego, CA	March 19-22, 2012
PA Chamber Environmental & Energy Conference	Lancaster, PA	April 18, 2012
TCEQ Environmental Trade Fair & Conference	Austin, TX	May 1-2, 2012

Lunch & Learn with Lancaster Labs

Lancaster Labs' offers technical seminars on regulatory topics and supporting testing capabilities along with lunch on us. Topics include:

Vapor and Air Analyses: Project planning, regulations and sampling protocol for soil gas, vapor intrusion or other air related projects.

Petroleum Analyses: Methods, results interpretation and common interferences.

Detection Limits and Low Level Analyses: Understanding MDLs, LOQs and PQLs; interpreting analysis reports and determining when low level analysis techniques are needed.

Low Level Metals Analysis Using ICP/MS Reaction/Collision Cell with HMI to Eliminate Interferences.

Specialty Analyses and Method Development: Explosives, Perchlorate, Hydrazines, Alkyl PAHS.

Laboratory Testing QC/QA: Detailed explanation laboratory QC sample value and data evaluation.

Call Environmental Business Development to schedule a presentation at your site. 717-656-2300.

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