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Practical and Current information for Environmental, Health and Safety Professionals

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**LOOKING FOR
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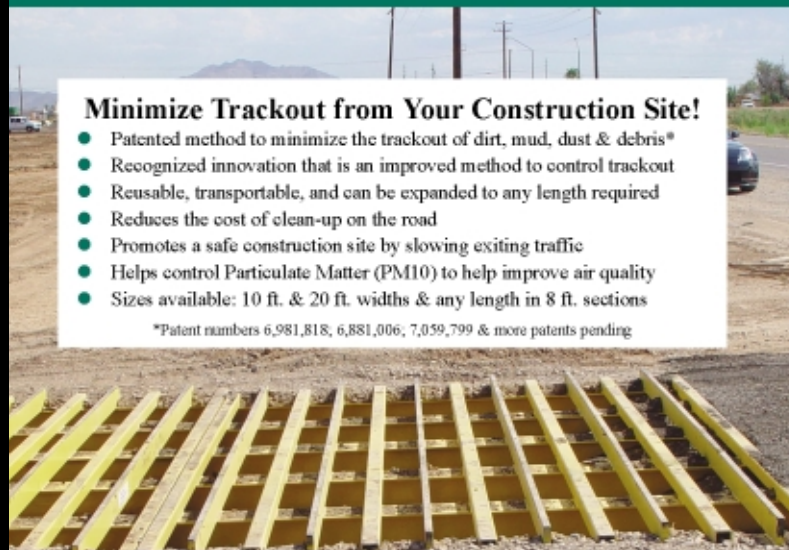


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From the Editor



One of my favorite "lessons learned" from many years in the printed circuit board industry involves thin black neoprene bands and a supplier that charged too little. The neoprene bands were used on a conveyor belt of a soldermask curtain coating machine, and prevented circuit boards from touching the belt and picking up spots of wet soldermask on the back side of the panels.

We did not use a lot of these bands, but when we needed them, we needed them in a hurry. Fortunately,

we found a local supplier for the bands, which was much more convenient than importing the bands from our parent company in the United Kingdom, and the cost was a fraction of the price we paid previously.

We had been ordering these bands from the local supplier for a number of months when one day we needed 6 bands immediately, so I personally drove over to the supplier to pick them up. He was not ready when I arrived, so while I waited I watched as he proceeded to cut the 1/4" wide, 10' long bands from huge wide sheets of neoprene using a razor and a straight edge. I had not realized he did this by hand. It took him 20 minutes to finish, then he rolled up the bands, tied them, and handed them to me. The charge? About \$7.40. I almost asked him how he could charge so little, as clearly his time alone was worth more than the few dollars he charged, but I hesitated and did not ask.

Not long after we again needed more neoprene bands and I called our supplier. You can probably already guess — there was no answer, he had gone out of business.

So what is the moral of this story? Charge enough for your services, or you are not doing your customers a favor — your business will be unsustainable. The reverse also applies; pay your fair share for services if you wish them to continue.

How does this apply to the Journal? In four months the Journal will be entering its seventh year of publication (wow). A solid core of advertisers, thousands of readers, and hundreds of contributors value and contribute to the Journal's sustainability. However, this is an "honor system" — it is possible to enjoy the benefits of the Journal for years without contributing anything back. For example, if a dozen or more of your employees subscribe to the Journal, but you've never placed an advertisement, or never contributed a major article — are you contributing to its sustainability?

Sincerely,

Jim Thrush, M.S. Environmental Management

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COVER IMAGE: ALTERNATE EOC SITE AT ASU POLYTECHNIC. PHOTO COURTESY OF PETERSON AND BROWN, ASU.



Dr. Danny Peterson leads an EOC Training and Simulation Class at the new Arizona EOC Facility at ASU

Arizona State EOC Goes On-Line at ASU Polytechnic

Part I: The Function of an EOC and Integrated Emergency Management

by Danny Peterson, PhD
and Ryan Brown, BS

An Emergency Operations Center, or EOC for short, is found in most governmental organizations as well as many private companies. We have seen the term used many times in media, especially in the last few years beginning with the aftermath of 9/11 and subsequently the tragedy of Hurricanes Katrina and Rita. Yet despite the fairly common use of this term, misunderstandings and misinterpretations are also very common.

According to Kuban, Skapski, and Sheardown (2002), there are many disparate perspectives and expectations surrounding the term which occasionally conflict with one another.

The purpose of this article is to define and describe the term EOC, discuss its function in terms of the bigger picture established by the National Incident Management System (NIMS), and finally look at a grant project nearing completion at Arizona State University which will enable training and exercising using an actual EOC which has been outfitted to operate in a simulation mode.

What is an EOC?

In its simplest form, an EOC is a physical or virtual facility that enables select personnel to assemble to provide coordination of response and recovery resources for emergencies and/or disasters. A more practical definition might be (Kaban, et.al., 2002; Davis, N.D.):

The EOC is really a place where:

- Uncomfortable people
- Meet in cramped conditions
- To play unfamiliar roles
- Making unpopular decisions
- Based on inadequate information
- In much too little time

A more official definition is provided by the Department of Homeland Security which is "The physical location at which the coordination of information and resources to support domestic incident management activities normally takes place. An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction. EOCs may be organized by major functional disciplines



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(e.g., fire, law enforcement, and medical services), by jurisdiction (e.g., Federal, State, regional, county, city, tribal), or some combination thereof" (DHS, 2004).

In practice, EOCs come in all sizes, shapes, and functional applications. Some are organizationally constructed to mirror the Incident Command System which is a fairly rigid and narrowly defined structure. Others are variations on this common structure based upon organizational politics. Whatever the particular architecture

Management, Supporting Technologies, and Ongoing Management and Maintenance. The components work together in a carefully crafted fabric "to provide the national framework for preparing for, preventing, responding to, and recovering from domestic incidents, regardless of cause, size, or complexity" (NIMS, p. 10). Of particular interest to this discussion are the Command and Management and Preparedness components.

Command and Management consists of three important systems which are: Incident Command System (ICS), Multiagency Coordination Systems, and Public Information. The EOC is a Multiagency Coordination System. According to NIMS (p. 33), "a multiagency coordination system is a combination of facilities, equipment, personnel, procedures, and communications integrated into a common system with responsibility for coordinating and supporting domestic incident management activities. The primary functions of multiagency coordination systems are to support incident management policies and priorities, facilitate logistics support and resource tracking, inform resource allocation decisions using incident management priorities, coordinate incident related information, and coordinate interagency and intergovernmental issues regarding incident management policies, priorities, and strategies." Such a system by definition is a strategic function which is separate from tactical coordination and command which falls under the Incident Command System.

Also germane to this discussion is the Preparedness Component which consists of: Planning, Training, Exercises, Personnel Qualifications and Certification, Equipment Acquisitions and Certification, Mutual Aid, and finally, Publications Management. Central to achieving the

that is used, the most important aspect of the facility is the functionality—what does it do and how well does it do that.

NIMS Linkage

The disaster of 9/11 taught us many things and not in a good way. Foremost was the inadequacy of our preparedness for such a threat. Prior to 2001, we counted on the Department of Defense to protect us from enemies abroad; Department of Justice to protect us from criminals within our country; and FEMA to provide disaster assistance to protect us from the ravages of natural and to a lesser degree, technological disasters. We were ill-prepared for enemies abroad who criminally brought disaster within our borders. An in depth investigation by the 9/11 Commission listed many factors that led up to the tragedy of 9/11, but foremost, they reported, was a lack of imagination on our part.

A rapid re-assessment of our preparedness structure immediately following the disaster resulted in the creation of the Department of Homeland Security which was the largest re-organization of our government since the creation of the Department of Defense in 1947. Subsequently, on February 28, 2003, the President issued Homeland Security Presidential Directive number 5 which directed the Secretary of the Department of Homeland Security to develop and administer a National Incident Management System (NIMS) as well as a National Response Plan. The latter has recently been superseded by the National Response Framework.

NIMS consists of six separate yet interrelated components which include: Command and Management, Preparedness, Resource Management, Communication and Information

Continued on page 14

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The Carter's highlands ranch in New Mexico was built for a "sustainable lifestyle"

Focus On: **CARE**

**Carter
Affiliates, Inc.
Resources for the
Environment:**

Our "Focus On" series has featured several mid-sized and larger businesses, but in this issue we focus on an environmental business that is a little smaller, but has a huge impact!

by Journal Staff

If you have been involved in the environmental field in Arizona for long, especially in the Tucson area, then you probably know Richard and Lois Carter, founders of Carter Affiliates, Inc. Resources for the Environment (CARE). They both have been major contributors to Arizona's environmental community for decades.

Background/About CARE

Established in 1991, Carter Affiliates, Inc. Resources for the Environment (CARE) is a small, but unique, environmental services company. CARE specializes in waste reduction and related equipment, pollution prevention programs, remedial services, hazardous waste management, regulatory compliance audits and resource management. Its CARTERCARE™ program is based on the Pollution Prevention Act mandated by the U.S. Congress in November 1990. For the last 17 years, this program has resulted in the significant reduction, recycling, and, if possible, elimination of hazardous waste generation for its clients.

Philosophy

It is the spirit behind the work that gives this firm its special character. CARE's philosophy may be best understood from the viewpoint of a professional who has worked with the Carters. A few years ago, Ralph McCulley, Manager of the Chemical Services Department of Texas Instruments Tucson, said of CARE: it is "the only organization I know of that will actually obsolete [itself] by finding or redefining the disposal alternatives that not only reduce expense or liability to the company, but support environmental objectives as well". Some of their other clients,

such as Ventana Medical Systems, Pima Community College, and BHP Copper have expressed similar sentiments.

Rather than just providing waste disposal services and collecting service charges, CARE has, through its experience and expertise, helped businesses reduce or eliminate the generation of hazardous wastes, and has saved their clients many hundreds of thousands of dollars over the years.

How can a company stay in business if it continually works to reduce or eliminate the very source of much of its profits? It can, says Richard, because by reducing waste and saving clients money CARE wins loyalty and trust, and "when you achieve (earn) those, the relationship develops and sustains itself on that foundation."

Community Contributions

Richard is former Chairman of the Environment and Ecology Committee and Board member of the Arizona-Mexico Commission, and the Governor's Environmental Delegate to both the U.S./Mexico Border Governor's and Mayor's Conferences for five consecutive years. He is also the former Co-Chairman of the Arizona Environmental Technology Industry Cluster (ETIC) and the Founding President of the 200+ member Southern Arizona Environmental Management Society, based in Tucson. SAEMS is one of the largest and most active environmental associations in Arizona.

In 2004, Richard received a Certificate of Appreciation from the U.S. Surgeon General, Richard H. Carmona, for "25 years of community service to state and local government" and for "expertise and leadership to the AZSERC and the Pima County LEPC making our county and state safer and healthier."

Living Sustainably

Not only do the Carters teach sustainability in their work practices, they live it as well. At their ranch in New Mexico, they will be producing 60 percent of their own food in two greenhouses and raised beds on the property. In addition, they have 7500 watts of solar power (panels are visible on hillside in photo), some of which is returned to the power grid. The Carters also enjoy teaching others to live a sustainable lifestyle. Richard explains, "we want to share our experiences with people on how we developed a sustaining economy and environment, while we grew our business."

Carter Affiliates, Inc. Resources for the Environment (CARE) is located in Tucson, Arizona. Contact Richard or Lois Carter at 520-323-1100, or visit the CARE website at www.cartercare.com/care.



Lois and Richard Carter



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- **HOLBROOK: September 17-18, 2008**
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- **MESA: September 23-24, 2008**
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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.



EPAZ

www.EPAZ.org

Greg Mehall of Arizona State University gave an interesting presentation on the Mars lander project at our June meeting. Arizona State University and the University of Arizona were key

participants in planning and designing the equipment for this effort to further explore and understand the environment on our neighboring planet. The photographs and explanation of the challenges involved were excellent.

EPAZ held our July meeting at Northern Arizona University in Flagstaff. In the morning, attendees were given a tour of NAU's Applied Research & Development (ARD) Building. The ARD Building is a LEED Platinum certified building that was completed about 1 year ago. Many innovative features were demonstrated that make this a unique structure incorporating the highest standards of energy efficiency.

There is not a regular EPAZ meeting in August, but a tour of the Mesa Boeing facility is being coordinated for a very limited, lucky few. Dr. Paul Westerhoff from ASU is scheduled to speak about endocrine disruptors and the impact of pharmaceuticals on drinking water at the September meeting.

EPAZ holds monthly luncheon meetings on the 2nd Thursday of the month from 11:30 am to 1:00 pm. EPAZ also gathers on the fourth Wednesday of the month for a casual cocktail mixer. Visit our web site at www.epaz.org for more details or contact Mannie Carpenter at (602) 393-4800.



Mannie Carpenter,
President

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ASU's MacroTechnology Works located at 7700 South River Parkway in Tempe. We will meet from 2:00-4:30pm, and have informal networking from 4:30-5:00pm. Our meeting format will be a little different this time. There will be a panel discussion among three experienced, professionals on the subject of "Starting your own EHS Business".

There will be time for questions and answers. Then we wanted to solicit participation from the audience and discuss "How do Companies Select EHS Consultants". Hope to see you there, and please come prepared for discussion!

Christine Pomeroy,
President



www.azchamber.com

The Arizona Chamber of Commerce and Industry held its annual Environmental Summit last month. It was a very successful event filled with presentations and discussions about emerging environmental compliance issues affecting industry. We would like to express our sincere appreciation to all of those who attended and presented.

The Chamber's Environment Committee will resume its monthly breakfast meetings beginning on September 10th. Breakfast meetings will be held at the usual location, the Sheraton Phoenix Airport Hotel, located at 1600 South 52nd Street in Tempe. Breakfast is serviced at 7:00 AM with speakers beginning at 7:30 AM. Go to the Arizona Chamber's web page at www.azchamber.com to register.



Jeff Homer,
Co Chairman
Environment
Committee



www.SAEMS.org

The Southern Arizona Environmental Management Society is heading into its 21st year with its long term commitment of promoting awareness, education and the understanding of environmental issues. On behalf of the 2007-2008 Executive Committee and the members of SAEMS, I would like to thank Jeff Christensen, Past President, for his hard work, excellent leadership and ultimate dedication to this organization.

We are off to an exciting year with the installation of the new Executive Committee during this past June's luncheon meeting. The Executive Committee is served by Shari Bauman (President), Sarah Sillman (President Elect), Craig Boudle (Vice President), John Barr (Treasurer), Pamela Beilke (Secretary) and Kristie Kilgore (Communications Coordinator). I am proud to share this experience with an excellent group of professionals.

Mark your calendar for the 2008 SAEMS P2 Seminar to be held on Sept. 24th at the Manning House in Tucson. Check out the SAEMS website, www.saems.org, for info. on luncheon meetings, seminars, upcoming events, and membership info.



Shari Bauman
President



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The Grand Canyon Section of A&WMA is on summer break and will start back up in September. The board is working on a fall meeting schedule that will see our normal meeting date moved to the fourth Thursday of the month and generally be scheduled as a noon meeting in the downtown Phoenix area.

Over the last two years some of our most successful meetings have been field trips to local environmental projects. With the overwhelming response to the last two such events we are planning on making this a semi-annual event with a field trip scheduled for both this fall and the coming spring. Check back for upcoming meeting topics and locations. As always you can also look for updates on our website at www.awma-gcs.com



*Kale Walch,
President*



ACHMM Thunderbird

www.thunderbirdchmm.org

The Thunderbird Chapter will once again be awarding ACHMM Thunderbird Chapter Scholarships for the 2009 Spring semester. Information and applications will be available in Aug. from our website and from the scholarship offices at ASU, UofA, and NAU. If you are in school, or know someone who is working on a degree in the environmental sciences at an Arizona school, be sure to pass on the word.

Don't forget the Thunderbird Happy Hour on 1st Thursdays, 5:30 PM - ?? The ACHMM/EPAZ monthly lunch meetings are held at the ASU MERCADO, 502 E. Monroe Street (SE of 7th St & Van Buren) from 11:30 ~ 1:00 on the second Thursdays of each month. Meeting details: www.thunderbirdchmm.org or www.epaz.org.

Calendar Items: Sept 4 - T-Bird Happy Hour, Rock Bottom Brewery in Ahwatukee. Sept 11 - Luncheon Meeting, Endocrine Disruptors, Dr. Paul Westerhoff, ASU. Oct 2 - T-Bird Happy Hour, Sonora Brewhouse in Phoenix. Oct 9 - Luncheon Meeting, OSHA VVP. Nov 6 - T-Bird Happy Hour, TBD. Nov 13 - Luncheon Meeting, TBD. December - T-Bird Holiday Party, TBD. Dec 11 - Luncheon Meeting, TBD. Jan 8 - Luncheon Meeting, TBD. Feb 17-18, 2009 - Gatekeeper Regulatory Roundup at the Chaparral Suites

*Chuck Paulausky,
Board Member*



www.eia-az.org

The EIA-AZ Chapter will be offering free classes to the public for PM10 following the Maricopa County's Rule 310 (fugitive dust sources). These classes will be conducted at different locations within Maricopa County and are offered free to all attendees. Class schedules will be posted on our web page in the upcoming months. The Maricopa County Air Quality Department Rule 310 contains the requirements that construction projects and others must follow to prevent dust emissions. The permit is required for any dust generating operation disturbing 0.1 acres (4,356 sq. ft.) or more for commercial, industrial, institutional or government purposes.

Please visit our web site at <http://www.eia-az.org> or call 602-437-3737 ext. 123 for information on all upcoming events sponsored by EIA-AZ.

*Laura Adams,
President*



Arizona Environmental Strategic Alliance

www.azalliance.org

It's hard to believe we're already halfway through 2008. Each year at this time, Alliance members submit reports detailing their performance for the proceeding year. The performance of each Alliance member - Arizona Public Service, City of Scottsdale, Intel, Ping Golf, Salt River Project and Salem Boys Auto - is measured against Alliance environmental leadership principles. Several Alliance members who also belong to the ADEQ Performance Track Program use the required annual Performance Track report to satisfy the Alliance requirement. Other Alliance members satisfy the requirement by submitting a separate report. In all cases, the Alliance Advisory Council reviews and provides feedback to the Board of Directors on member performance. Alliance members will present the highlights of their 2007 performance at an upcoming Alliance luncheon. Contact Jim Thrush at 480-422-7392 if you're interested in attending the lunch.

*Scott Davis,
Chairperson*



www.azhydrosoc.org

I am Nick Melcher and I recently replaced Jeanie Meredith, the past AHS manager. The Society very much appreciates Jeanie's service during the past few years. I look forward to working with the AHS and the opportunity to serve the many friends and contacts I have developed in Arizona during my 34 years with the US Geological Survey.

The major activity for the AHS during the upcoming months will be final planning for the annual symposium in Flagstaff. This year the AHS symposium will be co-sponsored by the American Institute of Professional Geologists. Ethics and standards in hydrology and geosciences are a major theme of the symposium. The symposium will be held Sept 20-26 and will include a number of well-known invited speakers, several technical workshops, and some excellent field trips in Northern Arizona. AHS has received over 90 presentation-abstracts for the symposium. Additional information and registration materials can be obtained at the symposium website at: <http://www.aipg.org/2008/AIPG-AHS-3IPGC.htm>.

The past few months have been very busy and successful for the AHS. A surface water workshop was held in Phoenix on May 15 and was attended by over 60 hydrologists. Amy Lynn, University of Arizona, was the recipient of the Leonard Halpenny Internship and Cheri Topel, Arizona State University, was the recipient of the Herman Bouwer Internship. These internships are sponsored by AHS and provide each recipient with on-the-job training in hydrology at a combination of private consulting firms, science organizations, and water management or regulatory agencies.

We look forward to seeing you in September at the Flagstaff Symposium.

*Nick Melcher,
AHS Manager*



Continued on page 13



Larry Olson, PhD.

It's All About Chemistry

Human Guinea Pigs

A study has just been published (G.W. Olsen, et al, *Environmental Science and Technology* (2008), 42, 4989-4995) that shows the potential impact of exposure to synthetic chemicals in our everyday life. PFOS, perfluorooctanesulfonate, is an example of a class of fluorinated chemicals that have no natural analogs. Over the last 50 years they have been widely used in consumer products and industrial applications.

Perfluoro means that all the C-H bonds have been replaced with C-F bonds. The great strength of the C-F bond gives it unique properties, not the least of which is very long term environmental persistence and slow metabolic degradation. PFOS is insoluble in both water and oil, so it is used to make carpet and other fabrics stain resistant, as a coating on packaging materials including those in contact with food, as a fire retardant, as a mining and oil surfactant, and as a starting material for insecticides.

The 3M Company was the primary manufacturer for over 40 years of perfluorooctanesulfonyl fluoride (POSF), the precursor to PFOS and other related fluorinated compounds. In 2000, following reports that PFOS had been found in human and wildlife populations, 3M decided to phase out POSF and related compounds. Annual production at that point was 8 million pounds,

but by the end of 2000 production had dropped by 98% and ceased completely by December 31, 2002.

Over the next four years, many studies confirmed that PFOS was distributed throughout the world and could be found in surface waters, sediments, indoor air and dust, and many animal and fish species where it was bioamplified. In two countries, the U.S. and Japan, multiple studies have monitored the exposure of the general public to PFOS. Serum PFOS has been found to be a good measure of internal dose from all exposure routes. Samples collected from 1974-2003 in the U.S. show that PFOS concentrations are relatively comparable across the U.S. and among different age groups. Levels were somewhat higher in the U.S. than in Japan.

The elimination half-life of PFOS appears to be about 5 years in humans. So it was logical to take another look at the concentration of this chemical in human blood serum after the phase-out of POSF based materials. The study cited above looked at blood collected in 2006 from donors at six different Red Cross centers across the country. They saw an across the board decline of about 60% in serum PFOS compared to samples collected in 2000-2001, that was uniform across age and gender and geography. This is consistent with the serum elimination half-life of PFOS.

Another related chemical, PFOA, was also measured. It has a shorter elimination half-life of 3.5 years, but the study showed only a 25% decline in PFOA levels. 3M phased out production of PFOA at the same time that it eliminated POSF, but other companies continued to produce it and so, unlike for PFOS, exposure to PFOA continued. DuPont didn't agree to reduce PFOA production until 2005. Expectations are that as sources of PFOA in the environment decline, blood serum levels will follow.

This study implicates consumer products as the source of PFOS and PFOA exposure to the general public and clearly demonstrates the impact of 3M's decision to ban the production of this family of chemicals. Unfortunately, we have all been unwitting guinea pigs in an experiment with unintended consequences. It is a reminder that the real world is more complicated than the laboratory bench and that we have to continue to take a long view in evaluating the cost-benefit ratios of modern technology.

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

Association Pages

continued from Page 11

ASSE

American Society of Safety Engineers

The Southern Arizona American Society of Safety Engineers ended the year with the Awards Banquet at the historic Fox Theatre. Ed Collette, Environmental Manager, Pima County Reg. Wastewater Reclamation Dept. Conveyance Div., was presented with the prestigious Safety Professional of the Year award. Ed was the driving force behind the group's attainment of triple ISO/OHSAS certifications. Two organizations were selected to receive the Community Safety Award. KE&G Construction incorporates safety into all of their operations, using the DuPont-developed Safety Training and Observation Program. K. R. Yarbrough Construction Co. is a framing subcontractor for residential and commercial construction. They hired a full-time, bilingual safety coordinator, upgraded their safety practices, training, and policies (written and delivered in English and Spanish), and implemented a safety incentive plan. They completely revised their fall protection plan. Because of the success of the plan, the Company shared the plan with other framing businesses, (their competitors) because it can make a difference in worker safety.

Incoming officers of the SA ASSE will be: President, Thomas Wilson; Vice President, Janet Brown; Secretary, Shari DiPeso; Treasurer Gerry Coley; Delegate to House of Delegates, Mark Grushka; Training and Community Liaison, Dave Baker. Past President, Chuck Gessner, rounds out the Board.

Shari Di Peso,
Secretary



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Alternate State EOC

Peterson and Brown
Continued From Pg 7

preparedness goal is training and exercising.

We can see that EOCs play a vital role in terms of our National Incident Management System's capability to respond to and recover from disasters from small local events to National events such as 9/11 and Hurricane Katrina. What is probably less evident is the general cloak of misunderstanding over exact EOC duties and responsibilities as well as a lack of experienced personnel to operate in an EOC environment. While this problem has many potential causes, foremost is the lack of opportunity for EOC personnel to obtain training and experience in a realistic setting. Actual EOC activation occurs very infrequently but when it does, requires an A Team playing their best game. This brings us to an exciting and innovative project being completed at Arizona State University—Polytechnic.

Part II: Facility Combines Training and Simulation Capabilities with Alternate State EOC

Several years ago, the Arizona Division of Emergency Management (ADEM) in conjunction with Arizona State University pursued a



Photo: The New EOC Facility at ASU Polytechnic

joint project to develop and construct an Alternate State EOC (ASEOC) on the ASU—Polytechnic campus. An Interagency Governmental Agreement (IGA) was signed by the responsible parties and the facility was finished and dedicated as operational in October, 2004. Subsequently, a Department of Homeland Security grant was awarded to Arizona State University to convert the ASEOC to a dual-use facility with a simulation mode and to author a simulator based training package to provide training and simulated real-world experience to interested parties. The first class will be scheduled to attend the 3 day training and simulation course in October of 2008.

Currently, ADEM is handling student scheduling.

The purpose of the EOC training is to provide the attendees an advanced educational training scenario with as close to realistic interactions and communications that would take place during the operations of an EOC. The training will align ASU's Emergency Management training and degree program with the National Preparedness Guidelines. The four guidelines that will be used for developing this training course are as follows

1. The National Preparedness Vision: *A Nation prepared with coordinated capabilities to prevent, protect against, respond to, and recover from all hazards in a way that balances risk with resources and need.*
2. The National Planning Scenarios: *Collectively 15 scenarios which represent diverse high-consequence threats composed of both terrorist attacks and natural disasters, of which that are designed to focus contingency planning for homeland security preparedness work at all levels of government and with the private sector.*
3. The Universal Task List: *1,600 unique task that can facilitate efforts to prevent, protect against, respond, and recover from the major events that are represented by the National Planning Scenarios. It presents a common vocabulary and identifies key task that support development of essential capabilities among organizations at all levels.*
4. The Target Capabilities List: *Defines 37 specific capabilities that communities, the private sector, and all levels of government should collectively possess in order to respond effectively to disasters. (National Preparedness Guidelines, iii)*

The EOC training course will be presented to the class over a three day period with approximately 24 hours of

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contact time. The 24 hours will be fulfilled by providing 16 hours of instructor lead modules followed by two 4 hour functional exercises. The instructor lead training modules cover a wide range of management principals and theory, EOC operations and accompanying technologies, resource management, incident stress, and communications. At the conclusion of the instructor led training modules the attendees will than participate in two challenging and increasingly complex functional exercises that will be developed using the Homeland Security Exercise and Evaluation Program (HSEEP).

It is the architecture and design of the functional training exercises that will provide the realism and the effective application of the attendee's knowledge, skills, and abilities to foster effective training. Through repeated efforts in delivering this course to diverse public and private organizations, there will be lessons learned that will provide ongoing improvements to further enhance ones preparedness and response to disasters.

Summary

Responding to and recovering from disasters requires finely tuned actions from many experts and specialists. Many of these actions are tactical by nature such as responding and operating within the incident command system. Other actions are more strategically oriented and consist of policy guidance and coordination of resources needed by tactical responders within the ICS. Of particular interest are the multiagency coordination systems such as EOCs. Training and exercising in this latter setting has proven to be more challenging than conducting tactical exercises such as responding to mass casualty or natural disaster scenarios. Arizona State University—Polytechnic in conjunction with the Arizona Division of Emergency Management has developed a joint use facility which is used as an Alternate Emergency Operations Center by the State and a teaching/exercising laboratory by the university. With the help of a DHS grant, this facility has been converted to a dual use facility—real world EOC or EOC simulator. Most important is the proof that Arizona's philosophy of readiness through partnering works; partnering among government, industry, community, and academia.

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Authors:

Danny Peterson, PhD, is a Professor at Arizona State University, where he teaches environmental management and emergency management courses. He can be reached at 480-727-1100 or by email at DrP@asu.edu.

Ryan Brown is a Coordinator for the Department of Technology Management at Arizona State University. Ryan has a B.S. in Emergency Management and 4 years of experience in developing and coordinating EH&S and Emergency Management training seminars. He can be reached at 480-727-1221, or by email at Ryan.T.Brown@asu.edu.

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News Briefs

Akzo Nobel Coatings Fined \$23,800 for EPCRA Violation: Failure to Submit Forms

❖ The U.S. Environmental Protection Agency recently fined a Phoenix, Ariz. paint and hazardous chemical storage and repackaging company \$23,800 for violating the federal Emergency Planning and Community Right-to-Know Act.

Delaware-based Akzo Nobel Coatings, Inc., failed to submit emergency and hazardous chemical inventory forms to local and state emergency planning and response teams in 2005 and 2006 for paints, coatings and hazardous chemical mixtures stored at its warehouse, located at 2639 North 31st Ave.

"Submitting accurate records of hazardous chemicals is crucial information when preparing for a potential emergency response," said Dan Meer, chief of the emergency response and preparedness branch for the Pacific Southwest region. "Keeping local and state emergency response teams informed helps to minimize damage to human health and the environment in the event of an emergency."

Hazardous mixtures stored at the warehouse included lacquers/clears, stains/glazes, liquid non-stick, and thinners/reducers. The EPA discovered the violations during a 2007 inspection of the facility.

The Emergency Planning and Community Right-to-Know Act requires certain facilities annually submit material safety data sheets and chemical inventory forms to local and state emergency planning and response agencies to help these agencies respond in the event of a spill or release.

For information on the Emergency Planning and Community Right-to-Know Act, visit: <http://www.epa.gov/oeaagct/lcra.html>.

AMEC Acquires Geomatrix Consultants, Inc.

❖ AMEC, an international engineering and project management company, announced recently that it has reached agreement to acquire Geomatrix Consultants, Inc. (Geomatrix) from its owner-managers for a total cash cost of \$85 million.

Geomatrix is a diversified technical consulting and engineering firm headquartered in Oakland, California. The company employs some 500 engineers, scientists and other professionals in 18 offices across the United States and one office in Canada. Geomatrix offers specialist environmental, geotechnical and water resources services to clients in sectors such as oil and gas, industrial, mining and municipal.

Arizona impact.

The addition of Geomatrix's office in Scottsdale will provide AMEC with a fourth office in Maricopa County and sixth in Arizona. AMEC currently operates offices in Mesa, Phoenix, Tempe, Tucson and Lake Havasu City.

The purchase is consistent with AMEC's strategy of geographic and capacity expansion in the Earth and Environmental business and follows the acquisition of six smaller environmental consultancy businesses since January 2007.

Samir Brikho, AMEC Chief Executive said: "With services ranging from environmental impact assessments to remediation, our Earth and Environmental capability is an important differentiator in AMEC's portfolio of services. Geomatrix will significantly enhance our geographic coverage and our ability to provide customers with high value consultancy services."

Roger Jinks, President of AMEC's Earth and Environmental division added: "This acquisition not only strengthens our presence in the United States, but also adds significant depth to our consulting talent in the environmental remediation, seismic and groundwater services growth markets."

Anthony Daus, President of Geomatrix said: "We are pleased to be joining AMEC and being part of this growing and dynamic organization. This will allow us to better serve our clients nationally and internationally and provides excellent technical and professional opportunities for our staff."

For more information contact Brad Christensen, Media Relations Director, at 602-432-1339



Roger Jinks
President, AMEC Earth
& Environmental



Anthony Daus
President, Geomatrix

Red J Environmental to Pay \$63,500 in Penalties for Haz Waste Violations

❖ ADEQ Director Steve Owens announced recently that Red J Environmental Corp., a hazardous waste transporter based in Joseph City, Arizona, will pay \$63,500 in penalties for hazardous waste violations that occurred when it transported waste in the Phoenix area.

"This company committed a number of violations that potentially endangered the environment and the public," Director Owens said. "The company's actions were simply unacceptable."

ADEQ learned that the Navajo County company illegally stored 32,000 gallons of petroleum-contaminated wastewater treatment sludge after test results indicated the sludge was a hazardous waste. Federal and state law prohibits the storage of hazardous waste for longer than 90 days without a permit, which the company did not have.

Red J had moved the waste from the Cave Creek Wastewater Treatment Plant in 2004 and 2005 to a yard at 3215 S. 7th Street in Phoenix. In February 2005, Red J received the test results, which showed that the sludge contained benzene and could easily catch fire. ADEQ inspectors discovered that the sludge had remained stored at the Phoenix

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site until the end of April 2005.

In addition, the company transported the waste about 15 miles from Cave Creek without the manifest required by state and federal law, transported hazardous waste without a required EPA ID number, and failed to pay the relevant fees. "If you are going to be in the business of transporting toxic waste, you'd better follow the law," Owens said

Triumph Precision Castings Co. Fined \$10,000 for RCRA Violations

❖ The U.S. EPA recently fined Chandler, Ariz.-based Triumph Precision Castings Co. \$10,000 for violating hazardous waste requirements of the Resource Conservation and Recovery Act (RCRA).

Triumph Precision Castings Co. is located in the Gila River Indian Community, and produces industrial and aerospace applications castings.

During a June 2007 inspection, EPA investigators found several violations of RCRA, including:

- Failure to implement the contingency plan during an emergency;
- Failure to have the name, address and telephone number of the emergency coordinator in the contingency plan;
- Failure to meet all of the training requirements for personnel handling hazardous waste.

"Ensuring a proper response to hazardous waste emergencies is a priority," said Jeff Scott, the EPA's Waste Management Division director for the Pacific Southwest region. "Firms such as Triumph, which generate hazardous waste, must follow federal regulations to better protect their employees, surrounding communities and the environment." Triumph Precision Castings Co. has since corrected the violations. The EPA's hazardous

waste rules require facilities to properly store, label and seal hazardous waste containers. Facilities must also have properly trained staff, as improperly stored hazardous waste can potentially spill and pose a risk to workers and the environment.

SAEMS Installs New Officers and Awards Scholarships

At its June 25th luncheon meeting in Tucson, SAEMS installed a new slate of officers, and recognized outgoing officers and committee chairs for their contributions. The Board also awarded two full scholarships and two half-scholarships, to 4 students. See photos below.



Fred Brinker, far left, and Dan Uthe, far right, present scholarship awards to Amy Lynn, center left, and Kelly Huxtable, center right.



Fred Brinker, far left, and Dan Uthe, far right, present scholarship awards to Jennifer Davidson, center left, and Guillermo Ponce, center right.



Outgoing SAEMS Officers, L to R: Sarah Sillman (VP), Jeff Christensen (President), Sue Dickinson (Secretary), John Barr (Treasurer), Shari Bauman (President Elect). Not present: Pamela Beilke (communications Coordinator).



Incoming SAEMS Officers, L to R: Craig Boudle (VP), Kristie Kilgore (Communications Coordinator), John Barr (Treasurer), Shari Bauman (President), Sarah Sillman (President Elect). Not present: Pamela Beilke (Secretary).

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*“... the news is
what I say it is ...”*

*David Brinkly, News Anchor
NBC (1965)*

Television, the vast wasteland we love to hate, drives me crazy! And, its not just the prime-time so-called situation comedies that light my fuse, either. TV, in general, has gotten so bad that, even when you want to hear a little news, you have to sit through 20 minutes of commercials, just to listen to 10 minutes of “real” news, only to realize afterwards that at least part of that “real” news was about some starlet going to rehab (or not) and how American Idol was seeking ways to become a “reality” survivor show—its enough to make you swear off TV!

And, I really love those ‘news’-casters ‘telling us what they are going to show us in the next exciting segment (right after the break), only to cut to another commercial break which is just another advertisement of the very same news program and talking heads you are watching... *what’s up with that?* Don’t they think we already know which news channel we’re watching?

With this remote-button-driven society we live in, do those news programs need to keep informing us that they are the ‘best’ for “live, late-breaking, investigative... whatever...” while showing footage of the very talking-heads we were just watching? That 30 seconds could have been more effectively used to give us some real news! Do the program genius writers/promoters really think we won’t hit that remote button anyway, instead of watching the commercial that follows?

What got me thinking about this was all the programming that led up to the Super Bowl, much of which was done right on those local evening news programs in the name of telling us the latest “news”—(well, hey, after all, the Superbowl was in Glendale, AZ—isn’t that ‘local’ news??)—like, which parties with which

celebs were going to be scheduled where—evidently, that was the local “news” that mattered most that week because it filled at least 15 minutes of the allotted 20 minutes available in every network station’s half-hour broadcast.

But, my rant isn’t about news programs themselves. No, it’s much more than that. My rant is really about what we are NOT getting on the news (or anywhere on TV, regularly).

The American public is NOT getting the biggest news story of the new millennium. We aren’t also getting information on why and how we’ve come to be in a crisis situation that *everyone* should be concerned about. The future of the biosphere and all its inhabitants hangs in the balance, and nowhere do we get this “news” (except in occasional ‘special’ programming aired opposite a reality show during prime-time—guess which one Joe Sixpack and his family watch?).

By this point in time, you would think that the long term environmental impact of greenhouse gases on the entire world would be updated in every news program, just like the sports and weather. The potential impact on quality of life as we know it and the progress being made toward reducing carbon in the environment should be “news” that has equal importance with the latest escapades of naughty nymphs in never-never land.

So, its time we stood up and demanded environmental equity on all the network news programs, local and national—and especially on the weather channel, where we are getting more commercials and canned commercial programming than ‘live weather news’ every day—they’ve become just like the networks: *‘show me the money; the weather can wait!’*

When those talking heads tell us after the first 6 minutes of a news program what they are going to show us in the next segment, we should demand that, instead, they should tell us how many acres of rain forest were lost during the commercial break, or how many tons of emissions were spewed out that day by all those airplanes carrying all those politicians and their entourages around the country, and how much fossil fuel was burned to get two minutes of air time on the evening “news.”

So, its not just about being sick of the same old “news” that isn’t really “news” every evening from every network—its about the real “news” we are missing on the environmental progress we’re making (or not)—and the need to have the news-viewing public understand just how critical our sustainability mission is for the future of our children’s, children’s, children.

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PROSPECTING:

For Environmental Business

Selling Sustainability

Everywhere you look, it's there. Going green, global warming, hybrids, carbon credits, carbon neutral, carbon foot-prints, renewable fuel, renewable building materials; the buzz-words could go on for this entire column. In this issue of Prospecting, I thought I'd explore the business side of sustainability. A few issues ago, I submitted my thoughts on the evolution of the environmental business and how a "tipping point" is near that could potentially blow the top off of our business. But until then, if I may be so bold, "is anyone making any money at the sustainability stuff?"

Fundamentally, the idea behind true sustainable practices is not for profit, but for the greater good of our planet and to leave a legacy for our children and grandchildren. But given the public buzz and the level of media attention, you would think anyone working in our field is rolling in cash. The opposite seems to be true. I understand there are companies and individuals profiting from the green movement, but on the whole, it seems the majority of the activity is speculative. Renewable fuels are living off of government subsidies, consumer spending for "green products" is spotty, and the progression of solar and wind power is sluggish at best. Don't get me wrong, I'm a believer, I personally feel the movement has great value, but I'm looking specifically at the business prospects associated with the movement and what it means for those of us in the business today. Short-sided? Maybe, but I'd bet I'm not the only one thinking it.

Most environmental services companies are expanding services and products to address growing demand for "green" in some way. ATC is no different. We have augmented our existing offering to include services that help companies with their sustainability programs. But the growth rate is not consistent with the media attention we see. The fact is, sustainability practices (or any business practices for that matter) must directly impact a firm's bottom line in order to convince a CEO or CFO to commit resources. The result is lots of interest, but not much buying because the return on many of the sustainable practices are difficult to measure and conservative operations need more proof of positive ROI. Energy management, water use, and recycling are areas where companies can see direct, short term impact. However, is this sustainability or simply efficient business practices that should be taking place anyway? Sustainability, from what I understand, goes far beyond conservation.

Maybe we are simply at the beginning of the business cycle for sustainability. Maybe the ROI is still in question. Maybe companies are waiting for regulation. Who knows, maybe service companies are not meant to profit from it at all.

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Joe C. Holmes



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SAEMS RCRA Committee Members

An article in the previous issue of the Journal (Jun/Jul 2008, page 20), with a photo titled, "SAEMS RCRA Committee Members" failed to note that six of the committee members were not in the photo. Members of the committee not shown in the photo are: **Jeremy Lite**, Quarles & Brady-Streich Lang; **Kristie Kilgore**, EEC; **Catherine Schladweiler**, Malcolm Pirnie; **Dan Uthe**, TFD; **Richard Carter**, CARE; **Jeff Christensen**, U of A Risk Mgmt.



SAEMS Committee members contribute many hours of time and hard work to make this a great annual event!



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