



Environmental Measurement Symposium

A Combined Meeting of
The National Environmental Monitoring Conference
and The Forum on Laboratory Accreditation

San Antonio, Texas
August 10 – 15, 2009

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Welcome to the Environmental Measurement Symposium

Your attendance and participation are key elements to the Symposium's success. Look forward to a week of shared expert knowledge; energetic discussions of current issues and concerns affecting our industry; exploration of products and services to support your endeavors; and invaluable networking with peers.

If this is your first time attending the Symposium, we hope you will find it stimulating and beneficial. Our registration staff and information booth are available to assist you with any questions you may have or to help you locate individuals you would like to meet. Please let us know how we can help make your participation at the Symposium a success.

Have a great week!

Site Map and General Information

Continental breakfast and breaks are provided daily.
 Lunch is provided Tuesday, Wednesday, and Thursday.
 Continental breakfast is from 7:30 – 8:00.
 Breaks are from 10:00 – 10:30 and 3:00 – 3:30.
 Lunches are from 12:00 – 1:30.

Exhibition Regency West / Center

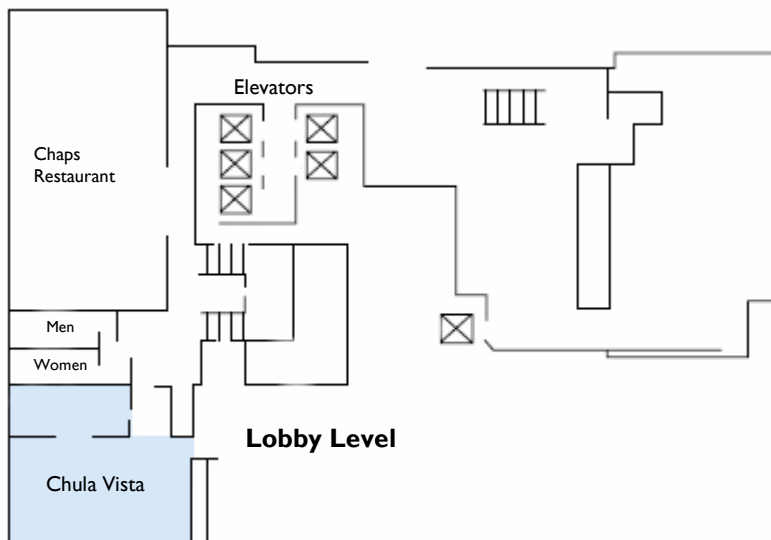
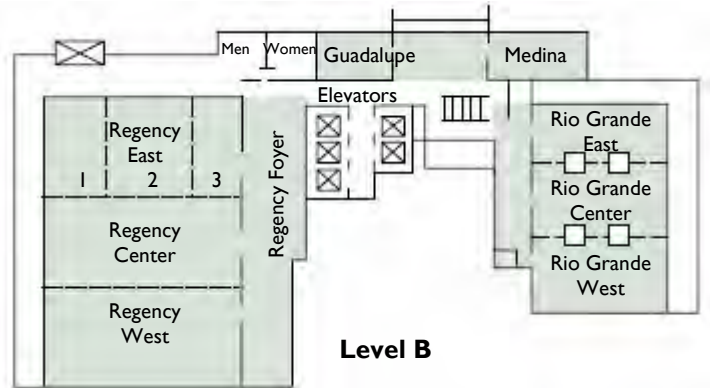
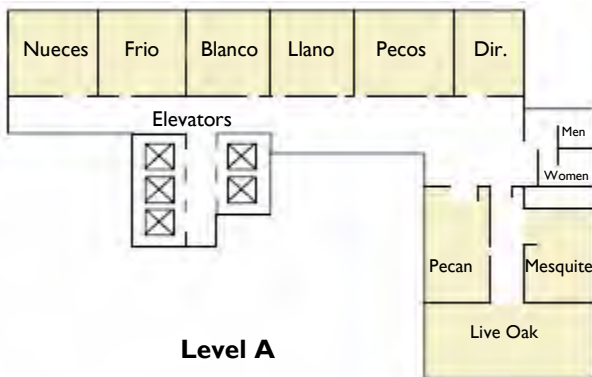
Meet with instrument manufacturers, laboratory suppliers, LIMS providers, and other laboratory service providers. See the latest innovations in measurement technology, proficiency testing, sample preparation, and laboratory automation.

Exhibit Hours

Monday
 5:30 – 7:00

Wednesday
 7:30 – 8:00
 10:00 – 10:30
 12:00 – 1:30
 3:00 – 3:30
 5:30 – 7:00

Tuesday
 7:30 – 8:00
 10:00 – 10:30
 12:00 – 1:30
 3:00 – 3:30



Agilent Technologies

is pleased to sponsor
free internet access
 In the Guadalupe Room
 adjacent to the
 conference registration desk
 during conference hours.

Keynote Addresses

Monday, 8:15, Regency East

Short History of Water Quality in the San Antonio River



Suzanne B. Scott
General Manager
San Antonio River Authority (SARA)

The waters of the San Antonio River have encouraged and sustained human habitation for thousands of years. By the mid-1960s, wastewater and sewage facilities turned the river into essentially an open sewer with water quality so impaired that fish kills became commonplace and an entire reach of the river was considered a dead zone where only bloodworms could survive. Since the 1980s, efforts to reclaim, restore, and rebuild the aquatic and riparian ecosystems have been made. By 2002, water quality in the river improved so much that a particularly pollution-sensitive species, the log perch, was discovered in the San Antonio River—immediately below a major wastewater treatment outfall, no less!

Suzanne directs the SARA's projects and programs with a \$111 million annual budget to extend SARA's environmental leadership, stewardship, and expertise in addition to broadening appreciation for the San Antonio River and its ecosystem. Suzanne is proud of the excellent reputation of SARA's nationally accredited water quality laboratory; the creation of nature parks and paddling trails throughout the agency's four-county district; and an emerging community visioning process to explore an ecosystem restoration project for 14 miles of previously channelized creeks. She has a Master's Degree in Urban Administration from Trinity University.

Tuesday, 8:15, Regency East

The Developmental Lifecycle of Commercial Laboratory Instrumentation – Determining the Feasibility of New Instrumentation for New Analytical Techniques



Chris Toney
Vice-President and General Manager
Agilent Technologies

The decision to develop commercial instrumentation is a complex process involving many factors. Quantitating the demand and the market are among the key elements of the process. This presentation will cover the general technical and business decision process for new analytical instrumentation product development and then be integrated with the product development cycle for several current Agilent products.

For the past 28 years in HP/Agilent, Chris has served in various functions: Research and Development; Manufacturing; and Marketing. His early career within Agilent was focused in Gas Chromatography and related businesses, but his last 10 years have focused on GC/MS, LC/MS and ICP-MS products. Chris has extensive experience developing Analytical Instrumentation for Life Sciences, Environmental, Food Safety, and Drug Testing.

Friday, 8:15, Regency West

Health Effect from Exposure to Metallic Species



Michael Waalkes
Research Toxicologist
National Cancer Institute at NIEHS

Among the wide variety of metallic elements, some of the most toxicologically important include the transition metals (e.g., cadmium, chromium), and the metalloids (e.g., arsenic). Metals are unique among pollutant toxicants in that they are naturally occurring, indestructible and, in many cases, ubiquitous within the environment. Metals have been linked to a multitude of acute and chronic pathologies. For example, environmental arsenic in humans has been linked to a variety of disorders such as IQ deficit, diabetes, atherosclerosis, peripheral vascular disease, and cancer. Arsenic carcinogenesis will be discussed further as an example of how form impacts metal toxicity.

Michael received his Ph.D. in Pharmacology and Toxicology from West Virginia University. His current research involves defining the mechanisms of action for carcinogenic inorganics, including arsenic, lead, and cadmium. Dr. Waalkes received the Society of Toxicology Achievement Award for Outstanding Contributions to the Science of Toxicology. He is Editor-in-Chief of *Toxicology and Applied Pharmacology*, and serves as Associate Editor for *Environmental Health Perspectives* in addition to other editorial boards of prominent journals in toxicology. Dr. Waalkes is author or co-author of over 325 peer-reviewed publications and book chapters.

Thursday, 8:15, Regency West

Pharmaceuticals in Water



Suzanne Rudzinski
Deputy Director
Office of Science and Technology
USEPA Office of Water

There is growing concern about the detection of pharmaceuticals and personal care products (PPCPs), and other potentially endocrine-disrupting compounds, at low levels in drinking water and surface water. EPA is working in partnership to gain a better understanding about their occurrence and concentrations in our waters, their potential adverse health effects, and which treatment technologies effectively remove them.

Suzanne is currently leading the EPA Office of Water's efforts to address emerging contaminants in water. She has also served as the Policy Director of the Department of Energy's Environmental Management program and worked on the Hill for the Energy and Commerce Committee. The program office develops technology-based effluent guidelines; water quality criteria; risk assessments in support of drinking water standards; and manages the Beach Act and Fish advisory programs.

Technical Sessions

Monday, August 10

KEYNOTE ADDRESS

Regency East

- 8:00 Welcome
Lara Autry, USEPA Office of Science Advisor
- 8:10 Introduction
Jerry Parr, The NELAC Institute
- 8:15 The History of the Water Quality of the San Antonio River
Suzanne Scott, General Manager, San Antonio River Authority

ELAB

ENVIRONMENTAL LABORATORY ADVISORY BOARD

Rio Grande East

Session Chairs: Lara Autry, USEPA and Jeff Flowers, Flowers Laboratory

- 9:00 Opening Remarks, Roll Call and Approval of July Minutes
General Workgroup Updates
- Monitoring
 - Measurement & Technology
 - Laboratory Management
- 9:30 Comparison of Drinking Water Certification Program and TNI Standard
- 10:00 BREAK
- 10:30 Method Identification Issues
ELAB / ORCR (EPA's Office of Research Conservation and Recovery)
- 11:30 Open Discussion
- Method Identification Issues
 - Proficiency Test Frequency
 - New or Old Topics
- 11:50 Review Action Items

Mentoring Workshop: The New TNI Laboratory Accreditation Standards

Regency Center

Session Chair: Ken Jackson, Black Diamond Enterprises

The NELAC Institute (TNI) has approved changes to the National Environmental Laboratory Accreditation Program (NELAP) that are expected to be fully implemented by 2010. These changes will replace the 2003 NELAC Standard with four new TNI standards:

- Management and Technical Requirements for Laboratories Performing Environmental Analysis,
- General Requirements for Accreditation Bodies Accrediting Environmental Laboratories,
- General Requirements for Environmental Proficiency Test Providers, and
- General Requirements for an Accreditor of Environmental Proficiency Test Providers.

9:00 TNI Consensus Standards Development Program
Ken Jackson, Black Diamond Enterprises

9:30 A National Approach for Proficiency Testing
Kirsten McCracken, TestAmerica, Inc.

10:00 BREAK

10:30 Requirements for an Accreditation Body
Sharon Mertens, Milwaukee Metropolitan Sewerage District

11:00 Requirements for Quality Systems in Environmental Testing Laboratories
Bob DiRienzo, ALS Laboratories, Inc.

12:00 – 1:30 Lunch On Your Own

Reception and Exhibition

Regency West / Center

Monday

5:30 – 7:00

Monday, August 10 (Continued)

National Environmental Proficiency Testing Program (PT)

Chula Vista
1:30 – 5:00

Session Chairs: Eric Smith, TestAmerica, Inc. and Kirsten McCracken, Test America, Inc.

The goal of this program is to establish and maintain Fields of Proficiency Testing (i.e., analytes, concentrations, matrices, and acceptance limits) appropriate for the scope of environmental monitoring performed in the United States and to ensure that all organizations providing PT samples to laboratories are recognized as competent to do so.

AGENDA

- New Fields of Proficiency Testing (FoPTs), including discussion on chemical, microbiological, whole effluent toxicity, and air and emission FoPTs
- Frequency of PTs
- PT Oversight Statement of Work
- Summary of PT Expert Committee Tentative Interim Amendments and Editorial Changes
- Status of Experimental PTs

Accreditation

Rio Grande East

Session Chair: Marlene Moore, Advanced Systems, Inc.

- 1:30 Dual Program NELAC States: Typical Differences Between Their NELAC Requirement, and Non-NELAC Requirements
Patrick Conlon, Environmental Standards, Inc.
- 2:00 The New TNI Laboratory Accreditation Standards
Jerry Parr, The NELAC Institute
- 2:30 DoD Environmental Laboratory Accreditation Program (DoD/ELAP)
Ed Hartzog, NAVSEA
- 3:00 BREAK
- 3:30 3rd Party Conformity Assessment and Its Significance to Government and Private Industry
Keith Greenaway, ANSI-ASQ National Accreditation Board/ ACLASS
- 4:00 It's time for National Cooperation in Laboratory Accreditation
Doug Leonard, NACLA
- 4:30 Global Recognition of Accredited Results through the ILAC MRA
Peter Unger, American Association for Laboratory Accreditation (A2LA)

Benefits and Challenges of New and Revised EPA Methods

Rio Grande Center

Session Chair: Richard Burrows, TestAmerica, Inc.

- 1:30 A New EPA SW-846 Method for Toxaphene and Toxaphene Congeners in Various Environmental Media
Shen-Yi Yang, USEPA Office of Resource Conservation and Recovery
- 2:00 Proposed and Recently Approved ASTM Methods for Nonvolatile Compounds Analyzed by Liquid Chromatography/Mass Spectrometry
Lawrence Zintek, USEPA Region 5
- 2:30 Accreditation of New Methods: A NELAP AB's Perspective
Steve Arms, Florida Department of Health
- 3:00 BREAK
- 3:30 Managing the Impact of New and Revised Regulatory Method Implementation on the Laboratory Community
David Speis, Accutest Laboratories
- 4:00 The Impact of New USEPA Methods - A Case Study of Contortions and Permutations - USEPA Method 5035
Ruth Forman, Environmental Standards, Inc.
- 4:30 Barriers and Solutions to New Method Implementation - What are the Options?
Richard Burrows, TestAmerica, Inc.

Innovative Approaches for Conventional and Emerging Pollutants

Rio Grande West

Session Chairs: Joe Romano, Waters Corporation and Gary Ward, Accutest Mountain States, Inc.

- 1:30 Towards Meeting European Regulatory Requirements for Tributyltin in Water: The Development of a Robust Fully-Automated GC/ICP-MS Methodology
Zoe Grosser, PerkinElmer, Inc.
- 2:00 Column Evaluations for the Analysis of Polycyclic Aromatic Hydrocarbons
Rob Freeman, SGE Analytical Science
- 2:30 Milwaukee Metropolitan Sewerage District's Biosolids PCB Experience – The Laboratory Perspective
Sharon Mertens, Milwaukee Metropolitan Sewerage District
- 3:00 BREAK
- 3:30 Low Level Analysis of 1,4-Dioxane in Aqueous Sample with Only 200 uL of Sample for Analysis
Patrick Conlon, Environmental Standards, Inc.
- 4:00 Direct Analysis of Nitrate and Nitrite in Waters by Reversed-Phase LC/ESI/MS
Yongtao (Bruce) Li, Underwriters Laboratories, Inc.
- 4:30 Methyl Mercury Analysis with Derivatization Purge and Trap GC System
Mark Bruce, TestAmerica, Inc.

Reception and Exhibition

Regency West / Center

Technical Sessions

Tuesday, August 11

Poster Presentations: 7:30 – 5:00

Regency Foyer
See Page 8 for details.

KEYNOTE ADDRESS

Regency East

- 8:00 Welcome
Earl Hansen, Independent Laboratories Institute
- 8:10 Introduction
Dave Speis, Accutest Laboratories
- 8:15 The Developmental Lifecycle of Commercial Laboratory Instrumentation
Chris Toney, Agilent Technologies

Chlorinated Dioxins and Other Halogenated Organics

Rio Grande East

Session Chair: Earl Hansen, Independent Laboratories Institute

- 9:00 Automated Review and Assessment of Dioxin/Furan and CB Congener Data
Nazy Abousaeed, Computer Sciences Corp.
- 9:30 Multiple Laboratory Evaluation of the Procept Rapid Dioxin Assay for Inclusion in USEPA SW-846 Methods Manual
Tara Laroche, Eichrom Technologies, LLC

10:00 BREAK

- 10:30 Analysis of Trace Level Organochlorine Pesticides by High-Resolution Mass Spectrometry
Michael Flournoy, TestAmerica, Inc.
- 11:00 A Discussion on the Current State of Brominated Compounds in the Dioxin Analysis Area
Dennis Tabor, USEPA Region 5
- 11:30 Optimizing the Analysis of Polybrominated Diphenyl Ethers
Michelle Misselwitz, Restek Corporation

Stationary Source Audit Sample Program

Llano
9:00 – 12:00

Session Chair: Maria Friedman, TestAmerica, Inc.

This program is focused on the externalization of the EPA's Stationary Source Audit Program (SSAP), including roles and responsibilities of program participants, manufacture of audit samples, oversight of audit sample providers, management of audit sample results, and acceptance criteria.

AGENDA

- Standard for Program Participants
- Standard for Audit Sample Providers
- Standard for Oversight
- Audit Sample Database
- Implementing the Program

Emerging Technologies

Rio Grande West

Session Chair: Nancie Copeland, Environmental Express

- 9:00 Real Time Estimation of BOD by the Rapid Determination of Chemical Oxygen Demand (COD)
Lindsay Peddle, ManSci, Inc.
- 9:30 Evaluation of a New Technique in Miniaturized Solid Phase Extraction
Rob Freeman, SGE Analytical Science
- 10:00 BREAK
- 10:30 Extraction of POPs and Acidic, Neutral, and Basic Compounds in Particulate Laden Aqueous Samples with a Single Extraction Step Using a Fully Automated Extraction System
Bob Johnson, Horizon Technology
- 11:00 Rapid Multi-Parameter Analysis Using the New RapidDuo by Man-Tech
Lindsay Peddle, ManSci, Inc.
- 11:30 The Method Update Rule Potable vs. Non-Potable Water - What Methods are Being Reported for Accreditation
Shawn Kassner, ERA - A Waters Company

Assessment Forum: Improving Audit Consistency

Rio Grande Center
9:00 – 12:00

Session Chair: Jack Farrell, Analytical Excellence

The 2009 Assessment Forum will focus on discussions and information gathering of techniques, tools, and management systems to fostering assessor and assessment consistency.

AGENDA

- What do Data Users want and expect from on-site assessments to support their decision making?
- Mechanisms used by ILAC/ISO ABs to manage and assure assessment consistency

12:00 – 1:30 LUNCH PROVIDED
Regency East

Tuesday, August 11 (Continued)

Data Usability

Rio Grande Center

Session Chair: David Friedman, Friedman Consulting

- 1:30 The Historical Changes and Quality Improvements of EPA's Discharge Monitoring Report - Quality Assurance (DMR-QA) Program
Jeff Lowry, ERA – A Waters Company
- 2:00 Evaluation of the Citable Guidance Documents for Unacceptable Laboratory Practices
Patrick Conlon, Environmental Standards, Inc.
- 2:30 Project-Specific Measurement Quality Objectives
Chung-Rei Mao, US Army Corps of Engineers
- 3:00 BREAK
- 3:30 Should XRF Data Be Adjusted Against ICP Data?
Deana Crumbling, USEPA Office of Solid Waste
- 4:00 Labeling Externally Validated Laboratory Data -The Black Box Opened!
Anand Mudambi, USEPA Office of the Science Advisor
- 4:30 Inter-Lab Performance Standards for the Municipal Solid Waste Permit Section Practical Quantitation Limit (MSW-PQL)
Arthur Denny, Texas Commission on Environmental Quality

Method Flexibility

Rio Grande East

Session Chair: Lemuel Walker, USEPA Office of Water

- 1:30 Method Flexibility and the March 12, 2007 Method Update Rule
William Lipps, OI Analytical
- 1:50 Problems Encountered with the USEPA Method Flexibility Rule – A Vendor's Perspective to Streamlining USEPA Approved Methods
Cary Jackson, Hach Company
- 2:10 Method Flexibility - Laboratory Perspective
Richard Burrows, TestAmerica, Inc.
- 3:00 BREAK
- 3:20 Challenges to State Accreditation Programs Dealing with Method Modifications, Flexibility, Alternate Test Procedures, etc.
Barbara A. Escobar, Arizona Department of Health and Steve Arms, Florida Department of Health
- 3:40 One Region's Simplified Process for Approving the Use of Alternate Wastewater Methods
Arthur Clark, USEPA Region I
- 4:00 Method 524.3, an Example of EPA Drinking Water Analytical Method Flexibility
David Munch, USEPA Office of Water
- 4:20 EPA Method 1664A Modifications
Joseph Stefkovich, Xenosep Technologies
- 4:40 QA/QC Developers and Users Responsibilities When Determining Equivalency for Regulatory Compliance
Edward Askew, Askew Scientific Consulting

Nanotechnology

Rio Grande West

Session Chair: Reza Karimi, Battelle

- 1:30 A Federal Perspective on Nanotechnology
Sally Tinkle, National Institute of Environmental Health Sciences
- 2:00 Microbial Interactions with Fullerenes and Other Engineered Nanoparticles: Environmental Implications and Applications
Pedro Alvarez, Rice University
- 2:30 Sensors as Tools for Quantitation and Cytotoxicity Studies of Engineered Nanomaterials
Omowunmi Sadik, State University of New York – Binghamton
- 3:00 BREAK
- 3:30 USEPA – Nanotechnology Environmental Benefits/Risks & Public Policy
Nora Savage, USEPA Office of Research and Development
- 4:00 Microarrays and Nanomaterials: Environmental Impact at the Gene Level
Barbara Carter, EcoArray, Inc.
- 4:30 A New Paradigm for Monitoring the Implications of Nanotechnology in the Environment
Arturo Keller, University of California – Santa Barbara

Stationary Source Audit Sample Program (Continued)

Llano

1:30 – 5:00

Consensus Standards Development Program

Chula Vista

1:30 – 5:00

Session Chair: Bob Wyeth, Columbia Analytical Services

The purpose of this program is to develop consensus standards related to improving the quality of environmental data collection activities.

AGENDA

- Use of guidance documents
- Use of copyright protected language within the NELAP program
- Activities and future plans of the Quality Systems, Accreditation Body, and On-Site Assessment Committees

Afternoon Break Sponsored By



Poster Presentations

Regency Foyer
7:30 – 5:00

Session Organizer: Kim Kirkland, USEPA Office of Resource Conservation and Recovery

Tuesday

Fast Separation of PolyAromatic Hydrocarbons using a Water-Methanol Gradient
Joe Romano, Waters Corp.

Can You Use Nitrogen as an Alternate Purge Gas for Analysis of Volatile Organic Compounds (VOCs)?
William Lipps, OI Analytical

Profiling Analysis of the Degradation Products of Alkylphenol Polyethoxylates by LC-MS using an Acclaim® Surfactant Column with Mass Spectrometric Detection
Richard Jack, Dionex Corporation

Nitrate + Nitrite Analysis by Nitrate Reductase
William Lipps, OI Analytical

Preparation and Uncertainty of Pharmaceutical Solution Standards for use in Drinking Water Analysis
Peech Reddy, Cerilliant Corporation

Synthesis and Analysis of Cyclohexyl Trideuteromethylphosphonic Acid
Peech Reddy, Cerilliant Corporation

The Importance of High Purity Water in Environmental Laboratories
Estelle Riche, Millipore

Analysis of Organotins in Water by GCME
Jessie Butler, ThermoFisher Scientific

Wednesday

Purge & Trap Volatiles: Adsorbent Choices, Trap Selection, Fast GC, and Troubleshooting
Steve Cecil, Sigma-Aldrich/Supelco

Fast GC in Environmental Analysis
Steve Cecil, Sigma-Aldrich/Supelco

Using Bonded Silica Solid Phase Microextraction Fibers as a Screening Tool for Pharmaceuticals and Personal Care Products in Drinking Water
Steve Cecil, Sigma-Aldrich/Supelco

Analysis of Volatile Organic Compounds by USEPA Method 524.3
Craig Marvin, OI Analytical

Automated Handling Techniques for the Analysis of Elevated Volatile Organic Compound (VOC) Concentrations in Soils
Teri Dattilio, Teledyne Tekmar

J-; Now What?
David Gratson, Neptune and Company

Buchi SpeedExtractor
William Ickes, Buchi

Updating Method 525.2 for the Measurement of Semi-Volatile Organic Chemicals in Drinking Water: New Extraction Procedures, New Sample Preservatives, Expanded Analyte List to Include CCL 3 Chemicals
Jean Munch, USEPA Office of Water

Rapid and Accurate Analysis of Trace Levels of Perfluorinated Compounds in Drinking Water
Joe Romano, Waters Corporation

Technical Sessions

Wednesday, August 12

Poster Presentations: 7:30 – 5:00

Regency Foyer
See Page 8 for details.

**General Session:
Global Perspectives on the Environmental
Landscape**

Regency East

**Session Chairs: Judy Duncan, Oklahoma DEQ and
Greg Carroll, USEPA Office of Water**

8:15 Welcome

8:30 The Benefits of National Accreditation
Steve Arms, ELCP Administrator, Florida Department of Health

9:15 The Forum on Environmental Measurement: Cross-Agency
Synergy for Measurement, Monitoring, Laboratory, and
Environmental Technology Issues
Lara Autry, Senior Advisor, USEPA Office of Science Advisor

10:00 BREAK

10:30 TCEQ – Meeting Challenges Head On
Carlos Rubinstein, Deputy Executive Director, Texas Commission
on Environmental Quality

11:15 The EPA Regulatory Agenda of the New Administration
Michael Shapiro, Acting Assistant Administrator,
USEPA Office of Water

12:00 – 1:30 LUNCH PROVIDED
Rio Grande

**General Session:
Emerging Environmental Issues**

Regency East

**Session Chairs: Ilona Taunton, The NELAC Institute
and Lemuel Walker, USEPA Office of Water**

1:30 Climate – Air Quality Linkages: The Science Needed to
Support Integrated Approaches to Managing These Two
Issues

James Meagher, Deputy Director, National Oceanic and
Atmospheric Administration

2:15 Sustainability Begins in the Lab: Scientists Can Be Green,
Too

Allen Doyle, Sustainability Manager, University of California at
Davis

3:00 BREAK

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3:30 Understanding and Quantifying the Environmental
Implications of Nanotechnology

Arturo Keller, Associate Director, University of California
Center for the Environmental Implications of Nanotechnology

4:15 Development/Products of Nanotechnology
Richard Chapas, Senior Market Manager, Battelle

Workshop: Green Techniques for Your Lab

Llano

3:30 – 5:00

**Session Chair: Allen Doyle, University of California at
Davis**

AGENDA

- Identifying Conservation Opportunities
- Best Practices
- Voluntary Green Environmental Laboratory Certification

Reception and Exhibition

Regency West / Center

Wednesday

5:30 – 7:00

Technical Sessions

Thursday, August 13

KEYNOTE ADDRESS

Regency West

- 8:00 Welcome
Robert Benz, PRÖMIUM
- 8:10 Introduction
Joe Romano, Waters Corporation
- 8:15 Pharmaceuticals in Water
Suzanne Rudzinski, Deputy Director, USEPA Office of Water

Keynote Address Sponsored By



Pharmaceutical and Personal Care Products

Rio Grande East

Session Chair: **Zoe Grosser, PerkinElmer**

- 9:00 Update on Contaminants of Emerging Concern Analytical Methods Activities
Brian Englert, USEPA Office of Water
- 9:30 Modified EPA Method 1694 for PPCPs in Waters
Yongtao (Bruce) Li, Underwriters Laboratories, Inc.
- 10:00 BREAK
- 10:30 Implementation of a Multi Residue MRM Method for Pharmaceuticals
Andrew Eaton, MWH Laboratories
- 11:00 Monitoring Pharmaceuticals in Surface Water Using On-line SPE/LC/MS/MS
Claude Mallet, Waters Corporation
- 11:30 Multiple Column Evaluation for Pharmaceuticals and Personal Care Products
Michelle Misselwitz, Restek Corporation

Method Modifications Mentor Session

Rio Grande Center
9:00 – 12:00

Session Chair: **David Caldwell, Oklahoma DEQ**

The Method Modifications Mentor Session will provide an opportunity for discussion of how to document method modifications. The session will include detailed discussion of quality control checks that are essential and must be included in documentation including matrices for which the method is satisfactory; data for the modified method as well as the original method; calibration; method detection limit; reagent blank; laboratory fortified blank; matrix spike and matrix spike duplicates; internal standards, surrogate standards, or tracers; control charts or other trend analyses of quality control results; specific frequency of control checks; and QC acceptance criteria. If these QC checks are not included, a written rationale that indicates why they are inappropriate must be provided.

Sensors

Rio Grande West

Session Chair: **Chris Bowerbank, Torion Technologies, Inc.**

- 9:00 Evaluation of Nitrate Sensors for Groundwater Remediation Monitoring
Stuart Nagourney, New Jersey Department of Environmental Protection
- 9:30 Water Monitoring with Environmental Sensors
Laura Webb, USEPA Region 7
- 10:00 BREAK
- 10:30 Online Monitoring of Major Electrical Utility Assets
John Hinshaw, Serveron Corporation
- 11:00 Evaluating Rugged and Portable Chemical Testing Platforms
David Epstein and Kirk Grates, National Forensic Science Technology Center
- 11:30 Measuring VX Vapor at the Worker Population Level (WPL) Near-Real-Time, Using an Optically Enhanced Flame Photometric Detector (FPD)
Eric Garff, US Army

National Environmental Laboratory Accreditation Program

Regency East
9:00 – 12:00

Session Chair: **Dan Hickman, Oregon DEQ**

The purpose of this program is to establish and implement a program for the accreditation of environmental laboratories.

AGENDA

- Implementation of the new TNI standards, including the implementation schedule, training workshops, and guidance documents.
- Building the program, including an update on New Accreditation Bodies (ABs); the NELAP Evaluator QA Report; the new AB Evaluation Standard Operating Procedure; and an update on the on-going AB recognitions that are underway.
- Continued discussion on the use of copyright protected language in state regulations.

12:00 – 1:30 LUNCH PROVIDED
Regency East

Thursday, August 13 (Continued)

National Environmental Field Activities Program

Rio Grande Center
1:30 – 5:00

Session Chair: Marlene Moore, Advanced Systems

The purpose of this program is to establish and implement a program for the accreditation of field sampling and measurement organizations (FSMOs).

AGENDA

- Review of Process to Date
- Model for Recognizing NEFAP ABs
- Policies and Procedures

Current Topics in Cyanide Analysis

Rio Grande West

Session Chairs: William Lipps, OI Analytical and Lemuel Walker, USEPA Office of Water

- 1:30 Past and Present Approaches in Dealing with Cyanide Interferences
Bill Telliard, USEPA Retired
- 2:00 Competing Chemical Reaction Mechanisms and Photophysical Interferences in the Colorimetric Analysis for Cyanide
Edward Askew, Askew Scientific Consulting
- 2:30 Development of Standard Practice for Sampling, Preservation, and Mitigating Interferences in Water Samples for Analysis of Cyanide
John Sebroski, Bayer MaterialScience, LLC
- 3:00 BREAK
- 3:30 Cyanide Sample Collection – A State's Perspective
Connie Turner, South Carolina DHEC
- 3:50 Cyanide Analysis for Wastewater Compliance Testing – Laboratory Perspective
Richard Burrows, TestAmerica, Inc.
- 4:10 An Overview and Comparison of Methods for Cyanide Analysis
William Lipps, OI Analytical
- 4:30 Analysis of Total, Metallo- and Free Cyanides using Ion Chromatography with Pulsed Amperometric Detection
Richard Jack, Dionex Corporation

Sensors (Continued)

Rio Grande East

Session Chair: Chris Bowerbank, Torion Technologies, Inc.

- 1:30 Near Real Time Decision Making Using Field-Portable GC/MS
David Curtis, Field-Portable Analytical, Inc.
- 2:00 Rapid Sample Screening of Volatile and Semivolatile Organics using Portable SPME-GC-TMS
Chris Bowerbank, Torion Technologies, Inc.
- 2:30 Trends in Capabilities for Real-Time Human Exposure Assessment
Phil Smith, Uniformed Services University of the Health Sciences
- 3:00 BREAK
- 3:30 Environmental Applications of Field Portable and Hand-held Raman Systems
Bryan Ray, DeltaNu
- 4:00 Developing & Field-Testing Chemical Analyzers for Rapid Detection and Quantitation of TICs & CWAs Using MEMS Nano-Sensor Array Technology
Brent Marquis, Sensor Research & Development Corporation
- 4:30 Identification of Unknown Hazardous Materials and Chemical Waste in the Field using FTIR
Duane Sword, Ahura Scientific

National Environmental Laboratory Accreditation Program (Continued)

Regency East

Session Chair: Dan Hickman, Oregon DEQ

AGENDA

- An open discussion on the fields of accreditation, specifically addressing the adoption of new and/or revised EPA methods with consideration of the discussion that will occur on Monday, August 10 at the meeting of USEPA's Environmental Laboratory Advisory Board related to SW-846 methods.
- Implementing the National Database.
- Accreditation Body Fees.

Technical Sessions

Friday, August 14

KEYNOTE ADDRESS

Regency West

- 8:00 Welcome
Skip Kingston, Duquesne University
- 8:10 Introduction
Matt Pamuku, Applied Isotope Technologies
- 8:15 Health Effects of Exposure to Metallic Species
Mike Waalkes, NIEHS National Cancer Institute

Keynote Address Sponsored By



Metals Speciation

Rio Grande East

Session Chair: Skip Kingston, Duquesne University

- 9:00 Development of Speciated Metal SRMs for Environmental Remediation Activities
Stuart Nagourney, New Jersey Department of Environmental Protection
- 9:20 Chromium Speciation Evolution – Inside & Outside the Box
John Petura, Applied Environmental Management, Inc.
- 9:40 Challenges and Solutions for Hexavalent Chromium Analysis by SW-846 Method 7199
Jay Gandhi, Metrohm USA, Inc.
- 10:00 BREAK
- 10:30 RCRA Objective "Human Health and Environment": Mercury Speciation in Crude Oil and Human Blood using EPA Method 6800
Mizanur Rahman, Duquesne University
- 10:50 Preparation of a New Caprine Blood Reference Material for Mercury Speciation Studies: NIST SRM 955c
Patrick Parsons, New York State Dept of Health
- 11:10 Arsenic Speciation Analysis of Tissue: A Comparison of New and Standard Extraction Methods
Hakan Gurleyuk, Applied Speciation and Consulting, LLC
- 11:30 Legally Defensible Accurate Data of Toxin Speciation: Dealing with Industry Pressure and Communication Gaps Among Government Agencies
Skip Kingston, Duquesne University

General Topics

Rio Grande West

Session Chair: Bob Wyeth, Columbia Analytical Services, Inc.

- 9:00 EPA's Water Laboratory Alliance - Lessons Learned from Functional Exercises
Anand Mudambi, USEPA Office of the Science Advisor
- 9:30 High Accuracy, Deterministic CBRNE Measurement with a Chemistry-Driven Universal Detection Platform
Matt Pamuku, Applied Isotope Technologies, Inc.
- 10:00 BREAK
- 10:30 Optimum Method Performance Evaluation for Newly Proposed US EPA Method 524.3
Teri Dattilio, Teledyne Tekmar
- 11:00 Analysis of Organotin in Water by GCMS
Jessie Butler, ThermoFisher Scientific
- 11:30 Advancing Endocrine Disrupting Compound Analysis Through Integrated Technology and Workflow Solutions
Joe Romano, Waters Corporation

Climate Change and Air Methods

Rio Grande Center

Session Chair: Ray Merrill, ERG

- 9:00 The Standing of the Skymine™ and the Amine Based Carbon Dioxide Capture Processes in Electric Power Generation
Eloy Flores, III, Southwest Research Institute
- 9:30 Feasibility of Producing Alternative Liquid Transportation Fuels from Landfill Gas Methane in China
Gary Walter, Southwest Research Institute
- 10:00 BREAK
- 10:30 Optimizing Analytical Parameters for Soil Vapor and Indoor Air Samples using Automated Thermal Desorption/Gas Chromatography/Mass Spectrometry (ATD/GC/MS)
Lee Marotta, PerkinElmer
- 11:00 Comparison of Compendium Methods TO-11A and TO-15 for the Measurement of Acrolein: Results from Three Field Sampling Campaigns
Ian MacGregor, Battelle
- 11:30 Identification of Two New Selenium Species in Flue Gas Desulfurization Wastewater and Their Impacts on Total Selenium Measurements
Russell Gerads, Applied Speciation and Consulting, LLC

Friday, August 14 (Continued)

The NELAC Institute Board of Directors Open Meeting

Chula Vista
9:00 – 12:00

Session Chair: Steve Arms, Florida Department of Health

The TNI Board of Directors will meet in an open session to hear reports from the TNI programs and conduct other business. All TNI members and the public are welcome to participate.

AGENDA

- Consensus Standards Development
- Laboratory Accreditation
- Proficiency Testing
- Field Activities
- Stationery Source Audit Sample
- Testing Assistance
- Administration

Small Laboratory Advocacy Group Information Table

Members of TNI's Small Laboratory Advocacy Group (SLAG) will be at an informational table near the Symposium registration desk during all morning and afternoon breaks of the conference. The Small Laboratory Advocacy Group serves as the focal point for small laboratory concerns within TNI by:

- Seeking actively the opinions, ideas, and viewpoints of the small laboratory community regarding accreditation;
- Answering questions internally and externally regarding small laboratory issues and implementation of accreditation standards; and
- Raising the visibility within TNI of small laboratory concerns by attending regularly face-to-face meetings and teleconferences.



Training Courses

Testing Requirements of EPA Regulations

Tuesday, August 11, 6:30 pm – 8:00 pm
Chula Vista

In response to laws passed by Congress, the USEPA has developed regulations that require the testing of environmental contaminants in virtually all environmental media (e.g., air, water, soil, wastes). This workshop will review the process by how a law becomes a regulation, examine the major statutes that require monitoring, and then provide an in-depth presentation of the specific testing requirements, including test methods and analytes in each regulation

Instructor: Jerry Parr, Catalyst Information Resources
Fee: \$45*
*Includes a light meal.

How to Use Qualified Data

Wednesday, August 12, 1:00 pm – 5:00 pm
Chula Vista

The objective of the course is to review how to use qualified data for making environmental decisions and limit the amount of qualified data for future decisions. The course includes practical examples of reporting data with qualifiers based on federal, state, and client specific specifications. At the end of the course, the student should understand: (1) when to use qualified data for making decisions, (2) how to evaluate data for the intended use, and (3) be able to assess how “good” the data reported is to the client.

Instructor: Marlene Moore, Advanced Systems
Fee: \$195

Gas Chromatography and Mass Spectrometry Analysis and Data Review

Friday, August 14, 1:00 pm – 5:00 pm
Blanco

The objective of this 4-hour course is to review the analytical process for obtaining data of known and documented quality for Gas Chromatography (GC) and Gas Chromatography/Mass Spectrometry (GC/MS). The course includes practical examples of: (1) performing testing using GC and GC/MS, (2) preparation techniques for organic analysis, (3) identifying and implementing corrective actions, and (4) performing the necessary laboratory data review. The course is designed to help laboratory personnel improve their understanding of the science and the regulated methods. Test methods include EPA 600 series; 3000, 5000 and 8000 series; and the Contract Laboratory Program (i.e., OLC, SOM, and OLM) for analysis of water and solids. The latest versions of these methods will be presented and discussed.

(Please note drinking water methods are not included in this course.)

Instructors: Marlene Moore, Advanced Systems and Mitzi Miller, Environmental Quality Management
Fee: \$195

Metal Speciation Analyses

Friday, August 14, 1:00 pm – 5:00 pm
Directors

This course will focus on the use of EPA Method 6800 for the determination of species of Chromium, Mercury, and other species in environmental matrices. Fundamentals of sample handling, including extraction, stable isotopic spiking, and species stabilization integrated with detection will be covered. The course will describe and compare Isotope Dilution Mass Spectrometry (IDMS) and Speciated Isotope Dilution Mass Spectrometry (SIDMS) as tools for elemental and molecular species analyses. The course provides support methods and materials for current available instrumentation, reagents, and standards used in carrying out these analyses. Software for solving equations and implementation tools will be provided on CD as part of the course. Additional support materials and manuals in addition to what is currently available in the method will be provided.

Instructor: Matt Pamuku, Applied Isotope Technologies, Inc.
Collaborating instructors: Skip Kingston, Duquesne University and Mizanur Rahman, Duquesne University
Fee: \$95

Electronic Delivery of Laboratory Data for the Next Generation

Friday, August 14, 9:00 am – 5:00 pm

Guadalupe

This training course will introduce and discuss the implementation of the Staged Electronic Data Deliverable (SEDD). Although the course will focus on implementing SEDD for the newly developed Inorganic Superfund Methods (ISM01.1) Statement of Work for EPA's Contract Laboratory Program (CLP), the course will also be applicable to anyone using SEDD, including organics and other programs. Laboratories, software vendors, and Architect-Engineer firms who have bid or are considering bidding on this contract in the future or have worked with SEDD files would be highly encouraged to attend. SEDD is a universal format that can deliver environmental testing data for any program in an XML format. The course will introduce SEDD and discuss the various Stages and what type of data each can deliver. The structure of SEDD will be discussed that will show the type of data that is reported in a Stage 2a, 2b, or 3 SEDD file and how the files are constructed. The course will focus on the reporting of the data for the Stage 2a and 2b along with some discussion on Stage 3. SEDD allows for the complete linking of all samples to their associated Quality Control samples, the complete linking of all samples to their associated continuing and initial calibration data, and the complete linking of all reported results to the specific analysis that was used to derive that specific result. Numerous real examples will be displayed and discussed. The various means for constructing these files along with the current tools that can assist the laboratories with the evaluation of their in-house created files will be demonstrated. Overall, in the data review process, a significant cost savings has been demonstrated in the CLP through the use of these deliverables and associated software tools.

Instructor: John Nebelsick, USEPA Office of Solid Waste

Fee: No charge

Inductively Coupled Argon Plasma & Mass Spectrometer Analysis and Data Review

Saturday, August 15, 8:00 am – 12:00 pm

Pecan

The objective of this 4-hour course is to review the analytical process for obtaining data of known and documented quality for Inductively Coupled Argon Plasma (ICP) and Inductively Argon Plasma/Mass Spectrometer (ICP/MS). The course includes practical examples of: (1) performing testing using ICP and ICP/MS, (2) preparation techniques for metals analysis (3) identifying and implementing corrective actions, and (4) performing the necessary laboratory data review. The course is designed to help laboratory personnel improve their understanding of the science and the regulated methods. Test methods include EPA 200 series; 3000 and 6000 series; and the Contract Laboratory Program (i.e., ILM series) for analysis of water and solids. The latest versions of these methods will be presented and discussed.

(Please note drinking water methods are not included in this course.)

Instructors: Marlene Moore, Advanced Systems and Mitzi Miller, Environmental Quality Management

Fee: \$215*

* Includes continental breakfast

You must be registered for these courses to attend.

Thank You

NEMC

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Future Meetings



The Forum on Laboratory Accreditation

Chicago, Illinois
January 25 – 29, 2010



Environmental Measurement Symposium

Washington, DC
August 9 – 13, 2010

