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1. TEXAS RISK REDUCTION PROGRAM

Xenco Laboratories is pleased to announce that it is offering fully compliant Texas Risk Reduction Program (TRRP) deliverables. In the past, Xenco Laboratories was unable to meet the TRRP PCLs (Protective Concentration Levels) for certain compounds. However, at that time, most labs were also unable to meet the lower PCLs. Through the use of Selective Ion Monitoring and other alternative methodologies, Xenco Laboratories can meet the lowest TRRP PCLs (residential) for the standard Target Compound List of analytes. While we strive to meet the PCLs with our Minimum Quantitation Limit (MQL), in most cases, the PCL can only be met at the Sample Detection Limit (SDL)/Method Detection Limit(MDL). This is even the case with the newest techniques/methodologies.

Specific examples are as follows:

	Old Methodology	New Methodology or Technique	TRRP PCL SOIL	Xenco MDL SOIL	TRRP PCL Water	Xenco MDL Water
1,2,3-Trichloropropane	SW8260	SW8011	0.00053	0.00031	0.00003	0.000024
Ethylene Dibromide	SW8260	SW8011	0.00024	0.00011	0.00005	0.000012
MCPP	SW 8151	MDLs/DCS	0.047	0.0035	0.0244	0.0048
Dibenz(a,h) Anthracene	SW8270 or SW8310	SW8270 SIM	0.55	0.032	0.0002	0.000072

All TRRP PCLs are based off of Residential limits. All units are in PPM (mg/Kg for soil and mg/L for water)

When the TRRP was first promulgated, Xenco Laboratories offered Training in both report interpretation and data review. In light of the changes made to the requirements of the TRRP by the Texas Commission on Environmental Quality (TCEQ), Brent Barron, Corporate Technical Director of Xenco Laboratories, is willing to offer a TRRP refresher course to clients interested.

These changes and updates will also facilitate the generation of reports for the Petroleum Storage Tank, Dry Cleaners, and Superfund programs for the TCEQ. MQLs and SDLs are required for these programs as well as TRRP formatted deliverables in some cases.

Please contact your Sales Representative or Project Manager for more information and a complete list of Xenco Laboratories MDLs, MQLs, and DCS information. (Please note, MDL information is subject to change)

2. POLYCHLORINATED BIPHENYLS (PCBS) IN CAULK

Polychlorinated Biphenyls (PCBs) are man-made chemicals which were widely used in construction materials and electrical products prior to 1978. PCBs can affect the immune system, reproductive system, nervous system, and endocrine system. They are potentially cancer-causing. The potential to affect these systems increases over time as they build up in the body. Most of us have low levels of PCBs in our system at levels that are harmless. However, high levels of exposure to PCBs over a long period of time can be harmful to our health.

The Environmental Protection Agency (EPA) reports that PCBs may be present in the caulk used in schools. The caulk which was used during the building, renovation and remodeling of schools between 1950 and 1978, may contain PCBs. The manufacturing of PCBs was banned by the U.S. Congress in 1976, and its use was phased out until 1978 except for certain limited uses. The caulk was primarily used in windows, door frames, stairways, and masonry columns as well as other masonry building materials.

PCB containing materials were primarily used because of their properties as a plasticizer. The PCB concentrations historically found in caulk have been in the 50 to 300,000 parts per million (ppm) concentration. At the time of usage, the caulk had PCB concentrations as high as thirty percent. When the contaminated caulk is disturbed, it can produce dust which may contain PCBs. This dust can be ingested or inhaled particularly by small children. It is also possible that the PCBs may be released into the air from intact caulk by off-gassing. Therefore, the indoor air at schools, as well as the dust present in the schools, may present a health risk. There are many factors which may affect the concentrations of PCBs found in the schools including the source of the PCBs, the age and condition of the building materials and the school's ventilation rates. EPA plans to conduct further research to help characterize the sources, determine the relationship between the source and the amount of exposure, and develop methods to reduce potential exposure.

3. ANALYSIS OF GEOSMIN AND MIB

Xenco Laboratories now offers water testing for geosmin and MIB. The laboratory uses an advanced analytical technique that combines Solid Phase Micro-Extraction (SPME) with Selective Ion Monitoring by Mass Spectroscopy to achieve detection limits down to 5 ng/L.

The naturally occurring chemicals geosmin and MIB impart an unpleasant "musty" odor to water as well as wine and beverages. According to the US Geological Survey, taste and odor issues related to geosmin and MIB are among the biggest problems facing water districts and water municipalities worldwide. The beverage industry also suffers quality issues related to the presence of geosmin.

Analytical services for geosmin and MIB should be of interest to water municipalities and beverage makers. Foul taste and odor complaints begin around the 50 ppt level for geosmin and concentrations over 200 ppt are frequently found in local water supplies. Xenco provides analytical services for geosmin and MIB for the purpose of monitoring water supplies, wine and other beverages for these musty odors.

For pricing information or to order a sampling kit, please contact danielle.winnings@xenco.com

4. ASBESTOS TESTING



XENCO Laboratories has been providing asbestos analyses to our clients for over four years. XENCO currently performs and has past experience working with a wide range of clients. These clients include Homeowners, Small Independent Consultants, Independent School Districts, Municipalities, and Large International Engineering Firms. XENCO Laboratories holds accreditation for bulk sample analysis by Polarized Light Microscopy (PLM) and air sample analysis Phase Contrast Microscopy (PCM) through the National Institute of Science & Technology's NVLAP program. In addition, XENCO Laboratories holds DBE and TX HUB certifications. These certifications make XENCO an ideal partner for federal and municipal contracts frequently encountered in asbestos testing.

Asbestos Overview

Asbestos is a class of six different minerals that form naturally into fibers. Properties such as heat/chemical resistance, tensile strength, and others, made asbestos a popular component in building materials. Materials such as thermal insulation and fireproofing may contain large quantities of asbestos; while in other building materials (such as mastic, drywall texture, ceiling tiles, and floor tiles) asbestos was used in smaller amounts as a filler material.

Because of increasing health concerns relating to the inhalation of microscopic asbestos fibers, including a rare but incurable form of cancer called mesothelioma, asbestos was banned from most new building materials in 1978.

Regulation

After the ban on most new asbestos products in 1978, most regulations have focused on dealing with the asbestos already present in just about all buildings built prior. Asbestos regulations generally focus on minimizing fiber release into the air by proper management of asbestos containing material, which may or may not entail removal. A key component of most regulation is that properly trained and certified individuals are required to perform asbestos inspection, sampling, and abatement activities. The regulations that impact the most people are AHERA and NESHAPs.

AHERA & NESHAPs

The Asbestos Hazard Emergency Response Act ([AHERA](#)) regulates the management of asbestos found in all US public schools, and the National Emissions Standards for Hazardous Air Pollutants ([NESHAPs](#)) regulates renovation and demolition activities in public buildings and apartments with more than four units.

AHERA - Public Schools

AHERA became federal law in 1986, and in the late 1980's every public school in the US performed asbestos surveys to determine where asbestos was present and developed management plans to minimize fiber release. Removal was not required, but many schools chose to do so because of concerns about litigation and negative publicity. AHERA still covers any remodeling activities that occur in public schools.

NESHAPs

Remodeling and Renovation in Public Buildings

Generally NESHAPs requires that a professional asbestos inspection must be performed prior to any renovation or demolition activities in public buildings and apartments unless the original building engineer certifies that the building was built with asbestos-free materials. Effectively, most remodeling to be performed in a public building built prior to 1980 or so first requires a professional asbestos inspection including lab analysis. The effort to enforce this varies state-to-state, county-to-county, and city-to-city, though most states have penalties and fines codified in their rules for noncompliance.

NVLAP

One component of AHERA is the requirement that PLM bulk asbestos analytical services be performed at NVLAP accredited laboratories, and many states have adopted this as a general requirement for all asbestos activities, not just public schools.

PLM - Polarized Light Microscopy

PLM is the primary method indicated in AHERA and NESHAPs for analyzing bulk samples to determine asbestos content. It utilizes a special kind of microscope often found in mineralogical and forensic labs. PLM enables optical properties such as refractive index, birefringence, and extinction angle to be measured so that particles can be accurately classified.

1% Asbestos

In most states, any material that contains more than 1% asbestos content is considered an asbestos containing material (ACM). Different regulations will apply depending on whether or not the ACM is “friable” or likely to release fibers.

Other Asbestos Methods - Air and Water

PCM (Phase Contrast Microscopy) utilizes a fairly basic microscope to analyze air samples to quantify airborne fibers. The phase contrast attachment allows thin fibers to be more easily resolved, but PCM cannot positively identify fibers. Though it is usually performed in the field, Xenco does offer this service in the lab.

TEM (Transmission Electron Microscopy) utilizes one of the most powerful types of microscopes available to analyze air, water, and sometimes bulk samples. TEM is capable of determining crystal structure (via electron diffraction) and elemental composition (via x-ray fluorescence) of individual particles 100 times smaller than the width of a human hair.

TEM can detect fibers much smaller than PCM, and it can positively identify them. AHERA requires that all final clearance air samples from public schools be analyzed by TEM (any time asbestos is removed, air samples are run after all the cleaning is complete as a final test to make sure the clean-up has been successful.)

Home-owners

Most states in the US do not regulate asbestos in private single dwelling homes. OSHA and other state rules may apply though if you hire someone to perform asbestos-related work at your home (instead of performing it yourself), and there may be specific landfill rules concerning proper disposal of asbestos containing material that you do remove.

Various resources are available online for [asbestos testing tips](#), help [interpreting asbestos test results](#), and tips for [asbestos removal](#) if you are inclined to do-it-yourself.

The main concern with asbestos containing materials is the generation of dust that can become airborne and be inhaled into the lungs. When possible, strategies should be practiced to avoid disturbing or damaging the material in question. Improper removal may produce more airborne asbestos than if the material had remained undisturbed.

Xenco does provide laboratory analysis services to individuals and home-owners, but Xenco is a laboratory only and does not provide any advice or consultation concerning the test results. Xenco is not licensed to provide asbestos consultation, and most states require that only properly licensed persons provide asbestos consultation.

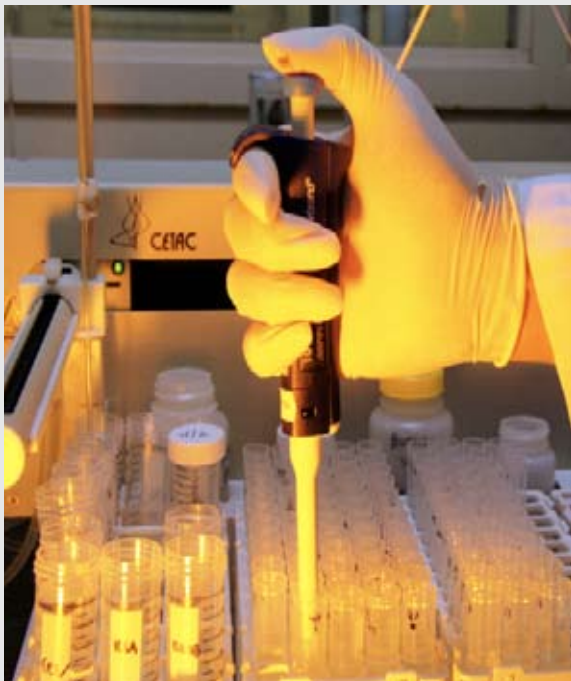
Additional Information

[EPA Asbestos Information](#)

[Understanding the Asbestos NESHAP](#)

[Texas Asbestos Info](#) [Interpreting Asbestos Test Results](#)
(for home-owners)

5. NEW STANDARD METHOD 9217B



XENCO Laboratories now offers Standard Method 9217B for Assimilable Organic Carbon

The goal of water treatment plants, in regards to bacteria in drinking water, is to eliminate pathogenic bacteria and minimize the presence and regrowth of heterotrophic bacteria. The regrowth of bacteria in drinking water distribution and storage systems can lead to the deterioration of water quality both hygienically and aesthetically and cause operational issues such as bio-corrosion. Assimilable Organic Carbon (AOC) is the low molecular weight dissolved organic carbon that is utilized by bacteria for metabolism, reproduction and growth. Dependent on the amount of AOC available in drinking water, these bacteria can utilize the AOC for regrowth. The analysis of Assimilable Organic Carbon (AOC), offers a standardized alternative for measurements of this bacterial growth potential of treated water. Routine AOC testing gives the fraction of organic carbon most readily used by bacteria for multiplication and is therefore of great interest to water treatment in

both process and water utilities. XENCO Laboratories utilizes Standard Methods 9217B 20th Edition to perform this test. This is accomplished by using two bacterial strains, *Pseudomonas fluorescens* (P-17) and *Spirillum* sp. Strain (NOX). These are separately inoculated into a pasteurized sample and incubated at 22°C for nine days. On the 7th day of incubation a set of the inoculated samples are plated on a specific agar for 48 hours, this process is repeated for the 8th and 9th days. Controls are analyzed with the samples for QC purposes. The results are calculated based on the growth and formation of both strains of bacteria over the entire period and reported in Colony Forming Units (CFU).

6. XENCO PURCHASES A NEW FACILITY IN LAKELAND, FLORIDA



Contact information and address:

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We are happy to announce the latest addition to the Xenco family, located in Lakeland, Florida. Although new to Xenco, the lab is over 35 years old. It was originally known as P.E. LAMOREAUX & ASSOCIATES, INC. and three years ago it was renamed as FLORIDA ANALYTICAL. This facility currently performs wet chemistry parameter and services, and boasts several municipal, water district, and county testing contracts. Lakeland is located in Polk County and it is the center of the Florida Phosphate mining industry. We are planning on expanding it so that we can perform other tests, including radiochemistry.

The Lakeland lab is located between Tampa and Orlando and will serve all of central Florida. It has easy access from I-4 and the Polk Parkway. Office hours are from Monday to Friday between 8 AM and 5 PM and Saturday/ Sunday only by appointment. Courier and sampling services are available to our clients.