

JOURNAL of Environmental Management

Practical and Current information for Environmental, Health and Safety Professionals

ARIZONA

NESHAP PLATING AND POLISHING RULE

JULIE C. ROGERS PG 4

CAUTION: A FEW MISTAKES CAN UNDERMINE YOUR SUSTAINABILITY PROGRAM

PART II OF A 2-PART SERIES WILLIAM (BILL) WILEY PG 6

WHEN DOES VISION BECOME OPPORTUNITY?

"PROSPECTING" JOE C. HOLMES PG 14

BP MAY BE ONLY THE BEGINNING

DR. LARRY OLSON PG 8



A World Leader In Environmental Services and Chemical Distribution

ChemCare® is a comprehensive waste management
and disposal service from Univar USA

You can depend on Univar to help you select the most economical and environmentally sound waste disposal technology available anywhere. We manage and dispose of your hazardous and non-hazardous waste products safely, quickly, and efficiently.

Univar | Phoenix

50 S. 45th Street
Phoenix, AZ 85043-3907
1-800-909-4897



Univar | Tucson

3791 E. 43rd Place
Tucson, AZ 85713-5403
1-800-909-4897



For more information, please call us or visit our Web sites
www.univarusa.com or www.chemcare.com



© 2010 Univar USA Inc. All rights reserved. Univar, the Univar logo, the hexagon, ChemCare, and the three barrel logo are registered trademarks of Univar USA Inc.



SAEMS 2010 P2 SEMINAR

Sustainable Growth to Reduce Our Carbon Footprint

Thursday, September 23

Manning House - Tucson

1st Annual Golf Tournament

Friday, September 24th

Reid Park, Tucson

Being sustainable means designing your business to reduce or eliminate reliance on finite resources. This includes a wide range of activities including designing products that reduce waste and are recyclable, and buying materials that are recycled from other sources. Sustainable practices increase long-term efficiency, and provide long-term security. It is not only good public relations, it is also sound business sense and can save money.

P2 is a path towards sustainable growth. Excess emissions are waste. Waste can become wasted money and lead to an ever-increasing regulatory burden. Eliminating waste and increasing efficiency is a stepping stone toward carbon neutrality.

Please join us for this informative event to reduce your footprint through sustainable practices. Monies raised support the SAEMS U of A Scholarships!

Need more information?

If you would like to be a speaker please contact: Pamela Beilke at (520) 720-2114 or PBeilke@ApacheNitro.com

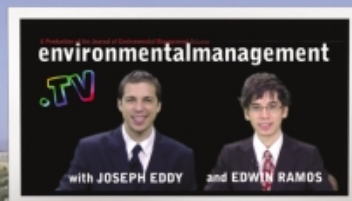
If you would like to be a sponsor or for info. contact: Heather Shoemaker at (520) 770-1789 or hpshoemaker@terracon.com

If you would like to be a sponsor or for additional information on the golf tournament contact:

Fred Narcaroti at (520) 577-7600 or fnarcaroti@ninyoandmoore.com

www.SAEMS.org





Environmental
Management .TV

COMING SOON
ON YOUR COMPUTER MONITOR

THE 21ST CENTURY WAY TO CONNECT WITH
THE ENVIRONMENTAL MANAGEMENT COMMUNITY

SEPTEMBER 7, 2010

WWW.ENVIRONMENTALMANAGEMENT.TV

NESHAP Plating and Polishing Rule

Compliance Assistance Provided For EPA's Recently Promulgated 40 CFR 63 WWWWWW

by Julie C. Rogers

Maricopa County Air Quality Dept. MACT Standard Specialist Jess Lotwala held a seminar in conjunction with the Greater AZ Branch of the National Association of Surface Finishers to assist area facilities in compliance with the EPA's recently promulgated 40 CFR 63 WWWWWW air quality regulation controlling emissions from plating tank and spray wand apparatus containing lead, cadmium, manganese, nickel, non-electrolytic chromium and chromates.

After opening remarks were given by Max Porter, Interim Director of MCAQD, attendees enjoyed presentations by chief Maricopa County permit writer Vasante Deshpande, MCAQD Air Quality Control Inspector Claire

Yabes, ASU's environmental specialist Dr. Larry Olson, NASF Member and Practicing Consultant Julie C. Rogers, and, of course, Jess Lotwala, who also introduced the speakers. A 20 year veteran with MCAQD, Jess's understanding of the plating and finishing industry and business friendly attitude has helped many facilities remain in business and has assisted many area facilities in achieving and maintaining compliance with the myriad air quality rules impacting the surface finishing industry.

The May 18th seminar focused on the new NESHAP Plating and Polishing Rule, which brings many facilities under air quality permitting

and inspection for the first time. With a compliance deadline of July 1 looming in the immediate future, the seminar was timely as well as helpful. While this newest NESHAP GACT, (or Generally Achievable Control Technology) known as the Plating and Polishing Rule, is not as stringent as a full MACT Standard, it still has an enormous impact on US metal finishers. WAFS (wetting agent fume suppressants,) tank covers, fume scrubbers or mist eliminators are required equipment on any tank or spray application system that contains one or more Plating and Polishing HAP.

Along with the newly required control devices come record-keeping and reporting requirements. Initial Notification Reports (INR), Notifications of Compliance Status (NCS), and Annual Compliance Status Reports (ACSR) must be generated in timely manner. The INR is filed with your Permit Application or as a stand-alone submittal, depending on your facility situation. The NCS is filed upon the compliance date or upon startup of a new area source facility, and the ACSR must be generated by January 31 of the year following the end of the reporting period (which is the previous year.) Maricopa County requires that ACSRs need only be submitted to the Control Officer if there has been a deviation from compliance. Be sure to check with your local regulators for information on your own area's requirements. Those without local regulation are subject too inspection and regulation by EPA.

MCAQD permits are being modified to include the requirements, which can be easily complied with by most surface finishers. Should anyone need help with these issues, contact Jess at MCAQD, ask your permit engineer or inspector, or engage a consultant familiar with these issues.

Julie C Rogers, Practicing Consultant, has been providing EH&S consulting services in Arizona for over 20 years. Julie can be reached at Rogers Consulting Services, LLC, 928-427-0300 (Office) or 520- 490-8380 (Cell) or by email at rogersconsulting60@yahoo.com.





2445 N. Coyote Dr., #104
Tucson, Arizona 85745
520 882-5880
Fax 882-9788
www.turnerlabs.com



- ♦ Drinking Water, Waste Water, Hazardous Waste, Compliance Testing
- ♦ Inorganic, Organic, Microbiological Analysis
- ♦ MBE/WBE/SBE Laboratory
- ♦ Waste Water Sampling Services

TURNER LABORATORIES, INC.
A Full Service Environmental Laboratory
Celebrating Over 26 Years in Tucson



RECOVERING TODAY'S RESOURCES FOR A CLEANER TOMORROW

We specialize in the treatment of non-hazardous liquid waste through physical separation, chemical treatment, biological treatment and sludge de-watering technologies.

- Waste disposal solution that is both economical and environmentally sound.
- On-site laboratory for profiling waste / sample technicians.
- After treatment, reclaimed water is returned to Arizona.
- Manage liquid waste for thousands of clients including some of Arizona's largest companies.
- Ask us about a cost effective alternative to your current waste disposal method.

liquid

ENVIRONMENTAL
SOLUTIONS

Call Us Today
602-278-3442
www.liquidenviro.com

JOURNAL OF Environmental Management

Contents ARIZONA

August / September 2010

Volume 8 Number 4

Features and Articles

- 4 **NESHAP Plating and Polishing Rule**
Julie C. Rogers
- 6 **Caution: A Few Mistakes can Undermine Your Sustainability Program**
William (Bill) Wiley

Columns

- 8 **It's All About Chemistry**
BP May be Only the Beginning, *Larry Olson, PhD.*
- 12 **Sustainability and Sustainable Development**
Sustaining the Superfund: Re-fund it!
Nicholas R. Hill, PhD.
- 13 **From the Director, ADEQ**
"Egads, E-Waste", *ADEQ Director Ben Grumbles*
- 14 **Prospecting: for environmental business**
When does vision become opportunity?
Joe C. Holmes, ATC Associates

Departments

- 5 **From the Editor**
- 10 **Associations Pages**
- 15 **News Briefs**

From the Editor



Online video programming. It is a concept that would have been entirely impractical just one or two years ago, but now is a common, even expected, part of everyday mass communication. Network news websites, entertainment websites, financial news websites, YouTube videos, and more — all commonly use video clips in addition to text to entertain, educate, communicate.

Video programming, when done well, can provide an educational experience that is 'the next best thing to being there'. It is a logical complement to the printed Journal in our mission to provide "current, practical information for environmental, health, and safety professionals."

On September 7th, 2010, the Journal will launch EnvironmentalManagement.TV (www.environmentalmanagement.tv). EMTV will feature Weekly Reports, Channel videos, and Seminar Room videos. Weekly Reports are brief videos featuring guest interviews and current information. Channel videos will be hosted by local environmental experts, and are periodic videos on a particular environmental topic, similar to a written 'column'. Seminar Room videos are "one of a kind" videos that will include facility tours, presentations, interviews, training videos, and more. I welcome your input and suggestions, and invite you to participate.

Sincerely,
Jim Thrush, M. S. Environmental Management
Editor & Publisher

Journal of Environmental Management Arizona
EDITORIAL Publisher & Editor: James Thrush, M.S. Env. Mgt., jimthrush@cox.net or 480-422-4430. SUBSCRIBE: ehshomepage.com or 480-422-4430. RATES FREE to qualified EHS Professionals, others call. MAILING ADDRESS: JEMA, 3145 E. Chandler Blvd, Suite 110-641 Phx, AZ 85048. ADVERTISING 480-422-4430 x42. Published 6 times/year. Copyright © 2010 by JEMA. All rights reserved. LEGAL DISCLAIMER: Information presented in JEMA originates from sources presumed to be accurate and complete. Due to the rapidly changing nature of regulations and the law and our reliance on information provided by various sources, we make no warranty or guarantee concerning the accuracy or reliability of the content of JEMA. Readers are encouraged to contact authors, agencies, and advertisers directly for verification/clarification. Content for informational purposes only, and should not be considered legal or professional advice. Consult your legal counsel or environmental consultants for advice. WARNING: Serious legal, environmental, and/or safety consequences can result from non-compliance with environmental and safety regulations and standard safety, environmental, and professional practices.

PSC



PSC is the single source for industrial cleaning services:

- Hazardous Waste Disposal
- Labpack
- Household Hazardous Waste Services
- Soil Excavation/Remediation/Decontamination
- Vacuum Tankers
- Roll-off and Vacuum Bins
- Super Suckers and Jet Rodders

PSC provides nationwide industrial services, environmental services, transportation and container services, delivered by thousands of skilled and committed professionals throughout North America.

What does PSC stand for?

People, Service and Commitment. As the industry leader, we don't just promise these qualities. We live them every day.

PEOPLE. PERFORMANCE. PRIDE. PROMISE.
THIS IS PSC NOW.

PSC
2003 W. McDowell
Phoenix, AZ 85009
602.252.1186

www.PSCNow.com



7 Terminals
throughout the
Western states

**Years of
Environmental
Excellence**

Hazardous/Non-Hazardous Transportation
Environmental Remediation Services
Waste Management
Emergency Response Services - 24 Hrs



3045 South 51st Avenue, Phoenix, AZ 85043
602-278-6233 800-833-7602 Fax: 602-278-2884
www.mpenviro.com



**Caution: A Few Mistakes
Can Undermine Your**

Sustainability Program

by William (Bill) Wiley

Part II In a 2-Part Series

Now that you've embarked on building a sustainability program for your organization, it might help to learn from those who have gone before you. One of my favorite aspects of the Arizona Businesses Advancing Sustainability (AzBAS) meetings is when companies present their sustainability programs. By design, they also present a section on the lessons learned by the company. Often, a subset of these lessons is discussion of some actions that did not work. This article takes off from that experience and presents a few mistakes so that you do not have to make them. Good luck!

Use of Recycling as one of your key metrics

Remember your "3 R's"? No, not the kindergarten variety, the environmental 'R's': Reduce, Reuse and Recycle. Although recycling is preferable to disposal, it is the lesser of these three R's and increasing it should not be your ultimate goal. *Unfortunately, you will see it proudly displayed by many organizations!* Your goal should be to increase material use efficiency and reduce that not used, whether it goes to a landfill or is recycled. Re-engineering is often an important

component of this effort. Likewise, after you have reduced the material used, how much can you reuse? Good examples are the reuse of pallets, boxes or even computers where they are donated to schools. Reuse doesn't require the energy for remanufacturing (as recycling often does) so it is a better choice. A mature sustainability program should actually reduce the material recycled over time as the organization improves its material use efficiency.

Setting inappropriate boundaries

So where does an organization become responsible for what it does? Is it at the organization fence (used most commonly) or does it start upstream? How about after it leaves your facility? A prominent consumer products company, after evaluating the lifecycle of its detergents, realized that the major impact was downstream during use by consumers. Based on this knowledge, they initiated a campaign to get people to use their products safely and in consideration of the environment. Conversely, on the upstream side in a well publicized situation, Nike realized that corporations are held responsible for the conditions of workers that make their products, not just when they reach the Nike warehouse. What are your appropriate lifecycle boundaries? The ISO 14040 series provides some guidance on this practice, but it can be complicated. A useful resource to help you in this process is: "LCA for Mere Mortals" by Rita Schenck.

No baseline

You are improving energy efficiency, reducing waste, talking with your stakeholders and feeling good about the progress you are making. Then the big questions are asked. How do you know it's better? Or how much money have you saved?

Continued on next page

REMEDIATION | TRANSPORTATION & BIN SERVICE

CT

Chemical Transportation inc.
ENVIRONMENTAL SERVICES



Your partner on the road to a Cleaner Tomorrow

ct-environmental.com

PO Box 397	1945 E. Jackson St.	400 Inglewood Dr., Suite E
Rillito, AZ 85654	Phoenix, AZ 85034	El Paso, TX 79927
800-362-4952	833-444-7077	888-999-2260
tel: 520-624-2348	tel: 480-784-4833	tel: 915-860-1161
fax: 520-682-3509	fax: 602-275-1666	fax: 915-860-1401

INDUSTRIAL SERVICES | WASTE MANAGEMENT

Without a baseline, you cannot answer these questions. Having a good baseline and tracking your progress goes a long way in keeping management support for your program. Likewise, what are the costs for the benefits you tracked? To answer this, you need to keep tabs on your implementation costs as well. This can be difficult, as I found out. Many actions are considered normal business activities, and are not specific "sustainability" costs.

Buying compostable or recyclable materials

without the means to compost or recycle them. Many products today proudly proclaim their recyclability or compostability. But be careful. Compostable products (e.g. biodegradable cups and tableware) often require specific conditions (i.e. temperature, moisture content, etc) or a special composting facility to be 'biodegradable'. Likewise many recyclable products only make sense where there is a local facility that accepts them. Failure to look at these important issues before you commit can leave egg on your face.

For additional information on other mistakes to avoid - See **Whoops! Ten Common Mistakes to Avoid in Building your Sustainability Program** in the Journal of Sustainability.

References:

Arizona Businesses Advancing Sustainability (AzBAS) <http://www.azbas.net/>
Schneck, Rita. 2000. LCA for Mere Mortals. Institute for Environmental Research and Education. <http://www.iere.org/mortals.html>
Wiley, William D. PE, 2010, Whoops! Ten Common Mistakes to avoid in Building your sustainability program. Journal of Sustainability. Summer 2010. <http://tinyurl.com/2egcweo>

William (Bill) Wiley P.E. was Senior Manager for Sustainability for Arizona Public Service Co. from 2007 through 2010. He is also adjunct professor for University of Phoenix, teaching science and ethics classes. From 1991 through 1994, he was Deputy Director of the Arizona Department of Environmental Quality. He is registered Professional Engineer in Arizona and has several publications on water, business process improvement and environmental management. Bill can be reached at wileywun@gmail.com.

N. Weiss Associates, Inc.

Environmental Compliance Services

Experience Counts

Contact: Norm Weiss @ (602) 870-5504

Web Site: www.nweissassoc.com

T.H. ENTERPRISES

Gary Boileau - Grade 4 OPERATOR

WATER & WASTEWATER OPERATIONS, SAMPLING,
METER READING, OPERATOR OF RECORD

PO BOX 2256, ARIZONA CITY, ARIZONA, 85123
CELL: 520-705-1282 g_boileau@yahoo.com



Proudly serving clients since 1976



CONESTOGA-ROVERS
& ASSOCIATES

Environmental
Water / Wastewater
Compliance / Permitting
Construction / Design-Build
Brownfield Redevelopment
Hydrogeology

4050 East Cotton Center Blvd., Suite 49
Phoenix, Arizona 85040
Phone: (602) 749-9400 Fax: (602) 749-9500

1670 East River Road, Suite 100
Tucson, Arizona 85718
Phone: (520) 623-9221 Fax: (520) 623-3065

REGISTERED COMPANY FOR
ISO 9001
ENGINEERING DESIGN

3,000 Staff in 90+ Offices

www.CRAworld.com

Worldwide Engineering, Environmental, Construction, and IT Services

BELFOR (●)

ENVIRONMENTAL

**Providing the
Finest in
Environmental
Service**

- 24 hour emergency spill response
- Soil remediation
- Storage tank cleaning and removal
- Vapor extraction system installation
- Asbestos abatement
- Waste management
- Bulk chemical transfer
- Industrial decontamination
- Lab packing



Offices in Phoenix, Denver, Atlanta, Portland,
Colorado Springs 480-632-2119 800-930-0011

BELFOR (●)



Larry Olson, PhD.

It's All About Chemistry

BP May Be Only The Beginning

When the Deepwater Horizon oil platform exploded on April 20, 2010 and sank two days later, it was the beginning of the most concentrated focus on an environmental catastrophe in U.S. history. Although many argue that it was too delayed, there has been a massive governmental response to the spill. Thousands of boats, millions of feet of boom, and more than 37,000 workers have been employed in responding to the spill. Hundreds of scientists are studying everything from the effect of dispersants on oil at great depths, to the detection and mapping of undersea oil plumes, to more effective means of cleaning birds or sea life coated with oil, to the impact of oil on wetlands and spawning areas. BP has pledged \$20 billion towards repairing the damage from the spill and aiding those who have been impacted. For weeks on end, the nightly news led with reports from the Gulf and people all over the world have been following the story.

Contrast this with the way the world has treated a very similar environmental disaster in Africa. Nigeria has oil reserves bigger than the United States and Mexico combined. Drilling began in 1958 and major spills followed almost immediately. According to the New York

Times (June 16, 2010), 546 million gallons of oil has been spilled into the Niger Delta in the last five decades. To put that in perspective, that is the size of an Exxon Valdez spill (10.8 million gallons) every year for 50 years. But there are no underwater robots here, no \$20 billion fund to assist locals affected by oil spills, and until the BP episode, there was very little publicity.

Environmental impacts of the oil industry in Nigeria include acid rain from gas flares, destruction of more than 50,000 acres of mangroves for 4900 miles of pipelines and 159 oil fields, and the poisoning of land and waters that have destroyed the ability of people not directly employed by the oil industry to make a living.

Nigeria nationalized its oil industry in 1971 and oil revenue grew to \$60 billion by 2005. But there is little evidence that any of this money has trickled down to average people. 30 million people live in the Niger Delta, most on \$1 per day. Port Harcourt, the center of Nigeria's oil industry is no shining modern city like Houston. There has been minimal investment in infrastructure like roads, schools, electricity, or health care. The World Bank categorizes Nigeria as a "fragile state" and it is a legitimate question to ask if Nigeria would have been better off without oil.

Why should this matter to the United States? For one, the U.S. consumes 40% of Nigeria's oil, an amount that constitutes 10% of our oil imports. So we are at least indirectly responsible for how Western oil companies in Nigeria behave because we are their customers.

A second reason is that conventional land oil production in the U.S. peaked in the 1970s. Oil production from the Gulf Coast in shallow waters peaked in 1997. Thus, we are forced to go to ever deeper depths to feed our insatiable appetite for oil. In 1990, deepwater wells in the Gulf yielded only 20,000 barrels per day. By 2009 that had grown to 1 million barrels per day. Cambridge Energy Research Associates report that deepwater wells account for as much as 17% of U.S. liquids production. Estimates are that 70% of the deepwater possibilities in the Gulf remain unexplored, but we now understand the risks we run in driving this new technology to its limits.

Besides the Gulf, the most promising deepwater areas in the world are off the coasts of Brazil, Nigeria, and Angola. These are attracting the attention of China and India among other nations. The potential is very real that the tragedies of Nigeria and the Gulf could be repeated over and over again.

Finally, some of the Nigerian spills are not due only to ineptitude but to vandalism and terrorism. A group of armed rebels called MEND (for Movement for the Emancipation of the Niger Delta) have attacked oil platforms, pumping stations and pipelines. With each significant disruption in the flow of oil, the world price of oil has been impacted. In this post 9/11 world, terrorist groups understand that our dependence on oil represents a soft exposed underbelly.

There is an argument about whether we have reached "peak oil" yet, the point at which world oil production begins to decrease rather than increase. But it is undeniable that every barrel of oil in the future is going to be harder to extract and that increasingly we are going to be dependent upon nations which are overtly hostile to us like Venezuela or who are ill equipped, like Nigeria, to handle the technological and environmental challenges of the oil industry.

Larry Olson, PhD., Associate Professor, Arizona State University Environmental Technology Management Program. Dr. Olson holds a Ph.D. in Chemistry from the University of Pennsylvania, and is an environmental chemist with interests in remediation technologies and international env. mgmt. He can be reached at 480-727-1499, or by email at Larry.Olson@asu.edu

An advertisement for RED J Environmental. The top half features the company logo, which includes a stylized red and yellow star above the text "RED J" in large, bold, red letters, with "Environmental" in black below it. To the right of the logo, contact information is listed for Phoenix and Northern Arizona offices. Below the text, a large white semi-truck with a vacuum truck body is shown. The truck has "RED J" and "250" on its side. In the bottom right corner, there is a small inset image of a white truck with a crane-like attachment.

Providing Environmental & Waste Management Solutions

RED J Environmental

Phoenix Office:
1465 N. Fiesta Blvd., Ste. 106
Gilbert, AZ 85233
(480) 557-7371

Northern Arizona Office:
P.O. Box A
Joseph City, AZ 86032
Toll Free: (877) 571-0313

**Vacuum Truck Services
Roll-Off Containers
Hazardous Waste Disposal
Waste Transportation
Remediation Services
Dry Well Cleaning
Soil Excavation**

GSA Contract Holder



Water. A new era has begun.



Harness the power of the ARCADIS/Malcolm Pirnie merger.

From water supply to wastewater treatment and aquifer protection to groundwater remediation, the combined team offers innovative services and business solutions tailored to Arizona's challenges.

With more than 200 years of collective experience and a global knowledge network of 15,000 professionals, we've got what it takes to deliver—right here, right now.

www.arcadis-us.com

Sustainable, Life-cycle Solutions

Imagine the result



SEVENTH ANNUAL GATEKEEPER REGULATORY ROUNDUP

**CALL FOR
ABSTRACTS**

The Environmental Professionals of Arizona (EPAZ), Thunderbird Chapter of the Alliance of Hazardous Material Professionals (AHMP) and the Arizona Emergency Response Commission (AZSERC) are co-hosting the Seventh Annual Gatekeeper Regulatory Roundup Conference. The conference will be held February 15-16, 2011 at the Chaparral Suites in Scottsdale, Arizona. The conference is a great opportunity to learn the latest regulatory updates, share industry specific information and network among your peers.

The GRR planning committee would like to invite you to submit an abstract for a topic to be presented at the conference. We are especially interested in topics presented from the industry perspective that may apply to a multitude of different industries (i.e., air quality, pollution prevention, regulatory issues etc.). Some examples of topics that have been suggested for the conference are listed below.

- Air Quality / Water Quality
- NEPA/Wildlife Considerations
- Emergency Planning & Response
- Emerging Technologies
- Pollution Prevention
- Greenhouse Gas Issues
- Alternative Energy/Sustainable Business Practices
- Stormwater/Wastewater
- Auditing Techniques/Self Assessment
- Pharmaceuticals and/or other Emerging Drinking Water Concerns

The submission deadline is **October 15, 2010**. The abstract should be one page or less and include a title, author and affiliation.

Please keep in mind that speakers will be asked to register for the event (the day of their presentation at a minimum) which will include lunch, attendance at other talks and keynote presentations, vendor interaction, networking and other scheduled events. We plan to notify presenters of acceptance on or before December 1, 2010.



Please email or fax your abstract to:

Michael Ford, 2011 Program Chair
 Polsinelli Shughart
 Office: 602-650-2321
 Fax: 602-361-7475
 E-mail: mford@polsinelli.com

Associations Pages

The Journal of Environmental Management Arizona invites environmental, health and/or safety organizations in Arizona to contribute news articles about their associations. Contact the editor at 480-422-4430 x42.



www.azhydrosoc.org

Another top-notch AHS Annual Symposium is only a few days away!!! Please join us at the Westin La Paloma in Tucson, Arizona, September 1 – 4. Workshops, field trips, and two days of technical presentations offering plenty of chances to re-connect with colleagues, network with new potential contacts, and visit with sponsors and exhibitors.

There are over 85 presentations in our Technical Program including Government Responses to

Changing Hydrologic Conditions; A Bi-national River - Watershed Hydrology of the Santa Cruz River and Transboundary Issues; Rainwater Harvesting and Green Infrastructure; Colorado River Management; and Dryland Hydrology - International Studies. Our invited plenary speakers are Charles F. Hutchinson, Professor of Arid Lands Resource Sciences and Director, Arizona Remote Sensing Center, *Future of Drylands* and Rodney Glassman, Tucson Council Member, U.S. Senate Candidate, and Arid Land Resource Sciences PhD, *Sustainability Consensus Building for our Water Future*.

Also, we want to thank our Flagstaff Chapter for hosting the amazing and fun field trip – Hops,

Stops, Lakes and a Dam BBQ, 2010: Hydrology, Geology, Forest and Watershed Health of Mormon Lake and Lake Mary Area on July 10. Water resources were discussed, lava flows observed, beer drank and a good time was had by all!



Christine O'Day
Executive Director



www.eia-az.org

Las Vegas here we come! The Environmental Information Association is hosting the 2010 Southwest Regional Conference September 30 through October 1 at the Flamingo Hotel in Las Vegas, Nevada. Early registration before August 20th saves you \$50. There are great opportunities for vendor/exhibitor participation and terrific lineup of presenters and topics.

Topics include: What you need to know about Chinese Dry Wall, Brownfield's, ASTM E1527-05 Update, LEED/USGBC, CERCLA Liability, Social Media and Environmental Marketing, and Lead-Based Paint new trends and regulations; just to name a few.

The highlighted keynote speaker is Mr. Martin T. Jones, Gust Rosenfeld P.L.C. who will speak of alternative energy potentials and "Going Green, the Benefits and the trade-offs". The venue holds something of interest for all who attend. Hope to see you there!

Please visit our web site or call 602-437-3737 ext. 123 for information on all upcoming events sponsored by EIA-AZ and for membership and sponsor opportunities. We encourage participation from members and non-members (environmentally concerned community) involvement with our outreach programs.



Vicky Aviles
Past President



www.awma-gcs.com

A&WMA Grand Canyon Section (AWMA-GCS) will hold their next meeting at noon on Thursday, September 23 at Snell and Wilmer in Phoenix. Colleen McKaughan, Associate Director of the Air Division for EPA Region 9, will present an overview of current air quality issues in Arizona.

Please check our website for additional information on meetings and for membership information. Also, feel free to contact Darcy Anderson at darcy.anderson@redhorsecorp.com or 520-360-2641 with questions or suggestions for meeting topics.

Darcy J. Anderson
Chair



American Society of Safety Engineers

We have a busy and exciting year ahead of us. We had a turn over in July of our board members and welcome the new President Janet Gallup, Vice President Shari Dipeso and Secretary Alexis Westin. All other board members remain the same.

ASSE is proud to be celebrating its 100th anniversary this year and the region is celebrating its 50th. The 100th year celebration will be in Chicago in June and we would like to see as many safety professionals as possible to share in the festivities. With the last 100 years of safety in mind we are working on the progression of safety as it has pertained to southern Arizona.

On the local side of safety we are hosting

the Regional Operating Committee on April 29th and 30th this year. We will be hosting it at the Biosphere and are looking forward to connecting with other chapters. We will also be planning our own local celebration in February to commemorate both the regional and national milestones.



Alexis Westin
Secretary



www.azchamber.com

The Arizona Chamber and Manufacturer's Council is in the process of developing the organization's public policy priorities for 2011. The Environment Committee is the venue to submitting and vetting environmental legislative and regulatory issues of concern on behalf of member companies.

Anyone wanting to recommend an environmental issue for consideration should contact Jeff Homer at 480-441-6672/jeff.homer@gdc4s.com.

The Environment Committee continues to host breakfast meetings on the second Wednesday of each month at the Phoenix Sheraton Hotel located at 1600 S. 52nd Street Tempe, AZ 85281. Check the Arizona Chamber's web page at www.azchamber.com for meeting details.

Jeff Homer
Chairman
Environment
Committee



Arizona
Environmental
Strategic
Alliance

www.azalliance.org

The Alliance Advisory Council is beginning the annual process of reviewing our Member Annual Reports. These reports document Alliance Member environmental accomplishments and adherence to Alliance performance standards for the previous calendar year. This summer, a committee of the Advisory Council and Members are exploring ways to increase sharing within of the valuable information in these reports, both within our membership as well as with other interested organizations.

Technology and idea exchange among Members is one of the key benefits of Alliance membership, and occasionally guests share their environmental accomplishments with our group as well. For example, Steve Vaughn of US Foods, Inc., guest attendee at a recent Alliance meeting, reported on how his facility has saved over 2,000,000 gallons of waters in a recent 7 month period, as a result of recent chemical additive technology improvements in their facility cooling tower system.



Matt Conway
Chair



www.SAEMS.org

It's a new year at SAEMS! Board members Heather Shoemaker (Terracon), Frank Bonillas (Tucson Household Hazardous Waste), John Barr (Alcoa), Tom Sisterman (Tucson Fire Department) and Ken Asch (Fluor) join me to form the 2010-2011 Executive Board. Our theme for the year ahead is, "The Whole is Greater Than the Sum of the Parts: Synergy". We welcome environmental professionals from state and local government, Davis-Monthan and industry to synergize through monthly SAEMS luncheons and our environmental seminars: Pollution Prevention (September 2010), Gatekeeper (January 2010) and Resource, Conservation and Recovery Act (RCRA) (May 2011). We are globally connected through financial shifts and changes, and impact from an unprecedented oil spill in the Gulf of Mexico. Current events punctuate the importance of professional development and continuing education in environmental stewardship, responsible land use, accountability, contingency planning, emergency response, and the role of well-informed environmental leaders in securing our community's future.

Join us Sept. 24th for fun at our first golf tournament! Proceeds benefit the SAEMS University of Arizona scholarship fund. May the year ahead show us the many synergistic ways that a united whole is greater than the sum of the parts.

Kristie Kilgore
President



AHMP
Thunderbird

www.thunderbirdchmm.org

If you're a current or aspiring CHMM, let's get together for a cold drink and a bite. We'll buy. Really. Now in its 26th year, the CHMM credential has become one of the strongest in the environmental industry. The Thunderbird Chapter is hosting a Happy Hour Hello meeting, planned for September 9th at Electric Dave's in Tempe. If you're an unaffiliated Arizona CHMM, a Thunderbird Chapter member, or interested in either the Chapter or the credential, we'd love to see you there.

The Thunderbird Chapter has selected its Board of Directors for 2010: President—Mike Ford, Polsinelli Shughart PC; Vice President/President-Elect – Dwight Clark, Ninyo & Moore; Secretary – Jeff Page, City of Phoenix; Treasurer – Kirby Woods, Clean Harbors Environmental Services; Director at-Large – Matt Conway, PING Inc.;

Director at-Large – Courtney Bear, Arizona Department of Transportation; Immediate Past President – vacant.

These folks, and many other environmental professionals, will be attending Arizona's largest environmental conference, the Gatekeeper Regulatory Roundup, on Feb. 15th and 16th. Future issues of the Journal will have more about Gatekeeper. For more information on Gatekeeper, the CHMM credential, or the Thunderbird Chapter, click on these links or email me or Mike Ford:

www.epaz.org/epazportal/annual_conf.html;
www.ahmpnet.org/
MFord@Polsinelli.com;

Jeff Page
CHMM
Board Member



www.EPAZ.org

Those attending our June luncheon meeting received an update on the Governor's Blue Ribbon Panel for Water Sustainability from Charles Graf of the Arizona Department of Environmental Quality. The Blue Ribbon Panel is expected to release its findings later this year, with many ideas being evaluated to increase the availability and ensure that the water necessary for the growth of the state is available.

EPAZ held our July meeting in Northern Arizona at the Arizona Snow Bowl. We learned about the challenges associated with obtaining the regulatory approvals for making snow at the Arizona Snow Bowl from their General Manager, J. R. Murray. We also had the opportunity to become acquainted with the nexus between air quality and water supply from David Modeer, General Manager of the Central Arizona Water Conservation District, more commonly referred to as the CAP. All in attendance expressed the opinion that both presentations were well worth the effort to get there—not to mention having an opportunity to escape the heat in Phoenix for some of us.

EPAZ normally holds monthly luncheon meetings on the 2nd Thursday of the month from 11:30 am to 1:00 pm. at the SRP PERA Club. However, we will not have a meeting in August, but will resume on September 9. For details and reservations, please go to our website at

www.epaz.org. EPAZ also gathers on the last Wednesday of the month for a casual cocktail mixer at various locations throughout the valley. Visit our website to find the location of our next mixer or contact Mannie Carpenter at (480) 829-0457 for more info.

Mannie
Carpenter
President



**ESH for
High Technology**

www.seshaonline.org

We are pleased to announce that our next Chapter meeting will be held on September 9th from 1pm to 4pm. The session will be held at the Western Technologies Phoenix Campus at the following address - 3737 E. Broadway Road, Phoenix, Arizona 85040. Among other topics Lori Zito from URS Corporation will be speaking about ADEQ's new industrial stormwater general permit, to be known officially as the AZPDES Multi-Sector General Permit or MSGP 2010.

We also plan to have a Mini-conference in the winter possibly in the second week of November. The mini conference will be an all day event with various speakers on various Environmental, IH and Safety topics. (Stay tuned for more information on that) We hope you are able to join us for our Chapter meeting in September and our Mini-Conference in November. Have a safe summer and don't forget to hydrate!

Vijaya Geetha KS
President



**JOURNAL OF
Environmental
Management
ARIZONA**

SUBSCRIPTIONS are FREE

to Qualified EH&S Professionals! Subscribe on-line at
www.ehshomepage.com or call 480-422-4430



**REPUBLIC
SERVICES**

Republic Services is an industry leader in Special / Industrial Waste disposal.

We service a variety of industries including: mining / mineral processing, automotive / transportation, food beverage, pharmaceuticals, power generation, refining, reclamation / remediation, construction / demolition, chemical processing and military as well as general manufacturing.



Visit our websites at:

Arizona Office
623-241-8427

www.specialwaste.info
www.republicservices.com

Hazard Prevention Institute (HPI)

Safety, Environmental & Emergency Management Solutions

Miguel A. Rodriguez
President

Training & Consulting Services

Office: (520) 887-0355
Cell: (520) 440-1352
Fax: (520) 887-0180; Toll Free: (800) 915-2492
E-mail: miguel@hazardprevention.com
Website: www.hazardprevention.com



Sustainability and Sustainable Development

Nicholas R. Hild, PhD.

Sustaining the Superfund: Re-Fund It!

As most people reading this know, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, aka, Superfund) funding has been next to nil for the past 15 years, resulting in much needed cleanup work at sites all over the country, slowing to a crawl. Just 19 Superfund sites were even worked on last year, down from 89 in 1999. And, those sites don't reflect the hundreds that are still awaiting clean-up from the previous decade and a half, where no work has been done at all in that same time.

The Superfund-*funding* literally dried up in 1995, when a Republican-controlled Congress refused to renew taxes on polluting industries and chemicals that, up to that time, at least funded remedial investigations and feasibility studies—and so hundreds of sites sit and wait while the soils and groundwater under them, remains contaminated—and exposure risks remain high.

There is hope, however, that this might be the year of change, (Obama's campaign pledges not withstanding), for *re-funding* the Superfund. In late June, a House bill was introduced by Representative Earl Blumenauer (D-Ore.), which would raise about \$19 Billion over 10 years—assuming enough support from both sides of the aisle will allow it to pass—that's the kind of money that's very much needed to clean up many of the worst sites that have been allowed to languish. So, its clear that “*sustaining*” the remediation of hundreds of contaminated CERCLA sites truly requires funding which can only come from taxing the very industries and products that have contaminated those sites.

Rep. Blumenauer's bill imposes an excise tax of 9.7 cents per barrel of crude or refined oil (you read that right: a dime a barrel), which would add about 0.023 cents per gallon to the price of oil. It would

also impose taxes on certain chemicals (i.e. similar to the original funding ‘tax’ on manufacturers and distributors of certain chemicals in the original funding of the Superfund of the ‘80's)— ranging between 22 cents and \$4.87 per ton (depending on which chemical)—and, this bill would also hike income taxes on some companies by 0.12%—of course, that might just be the deal-killer for Republicans to support this bill, since they seem reluctant to do anything that smacks of more taxes on corporations.

But, a similar bill was also introduced in the Senate (details at press-time are sketchy) so this is a serious effort (at least by Democrats) to recognize that its time to get something done for/with Superfund. Suffice it to say that this will be no slam-dunk in either House—with the Gulf oil spill clean-up as a backdrop, there will be serious debate about more taxes on petro-chemicals in particular and push-back from the entire fossil energy producing industry in general. It will also be interesting to see where the Chemical Manufacturing Association weighs in on this bill—will they lobby for or against it? Or, maybe they will just sit this one out...time will tell.

But, it is a *re-funding* initiative that is long overdue, regardless that it comes at a time when our economy is still reeling and the future for most of our chemicals-using industries is still uncertain—unemployment is still a serious problem and job prospects in those industries remains unstable—but our Congress needs to be reminded that those extra taxes will be (in the words of a recent St. Louis Post-Dispatch editorial)... “...an insurance policy against the social costs of pollution. Someone has to pay the cost of cleaning up orphan sites, even if big polluters don't.”

“For the past 15+ years, that someone has been you (us)!”

Politicians are in the unique position to easily forget where their constituencies live and work, when they spend so much time focused on major disaster clean-ups like the BP and Katrina-Ike aftermaths. They need to be reminded that cleaning up a Superfund site may not appear to have the immediacy of those kinds of disasters but, left unfunded and unmanaged, such sites can have the same kinds of impact legacy (as oil spills and hurricanes), without visibility to the rest of the world.

Which polluters pay, again, will be determined years from now but one thing is certain: if Superfund isn't adequately re-funded this year so we can once again begin the monumental task of cleaning up groundwater contamination in hundreds of sites around the U.S., the Superfund of the future will be funded by money from the pockets of our children's, children's, children.

Nicholas R. Hild, PhD., Professor, Environmental Technology Management, Arizona State University College of Technology and Innovation, has extensive experience in Environmental Management in the southwestern U.S. Dr. Hild can be reached at 480-727-1309 and by email at DrNick@asu.edu.



ADEQ Director Ben Grumbles: "Egads, E-waste"

Electronic clutter is a growing problem in Arizona but we can change that and boost green jobs by reducing, reusing, and recycling the hi-tech litter that threatens our landfills and watersheds.

Electronic waste is more than just cell phones, computers, and TVs. It includes, among other e-gadgets, VCRs, DVDs, clock radios, batteries, and, to show my age a bit, cassette recorders and eight-track tape players.

Much of it comes from our Arizona factories, businesses, facilities, and homes. No statistics are available locally but a total of 304 million electronic devices were removed from U.S. households in 2005, according to the Consumer Electronics Association. We also accept a lot of the electronic leftovers and discards from California and other states for disposal and/or recycling and we need more data to make informed decisions.

What's so special about e-waste compared to any other waste stream (besides its stunning growth rate)? For starters, it's about toxic chemistry. Lead, cadmium, and mercury are some of the heavy metals that weigh heavily on the minds of environmental health professionals.

Dlubak Glass Co. in Yuma is a good example of the need for improved housekeeping. ADEQ continues to work with the company to clean up its operations and comply with environmental requirements

to reduce hazards from lead and other metals in the computer and TV cathode ray tubes collected and crushed at the plant.

A second motivation for our e-waste effort is about landfill space. Arizona has more room than most states but we still need to reduce the amount of recyclable materials going to disposal.

A third characteristic, that hits dangerously close to home for me, is household clutter. You don't have to be an environmentalist to appreciate open space, particularly in your own living space, closet, or garage. Convenient, cost-free community collection drives make citizens happy.

Fourth, identity theft. Dumping your computer or cell phone in the trash can be a bit like leaving credit cards and personal records on the curb. Organized collection and recycling efforts, particularly those sponsored by ADEQ, use technologies that clean the files to ensure security.

For the last year, ADEQ has been co-sponsoring free collection and recycling events for e-waste at communities throughout the state. Westech Recyclers and E-Waste Harvesters are two of ADEQ's committed partners in the effort, providing "safe and secure" recycling services to help get the job done. Many other entrepreneurs and communities are joining their ranks.

Sixteen events throughout Arizona have been held since last August, mostly in rural communities, from Show Low to Sun City West and Nogales to Lake Havasu City. It's making a huge difference as more than 168 tons of e-waste have been collected from nearly 2,700 motorists and have been disposed of in an environmentally sensitive manner.

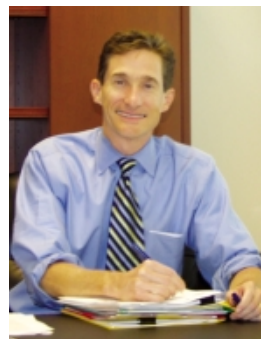
Rep. Steve Farley, D-Tucson, has been working on an e-waste recycling bill for the last two years. He's looking closely at what other states and electronics industries are doing when it comes to take-back programs. Rep. Ray Barnes, R-Phoenix, Chairman of the House Environment Committee, has been interested in the legislation, as well as the broader question about ultimate destination and legitimacy of the "recycled" goods exported from the state. More legislators and policy makers need to take an interest in the e-waste effort.

Unfortunately, the bill didn't get a hearing this year because of concern about the impact on business and the crush of other time-sensitive priorities. That needs to change. Education, collaboration, and legislation are all needed for Arizona to move forward and respond positively to the challenge.

ADEQ is committed to working with bill sponsors, businesses, local governments, and nongovernmental organizations to revise the text and strengthen the support for a pro-active and pragmatic approach. We are helping lay the groundwork now for future legislative priorities.

Spread the word and help join the cause in collecting and recycling the signature litter of today's information-telecommunication age. One day, electronics recycling will be as ingrained and widespread as newspaper recycling. Remember, you read it here first.

Benjamin Grumbles
Director, AZ Department
of Environmental Quality





Environmental Response, Inc.

A Wholly Owned Subsidiary of Spray Systems Environmental
Arizona Contractor's Licenses B-General ROC 130187, ROC AE-191060,
ROC C05-101110, EPA Haz. Materials Trans. Lic. # AZ0000303032





24-Hour Emergency Response

Soil Remediation

Hazardous Waste Trans. & Disposal

Facility Decontamination

Lab Packing

Excavation and Demolition

Mold Remediation

Lead Abatement

Landfill Closure

Household Haz. Waste Collection Events


Vapor Extraction System Installation

Brownfields Remediation

www.spraysystemscri.com

2202 W. Medtronic Way, Suite 108, Tempe, AZ 85281

Arizona 24 Hours (480) 967-2802



More than remediation.

Asbestos, Lead and Mold Assessments
Property Condition Assessments
LEED™ Services
Industrial Hygiene Services
Geotechnical Engineering
Construction Materials Testing

PHONE: 480-894-2056



www.atcassociates.com

Environmental, Health & Safety Seminars

See website for Course
Schedule, Class Descriptions,
and Registration Fees
www.poly.asu.edu/seminars/



OSHA, DOT, and EPA COURSES

Courses provided include:

- HazWOPER (40-Hr. & 8-Hr. Refresher)
- Hazardous Materials Transportation (49 CFR & IATA, Initial & Refresher)
- RCRA Regulation & Compliance (Initial and Refresher)
- Clean Air Act Regulatory Compliance
- Water Quality Laws & Requirements
- Emergency Response Technician Level
- EPA Method 9 (Smoke School)

Please contact Chad Geelhood (480) 727-1869 for
information on site specific courses. For registration
information please contact Denise Kolisar @ (480) 727-1825

Register online @ www.poly.asu.edu/seminars/

Providing regulatory compliance training courses for more than 20 years

ASU ARIZONA STATE
UNIVERSITY
POLYTECHNIC CAMPUS

PROSPECTING:

For Environmental
Business

When Does Vision Become Opportunity?



We've all looked upon someone else's accomplishments with envy and wondered what they did to get them there. Many times the story is peppered with good timing, smart business approaches, hard work and a little luck. I'm always interested to see what happens behind the scenes of success, but I'm just as interested in what happens when things fail. What transpires along the way to make-or-break someone's aspirations, and at what point do they consider their venture a success or make the decision to quit. Vision doesn't automatically mean opportunity and if vision doesn't generate *real* opportunity relatively quickly it can mean tough decisions for an enterprise. Cut losses or continue? If real opportunities are looming the decision is easy. The idea is to make it that way.

In this case "vision" means chasing big picture ideas, venturing into uncharted waters, developing new business lines and products and breaking new ground, striving to establish yourself as a cutting edge service provider in some emerging market or innovating when few others will. Look back at that sentence. Which of those references translates into dollars and cents? None, they are all conceptual. Ideas are just ideas and pursuits are just pursuits until someone starts paying for something. Everyone has ideas, many of which may be solid potential money makers. But until transactions take place, they're worth little. When the decision is made for a firm to pursue an idea, prepare a business plan and build a framework designed to generate transactions, what is one thing that can increase the chances of success and shorten the time to profit? Properly evaluating opportunities.

In a big organization with big resources, establishing an initiative to pursue someone's vision may be rather easy. If you are an entrepreneur, the stakes are much higher and the time you are willing to wait before transacting a dollar is much shorter. However the dynamic is the same; make the time between start up and profit as short as possible. Opportunity comes before money so the ability to evaluate opportunities to determine if they are real or not is paramount.

Look critically at the opportunities that arise to be sure they can directly impact your plan. Beware of soft opportunities that validate your idea, but don't have substance or are simply more vision to pile on top. It can be frustrating when there are others that support your

vision, but no one to write a check. Your ability to properly evaluate and take advantage of an opportunity that shortens your "time-to-profit" may end up being the one thing that will cause others to look upon your success with envy.



Joe Holmes is the Regional Manager of Business Development at ATC Associates. He can be reached at joe.holmes@atcassociates.com.

Joe C. Holmes

News Briefs

ADEQ Dir. Grumbles Announces Appointments

✦ ADEQ recently announced long-time Air Quality Division leader Ira Domsy has been selected as ADEQ's new director of information technology and science adviser and Eric Massey will become the director of the Air Quality Division. Domsy, who has been acting Air Quality Division director since January, was deputy director of the division from 1998 until 2010 and has worked at ADEQ and its predecessor, the Division of Environmental Health at the Arizona Department of Health Services, for 26 years. Domsy received his bachelor's degree in biology from Lycoming College in Williamsport, Pa., and his master's degree from ASU, specializing in plant ecology. He also has studied public administration at ASU. Massey, who has been a manager in both air quality compliance and permitting during his 11 years at ADEQ, has been acting deputy director in air quality at ADEQ since January. Massey, a leader in Western regional air quality issues, has a bachelor of science degree in chemical engineering from ASU. Grumbles also announced that Trevor Baggione will become the Air Quality Division's new deputy director. Baggione, a registered professional engineer, has worked for ADEQ for nine years managing air quality permits.

"ADEQ's new team of talented leaders will get sustainable environmental results with an emphasis on collaboration and customer service. Ira will bring fresh perspective to our IT operation and provide timely advice on cross-cutting scientific issues," Grumbles said. "Eric is widely respected as a leader in the agency after serving in a variety of roles in the Air Quality Division. Eric and Trevor will make a great team to lead the agency in protecting air quality, promoting clean energy and sustaining our economy."

Lisa Culbert Joins Layne Christensen

✦ Lisa Culbert has joined Layne Christensen and accepted the position of National Product Marketing Manager for the Water Operations and Services Division, it was recently announced. Lisa stated that, with the recent acquisition of Chandler-based MCL Technology Corporation, Layne can now offer Deionization (DI) and DI tank exchange programs and membrane cleaning for the high purity industry to support manufacturing and medical facilities, power plants and food and beverage processing plants. Layne also has capabilities to fabricate a multitude of water treatment systems including RO systems.



Lisa Culbert

Layne Christensen

The Water Operations and Services division will soon be headquartered in Phoenix, Arizona. Lisa said, "We are currently in the process of preparing our new facility for occupancy which will include expanding our current DI regeneration capability and adding regeneration of LayneRT (arsenic removal resin). This local facility will be known as the Layne "Center of Excellence" as it will be home to a laboratory, equipment fab shop, regeneration and our expanding service group." Lisa can be contacted at the Layne Christensen Company at 602-332-3174, or by email at lculbert@laynewater.com. Website: www.laynewater.com.



BE CONFIDENT IN YOUR OPACITY READINGS



EPA Method 9 Visible Emissions Training

Fall 2010 Smoke School Schedule

ADEQ and ASU's Office of Environmental Technology look forward to seeing you at one of the Smoke School sessions.

- **TUCSON**
Sept. 8, 2010
Kino Veterans Memorial Community Center
2805 E. Ajo Way, Tucson, Arizona 85713
- **SAFFORD**
Sept. 9, 2010
Graham County Fairgrounds
527 E. Armory Rd., Safford, Arizona 85546
- **HOLBROOK**
Sept. 15, 2010
Navajo County Government Complex
Board of Supervisors Conference Room
100 E. Carter Drive, Holbrook, Arizona 86025
- **COTTONWOOD**
Sept. 16, 2010
Dead Horse Ranch State Park
675 Dead Horse Ranch Road
Cottonwood, Arizona 86326
- **LAS VEGAS, NEVADA**
Sept. 22-23, 2010
Clark Co. Regional Transportation Commission
600 S. Grand Central Parkway, Room 108
Las Vegas, Nevada 89155
- **MESA**
Sept. 30, 2010
Arizona State University-Polytechnic Campus
Student Union Annex (Union 2)
5931 S. Sterling Avenue, Mesa, Arizona 85212
- **NIGHT CERT. (MESA)**
Sept. 30, 2010
Arizona State University-Polytechnic Campus
Student Union Annex (Union 2)
5931 S. Sterling Avenue, Mesa, Arizona 85212
- **GLENDALE**
Oct. 6-7, 2010
Location T.B.D.
- **YUMA**
Oct. 13, 2010
Yuma Civic Center
1440 Desert Hills Drive, Yuma, Arizona 85365
- **SATURDAY CLASS (MESA)**
Oct. 16, 2010
Arizona State University-Polytechnic Campus
Student Union Annex (Union 2)
5931 S. Sterling Avenue, Mesa, Arizona 85212
- **KINGMAN**
Oct. 20-21, 2010
Mohave Community College
1971 E. Jagerson Avenue, Kingman, Arizona 86401

Please call 480-727-1322 for registration or register online at:
<http://www.poly.asu.edu/seminars/>

Classes for groups of over 20 may be scheduled if your employees cannot attend one of the above classes. Please contact us to discuss your needs.

Your Air Quality Permit may require opacity readings by a person certified in the proper use of EPA Method 9.

Opacity training is recommended for air quality environmental consultants and environmental compliance personnel at construction sites and at any source of visible emissions.

Maricopa County area classes include a review of all Maricopa County Air Quality Department opacity standards by Al Brown, Certified Trainer for Comprehensive and Basic Dust Control Training.

Jason Bolen
Cell 602.739.0083
jbolen@aerofire.com

623.580.7800
Fax 623.434.0029



AERO AUTOMATIC SPRINKLER CO.

21605 N. Central Ave. Phoenix, AZ 85024



NEW LOCATION!
641 S. Drew, Mesa AZ 85210

1982 - 2010
28
YEARS OF
EXCELLENCE



- Emergency Response
- Hazardous Materials Management
- Lab Packing
- Clandestine Drug Lab Remediation

- Confined Space Rescue Certified
- Temporary Technical Personnel
- Training, Including: HAZWOPER; RCRA; and Confined Space
- Asbestos, Lead, and Mold Abatement

- UST Removal
- Soil Remediation
- Tank Cleaning
- Tanker Service



Phone: (480) 945-0009 24 Hour Emergency Spill Response Fax: (480) 945-8599

WWW.KARYENVIRONMENTAL.COM ROC151767 L-05 ROC218820 C-05 ROC263766 K-57