The Standard

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Methods Update Rule Can Impact Current Projects

On March 12, 2007, the US EPA published the Final Rule of 40 CFR Part 136 (Volume 72, Number 47). Also known as the Methods Update Rule, the Final Rule contains significant changes relative to the procedures approved for sampling and analysis under the Clean Water and Safe Drinking Water Acts. It is important that our clients are aware of the potential impact that the recently promulgated regulations may have on their aqueous sampling and analysis projects.

The Final Rule, which became effective on April 11, 2007, incorporates "new" commercially developed methods, methods developed by the US EPA and consensus standard bodies, updated versions of current methods, revisions to method modifications and analytical requirements, and withdrawal of outdated analytical methods. In addition, sample collection, preservation, and holding time requirement changes that apply to only Clean Water Act investigations are included.

A major concern is that project permits and documents (*e.g.*, Quality Assurance Plan, Sampling and Analysis Plan) may reference methods that have been withdrawn under the Final Rule. Issues such as laboratory certification for withdrawn methods, regulatory adoption (if and when) of the newly promulgated regulations, and appropriate laboratory SOPs will have to be resolved on a project-by-project basis.

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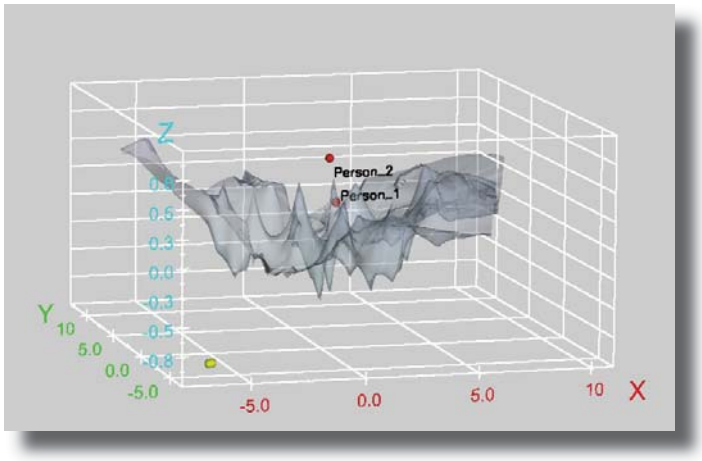
ENVIRONMENTAL STANDARDS

Three-Dimensional Model Provides Visualization Of Biomonitoring Study Data

A significant amount of research has historically been dedicated to establishing the human health effects associated with environmental contaminants; recently, biomonitoring has become a direct vehicle by which to assess human exposure. Biomonitoring provides a more functional assessment of exposure to multiple potential exposure media (*e.g.*, air, soil, dust, water, food) than directly measuring the amount of a contaminant contained in an individual source and estimating human intake via modeling.



3-D modeling techniques assist in project data interpretation and visualization.

Perhaps the most notable biomonitoring studies are those conducted as part of the National Health and Nutrition Examination Survey (NHANES). Medical personnel from the National Center for Health Statistics (NCHS) of the Centers for Disease Control and Prevention (CDC) visit 15 different locations around the United States annually to collect statistically relevant information using interviews and physiological and analytical measurements, including measurements of levels of environmental chemicals in blood and urine. The biomonitoring exposure data collected under NHANES are released every two years in a "National Report on Human Exposure to Environmental Chemicals" (the Report). Among the analytes that have been examined as part of this on-going biomonitoring study are seven chlorinated dibenzodioxins, 10 chlorinated dibenzofurans, and nine dioxin-like PCB congeners. These national reports have provided the first picture of dioxin levels in the United States population. Dioxin levels were initially reported in the Second Report (1999-2000 survey period released in 2003) and subsequently in the Third Report (2001-2002 survey period released in 2005). The Fourth Report (2003-2004 survey period) is expected to be released in 2008.

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Featured Topics

Methods Update Rule Can Impact Current Projects

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Highlights of the Final Rule are presented below in two categories.

New, revised, and withdrawn method highlights:

- Approval of three alternative methods for inorganic anions (including chromate) and total cyanide.
- Approval of a broad-purpose digestion procedure for total recoverable metals.
- Approval of four new multi-element metals test procedures.
- Approval of new test procedures for inorganic anions (six), hexavalent chromium (four), nitrate and/or nitrite (seven), chlorine (one), chloride (two), cyanide (two), sulfide (two), and mercury (one).
- Approval of 11 updated (replacement) methods.
- Approval (by reference) of 74 ASTM methods, 88 updated methods in Standard Methods, and 19 newer Association of Official Analytical Chemists (AOAC) International methods.
- Withdrawal of 109 methods in "Method for Chemical Analysis of Water and Wastes."
- Withdrawal of all oil and grease methods that use Freon-113.

Bottleware, preservation, and holding time highlights:

- Clarification that fluoride samples must be collected in polyethylene bottleware.
- Clarification that preservation must be within 15 minutes of collection for grab samples, composite samples, or an aliquot split from a composite sample collected automatically over time; samples analyzed within 15 minutes of collection do not require temperature preservation.
- The criterion for aqueous sample temperature preservation is < 6°C (not frozen), except for Cryptosporidium (0-8°C) and other bacterial tests such as coliform and E. coli (<10°C).
- Hexavalent chromium samples require slight basic pH preservation with a holding time of 28 days from collection.
- Ortho phosphate samples require filtration within 15 minutes of collection.
- The holding for PCB samples is 1 year from collection.

Environmental Standards advises clients to direct their environmental professionals to evaluate which investigations may be affected and to contact applicable regulatory agencies about adoption of the Final Rule. For assistance in ascertaining if and how changes in the Final Rule impact current environmental programs, contact Lester J. Dupes, CEAC, or Rock J. Vitale, CEAC, CPC, at 610-935-5577.

Biomonitoring Study Data

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Biomonitoring studies, however, are not restricted to the CDC. In fact, over the last few years, the private sector has designed and initiated biomonitoring studies to assess exposure levels potentially associated with industrial operations. For example, Environmental Standards was recently retained to provide chemistry quality assurance oversight and data management support for a private-sector funded biomonitoring project involving the collection of blood and urine from current and previous employees at an industrial facility. Analytes of interest for the study included chlorinated dibenzodioxins/dibenzofurans, PCB congeners, and metals.

One of the challenges inherent in such studies is interpreting the analytical data relative to published NHANES data and to the significance of differences between the results of the study participants. Environmental Standards professionals employed 3-D modeling techniques to assist in project data interpretation and visualization.

The application of this technology allows team scientists to quickly and intuitively understand how project-specific data "fit" within the context of historical published data for the general population at large. This intriguing project is on going.

Successful *In-Situ* Bioremediation Project Conducted

Two pilot-scale *in-situ* engineered bioremediation technology and monitoring programs were conducted at a project site located in north-central Pennsylvania to compare the potential effectiveness of patented groundwater treatment technologies in addressing dissolved-phase volatile organic compounds (VOCs) in site groundwater. Groundwater and soil at the site were impacted by chlorinated ethenes resulting from an historic dry cleaner release.

Groundwater monitoring results were initially favorable after formula injection of the first substrate and indicated that chlorinated VOC degradation was beginning to occur. As time progressed, however, data clearly indicated that the *in-situ* microbial VOC breakdown that had been initiated was no longer occurring.

Evaluation of the groundwater monitoring results from the first groundwater treatment technology led to the conclusion that its failure was the result of a combination of the following factors:

- Groundwater pH was severely affected by the production of acids post-injection and the acids inherently part of the substrate causing aquifer microbes to negatively respond through reduced reductive dechlorination activity.
- The relatively high viscosity of the substrate at the time of injection contributed to an uneven distribution of the injection material into the aquifer.
- The dehalococcoides bacterial population present in the aquifer was somewhat low relative to what could be described as an "optimal" population count.

Based on the results of the first program and the conclusions cited above, a modified *in-situ* treatment and monitoring program that included a focused application of a second commercially available substrate into the subsurface was initiated. The second substrate injection program also included the introduction of sodium bicarbonate as a buffering agent to better manage the reduced groundwater pH levels.

Evaluation of analytical results and field-measured bioremediation parameters from the second, modified treatment suggested that a site-wide groundwater remediation strategy utilizing the alternative substrate was more appropriate at this particular site.

Environmental Standards Principal Geoscientist Gerry Kirkpatrick and Senior Geoscientist Joe Kraycik will be developing a presentation ("Comparison of *In-Situ* Groundwater Bioremediation Technologies at a Dry Cleaner Release Site") based on this project at The 23rd Annual International Conference on Soils, Sediment, and Groundwater, held at the University of Massachusetts Amherst Campus. The theme of this year's conference is "Expediting and Economizing Cleanups." Several members of Environmental Standards Geosciences, Chemistry, and Risk Assessment Departments are planning to attend and present at the conference which is scheduled for October 15-18, 2007.

Aroclors — Historical Uses And Applications During Forensic Investigations

A frequently identified class of pollutants that is encountered during soil and sediment investigations is polychlorinated biphenyls (PCBs). The Monsanto Chemical Company manufactured and sold mixtures of various chlorinated biphenyls (and terphenyls) under the trade name "Aroclor" during the mid to late 1900s.

Most environmental professionals associate PCBs with dielectric (electric insulator) applications within transformers; however, Aroclors were used extensively in surface coatings, adhesives, and plastics because of their low cost and desirable properties. These same properties, however, made Aroclors resistant to breakdown and account for their persistence in environmental compartments.

Some specific applications are listed below:

- Chlorinated rubber – masonry paints and shingle coatings.
- Nitrocellulose coatings – cable finishes, heel lacquers for shoes, and overprint varnishes.
- Polyvinyl Chloride – tile, barrel, and metal coatings.
- Styrene and Butadiene – masonry and metal paints.
- Epoxy Resins – plastics and plastic coatings.
- Polyvinyl Acetate – concrete and stucco paints and asphalt coatings.
- Phenolics – masonry and marine paints.

Depending on the specific application, Aroclor formulations also included polychlorinated terphenyls (PCTs) and, under some applications, polychlorinated naphthalenes (PCNs). PCTs and PCNs are classes of compounds that are rarely quantitatively examined in soil and sediment samples, although fairly elegant GC/MS methods for these compound classes have recently been developed.

Traditionally when conducting forensic soil and sediment investigations and PCBs are the primary compounds present, investigators have relied on specific PCB Aroclor fingerprinting, which has often been presumptive or non-conclusive. More recently for source identification investigations, additional classes of compounds (*e.g.*, PCTs and PCNs) have been included in the analytical suite resulting in invaluable supporting analytical data. For further information, contact Technical Director of Chemistry/Principal Rock J. Vitale, CEAC, CPC, at 610-935-5577.

Grant Assistance Helps Businessman Conduct Soil Assessment Of Commercial Property

Environmental Standards recently assisted a local businessman to obtain a Pennsylvania Growing Greener II Grant to assess a commercial property located in Spring City, Pennsylvania, prior to purchase and reuse. The property had a history of commercial and industrial uses and was an eyesore for the local community. In addition, the property was being used as a rental property and was not well maintained by the owner. Environmental Standards was approached by a local businessman who was interested in acquiring and reusing the property.

A Phase I Environmental Assessment (ESA) of the property was performed by a third party in June 2006 using funds from the Chester County Economic Development Council (CCEDC) Brownfields Assessment Grant. The Phase I ESA identified two recognized environmental conditions (RECs), eight significant environmental concerns, and eight minor to moderate environmental concerns. The identified areas of concern (AOCs) were associated with historical property use and historical material handling on the property. Some of the AOCs were associated with oil staining on the ground surface, a former underground storage tank (UST), 55-gallon drums containing hazardous and non-hazardous material, cans of paint and paint thinner, historical aboveground storage tanks, a sheen on the adjacent creek, and used automobile gasoline tanks.

The CCEDC also funded Environmental Standards' preparation of a site-specific Sampling and Analysis Plan (SAP) to address the issues identified in the Phase I. The SAP was reviewed and approved by the US EPA in December 2006. The SAP identified 12 AOCs that warranted a Phase II Soil Investigation.

The Phase II Soil Investigation, which was funded by the Pennsylvania Department of Environmental Protection's (PA DEP's) Growing Greener II Grant, was initiated in February 2007 and consisted of 42 soil borings, three sediment samples, and two surface water samples. The soil boring investigation targeted each AOC with specific analytical requirements based on the nature of the AOC.

The results of the investigation identified no measurable impacts above action levels to the sediment and surface water adjacent to the property as a result of historical site activities. The soil boring program identified three areas where soil samples exhibited concentrations of target analytes above PA DEP Statewide Health Standards (SHS). Additional investigation activities are proposed to delineate the areas of impact and to evaluate potential remedial alternatives. The results of the assessment provided the potential property owner with necessary information to assess his potential liability and complete the property transaction.

BP Recognizes Safety Standards With HSSE Award

Environmental Standards is honored to receive the Atlantic Richfield Company (a BP-affiliated company) Remediation Management 2006 Excellence in HSSE Award. This honor/recognition is indicative of Environmental Standards' commitment to workplace safety.

In order to qualify for the award, an Atlantic Richfield remediation management contractor or subcontractor must have completed all 2006 remediation site activities without any OSHA-reportable or BP-related field work incidents and with no severe road accidents (described as level 4 and above), notices of violation that include fines or penalties, and no recordable chemical or oil spills.

"We are proud of our record of safety on the job, as well as the quality of our work," said Technical Director of Chemistry/Principal Rock J. Vitale. "For a Fortune 50 company like BP to recognize this milestone is an honor."

What Will A Background Check Reveal About Background Air Data?

Ambient (outdoor) and background air samples are often collected to represent "clean" locations that have been unaffected by site contaminants. Investigative air sample results from a site are typically compared to background and ambient air sample results as one way of determining the excess effects of site contaminants on air quality. Background and ambient air samples are also often collected as quality control measures (field blanks) during air sampling events.

As part of a recent study conducted by Environmental Standards, ambient and background location Method TO-15 data from 65 unrelated sites were evaluated using both summary statistics and human health inhalation risk assessment models to determine the appropriateness of background concentrations, method detection limits, and reporting limits for remedial action decision-making. While data were obtained for almost 70 analytes, the study was limited to 17 carcinogenic compounds. Of these 17 compounds, 12 were detected in at least one background sample and only five were not detected in any of the samples. The study considered both residential and nonresidential inhalation exposures. Inhalation cancer risks associated with the minimum detected and maximum detected concentrations were calculated for detected compounds. Additionally, inhalation cancer risks were calculated for the method detection limit and reporting limit for each compound. Although trichlorofluormethane was not assessed in the study, it was interesting to note that this compound was detected in all 65 samples.

The results of the study revealed that the method detection limits and reporting limits for a majority of the 17 compounds analyzed were at levels that correlated to unacceptable cancer risk estimates (i.e., cancer risks greater than US EPA's lower bound $1x10^{-6}$ benchmark). In fact, the reporting limit for 1,2-dibromoethane correlated to residential and nonresidential risk levels that exceeded the US EPA's upper bound risk benchmark of $1x10^{-4}$. Typically, a risk level of this magnitude would trigger remediation. Laboratory reported detections in the ambient air and background samples also correlated to unacceptable risk levels for most of the analytes. Elevated method detection limits and reporting limits could mean that samples reported by the laboratory as nondetect actually contain compound concentrations that could result in unacceptable exposures.

The detected concentrations of 12 compounds also resulted in unacceptable background risk levels for a majority of the analytes. For both residential and nonresidential scenarios, 1,2-dibromoethane and trichloroethene detections yielded cancer risks in excess of US EPA's upper bound $1x10^{-4}$ risk benchmark. The maximum detected background concentration of trichloroethene resulted in a risk level for residential exposures of $2x10^{-3}$, or two incidences of cancer per 1,000 individuals. Depending on the nature of the site and the purpose for which this trichloroethene sample was collected, its results could have a significant effect on the site characterization and remedial investigation processes. Elevated background concentrations could mean that the portions of the site that are believed to be unaffected by a release have actually been affected or are being influenced by off-site factors.

This study revealed that method detection limits and reporting limits for the sites included in the assessment were not set at levels below acceptable risk-based concentrations. If background samples are collected with the intent that the background samples will represent "clean" conditions, appropriately low detection limits and reporting limits should be established prior to sample collection. It is also critical not to assume that background air concentrations are at acceptable levels. Forming remedial action decisions based at least, in part, on elevated background or ambient air data without recognizing the implications may result in underestimates of remedial actions, time, and expenses and continued unacceptable exposures to site occupants and visitors.

For more information about the collection of background air data and setting appropriate detection limits, please contact Manager of Risk Assessment & Toxicology Kathy Zvarick at 610-935-5577.

"Marriage" Of Chemistry QA And Data Management Spells Success For Energy Client

Environmental Standards was awarded a contract from a top 50 oil and gas company in Houston, Texas, in Fall 2006 to assist with the development of a Corporate Laboratory Program. Successful corporate laboratory programs involve appropriate planning, established business definition processes, and the preparation of quality assurance/quality control (QA/QC) documents and technical requirements followed by critical quality assurance monitoring activities. After reviewing the company's established business procedures and the information gathered during a detailed needs (*e.g.*, analytical requirements) assessment process that involved personnel from various programs, Environmental Standards prepared a Request for Proposal (RFP) for laboratory services. The RFP included a laboratory contract complete with a detailed technical specification for all aspects of laboratory operations (including electronic data deliverable [EDD] requirements) and quality assurance requirements.

The company subsequently selected and contracted with its corporate laboratories of choice. Environmental Standards has been assisting the client with various aspects of implementation and management of the laboratory program, including coordinating bottleware orders with the contract laboratories, providing technical assistance associated with chemistry quality assurance issues, and providing various data management services. As part of the data quality cycle and QA/QC monitoring activities, the EDDs from all program laboratories are submitted to Environmental Standards and checked for completeness relative to the required data specification and for correctness of the submitted data and undergo a data verification process. The data verification process entails a check of the QA/QC information reported by the laboratories against the client's program-specific QA/QC limits. By "marrying" the established chemistry quality assurance technical requirements with the implementation of a systematic data management solution, the client has gained a powerful combination to effectively manage its contract laboratories and environmental data.

For information about development of a corporate laboratory program and management of environmental data, contact Quality Assurance Specialist/Principal Ruth Forman at 610-935-5577.

Top 10 Reasons To Use A Systematic Approach To Centralizing And Effectively Managing Your Environmental Data

Many industrial parties have learned expensive, hard lessons with regard to allowing their environmental data to be managed and owned by numerous engineering firms. Laboratories that generated project data may be acquired, may merge, or even declare bankruptcy.

Engineering firms may fall (substantially) out of favor, may lose the next contract cycle bid, or go out of business. Over the last several years, many industrial parties have retained Environmental Standards to champion the implementation of an enterprise-wide data management solution with the goal of regaining control and ownership of their environmental data. The top 10 reasons to do so (starting at number 10) are listed below.

10. Better data management makes for more informed, faster decisions – both technical and business.

9. Once you apply a systematic approach to the finer-grain technical data cost tracking management of data, your days of guessing at costs are over.

8. Reduced cost – Reducing costs seems to be a prevalent topic – in our business, we hear "Do it better, faster, cheaper!" with regularity. A systematic approach to managing data can provide savings up to 65%. A recent study by a major industrial showed that an all-inclusive management cost per analyte can be reduced from over $4 to under 50 cents.

7. Positive Return on Investment – Data Management systems can pay for themselves easily within three years and typically in much shorter periods depending on the specifics of the operation.

6. Increased data believability through a demonstration of due diligence in data handling – Imagine the reaction of a team member or regulator's discovery that your data management practices on a large project are based on thousands of spreadsheets, crates of bankers boxes, or arcane symbols chipped into granite slabs? Do you think you may receive special scrutiny of your data?

5. Reduction in errors – Employing an appropriate data management strategy can reduce errors by up to 20%. Historical manual data entry error rates are between 15 and 20%. Other errors can occur either in quality or in reporting by not employing standardization.

4. Reduced liability of "bad" data – On any large project, a certain portion of data just does not make sense. When isolated in an individual data set, such as a spreadsheet, it may be very difficult to view data with a sense of perspective. Once data are in a data management system, outliers and data anomalies are easily identified by quick comparison to other project data.

3. Standardized nomenclature saves time – Develop standardized lists of data elements such as methods and analytes. Consider if each project needs to have a unique set of valid values or if a master list can be used, thereby avoiding the time required to create individual project lists.

2. A standardized process reduces chaos – Why have a new process for each new project? Why reinvent the wheel? Create a standard process and stick to it.

1. More expeditious project implementation – Start projects instantaneously by utilizing a pre-existing data management system. Customization of the data management solution with project or client-specific policies and procedures can be put into play immediately.

Environmental Standards Focus Of Philadelphia Business Journal Article

As Environmental Standards continues to celebrate its 20th year of providing environmental consulting services, the company has garnered some regional media attention. The company was recently featured in the "Growth Strategies" section of the Philadelphia Business Journal with an article providing an overview of who we are and what we do.

In that article, Technical Director of Chemistry Rock J. Vitale explained how the company brings a mix of technical and business expertise to the table when dealing with a client's environmental needs. For example, not only do our professionals understand how a laboratory should operate from a procedural and compliance standpoint, but they can create cost-effective processes for running a laboratory program.

The article also addresses business growth, business challenges, the diversity of assignments, and how our departments work together on complex projects that require the collection, analysis, qualification, organization, and dissemination of large amounts of data.

To obtain a copy of the Philadelphia Business Journal article, contact Marketing Coordinator Kathy Knaub-Hardy at 610-935-5577.

US EPA To Expedite Approval Of Test Methods Under Safe Drinking Water Act

The US EPA published a notice in the *Federal Register* on April 10, 2007, announcing its intention to expedite the approval process for alternative testing methods to the promulgated analytical methods under the Safe Drinking Water Act (SDWA). The Agency proposes to use its authority under the SDWA to publish method approval (after evaluation of effectiveness) in a notice in the *Federal Register* instead of through rulemaking procedures. This expedited process is expected to provide more timely access to new measurement techniques and increased flexibility in the selection of analytical methods for drinking water contaminants. Comments on the proposal will be accepted through June 11, 2007.

Environmental Laboratory Audits — 2007 Cost-Sharing Opportunities Available

The Environmental Standards Quality Assurance/Chemistry Group has audited over 300 distinct commercial environmental laboratories throughout the United States and abroad. Seventy on-site audits, located in 25 different states, were conducted in 2006. While these audits were conducted on behalf of more than 20 industrial clients, individual audit costs were often shared by multiple parties in a "consortium style," resulting in considerable cost savings for our clients. In fact, almost one-half of the audits in 2006 were shared by two or more Environmental Standards' clients.

The types of on-site audits that have been or will be conducted in 2007 are listed below.

- Full RCRA method audits
- Benzene waste NESHAP audits
- Wastewater and drinking water method audits
- Whole effluent toxicity (WET) audits
- Air laboratory audits
- Dioxin/furan and high-resolution PCB audits
- Low-level mercury and methyl mercury audits

During Environmental Standards' 20 years of incorporation, other firms have attempted to provide robust, third-party laboratory audits for industrial parties in a consortium style – sometimes even proposing fees for simply being members of the consortium. Nonetheless, Environmental Standards remains a leader in this niche service area because of our proven protocols and "deep bench" of seasoned auditors. Our auditing services are offered with zero out-of-pocket expense until completion of the audit.

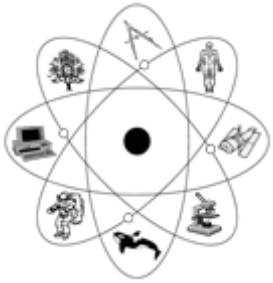
Scheduling 2007 audits on behalf of our industrial clients is well underway. If you are interested in receiving a list of the commercial environmental laboratories that have been sponsored and/or nominated to be audited during 2007, contact Technical Director of Chemistry/Principal Rock J. Vitale, CEAC, CPC, at 610 935.5577.

Charlottesville Office Sponsors Science Fair

The Environmental Standards Charlottesville Office recently joined in praising students in the pursuit of environmental sciences as the Silver Sponsor for the 26th Annual Virginia Piedmont Regional Science Fair. The competition, held at the University of Virginia, featured students in grades 6 through 12 from more than 30 schools in the region; some of these students could even apply their scientific knowledge someday as Environmental Standards environmental professionals.

In addition to the overall sponsorship, Environmental Standards also sponsored an Environmental Management category in the Junior (grades 6-8) and Senior (grades 9-12) divisions. Topics covered in this category included bioremediation, ecosystems management, environmental engineering, land resource management, forestry, recycling, and waste management. Junior level winner was Thomas Bewick, a student at King George Middle School, with the topic of "The Effect of Land Use on Surface Water Quality." The Senior winner was Victoria Lama from Massaponax High School, with the topic of "Effects of Nitrate Levels on Algae Growth." Each category winner received a $100 gift certificate to Barnes & Noble.

Students were selected to participate at the regional level after competing in their respective school fairs. At the regional competition, students were interviewed by a panel of volunteer judges with scientific and engineering backgrounds.



Two Senior Division Grand Award Winners advance to the Intel International Science & Engineering Fair. Each Senior Division first-place category winner is invited to advance to the Virginia State Science & Engineering Fair, while each Junior Division first-place category winner is invited to participate in the Discovery Channel Young Scientist Challenge. The fair is affiliated with the International Science and Engineering Fair.

"We were pleased to sponsor the Piedmont Regional Science Fair, as this event provides students interested in science and engineering with an opportunity to earn recognition and participate in an inspiring learning experience," said Charlottesville Office Manager and Senior Geoscientist Phil McKalips, P.G.

Proposed Rule To Redefine Hazardous Waste

The US EPA has proposed a rule that could have significant ramifications for the chemical, pharmaceutical, coating and engraving, and semiconductor and electronic industries as well as the industrial waste management industry. On March 15, 2007, the Agency proposed a rule that would revise the Resource, Conservation and Recovery Act definition of solid waste to streamline the regulation of hazardous secondary materials and to increase recycling. The rule also defines legitimate recycling activities to preclude treatment under the guise of recycling.

The new rule is intended to make it easier for industry to safely recycle hazardous secondary material such as metals, solvents, and other chemicals. The US EPA estimates that about 4,600 facilities handling more than half a million tons of hazardous secondary materials annually may be affected by this proposed rule. Exclusions are provided for the following materials:

- Materials that are generated and reclaimed under the control of the generator.
- Materials that are generated and transferred to another person or company for reclamation under specific conditions.
- Materials that the US EPA deems non-waste through a case-by-case petition process.

The new solid waste definition was published in the *Federal Register* on March 26, 2007. The US EPA is accepting comment on this proposal for 60 days (until May 25, 2007). More information on the proposed regulation is available at http://www.epa.gov/epaoswer/hazwaste/dsw/abr.htm.

Indiana Adopts SW-846 Method 5035A

The Indiana Department of Environmental Management (IDEM) has announced its adoption of US EPA SW-846 Method 5035A effective May 1, 2007. Method 5035A, which was published in July 2002, is applicable to sampling of soils and solid wastes for volatile organic compounds. The "new" method is designed to minimize the loss of volatile organic compounds due to volatilization and biodegradation and contains significant sample preservation and holding time changes relative to Method 5035. In addition, IDEM issued supplemental guidance that is available at www.epa.state.il.us/land/lust/fact-sheets/sw-846-method-5035-fact-sheet.html.

Spring Conferences Keep Environmental Standards Professionals On The Road

Spring is proving to be a busy season for Environmental Standards professionals as they "hit" the conference circuit, traveling from Harrisburg, Pennsylvania, to Las Vegas, Nevada, for presentations, sponsorships, and key events where the latest environmental topics are discussed.

April began with our platinum sponsorship of the **Pennsylvania Bar Institute's Environmental Law Forum**, held in Harrisburg, Pennsylvania. The focus of this conference was the increasing importance of "environmental performance" as a consideration when it comes to competing in business today. Next was the **2007 Annual Environmental Laws and Regulations Conference and Trade Show**, also in Harrisburg. This year's conference looked at such topics as greenhouse gases and the Chesapeake Bay Tributary Strategy. Environmental Standards exhibited at this show.

Also in April, Director of Geosciences/Principal Dan Claycomb gave a presentation at the **Business of Brownfields Conference** in Pittsburgh, Pennsylvania. Mr. Claycomb's presentation was titled "The Role of Field Auditing in Environmental Quality Assurance Management" and highlighted the fact that errors in data can occur in the field as the data are collected.

May has proved to be busy as well, starting the month by exhibiting and presenting at the **Texas Commission on Environmental Quality Environmental Trade Fair & Conference** in Austin, Texas. Technical Director of Chemistry/Principal Rock J. Vitale gave two presentations at this key environmental event. The first presentation addressed method detection limit (MDL) alternatives and was given as part of a panel discussion. Mr. Vitale's second presentation, titled "A Novel Approach for Identifying Sources of PCB Contamination – A Case Study for a Large Sediment Characterization Project," discussed the source characterization of polychlorinated napthalenes (PCNs) and polychlorinated terphenyls (PCTs) for a project adjacent to a former electrical cable manufacturer.

Baltimore, Maryland, was the location for another May conference when Environmental Standards geoscientists presented at the **In Situ and On-Site Bioremediation Symposium**. In the first presentation, Principal Geoscientist Gerry Kirkpatrick and Charlottesville Office Manager Phil McKalips discussed the *in-situ* bioremediation technologies designed and implemented for a closed municipal landfill in central Virginia. Mr. McKalips participated in a second presentation associated with that same former landfill – this time focusing on an enhanced reductive dechlorination pilot in fractured bedrock at the site.

Everyone was a winner in Las Vegas, Nevada, where Environmental Standards brownfields specialists attended the **2007 International Council of Shopping Centers Spring Convention**. "Reaching Beyond the Gold" was the theme for this year's event, where thousands of individuals learned more about the latest directions in retail shopping development, including the revitalization of brownfields properties and abandoned sites into vital commerce centers.

Watch the pages of upcoming newsletters for more information on where our professionals are going next.

Federal Advisory Committee Update — Detection And Quantitation Approaches

Previous editions of *The Standard* have reported on the activities of the Federal Advisory Committee on Detection and Quantitation Approaches and Uses in CWA Programs (FACDQ) since its establishment in January 2005. Six meetings and more than 50 conference calls have been held among the Technical Work Group, the Multi-Laboratory Subgroup, the Single-Laboratory Subgroup, and the Policy Group during the last two years. While evaluating and developing new methodology, the Technical Group has been addressing the challenges associated with qualitative identification criteria, blank contamination/false positives, and other technical issues that will be addressed in the new procedure. Various procedures have been evaluated and piloted by interested parties such as the American Council of Independent Laboratories and a consensus group (a voluntary *ad hoc* group with representatives from industry, municipalities, and laboratories). Studies that included single-laboratory pilot and non-pilot, inter-laboratory non-pilot, and multi-laboratory pilot have been conducted; the results of these studies are undergoing evaluation and the approaches are being balloted. Environmental Standards quality assurance chemists will continue to follow the activities of the very important FACA.

Sales Veteran Joins Charlottesville Office

The Environmental Standards Charlottesville Office has added a veteran account executive with nearly 20 years of sales experience to its staff as business interests continue to grow in the region. Ann Marie Gathright, a long-time Virginia resident, has extensive experience in utilizing state-of-the-art sales tools to garner new clients and expand business with innovative approaches to the marketplace.

"Ann Marie brings valuable knowledge of this regional market and knows how best to reach potential clients who could benefit from our environmental consulting services," said Principal Geoscientist Gerry Kirkpatrick. "We are pleased to have her join us as our account executive in Charlottesville."

Ms. Gathright previously worked in the construction equipment industry, where she was a sales leader and produced sales in excess of 1 million dollars in Central Virginia. Her sales and marketing experience includes significant networking with professionals in industry and regional business organizations.

In addition, Ms. Gathright is involved in numerous community-related activities, such as the Charlottesville Networking Group, of which she is a charter member. She is also Chairwoman for the Association of General Contractors (AGC) Safety Alliance (Piedmont Chapter), Executive Committee Member of the AGC Piedmont Chapter, and a member of the Covenant School PTA. Her husband, Clark Gathright, P.E., is a partner with Daggett & Grigg Architects, keeping their professional connections all in the family.

Ms. Gathright earned a B.A in Psychology from Mary Baldwin College in Staunton, Virginia, where she graduated cum laude.

Geoscientist Jim Arthur Earns P.G. Credentials

Environmental Standards is pleased to announce that Project Geoscientist Jim Arthur has earned his Professional Geologist (P.G.) credentials for Pennsylvania. Mr. Arthur, a 2001 graduate of Penn State University with a B.S. in Geosciences, has been with Environmental Standards for more than three years and has more than five years experience in the environmental consulting field. Please join us in congratulating him on this career accomplishment.

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Did you know?

- While 80-90% of shoppers receives plastic bags with their merchandise, only 1% of plastic bags is recycled, compared to 20% of paper bags; however, it takes 91% less energy to recycle a plastic bag than a paper bag.
- Thirty-one states representing more than 70% of the US population have formed a "Climate Registry" that will jointly track and measure greenhouse gas emissions by major industries.