

Accurate NEWS



ENVIRONMENTAL SERVICES

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Adding GAC to Filters is a Process Modification!!!!

Using granular activated carbon (GAC) as part of the water treatment process for the purpose of reducing disinfection byproducts is gaining popularity in many water treatment plants but there is a regulatory issue that needs to be addressed. **If the water treatment plant is replacing old GAC that is considered "maintenance" but if a water treatment plant is adding GAC to their filters for the first time that is a process modification.** A process modification needs an engineering study before the DEQ will approve the modification. Accurate Environmental has been informed by the DEQ Water Quality Division, that they are requiring an engineering study from plants that are incorporating GAC into their treatment process. This is cited in the Oklahoma Administration Code 252 sub chapter 626-9-5b. Accurate Environmental Services (AES) can perform such studies and prepare the required engineering report. AES has in place a staff of engineers, analytical equipment, and a Rapid Small Scale Column Test (RSSCT) apparatus to perform a contaminant adsorption on GAC study. Our study can provide information on TOC percent removal, THM and HAA potentials, and estimated life of the GAC for your specific water quality. When accuracy and timely response is demanded please remember AES can provide this service for your system.

Ken Crawford
Environmental Services

AETC Renewal Hours

Accurate Environmental Training Center (AETC) *does* provide the Four-Hour Renewal Hours. You can get your Four-Hour Renewals many different ways at AETC. **First**, you can take any four-hour block in the morning or afternoon on any day, except for the afternoon of the last day, of any of our classes, either a certification class, i.e. Class "C" Water Operator Class, or a specialty class, i.e. Sampling Class. This way you can get some "meat" for your "money."

Second, you can take any of AETC's Specialty Classes to satisfy your Four-Hour Renewals. These classes may include our Pretreatment, Sampling, Biological Process, and Math Classes. Many of these classes are either a four-hour or eight-hour class.

Remember, when you look for a class, either for Renewals or for Certification, look for an institution that provides classes that have substances to them. If you take classes that are "empty" of quality information, you still will not have the knowledge to pass the ODEQ Certification Examinations. Yes, you may have accumulated the required hours to take your Certification Examinations, but did you really acquire the knowledge.

So, when you look for "Hours of Training," look to Accurate Environmental Training Center for Renewal Hours, Certification Training, and Specialty Classes.



**AETC
Classes
Are Now
In
Oklahoma
City.
Check
Out the
AETC Class
Schedule
on AETC
Web Site**



www accuratetraining.com



Heavy Metals Analysis by ICPMS

The three most common instruments used to test for metals are the Atomic Absorption Graphite Furnace (AAGF), ICP-AES or ICP-OES, and ICP-MS. The ICP stands for Inductively Coupled Argon Plasma, each of these three ICP's have a different metals detection system. The graphite furnace is the most common for drinking water testing. This instrument has good sensitivity between 1.0 and 50.0 parts-per-billion (ppb). The AAGF can only measure one metal at a time. This leads to a long and slow analysis timetable. The AAGF has many interferences which can give poor results. The ICP-AES and the ICP-OES are two similar instruments. The ICP-AES is a sequential analyzer that can only measure one metal at a time. The ICP-OES uses a CID crystal similar to a digital camera. This allows the instrument to measure multiple metals at one time or simultaneously. This simultaneous analysis makes the ICP-OES the fastest of these instruments. These two ICP's do not have the sensitivity for small concentration like the AAGF. The ICP can read concentrations from ppb to high parts-per-million (ppm). The ICP has many interferences, since several metals can mask over and appear as something different. The ICPMS can measure concentrations in the low parts-per-trillion (ppt), much lower than the AAGF. The ICPMS can also observe concentrations in the high ppm like the ICP-OES. Accurate's new ICPMS has a series of extraction lenses and an Octopole System, that is specifically tailored to environmental work. This octopole system works to remove interferences like Oxides, Chlorides, and Double Charged Ions. The ICPMS can measure all the metals in a sample at almost the same speed of the ICP-OES. This technology is the newest and the best on the market. Accurate Labs is the only laboratory, of any kind in Oklahoma, to have this type of ICPMS. Accurate Labs currently has two AAGF for EPA Method 200.9, two ICP-OES for EPA Method 200.7, and now our new ICPMS for EPA Method 200.8.

Owen Byfield
Inorganic Co-Manager

Accurate Environmental Training Center

STILLWATER Classes

April	
05 - 07	Class "D" W & WW Operator
12 - 14	Class "C" Water Operator
18 - 21	Class "A/B" Water Operator
May	
02	Class "D" Distribution & Collection
03 - 05	Class "C" Distribution & Collection
17 - 19	Class "C" Wastewater Operator
June	
07	Math - Wastewater
14	Math - Water
21	Math - Wastewater

TULSA Classes

April	
04	Class "D" Distribution & Collection
05 - 07	Class "C" Distribution & Collection
18 - 21	Class "C" Water Laboratory
May	
10 - 12	Class "D" W & WW Operator
24 - 26	Class "C" Water Operator
June	
08	Math - Water
15	Math - Wastewater
22	Math - Water

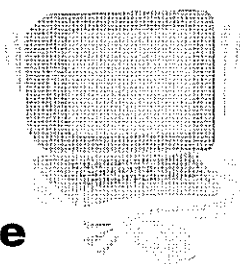
OKLAHOMA CITY Classes

April	
04	Class "D" Distribution & Collection
05 - 07	Class "D" W & WW Operator
18 - 21	Class "C" Wastewater Laboratory
May	
10 - 12	Class "D" W & WW Operator
24 - 26	Class "C" Wastewater Operator
June	
09	Math - Wastewater
16	Math - Water
23	Math - Wastewater

AETC Lab Classes

The month of March is Lab Class Month in Stillwater. We are offering the **Class "A," "B" & "C" Water Laboratory Classes** and the **Class "A" & "B" Wastewater Laboratory Classes**. The lab classes this month seem to be filling up faster than usually, so, please contact Clarke Hodson ASAP to save your space in class.

This will be **the only** Class "C" Water Lab Class held in Stillwater this year. The Class "C" Wastewater Lab class in Stillwater will be held in September. We still have the Class "C" Water and Wastewater Lab classes in Tulsa and Oklahoma City though out the year. Soooo.... Call Clarke now for that very important enrollment.



New Accurate E-Newsletter

Accurate, Inc. has a new E-Newsletter in production. You will find the same valuable information as you would in our regular newsletter, but you get it by e-mail. If you would like to begin receiving these E-News Publications, please notify Clarke Hodson by phone at 1-800-516-5227, or by e-mail at clarke-atc@accuratelabs.com. We hope to hear from you soon.

Accurate Labs New Semi-Volatile Equipment

Accurate Labs is proud to announce that it has purchased a new GC/MS for the analysis of semi-volatile organics. This instrument is the state-of-the-art in chemical analysis, and comes with software called AMDIS (Automatic Mass Spectral Deconvolution and Identification System) that was originally developed by NIST (National Institute of Science and Technology) to search for chemical weapons. AMDIS automatically separates spectra at very low concentrations and searches a database of over 145,000 compounds to identify matches.

Why is this good for our customers? With the top of the line GC/MS working with this software, it can minimize false positives or false negatives in your samples. There also may be chemicals in your water that you are not testing for, but you would want to know if they were present. We can now detect a huge number of compounds at very low concentrations in almost any sample matrix. Not only can we detect and confirm the presence of compounds in your sample, but we can also determine their absence. For example, if you are testing for pesticides in wastewater and the lab has a positive hit at a very low concentration. Using previous instrumentation, there would be no alternative except to reanalyze the sample, most likely getting the same results. With this new GC/MS software we can confirm the absence of a compound and save customers time and money for an unnecessary violation. In the end, this new GC/MS and the accompanying software will lead to much better data quality for our customers. If you have any questions or comments about the new instrumentation, please feel free to contact Danny at 405-372-5300.

Danny Chance
Organics Manager

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New Microwave for Metals Digestion

Accurate's Research and Development Department is always looking for new instruments and new analysis equipment. Last year Accurate Labs purchased seven new analyzing instruments. Accurate Labs also bought a new microwave digestion system. This new microwave is used for the acid digestion of soils and sludges to be analyzed for heavy metals. Our new microwave can hold a higher amount of pressure inside the sample vessels. This allows us to use higher temperatures during the digestion process. The higher temperature increases ability of the metals to dissolve in the acids. This gives us a better digestion than in the past. This new microwave can also hold three times the number of samples as our other microwave. This gives us a greater through put of samples in less time.

Owen Byfield
Inorganic Co-Manager

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www.accurateenvironmental.net



Accurate Environmental Labs

Accurate Environmental Labs is an NELAP certified environmental laboratory primarily serving municipal and industrial clients in Kansas, Oklahoma, Texas, Arkansas and Louisiana. We provide analytical support for projects involving wastewater, drinking water, ground water, soil, sediment and sludge. In addition, we offer complete field sampling services. We maintain certifications in Oklahoma, Arkansas and Kansas for wastewater and hazardous waste analysis. Accurate Labs is the only commercial lab in Oklahoma fully certified for drinking water analysis.



Accurate Field Services

Accurate Field Services provides Field Services and Sampling Pick-Up Routes out of Stillwater, Tulsa and Oklahoma City Field Offices. We have routes that extend through out the state of Oklahoma and into southern Kansas, southwest Missouri and northwest Arkansas.



Accurate Environmental Training Center (AETC)

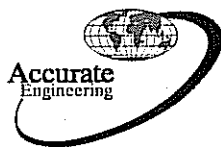
Accurate Environmental Training Center provides ODEQ State Certification Classes and Training for the Water and Wastewater Treatment Facility Operators, Laboratory Technicians, Distribution and Collection Operators and Technicians, Industry and Pretreatment Personnel, Rural Water Districts, Indian Tribes, State Parks, Public and Private Camp Grounds, Mobile Home Parks, and Construction and Contract Personnel.



Accurate Laboratory Supply (ALS)

Accurate Laboratory Services provides basic laboratory supplies needed by most water and wastewater treatment plant and laboratory facilities, industries, and educational facilities, or any other facility in the Oklahoma, Arkansas and Kansas region. Our pricing is very competitive, but the *real value* of ALS is the *service and convenience* we provide. ALS is prepared to help our customers set up and design a lab from scratch if necessary. Another benefit of ALS is free delivery of supplies along our routine weekly routes. For those not serviced by one of our routes, we will use a courier for delivery and charge a small fee.

Accurate Laboratory Services is an *Authorized HACH Regional Distributor* in the state of Kansas, Oklahoma and Arkansas.



Accurate Environmental Services (AES)

Accurate Environmental Services provides environmental technical services related to municipal and industrial water, wastewater, solid wastes and biosolids, industrial pretreatment and environmental site assessments.