Lab-O

The Lab-Oratory Newsletter ▪ Spring 2017

Eastern Analytical, Inc.
professional laboratory and drilling services

Field Notes

by Jeff Gagne, Field Services Manager

Eastern Analytical, Inc. (EAI) has offered sample collection, field testing and drilling services for many years. These field services complement those of our fixed laboratory and offer unique opportunities to assist customers in solving challenging problems that can arise at job sites. One such challenge recently presented itself and all of these services were utilized together to track down a leak from underground pipes at one of our client's job sites.

Due to the nature of the site, a network of pipes is used to transport wastewater from various locations to the treatment facility. Our client noticed data for groundwater monitoring wells in a certain area of the site began exhibiting trace contamination of certain volatile organic and indicator parameters. In particular, specific conductivity concentrations in these wells began to rise. Our client suspected that the rise was likely due to the presence of a leak somewhere in the piping network, as the wastewater contained much higher concentrations of indicator and volatile compounds than the native subsurface. EAI was asked to perform direct push borings and collect groundwater samples, to help pinpoint the source of the leak.

We mobilized our **Geoprobe® 7822 track rig** to the site and spent several days conducting borings and collecting groundwater samples throughout the area of concern. The mobility of our track rig and the versatility of our staff allowed our client to select drilling locations from pavement, grass to brush and woods. Where the rig couldn't go, our Field Technicians advanced several borings manually. We performed real time field analyses for specific conductance. Our client used this data along with site history and the relationship with other parameters at the site to determine suitable locations for more extensive analyses, such as VOCs. Using the relatively low-cost field analyses allowed our client to take a more targeted approach for the more costly fixed-lab analyses.

Combining EAI's unique and versatile mix of on and off site laboratory expertise, drilling and sample collection services, the Field Service team was able to provide our client with the support needed to assist in finding answers to important questions. The leaking pipe has been identified and repairs will be made once the ground thaws this spring.

2017 EAI's Nuts & Bolts Seminars

This year's EAI Nuts & Bolts Seminars were all well attended in spite of consecutive snow storms! **Ray Gordon,** with NHDES Subsurface Program and Wastewater Operator Education Committee highlighted the importance of being mindful of what goes down the drain as "Flushables". The timely topic of Perfluorochemicals (PFCs) was addressed from both the drinking water and hazardous waste perspective thanks to **Brandon Kernen,** with the NHDES Drinking Water and Groundwater Bureau, and **Lea Anne Atwell,** with the NHDES Waste Management Division.

We thank each of the speakers for taking time to share information about each of these interesting and important topics. Registration for EAI's 2018 Nuts & Bolts Training Sessions will open in December!

Contact Us

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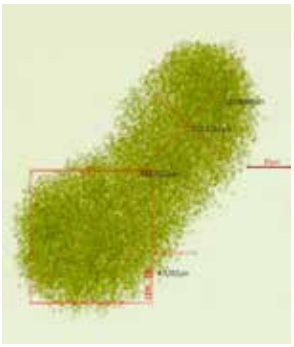
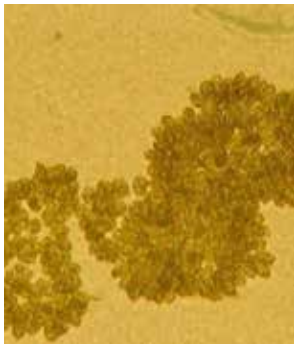
Cyanobacteria (a.k.a. Blue Green Algae)

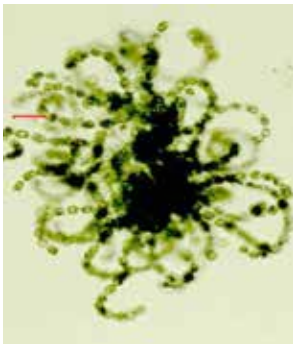
by Kitty Lane, Senior Chemist

Algae blooms are on the rise in reservoirs, lakes, rivers and other recreational waterbodies. It is important to determine whether an algae bloom is characterized as a Harmful Algal Bloom (HAB) or an aesthetic nuisance. When a HAB is suspected, a microscopic analysis of a water sample is necessary to determine if Cyanobacteria, particularly species which can produce cyanotoxins, are present. To make this determination the water samples are brought to the laboratory, and upon receipt, are microscopically scanned for HAB. The sample will also be prepped and checked by fluorescence for the pigments Phycocyanin and Chlorophyll-a. Both pigments are present in Cyanobacteria, however the Phycocyanin concentration will be higher when a cyanobacteria bloom is occurring. Anabaena spiroides can produce the cyanotoxin Microcystin-LR, as can the Cyanobacteria Microcystis. Microcystin-LR is considered to be one of the more toxic cyanotoxins and can cause anything from stomach cramps, diarrhea and vomiting to severe liver damage and heart failure. When harmful Cyanobacteria species are detected, then cell counts are estimated. If the cell counts are above a certain limit (in NH the limit is 70,000 cells/mL), a Public Health Advisory will be issued warning people of the danger.

Eastern Analytical, Inc. offers microbiological identification analysis, cell counts and fluorescence analysis. If you would like to learn more, please call 800-287-0525 or email customer service.







Pictured from L to R: *Cyanobacteria*: *Microcystis; Coelospherium; Anabaena spiroides*

Per- and Polyfluorakyl / Perfluorinated Compound (PFAS/PFC) Testing

If you need to test samples for Per- and Polyfluorakyl / Perfluorinated Compounds (PFAS/PFC), EAI can help simplify the process for you! We maintain a supply of properly preserved containers from our certified subcontract laboratory so bottle orders can be readily fulfilled. We'll coordinate sample shipment, completion of paperwork and final report delivery. Just leave it to us!

VOC Reporting Changes for Public Water Supplies

Beginning April 1, 2017, EAI will report the regulated volatile organic compound (VOC) list versus full compound list for EPA Method 524.2 when Public Water Supplies submit their drinking water samples for analysis. We are making this change in response to customer requests. This reporting change will only affect compliance drinking water samples submitted by Public Water Supplies.

Quick Technical Reference Guides

Our easy to read **Hydrocarbon Spectrum Analyses Chart** shows analytical methods that provide the typical petroleum hydrocarbon carbon ranges. Printed on durable heavy weight paper, it can be hung up on an office wall as a quick reference!

EAI's newly designed **Reference Card** contains the latest sample collection information in a convenient and easy to read format. Clients tell us that they place an extra reference card in the glove box to have on hand in case they are in areas where cell phone service is limited.

Another item that can be used in the office and the field is our new **EAI Banner Pen.** It's a pen with a surprise... a retractable banner inside the pen barrel that lists the technical information from our reference card.

Get your quick technical reference guides by calling us at 1-800-287-0525 or email customer service.