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JOURNAL OF **Environmental** Management

ARIZONA

February / March 2005

Volume 3 Number 1

FEATURES AND ARTICLES

- 6 JOB SAFETY ANALYSIS A SAFETY MANAGEMENT TOOL CHUCK PAULAUSKY, CHMM
- 16 **DOT SITE SECURITY PLANS** HON. KEN REILLY, J.D.
- 18 S. PHOENIX TOXICS REDUCTION AN UPDATE RICHARD POLITO, MARICOPA COUNTY AIR QUALITY DIVISION

COLUMNS

- 11 SUSTAINABLE DEVELOPMENT "THERE IS A SANTA CLAUS"
 - NICHOLAS R. HILD, PHD.
- 10 **REGULATORY DEVELOPMENTS**
 - ADEQ'S REPORT CARD MICHAEL C. FORD, ATTORNEY
- 22 PROSPECTING: FOR ENV. BUSINESS OUTLOOK FOR '05 IS GOOD!

JOE C. HOLMES, ROMIC ENV. TECH. CORP.

DEPARTMENTS

- 4 FROM THE EDITOR
- **NEWS BRIEFS** 8
- 12 **ASSOCIATIONS PAGES**
- 4 **ADVERTISERS INDEX**

CONTENTS



Job Safety Analysis page 6



DOT Site Security Plans page 16



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FROM THE EDITOR



Tow, the time has gone fast! This issue begins the third year of publication of the Journal! I remember back in 2002, before starting the Journal, and just before completing my Master's at ASU, an environmental colleague asked me what I wanted to do with my degree. (Some of you may have heard me tell this story). I told her, do you want to know my practical plans, or do you want to know what my dream is?

She said, I hear enough practical stuff, please tell me the dream. Well, my dream was to start a Journal for environmental professionals that would provide current, practical management information, look good, and be fun to read. Well, two out of three isn't bad! (Just

Yesterday I was talking with someone from an environmental lab in Phoenix, and she said that one of the things she really liked about the Journal was that it was like a family magazine. I understood what she meant. I see it that way also. The Journal is not just dry facts about regulations, but it is by and about the people who make up the Arizona environmental community. That's what makes it enjoyable to read and to publish.

The Journal has been successful because of you, the readers, and the advertisers who took a chance on a new start-up magazine, and the many talented and experienced professionals who have so generously contributed all of the articles and columns that make up the Journal. Thank you all for your contributions, and I look forward to many more years of working together! And please, if you like the Journal, support us by supporting our advertisers. And, if you don't tell them you saw their ad in the Journal, they won't know!

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ADVERTISER	PAGE
Aegis Environmental Strategies	19
Arcadis	
Arizona State University EH&S Seminars	5 5 6
Arizona State University East Office of Env. Tech.	6
Basin & Range Hydrogeologists, Inc.	24
Carter Affliates, Inc.	18
Clear Creek Associates	7
Conestoga-Rovers & Associates	21
Del Mar Analytical	20
Diversified Transportation Inc.	22
Dulin Metals Company	22
Eddie Martinez, Realtor	19
Emergency Restoration Experts	22
Environmental Compliance Solutions, Inc.	4
GEC SA&B	18
Graphics Outpost	20
Hon. Ken Reilly	17
Levine-Fricke (ĹFR)	20
McPhee Environmental Supply, LLC	5
MP Environmental	21
R. Bruce Scott, LLC	9
Resource Recovery Techniques of AZ, Inc.	3 4
Rogers Consulting Services, LLC	4
Romic Environmental Technologies Corp.	23
Transwest Geochem	8
Turner Laboratories, Inc.	6 2
Univar USA Inc.	2

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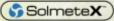
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JOB SAFETY ANALYSIS

A SAFETY MANAGEMENT TOOL

If you wear the "safety hat" at your facility, here is a systematic method to identify risks that can help make your work easier

by Chuck Paulausky, CHMM

ith the trend towards downsizing, more and more companies are combining the Safety & Environmental roles. For environmental professionals being asked to wear the safety hat, this can seem like a challenging task, but not an impossible one. There are numerous tools available to help make the process easier. One tool that is very useful in getting a handle on process safety and reducing employee risk is Job Safety Analysis.

OSHA requires that employers assess workplace hazards and provide "a place of employment . . . free from recognized hazards that are causing or are likely to cause death or serious physical harm." Identifying and reducing risk is a basic OSHA requirement. Documentation of this process is very important, both in terms of reducing liability and managing process changes.

Job Safety Analysis (JSA) is a systematic method used to identify and document the risks to health and safety in

> the workplace, and the measures taken to reduce those risks. Like many good management tools, JSA incorporates c o n t i n u o u s improvement that requires ongoing review and response to changes in the process, resulting in

improved employee safety and reduction in injuries.

JSA's are best performed in coordination with those most familiar with the processes. Process/manufacturing engineers and supervisors can provide knowledge and details about a specific process. Interview the hands-on workers, as well, and pay attention to their comments and concerns about the process.

A JSA INVOLVES SEVERAL STEPS:

1. <u>Identify the process to be analyzed.</u> Many manufacturing processes involve operations that feed into other operations. Break the manufacturing flow into the separate processes. A process flow diagram can be very useful. This will help focus the effort and limit the scope of the JSA to make it a manageable task.

2. <u>Identify the individual, sequential steps and activities in the process.</u> Each step will be analyzed for risks. Having this breakdown is critical to the JSA and will make future review and response to process changes much easier. Don't forget to include maintenance and calibration steps in the analysis, since these can also pose a risk.

3. <u>Identify the hazards.</u> Spend some time looking at each step in the process in terms of potential injury or exposure. Focus first on those hazards that pose greatest risk. Trivial or insignificant exposures can be addressed later, if necessary. Hazards can be posed by a variety of factors:

A.) Tools and equipment - Can employees be injured by physical exposure to the machinery involved in the process, i.e. pinched fingers, snagged clothing or jewelry, struck by rotating parts, radiation, etc.? Is there a potential for exposure to hazardous energy, i.e. electrical, pneumatic, hydraulic, or any other stored energy?

B.) Materials and chemicals - Do the chemicals used at each step in the process pose a risk? This one requires some knowledge of chemistry and the nature of the chemicals involved. Material Safety Data Sheets (MSDS) should provide a wealth of information about the exposure risks.

C.) Ergonomic exposures - Consider ergonomic factors, including repetitive motions, lifting and material-handling, body position, movement, and physical stress.

D.) Various other factors - Pay attention to other factors, such as lighting, ambient and process temperatures, noise levels, emergency egress, housekeeping, potential



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- 4. <u>Identify those at risk.</u> The employee performing the task isn't necessarily the only one at risk. Can workers nearby be exposed to flying objects, chemical fumes, or radiation? Will contractors working in the area be at risk? Also, consider janitorial and maintenance staff, and visitors.
- 5. Evaluate the hazards and existing control measures. For each hazard identified, determine if existing control measures are adequate to reduce the risk:
- A.) Tools and equipment Are guards and other equipment controls in place to prevent employee injuries, such as interlocks, two-hand activation, and other safety devices? Is there an emergency shutoff immediately accessible? Can or do employees bypass interlocks? Are there other electrical hazards?
- B.) Materials and chemicals Is ventilation in place that adequately reduces exposure to chemical fumes, dust, etc.? In some cases, it will be necessary to perform exposure monitoring to measure the amount of chemical exposure and determine if the worker is exposed above safe limits. You may want to use the services of a safety consultant or CIH to help with this. Do employees wear personal protective equipment (PPE) to protect them from exposure and injury?
- C.) Ergonomic exposures Do employees get occasional breaks from repetitive work? Are they lifting properly or have access to devices to help lift or transport heavy objects? Are tools used that are designed to reduce physical stress?
- D.) Various other factors Are efforts made to provide adequate lighting and ambient temperature control? Is ventilation used to reduce employee exposure to heat from the process? Do noise levels exceed regulatory limits? Measurement of the noise level is critical to reducing potential of hearing loss. Are aisles kept clear allowing



Job Safety Analysis will help you assess workplace hazards, and identify risks that are hidden as well as those risks that may seem obvious. The above photo shows a printed circuit board processing laboratory.

employees to evacuate quickly, without risk, in the event of an emergency? Are there eyewash/safety showers located nearby, as needed? What about fire extinguishers and first aid supplies?

- 6. <u>Determine necessary changes.</u> Decide whether additional controls are necessary to reduce the exposures. The changes can be in one of three forms:
- A.) Engineering controls These include ventilation, machine guarding, interlocks, shielding, sound-dampening, material substitution, etc.
- $B.)\,Administrative\ controls\ -\ These\ include\ changes\ in\ work\ procedures,$

Continued on page 21



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NEWS BRIEFS

ADEQ ANNOUNCES \$392,400 SETTLEMENT WITH BAYLESS **COMPANY FOR GROUNDWATER CONTAMINATION**

Arizona Department Environmental Quality (ADEQ) Director Steve Owens announced on January 11th a settlement agreement totaling \$392,400 with Bayless Investment and Trading Company for releases of hazardous substances on property owned by the company.

Under the terms of the agreement, Bayless will pay \$225,000 in addition to \$167,400 already expended by the company on cleanup activities to resolve their liability for cleanup costs at the site.

"We are committed to holding responsible parties accountable for their share of the costs to clean up contamination," Owens said. "Safeguarding Arizona's precious water resources is one of our top priorities."

The site, located at the northeast corner of Seventh Avenue and Bethany Home Road, had been used by commercial dry cleaners for several decades. Soil and groundwater beneath the site are contaminated with tetrachloroethylene (PCE), a solvent used in the dry cleaning industry. In August 2004 the site was added to the state Superfund site list.

ENVIROSOLVE TO PAY \$80,000 FOR HAZARDOUS WASTE VIOLATIONS

* Department Arizona Environmental Quality (ADEQ) Director Steve Owens today announced on January 5th a settlement agreement totaling \$80,000 with Envirosolve, LLC for illegal releases of hazardous wastes at its Tucson facility.

In August 2001, Envirosolve illegally released 458 pounds of chromic and sulfuric acid into the parking lot of its Tucson facility. The hazardous waste was then carried by storm waters on to neighboring properties resulting in an emergency

response by local fire and environmental officials.

"These were serious violations of Arizona's environmental laws," Owens said. "We are committed to ensuring that companies like Envirosolve comply with the law."

Envirosolve also failed to notify ADEO and submit the required paperwork and manifests for its hazardous waste shipments, and violated hazardous waste transporter requirements by storing waste at



3725 E. Atlanta Ave., Suite 2, Phoenix, AZ 85040

its Tucson facility for more than 30 days over the legal limit.

Envirosolve, LLC is a hazardous waste management and transport company based in Tulsa, Oklahoma with transfer facilities in Phoenix, Albuquerque and throughout the west and mid-west. The company's Tucson facility closed in September 2002.

EPA DECISION TO DESIGNATE ARIZONA IN COMPLIANCE WITH FINE PARTICULATE MATTER STANDARD

Arizona Department of Environmental Quality Director Steve Owens announced in December that the U.S. Environmental

Protection Agency has designated Arizona as being in compliance with National Ambient Air Quality Standards for particulate matter less than 2.5 microns in size, referred to as PM2.5. EPA officially notified the State about the designation today.

The tiny particles that fall under this designation come from multiple sources, such as industrial and automobile and diesel engine emissions. These fine particles, which are as small as a grain of flour, pose a significant threat to public health because they can persist in the ambient air for an extended period of time. Inhalation of the particles can aggravate respiratory illnesses, including asthma, and the particles can be difficult to expel from the lungs.

"This is another sign that the clean air efforts we are undertaking are working," said Director Owens. "Arizonans can breathe easier knowing that air quality across our state is improving."

Populations most sensitive to the effects of PM2.5 include individuals with asthma, bronchitis, emphysema, influenza, pulmonary disease, children and the elderly.

The decision covers all Arizona cities and counties, excluding tribal lands.

EPA REDESIGNATES PHOENIX AREA AS ATTAINING CARBON MONOXIDE STANDARD

U.S. Environmental Protection Agency Regional Administrator Wayne Nastri announced on January 5, 2005, that the Phoenix metropolitan area has met the federal health standard for carbon monoxide.

The Phoenix area has not violated the federal carbon monoxide standard in the last seven years, despite its growth into one of the country's major metropolitan areas. The EPA also approved the state's plan that shows how the region will continue to maintain healthy levels of carbon monoxide in the area.

The agency also approved a boundary change to exclude the Gila River Indian Community from the Phoenix carbon monoxide. maintenance area. "Meeting the carbon monoxide standards will translate into fewer hospital visits and overall improved public respiratory health for Phoenix residents," Nastri said. "We will continue working with stakeholders to address additional regional air pollutants, such as coarse particulate matter and ozone, for all Phoenix residents."

"This redesignation is a testament to the strong partnerships in this region for addressing complex regional issues," said Maricopa Association of Governments Chair Keno Hawker. "This achievement required the Governor's Office, Legislature, Maricopa County, and the cities and towns to work cooperatively together for the common good." he said.

This is a clear sign that the efforts we are making to improve air quality in the Phoenix area are working," ADEQ Director

Owens said. "The usage of cleaner burning gasoline, a highly effective vehicle emissions program and other efforts are leading to cleaner air in the Valley."

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rbrucescott38@cs.com PHONE (623) 979-3445 FAX (623) 878-6884 powered motor vehicles cause more than 75 percent of the Valley's carbon monoxide, which is a clear, odorless and poisonous gas. It enters the bloodstream and reduces the delivery of oxygen to the body's organs and tissues. Carbon monoxide can have serious health effects on children, the elderly, and people with respiratory ailments.

State and local agencies run a number of innovative programs that have reduced CO pollution, including a nationally recognized vehicle emissions inspection program, a cleaner burning gasoline program, pollution reduction measures for commercial and industrial sources, and woodburning restrictions.

After the 1990 Clean Air Act amendments, the Phoenix area did not meet the moderate carbon monoxide standard by the Dec. 31, 1995 deadline. In 1996, the EPA reclassified the area to serious.

EMISSION LIMITS BROWN BAG

Maricopa County Air Quality Department and Arizona Association of Industries will Co-Sponsor an Emission Limits Brown Bag meeting Feb. 23, 2005. This is one of several events designed to demystify the permit process and encourage public participation. INFO: Richard Polito at 602-506-6761 or email: RPolito@mail.maricopa.gov.



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Michael C. Ford, Attorney

ver wonder who evaluates ADEQ's performance? One answer is the Legislature under its "sunset review" process, which allows for periodic evaluations for the purpose of determining whether to "sunset" (terminate), continue, or modify the agency. The most recent sunset review process began for ADEQ in November 2002, and four critical, advisory, audit reports were issued by the State's Office of the Auditor General last August, followed by ADEQ's responses, in September. (The documents are available on the Auditor General's website). The reports will be submitted to the Legislature, and the process will culminate in the spring when the Legislature decides ADEQ's fate.

The reports include an evaluation of ADEQ's overall performance using twelve statutory criteria, as well as performance audits for ADEQ's Water Quality, Waste Programs, and Air Quality Divisions. The criteria include:

- "The effectiveness with which the agency has met its objective and purpose and the efficiency with which it has operated";
- "The extent to which rules adopted by the agency are consistent with the legislative mandate";
- "The extent to which the agency has encouraged input from the public for adopting its rules and the extent to which it has informed the public as to its actions and their expected impact on the public"; and
- "The extent to which the level of regulation exercised by the agency is appropriate and whether less or more stringent levels of regulation would be appropriate."

While the audit concludes that ADEQ "is generally effective in meeting its overall objective and purpose," and "generally has operated efficiently," there are a number of program-specific recommendations for ADEQ, as summarized below. (Incidentally, the reports also include interesting data regarding ADEQ's employment and enforcement statistics).

WATER QUALITY

- enforcement staffing levels and needs should be reviewed, as reductions have limited enforcement of drinking water standards;
- APP processing fees should be regularly recalculated based on actual direct costs (including travel time) and current estimates of direct costs and billable hours.

WASTE PROGRAMS

- continue to work on increasing the level of compliance with UST financial assurance requirements, and undertake certain other measures to control costs reimbursed by assurance fund;
- notify facilities of hazardous waste violations more quickly, consider setting time frames for the internal review of proposed enforcement actions, more closely track their status, and escalate them to the next level as necessary. **AIR QUALITY**
- in order to ensure the timeliness of issuing enforcement actions, consider setting specific time frames for each step in the enforcement action review and approval process, and create an internal status report of all pending enforcement cases.

In its response letters, ADEQ concurred in these findings, and agreed to implement the recommendations. In addition, the report also noted that ADEQ "could potentially benefit from legislation to grant it administrative penalty authority with respect to air pollution control," which would allow it to unilaterally issue administrative penalties (the drinking water and hazardous waste programs have such authority). Assuming ADEQ survives its upcoming sunset review (a safe bet), the audit reports may foreshadow enforcement and permitting changes at ADEQ, as well as provide a glimpse of ADEQ's next legislative agenda.

Michael C. Ford is an Attorney with the Phoenix office of Bryan Cave, LLP, practicing environmental and occupational safety law. His practice is focused primarily on regulatory compliance advice and enforcement defense. He can be reached at 602-364-7417, or by email at mcford@bryancave.com.



SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT: YES, VIRGINIA . . . THERE IS A SANTA CLAUS .

Nicholas R. Hild, PhD.

hout it from the 'green-built' rooftops: CONGRATULATIONS are in order for those at ASU who helped make the future more sustainable. In November of 2004, philanthropist Julie Ann Wrigley bestowed an early Christmas present of \$15M on ASU, to boost Sustainability efforts already underway throughout the geographically distributed campuses of ASU. The gift enabled the Center for Environmental Studies to morph into the International Institute for Sustainability (IIS), and Charles Redman to add another director's hat to his collection at ASU. President Crow said, "...under Chuck's guidance, ... the new infusion of funds will allow ASU...to quickly join Harvard, Columbia, Stanford ...as a leader in the important and emerging field of sustainability." (No pressure, Chuck!)

That's great news because this effort recognizes the importance of making "sustainability" the centerpiece of interdisciplinary efforts across more than nine different ASU colleges, schools and institutes. A press release also noted that ASU is partnering with premier institutions in South Africa, Mexico, the UK, and India and numerous other U.S. institutions like Columbia, Harvard, Stanford, and MIT.

Conspicuously absent from that list were the state's own existing nationally recognized Center for Sustainability at NAU, the Gila Community College Center for Sustainability, and the Center for Renewable Resources at U of A. That was probably an oversight by the media, because according to IIS director Redman, the prestigious list of like-minded schools (i.e. partners) will ensure that the Wrigley gift will be a "springboard to study and test sustainability ideas..." so the Arizona schools are probably on that list, too.

The grant was actually given to the ASU Foundation on whose Board Ms Wrigley serves as a Director, so she will be in a position to monitor where her dollars go. That's good news for sustainability proponents because everybody recognizes that our University overhead rate (obscenely high at up to 52%) will slice the working dollars in half so its important that the remaining "working capital" of about \$7M+ gets used for putting sustainability science-based solutions 'on the ground,' solving real-world problems, and not just for studies that end up in the reference section in the library.

Nobody seems to know why the Wrigley name wasn't attached to the IIS, something that would lend even more credibility to work performed, but it may be an artifact of the Fulton and Carey contributions raising the bar for that honor (to \$50M). There is precedence, however: it took only \$3M to get the School of Construction named in Del E. Web's honor. Surly, \$15M would be enough for an "Institute" these days? But, who knows, maybe there's already something in the works yet to be made public at the most opportune time? It would be a nice touch.

But, what is really great is, (as noted in a previous Journal column), this grant provides an opportunity for the university to "walk the talk" and actually implement sustainable science-based solutions into our own ASU building de-construction, construction, and design/build plans for campus facilities all over the valley. If everyone truly embraces Ms Wrigley's dream that the Institute will "...make a real difference." ASU can truly help make our campuses sustainable...because, sustainability, like charity starts at home.

So, yes Virginia, there is a Santa Claus and her name is Julie Ann...and her gift means that real, science-based sustainability work is going to be accomplished (and not just 'studied') to benefit the future of our children's, children's, children.

Nicholas R. Hild, PhD., Professor, Environmental Technology Management, Arizona State University College of Technology and Applied Sciences, 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.

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AAI's EHS Committee has entered into a cooperative effort with Maricopa County Air Quality Department focusing on making improvements to the air permitting process. This group has organized a series of conference calls to gather input from the

Jeff Homer, EHS Committee



regulated community. The first conference call was held on January 19th where record keeping was discussed. Conference calls are also scheduled for February 23rd and March 23rd where emissions limits and compliance testing respectively will be the topics. Please contact Mike Sherer (480-773-5548) or Jeff Homer (480-441-6672) for more information.

AAI's EHS Committee continues to hold monthly breakfast meetings on the second Wednesday of each month where knowledgeable speakers address a variety of timely topics. Contact James Tunnell at 602-252-9415 or Jeff Homer at 480-441-6672 for more inform ation.

ACHMM THUNDERBIRD



FEB. 16, 2005 - NO CHAPTER MEETING*

FEB. 16 - 17, 2005 GATEKEEPER REGULATORY ROUNDUP

(** NOTE: WE ARE CO-SPONSORING A RECEPTION WITH EPAZ AFTER THE FIRST DAY, IN LIEU OF A CHAPTER MEETING.)

MARCH 16, 2005 CHAPTER MEETING, 6-7:30 PM, PROGRAM: PAT RYAN, **ADOSH DEPUTY DIRECTOR**

APRIL 12 - 14, 15, 2005 CHMM OVERVIEW COURSE & EXAM. WWW.THUNDERBIRDCHMM.ORG

APRIL 20, 2005 CHAPTER MEETING, 6-7:30 PM PROGRAM: TBA

Starting in January, our dinner meetings will be on the THIRD WEDNESDAY of each month. The meetings will be devoted to presentations and social/networking opportunities. Board meetings will be held separately.





Vice President

Don't forget to register for the Gatekeeper Regulatory Round-up on February 16-17, 2005. You won't want to miss it! For more details: http:// www.epaz.org/regulatory-roundup2005.htm

MARCH 4th is the deadline for registering for the CHMM Certification Exam. Don't wait too long to check on this, or you will miss the opportunity to get certified in April!

FYI, Due to changes at the National Safety Council, the Southwest Safety Congress has been cancelled!

Regular monthly dinner meetings are held at 6:00 PM on third Wednesdays. Old Spaghetti Factory, 1418 N. Central Ave., Phoenix. Details: www.thunderbirdchmm.org. (See upcoming evnts at left.)

VALLEY FORWARD



Over 300 business and civic leaders are expected to attend Valley Forward's Livability Summit at the Phoenix Civic Plaza & Convention Center on April 13. The second annual daylong event will promote healthy communities through

Diane Brossart,



President

education and awareness of innovative technologies, sustainable development, resource conservation and environmental initiatives.

Keynote speakers will include Amory Lovins, chief executive officer of the nationally renowned Rocky Mountain Institute, and journalist Neal Peirce, one of America's foremost writers on the issues facing metropolitan regions. Panel discussions by local leaders will focus on livability challenges and solutions for our Valley. The panels will be moderated by Rob Melnick, director of the Morrison Institute for Public Policy, who has worked extensively as a policy analyst for government agencies, major corporations and foundations nationwide.

The registration fee for Valley Forward members is: \$125, for non-members \$130. For more information, call (602) 240-2408 or visit www.valleyforward.org.



Barry Westerhausen, Sergeant at Arms

The AESF would like to invite all platers, finishers and vendors to the AESF Golden West Regional, April 1st and 2nd at the Arizona Golf Resort in Mesa, Arizona. This event

is presented by the Golden West Region which includes: Greater Arizona, Santa Clara, Los Angeles, Orange County, and Denver. This event will bring all the AESF branches and many wonderful vendors together for lectures, presentations, food and drinks; cocktail party Friday night, Saturday conference. On Sunday, April 3rd, will be the Greater Arizona AESF Golf Tournament.

Golden West - individual: \$100.00 includes Friday cocktail party, conference, lunch, dinner. Exhibitor: \$250.00 for table, includes individual admission - \$50.00 for additional table person. Advertising \$150.00 full page, \$100.00 1/2 page.

Golf April 3rd - \$280.00 foursome, \$150.00 twosome, \$80.00 individual, Sponsorships available \$75.00 to \$1000.00

For information contact Barry Westerhausen at bwesterhausen@lachem.com (480) 206-4107 or Mark Thede at markthede1@cox.net (480) 695-4344.

AESF



2005 ARIZONA AESF SPEAKER AND EVENTS LINE UP:

FEBRUARY: CHEMRESEARCH ON-SITE MEETING

MARCH: CHEMRESEARCH ON-SITE MEETING

APRIL: GOLDEN WEST REGIONAL APRIL 1ST AND 2ND, GOLF 3RD



Frank Bonillas, President

In partnership with the AZSERC, SAEMS will be holding the 2005 Tucson Gatekeeper Conference February 15, 2005. The one-day conference will primarily focus on Emergency

Planning and Community "Right-To-know" EPCRA (Tier II) requirements and Accidental Spill Reporting Requirements (TRI). Other topics being presented include updates related to Local Fire Code and DOT Hazardous Materials Requirements, Risk Management Planning, Homeland Security, and EPA Enforcement of EPCRA, RMP and Spill Reporting Requirements. Visit the SAEMS website for current agenda, conference registration and sponsorship information or look for the conference ad in this issue of the Journal.

SAEMS is partnering with the City of Tucson Environmental Services Department on a proposal to the USEPA for Brownfields Job Training grant assistance. The proposal will request funding to provide job training in the environmental field to residents of the City's Empowerment Zone. SAEMS will encourage its members to provide the job-training program with instructors and a pool of potential future employers for the trainees.

SAEMS



VISIT OUR WEBSITE AT SAEMS.ORG

SAEMS MONTHLY LUNCHEON MEETINGS HELD ON THE LAST WED. OF THE MONTH START AT 11:30 A.M.

AT **THE MANNING HOUSE** 450 W. PASEO REDONDO (N. OF CONGRESS ON GRANADA) TUC., AZ

LUNCHEON TOPICS:

FEB: WALTER SLACK, DARLING ENVIRONMENTAL; 3D LASER SCANING IN THE ENVIRONMENTAL FIELD

MAR: TBA

AZ ELM



On February 24, 2005, AZELM will host the Symposium for Environmental and Economic Dynamics (SEED) at the Orange Tree Resort in Scottsdale. Arizona recently lost a vocal proponent of Environmental Leadership



Richard Polito

with the passing of Bill Kicksey. He was instrumental in countless environmental initiatives and innovative programs meant to improve air quality and reduce the "big brown cloud." It is in his honor that AZELM will present the inaugural Bill Kicksey Environmental Leadership Award to Northern Arizona University in recognition of their new LEED (Leadership in Energy and Environmental Design) certified campus building. Kitchell Corp has graciously partnered with Joe Tyler, a renowned metal smith and artist, to create an award fitting of such an honor. We invite you all to join us at SEED for the award presentation. Visit www.azelm.org to register or call Rich at 602-506-6701.

AZ CHAPTER SEMICONDUCTOR ENVIRONMENTAL SAFETY & HEALTH ASSOCIATION

The Semiconductor Environmental, Safety & Health Association (SESHA) is once again bringing its main educational program to Arizona. The SESHA 27th Symposium Annual Exposition will be held May 9-

Tim Jones President

Рното Not AVAILABLE

12, 2005 at the DoubleTree Paradise Valley in Scottsdale.

The premier gathering of ESH professionals in the semiconductor industry, the Symposium is the best place to hear industry forecasts, keep up with the rapid pace of change, network, and learn about industry initiatives and best practices. Jim Feldhan, President of Semico Research Corporation, is one of six keynote speakers. The program also includes 29 education sessions, Boot Camp: Back to Basics, a Roundtable, 8 Professional Development courses, Exposition, and networking. Visit www.seshaonline.org. E-mail: sesha@burkinc.com to receive registration materials. Want to exhibit? E-mail: seshaexhibits@comcast.net

ARIZONA HYDROLOGICAL SOCIETY



PLEASE VISIT THE AHS WEB SITE: HTTP://WWW.AZHYDROSOC.ORG

There is always something going on at AHS. Along with our regular monthly activities, we are currently planning our 12th Biennial Symposium on Groundwater Recharge to be held in Tucson, Arizona, on June 8–11, 2005. The event will be a combination of



Paul Plato, R. G. President

technical presentations, workshops, and field trips, so mark your calendar now and watch this space for updates.

Upcoming monthly meetings in the Flagstaff, Phoenix, and Tucson Chapters will feature a rich variety of topics ranging from Mars exploration, the CAP, and City of Tucson water issues to how the presence of pharmaceutical compounds in septic systems can affect groundwater.

You can find out more about the Recharge Symposium and logistical details on upcoming meetings and presentations by visiting www.azhydrosoc.org.



Ed Collette, Secretary

At the ASSE meeting December 14th, Joe Kane and Esther Almazan shared information about the exciting new degree programs in safety and

risk management now available through the Prescott College Tucson Center. The highly accredited Prescott College has a campus in Tucson and is now offering undergraduate and graduate degrees in safety and risk management through their Adult Degree Program. This program is specifically geared to adults who are already working in the safety field. Past college credits and work experience can reduce the time required to complete a bachelor degree to less than two-years. For more information contact Esther Almazan in Tucson at 520-319-9868 ext. 112, or Joe Kane at 520-896-2114.

Meetings every second Tuesday of the month from 11:30 AM to 1:00 PM at Kino Community Center, 2805 East Ajo Way, Tucson.

AMERICAN SOCIETY OF SAFETY ENGINEERS

FOR INFORMATION:

VISIT HTTP://SOUTHAZ.ASSE.ORG FOR OUR LOCAL CHAPTER OR CALL 520-740-2656, OR EDWARD.COLLETTE@WWM.PIMA.GOV. SEND EMAIL TO:

EDWARD.COLLETTE@WWWM.PIMA.GOV



Eddie Martinez, President

January's EPAZ luncheon meeting featured Mr. Arcelious Stephens, who is the ADEQ's Brownfields Program coordinator. The

Brownfields coordinators for the City of Phoenix, Ms. Rosanne Sanchez, and the City of Tucson, Mr. Francis LaSala, were also in attendance and spoke about their respective programs.

The ADEQ seeks to facilitate the cleanup and redevelopment of brownfields properties, which reduces potential environmental hazards, encourages economic development, and efficiently uses existing utilities and roads. A variety of tools are available to assist with brownfields redevelopment, including EPA funded grants and loans for environmental site assessments and cleanups, and eligibility certification for the federal brownfields tax incentive.

The ADEQ has been awarded a total of \$1 million from EPA to fund revolving loans to clean up brownfields sites in the cities of Phoenix and Tucson. The grant created the Arizona Brownfields Cleanup Revolving Loan Fund (Arizona BCRLF), which provides low interest rate loans to public and private parties to clean up brownfields sites that have already been assessed for hazardous substance contamination.

EPAZ



FEBRUARY - EPAZ WILL PARTNER WITH ACHMM AND AZSERC TO HOST THE 1ST ANNUAL GATEKEEPER REG. ROUNDUP FEB. 16-17. VISIT OUR WEBSITE FOR INFO.

OUR NETWORKING MIXER WILL BE FEB. 23 AT ROCK BOTTOM IN N. SCOTTSDALE.

·MARCH - LUNCHEON MEETING ON THE 10TH, WILL FEATURE JO CRUMBAKER, MCESD AND JULIE ROGERS, ROGERS

CONSULTING SERVICES. THEIR PRESENTATION IS ON: INDUSTRY PARTICIPATION IN THE REGULATORY PROCESS.

MARCH NETWORKING MIXER WILL BE IN TEMPE

MARCH NETWORKING MIXER WILL BE IN 1 EMPE

APRIL - LUNCHEON MEETING ON THE 14TH,
WILL FEATURE CHARLIE POPECK, US GREEN
BUILDING COUNCIL REGARDING ARIZONA'S
GREEN BUILDING PROGRAMS.

THE NETWORKING MIXER WILL BE HELD ON APRIL 27TH AT GEORGE & DRAGON (48TH STREET & BROADWAY).

VISIT <u>WWW.EPAZ.ORG</u> FOR DETAILS REGARDING UPCOMING MEETINGS AND OUR MONTHLY MIXER LOCATION OR CONTACT ME AT (480) 961-1300 x181.

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U.S. DEPARTMENT OF TRANSPORTATION COMPLIANCE REQUIREMENTS

by Hon. Kenneth F. Reilly, J.D.

In 2003, the U.S. Dept. of Transportation, at the urging of the Attorney General of the United States and the Secretary of the Dept. of Homeland Security, promulgated new and additional D.O.T. regulations intended to afford greater protection from acts of terrorism. These regs are now in place and D.O.T. has begun the auditing and enforcement process.

On July 22nd of 2004, the independent 9-11 commission, after thoroughly investigating reports of

terrorist cells actively operating in the United States, concluded that there will, in all probability, be many future attempts to disrupt our way of life. One particular and clearly identified target is <u>any</u> generator of hazardous waste. This may include your facility.

Two regulations in particular are brought to your attention herein. They are 49 CFR 172.704 and 49 CFR 172.802. The first deals with the new form of D.O.T. required training and the latter imposes a stringent requirement for the construction of a written Security Plan which must be regularly updated. These D.O.T. requirements are imposed on any company that ships any placarded material. These regs do not specify quantity or weight breakpoints, but instead appear to apply to conditionally exempt small quantity generators, as well as small and large quantity generators who ship any amount of HazWaste off premises.

The training includes general awareness and safety, and must also be function-specific. It must include company security objectives, specific company procedures to be followed, employee responsibilities, actions to be taken in the event of a security breach, and a knowledge and understanding of the company's organizational security structure. Such training must be followed by an appropriate test which each employee must successfully pass. Records of the same must be maintained for a minimum of three years. This training, unlike RCRA training requirements, must only be completed once every three years.

The Written Security Plan, otherwise known as a Site Security Plan, includes initial data gathering, risk assessment,





Visit <u>www.saems.org</u> for current agenda, conference registration and sponsorship information, or contact Cynthia Wundrock at (520) 694-7475 (cwundrock@umcaz.edu)

The Arizona EmergencyResponse Commission (AZERC) & The Southern Arizona Environmental Management Society (SAEMS) Present . . .

The 2005 Tucson Gatekeeper Conference

A one-day conference on February 15, 2005

Pima Community College - East Campus 8181 E. Irvington Road Tucson, Arizona

Seminar Topics

- EPCRA (Tier II) Reporting & Planning Requirements
- Hazardous Materials and Local Fire Code Requirements
- DOT Hazardous Materials Regulations
- Risk Management Planning
- Homeland Security Update/WMD Information
- Accidental Spill Reporting Requirements (TRI)
- EPA Enforcement of EPCRA, RMP and Spill Reporting Requirements
- Chemical Reporting Compliance Strategies

Seminar Costs

SAEMS Member Rate - \$50 Non-Member Rate - \$60 Late Registration (After February 4, 2005) - \$75

Continental Breakfast and Lunch will be provided



Photo courtesy of Diversified Transportation, Inc.

development of a baseline site protection plan, employee security measures plan, and a periodic audit and reassessment plan, the purpose of which is to regularly and continually update, integrate and review site data for purposes of maintaining currency of the Security Plan.

The U.S.D.O.T. did not immediately begin enforcement of these regulations on any meaningful level until the third quarter of 2004. However, the author who teaches this

and other subjects across America, has recently been made aware, by several attendees and corporate clients, of recent D.O.T. audits seeking to determine compliance with these regulations. Your company should begin this training and planning immediately if it has not already been done.

Hon. Kenneth F. Reilly, J.D., is an environmental lawyer with over 42 years of experience, including service as a Texas Judge. He has also consulted to the U.S. Department of Energy and the Texas House of Representatives. He can be reached at 800-542-2826, or by email at Reillytalk@Reillytalk.com.



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4300 E. Washington St. Phoenix, AZ 85034

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March 3rd: DOT Security Training Requirements and Drafting of a Security Plan

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SOUTH PHOENIX TOXICS REDUCTION PROJECT

An update from Richard Polito, Maricopa County, Air Quality Division

In 2003, the EPA Region 9 provided funding to start the South Phoenix Toxics Reduction Project. This project addresses community concerns about exposure to toxic substances through a collaborative community process. To date, the project has brought together community representatives, environmental experts, and other officials to identify the most problematic toxics

releases in South Phoenix and develop a science-based multimedia toxics reduction plan. This plan includes an inventory of emission sources, identification of specific toxic pollutants of greatest concern, and the use of screening tools to evaluate community exposure as a means to set priorities for toxic reduction activities. Recognizing that many elements of the toxic reduction plan require long-term solutions, activities to begin reducing air pollution have already been undertaken. For example, EPA Region 9, Maricopa County, the City of Phoenix,

elected officials, civic leaders, private sector and non-profit organizations, community groups, and local residents have been key developing several pollution reduction initiatives. Two of these initiatives are: reduce



emissions from paint coating operations, and the industry challenge/good neighbor partnership.

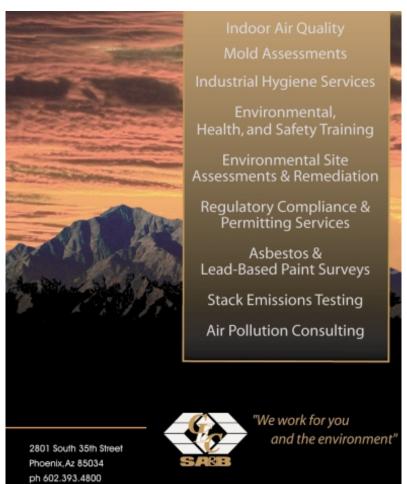
REDUCING EMISSIONS FROM PAINT COATING OPERATIONS

The Maricopa County Air Quality Department will host a pollution prevention workshop for paint coaters on March 17, 2005. This workshop provides hands-on training in the use of laser touch technology to minimize waste and reduce VOC emissions. Workshop participants are offered pre-and post-site assessments to help determine emission reduction and cost benefits. For more information on this workshop contact Aaron Corey at ACorey@mail.maricopa.gov or by phone at 602-506-5102.

INDUSTRY CHALLENGE/GOOD NEIGHBOR PARTNERSHIP

The South Phoenix Industry Challenge/Good Neighbor Partnership provides an opportunity for participants to network with other environmental professionals, examine altenative processes and technologies, evaluate and realize potential cost benefits, and support and encourage solid environmental performance.

Currently there are over 30 South Phoenix companies involved in this partnership. These companies, along with government agencies and other partners, are helping to design and implement this program as well as develop objectives and goals. So far, there are two primary objectives of this partnership. The first is to challenge all industry partners to collectively achieve a 20% decrease in selected potential toxic emissions by 2007. The second is to challenge industry partners to voluntarily implement evaluation and safety procedures dealing with hazardous chemical emitting processes with the ultimate goal of not only reducing pollution but assuring there are no accidental



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releases due to spillage, fire, etc. partners, including regulatory agencies and industry partners, are committed to providing mentoring, compliance assistance, and technical assistance as needed. "Peer to peer" learning and pollution prevention opportunities will be fostered in this partnership to improve environmental, health, and safety performance

in South Phoenix. EPA Region 9 and its regulatory partners are also responding to industry's needs by providing free Environmental Management system (EMS) training and technical assistance. The first of a series of EPAsponsored EMS workshops was held in January, 2005. Additional workshops will be provided to assist industry in achieving better

pollution. In February 2005, an EPA-sponsored workshop on Emergency Preparedness and Protection will be provided to South Phoenix Partners. Accompanying on-site audits will also be available.

environmental performance and identifying ways to reduce

In March, 2005, we will officially launch the South Phoenix Industry Challenge/Good Neighbor Partnership. This



will be a Press Event/ Community Expo that will encourage greater community involvement.

To learn more about the South Phoenix Industry Challenge/Good Neighbor Partnership directly from the



EPAZ LUNCHEON

EPAZ had a great luncheon meeting turnout in January for speaker Arcelious Stephens, Brownfields Coordinator, Arizona Department of Environmental Quality. Arcelious spoke on "Brownfields and the Brownfields Program in Arizona." For information on EPAZ luncheons and topics, see the Association Pages, page 15.

industrial sources participating in the project, attend the SEED Event scheduled for February 24 at the Orange Tree Resort in Scottsdale, AZ. The event is co-sponsored by AZ Elm and the Maricopa County Air Quality Department. For more information visit www.azelm.org. For more information about the Partnership, visit www.phoenixindustrychallenge.com or contact Kathlene Graf. Chair, Communication Workgroup, maricopa County Air Quality Department, at 602-506-4669, or by email kgraf@mail.maricopa.gov.

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PROSPECTING:

CONTINUED FROM PAGE 22

sector; manufacturing is improving

although not as robust as before. This upturn is providing opportunities for more on-going

base business instead of the event work that has comprised much of

the activity over the last few years. The competition base has also

changed somewhat in that under

performing firms have either been

acquired, left the state or have gone out of business. In addition, the

maturation of the buying community continues to benefit

those who provide good service at high value. The combination of

these circumstances bodes well for

favorite survey response. When asked the question; "If you had

To close, I'll share my

BY DR. LARRY OLSON WILL RETURN IN OUR NEXT ISSUE.



IT'S ALL ABOUT CHEMISTRY BY DR. LARRY OLSON

submittals.

Joe Holmes

Technical

Sales Manager with Romic Environmental Technologies Corp. Joe can be reached at 800-952-5760, and by email at joeh@romic.com.

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LFR Levine Fricke (LFR) recognizes that EH&S issues have a direct impact on the efficiency and profitability of a company. Achieving and maintaining regulatory compliance can be complicated and time consuming. Lack of compliance can result in fines, employee injury, and increased Workers' Compensation costs.

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LFR is a national environmental management and consulting engineering firm.



JOB SAFETY ANALYSIS CONTINUED FROM PAGE 7

cross-training, policies and rules, signs and labels, and other efforts to reduce the frequency, duration, and severity of the exposure.

C.) Personal protective equipment - PPE is used as a last resort, when engineering and administrative controls are not effective or economically feasible. PPE can be effective in reducing risk when used properly, but can pose risk as well. For this reason, selection of the correct material and type of PPE is critical, as is providing training in the proper use and maintenance of the equipment.

7. <u>Documentation, training, and review.</u> Be sure to document the entire Job Safety Analysis process, including the exposure monitoring, process and control changes. (An example of a typical format for performing and documenting the step-by step JSA for a single process, and a second form used to document the chemical evaluations for the process, is available to interested



readers. Email me at cpaulausky@CPSafety.net.)

Employees subjected to exposure monitoring must be informed of the results. In some cases, you will want to follow up with additional monitoring to ensure that the controls implemented are effective.

Provide training to the employees whenever changes are made, including training for use and maintenance of new PPE. Be sure to provide this training to new or transferred employees prior to having them start working the process.

The JSA for a process should be reviewed:

- Whenever there is a change in the process, including changes to equipment, materials, and chemicals
- Whenever an injury results from the process
- At least annually

An effective JSA policy can help reduce employee injuries, worker's compensation costs, production downtime, and company liabilities. A well-documented Job Safety Analysis will help maintain OSHA compliance by meeting the OSHA requirement for hazard assessment and providing your employees with a safer workplace.

Chuck Paulausky is a Certified Hazardous Materials Manager (CHMM) and EHS consultant with CPSE, with over 16 years of experience providing OSHA and EPA compliance support for manufacturing companies in the western states, Europe, and Asia. He can be reached at 480-694-1975 or by email at cpaulausky@CPSafety.net. Additional information is available at www.CPSafety.net.

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For complete qualifications and application information see http://www.east.asu.edu/ctas/imt/html/facultyHire.html Deadline is March 1, 2005, if not filled, every 15 days thereafter until search closed. AA/EOE











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SURVEY SAYS! . . . THE OUTLOOK FOR '05 IS GOOD!

appy New Year and I hope this issue of Prospecting finds all doing well as we kick off another year of "beating the streets" for new business. This month's column came easy. Mainly, because the content came from all of you out there in the environmental community. In mid December I prepared a short, very informal survey to solicit feedback as to how you view the up-coming year. I tried to reach as many sectors of our business as possible to get a comprehensive picture and hope I can do us all justice. The response was good and I thank everyone that took the time to reply. Now, the challenge is to summarize and communicate the wide variety of responses into this very small space to which my editor restricts me. After all, valued advertising space takes precedence over prose from a sales guy!

It would seem obvious in an improving economy where the national outlook is generally positive, that the outlook on a micro scale would be similar. Overall, this holds true locally. When asked about the outlook for 2005, all business sectors of our industry have good reason to believe that this year will improve over last and indicate that much has to do with the overall wellbeing of the economy on a national level. However, I was surprised to see the number of comments relating directly to real estate. Obviously, firms working directly in this market would be affected, but it was interesting to see how seemingly unrelated business sectors, such as environmental product and service providers, are affected by the trickle down from the power of Arizona's real estate economy.

Responses from the consulting/legal community relating to how business has changed were interesting. The acquisition/consolidation craze that took place over the past few years seems to have settled and firms are seeing payoff in their ability to provide more than environmental services alone. Some see a trend with larger companies outsourcing portions of compliance programs or, in some cases, entire EHS departments

providing opportunity to become entrenched with such a company for the long term. Municipalities also are reportedly starting to release money on projects and programs that have been lingering.

From the products and services

Continued on page 20

Joe C. Holmes







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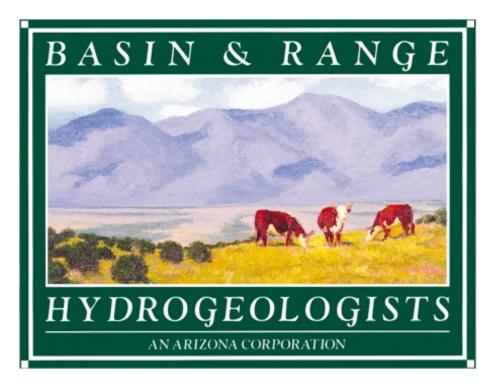
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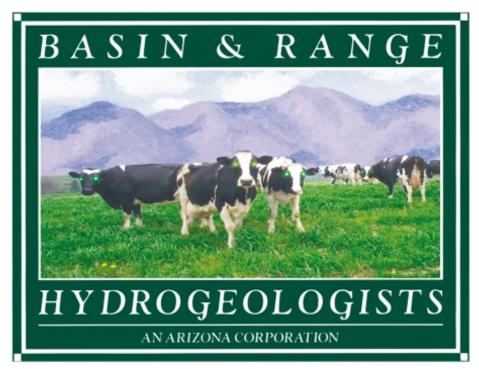
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