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PRACTICAL AND CURRENT INFORMATION FOR ENVIRONMENTAL, HEALTH AND SAFETY PROFESSIONALS

In-depth look
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PREPAREDNESS**

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INSIDE: EMERGENCY PLANNING+
by Dan Roe (left), Executive
Director, Arizona Emergency
Response Commission, and
TERRORISM DEFENSE by Danny
Peterson, PhD. (right), ASU
Associate Professor

TERRORISM DEFENSE

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August / September 2003 Vol 1 No. 4

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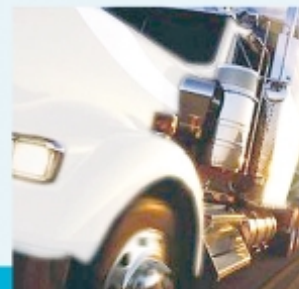
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JOURNAL of Environmental Management ARIZONA

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FROM THE EDITOR



The best part of putting this issue of the Journal together was having so many great articles to work with, all from really top experts. The hardest part of putting this issue together was fitting it all in! We hear a lot about homeland security and emergency preparedness these days through the media, but what we tried to accomplish

with this issue is to provide several articles focusing on practical information you can adapt to your facility to improve your own facility security and preparedness. I hope you will get a lot out of this information; please consider calling or emailing the authors if you read anything you particularly like.

Our next issue will explore several aspects of Pollution Prevention & Waste Minimization (including perhaps a discussion of what the difference is between the two), with an emphasis on ideas that you may be able to implement or modify & then implement in your own facility or organization. Pollution Prevention is great because there are so many instances where your goal begins with reducing pollution or minimizing waste, but the result is saving money *and* reducing pollution.

The Journal mailing list is now over 2700, but we still need your help to expand our circulation base. Help us to extend the reach of the Journal to all environmental & safety professionals in Arizona. Please tell at least *one* co-worker, friend, or environmental contact about the Journal, and suggest they go to www.ehshomepage.com & sign up. Thanks!

Sorry to bring this up again, but there are still a lot of you reading this who receive the Journal but you are not yet a 'subscriber.' Please check your mailing label, if you have not done this already. If you see, above your name, "[SUB?Y]" then you are a subscriber, if you see "[SUB?N]" then you are not a subscriber on our records. Please request a free subscription — by email, telephone, fax, or on the web (see page 17).

This fall several environmental conferences are planned for Arizona. The Journal will have a booth at three of these: the Arizona Hydrological Society Symposium on September 17-20, the EPAZ Regulatory Roundup, October 9-10, and the AZ ELM Symposium for Environmental and Economic Development, October 30-31. I hope you can attend; stop by our booth and say hello!

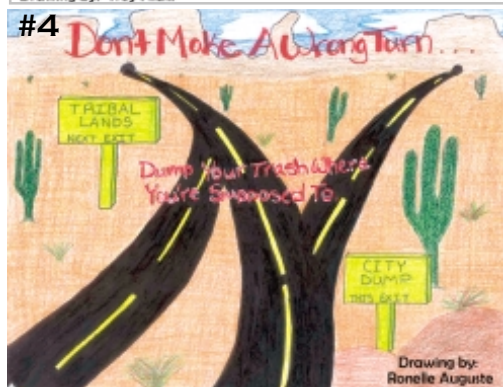
Jim Thrush, M.S.
Publisher & Editor

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WARNING

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TO THE JOURNAL:

LETTER'S & EMAILS

Our "To The Journal" contribution for this issue comes from the 1st Place winning students in the Youth Poster Contest at the "Illegal Dumping on Tribal Lands Conference." Thanks to Suzette Martin, Environmental Coordinator, Inter Tribal Council of Arizona, Inc., for making these great posters available. See related article in Newsbriefs on page 8.

Thank you to all readers who send in your comments & suggestions. Please mail, email or fax your letter to the editor:

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1st Place Winners in Youth Poster Contest; Illegal Dumping on Tribal Lands Conference, June 24-26 (see Newsbrief article, page 8)

Pic. 1. Bronson Hooper 1st Place Ages 5-8 Fallon, Nevada.
Pic. 2. Troy Hicks 1st Place Ages 16-18 Fallon, Nevada.
Pic. 3. Orianna Bradley 1st Place Ages 9-12 Scottsdale, Arizona.
Pic. 4. Ronelle Auguste 1st Place Ages 13-15 Phoenix, Arizona.

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A NEW CHALLENGE FOR EMERGENCY MANAGEMENT

TERRORISM DEFENSE

*"Everything was
so different before
it all changed"*

Dr. Danny Peterson,
Arizona State University
Associate Professor,
provides a perspective on
emergency management
in a new era. "

by Danny Peterson, PhD.

A profound change was thrust upon our nation after the events of 9/11. The catalyst for change was the dramatic arrival of a new phase of terrorism on American soil. We have seen radical changes in our lives, our culture, and even our sensitivity to civil rights since this historic event. President Bush signed the USA Patriot Act into law in October of 2001. This law removed many checks and balances that prohibited surveillance of international visitors as well as citizens. The price was paid as part of our war on terrorism. The war continues and likely will continue into the distant future. The evolution of emergency management has taken an abrupt turn following 9/11 but its paradigmatic change is not unlike that which occurred in environmental management. This article will look at the similarities between changes in environmental regulations and emergency management and provide a look into the emerging

complexity of emergency management and its umbrella of Homeland Security.

Many events, including Love Canal, led to the Resource Conservation and Recovery Act (RCRA) of 1976. The "cradle-to-grave" control of hazardous waste by RCRA was an attempt to reduce mismanagement of this waste that polluted our environment. Ironically, RCRA did little to encourage reuse or recycling. Source reduction grew out of the Hazardous and Solid Waste Amendments (HSWA) of 1984 which stressed waste minimization and innovative treatment technologies. The Pollution Prevention Act (PPA) of 1990 finally introduced a more pure form of waste minimization that included source reduction, recycling and reuse. Ultimately, the environmental policy switched from responding to hazardous waste to taking actions that would prevent the creation of hazardous waste in the first place.

Emergency management has undergone a similar evolutionary growth. The Federal Emergency Management Act was an outgrowth of the old civil defense days. The National Governor's Association in the 1970's recommended a logical and practical approach to emergency management which promoted an all-hazards approach to managing disasters and was institutionalized as Comprehensive Emergency Management (CEM) with the creation of FEMA in 1979. CEM recognizes four phases of emergency management which include mitigation, preparedness, response, and recovery. While mitigation has always been considered important, there has been a disproportionate emphasis placed on response and recovery. The fallacy of this emphasis became evident following 9/11. It became painfully evident that prevention of such disasters was far more important than response capabilities. We now know that an increased emphasis must be placed on mitigation and prevention.

Concurrent with the realization of the importance of prevention came an awareness of a major shortfall in the supporting pillars of the security of our citizens. There have been three separate yet related supports that provided security and safety for our country. These include the Department of Defense that protects us from enemies outside of our borders, Department of Justice that protects us from criminals within

our borders, and FEMA that provides disaster relief from natural and technological disasters. It was evident following 9/11 that we had a major flaw in our grand system that did not adequately address such threats as terrorism and weapons of mass destruction. A fourth pillar was needed that would provide the support for the security and safety of our citizenry—that fourth pillar is the Department of Homeland Security (DHS).

DHS consists of four directorates which include: Border and Transportation Security, Emergency Preparedness and Response, Science and Technology, and Information Analysis and Infrastructure Protection. FEMA moved into DHS and became part of the Directorate of Emergency Preparedness and Response. Other functions within this Directorate include Strategic National Stockpile and the National Disaster Medical System, Nuclear Incident Response Team, Domestic Emergency Support Teams (Justice) and National Domestic Preparedness Office.

While we run the risk of allowing preoccupation with terrorist threats to eclipse our readiness efforts for other hazards, terrorism has become the threat de jour. On the positive side, many steps we take toward preventing and/or mitigating terrorist acts also



Participants in a recent Emergency Preparedness Exercise

provide protection against other threats including sabotage,

workplace violence, corporate espionage, civil disobedience, and many more.

There are many ways of categorizing terrorist threats and weapons of mass destruction, but probably the most common in literature today is C B R N E (pronounced “see burn”).

Continued on page 12



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JULIANNE HAMILTON JOINS AMEC

❖ Brad Christensen, U.S. Communications Manager, AMEC Earth & Environmental, announced recently that Julianne Hamilton, P.G., has joined AMEC as manager of environmental operations in Arizona. Julie has 15 years experience as an environmental professional. Her expertise includes site characterization and remediation of contaminated properties, including brownfield properties, and leaking-underground-storage-tank sites. Her regulatory compliance experience includes preparation of pollution-prevention plans, waste characterization, and permitting.



Julianne Hamilton, AMEC
(Photo courtesy AMEC)

AMEC operates Earth & Environmental offices in Phoenix, Tucson, and more than 80 other locations in North America. Julie can be contacted at

602-272-6848, or by email at julie.hamilton@amec.com.

INTER TRIBAL ILLEGAL DUMPING CONFERENCE

❖ The Inter Tribal Council of Arizona, Inc., Tribal Solid Waste Program coordinated and facilitated an illegal dumping conference on June 24-26, 2003, in Mesa, AZ. The Inter Tribal Council of Arizona, Inc. is an organization of nineteen Tribal Governments in Arizona. Governor Richard Narcia of the Gila River Indian Community opened the conference emphasizing the importance of combating illegal dumping on tribal lands. The majority of the conference attendees included Tribal members and staff from Arizona, Nevada, California, and New Mexico. Attendees also included U.S. EPA officials and mid-school students.



Loretta Stone accepting an award
(Photo courtesy of Suzette Martin, Inter Tribal Council AZ)

The conference goal was to increase awareness of existing and potential threats to public health and the environment posed by illegal dumping. It provided an opportunity for tribal community members to learn about various strategies and partnerships to control this problem. The conference featured breakout tracks in Enforcement & Compliance, Public Awareness, and Environmental Education. In addition, the conference had a youth poster contest, exhibits, and tribal environmental program awards for "Outstanding



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Service in Solid Waste Management". The awardees include Loretta Stone, Environmental Program Specialist, San Carlos Apache Tribe; The San Xavier District Ranger Department of the Tohono O'odham Nation; and the Gila River Indian Community Department of Environmental Quality.

The conference was funded in partnership with the Hohokam Resource Conservation and Development Area, Inc., Phoenix Area Indian Health Service, and Southwest Strategy. For more information, contact Suzette Martin at 602-258-ITCA, or by email at suzette.martin@itcaonline.com.

2ND ANNUAL GOLF TOURNAMENT BENEFITS AMERICAN CANCER SOCIETY & TAMARA BOLIN MD MEMORIAL SCHOLARSHIP FUND

❖ Aerotech Laboratories, Inc., will be hosting its 2nd annual benefit golf tournament on Saturday, September 6th at Starfire at the Scottsdale Country Club. All proceeds will benefit the American Cancer Society, Southwest Division, and the Tamara Bolin MD Memorial Scholarship Fund at the Albert Einstein College of Medicine.

The benefit is in the honor of Tamara Bolin, who passed away at the age of twenty-seven after a three-year battle with cancer. After spending a year researching for the Diabetes Prevention Project, she enrolled at the Albert Einstein College of Medicine in New York. She was diagnosed with her illness as she completed her first year of medical school, but despite an uncertain future she elected to pursue her degree and graduated with a Doctorate in Medicine on June 6, 2002. Even in the face of her relentless illness she was always concerned with others first. She enrolled in several clinical treatment trials knowing that they had no proven effectiveness but hoping that she was contributing to knowledge that might help her and also others. She is remembered as an outstanding person with unstoppable spirit, which served as a constant inspiration to family and friends.

Potential benefit sponsors and participants are encouraged to contact Debra Weedon at Aerotech at 623-298-1021 or email events@aerotechlabs.com.

3RD BINATIONAL P2 CONFERENCE: TUCSON

❖ Pollution Prevention Seminar: The third binational pollution prevention conference will be held in September in Tucson, Arizona. Watch for further details, or call the numbers below for more information. Plan to attend for a day filled with pollution prevention ideas and tips. Sponsored by the Southern Arizona Environmental Management Society, the Tucson Fire Department, Pima County Department of Environmental Quality and the Arizona Department of Environmental Quality. For additional information contact the seminar co-chairs, Edna Mendoza at 520-628-6710 or 888- 271-9302, or Gail Bliss at 602-771-4212 or 800-234-5677, Ext. 771-4212.

ANNUAL WRPPN POLLUTION PREVENTION CONFERENCE

❖ The Western Regional Pollution Prevention Network (WRPPN) will present its annual Pollution Prevention Conference from October 15 to 17. The WRPPN is a

cooperative alliance of P2 programs throughout the region, including Arizona, California, Nevada, Hawaii, Tribal Lands, and Trust Territories. The conference provides a training and discussion forum for pollution prevention topics of importance to programs in Region 9. This is one of the premier P2 conferences across the nation. For more information, contact Ed Gonzalez, WRPPN Regional Coordinator (775) 689-6675, or visit the website at www.wrppn.org.

ADOSH EMAIL FORMATTING CHANGES

❖ ADOSH plans a change in its email address formatting. The new format for all ADOSH personnel is: **Lastname.Firstname@dol.gov**. Any "old" email addresses should continue to work for some time, but it is suggested that the new email address formatting be used.

NEWS BRIEFS

will publish notices, new products or services, significant accomplishments or awards to individuals or facilities, and other information helpful & of interest to Arizona's EH&S community. Please contact the editor, or send your notices to: Editor@ehshomepage.com

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POLLUTION PREVENTION, RECYCLING & WASTE MINIMIZATION

**TECHNIQUES YOU CAN
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EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW - PLUS!

Do you store hazardous chemicals on your site?
Daniel Roe, Director of the Arizona Emergency Response Commission, illustrates the importance of emergency planning.

by Daniel Roe

It's 5:45 a.m. The day is already warm with a relatively light wind of 4 mph coming from the west. You're having your morning coffee and looking through headlines that reflect "challenges" to be faced in almost every discipline that can be imagined. Your concentration is disrupted by a phone call from a supervisor at your facility.

"We're releasing chlorine . . . probably gonna lose 60 pounds of it by the time it's all over. No question about it having left the site . . . it has."

Well, so much for other folks' challenges . . . time to think of your own.

You thank the supervisor for the call and advise him to follow his written response procedures and to call you back when the "smoke has cleared." You ask him if he needs anything from you. His *"Where are the written procedures?"* catches you off guard and your concerns mount. *"You're kidding, of course, right?"* "Not hardly," is the response. "Well, do

the following: call 9-1-1; make sure we've got nobody on site in harms way; call me when it has been taken care of." You never get the call.

Well, so much for being part of the scenario. Let's step outside of the roles. How much could have been done in advance of the problem that wasn't done? How much that needed to be planned for wasn't? The can't/won't happen to me belief is catching lots of folks by surprise these days. Here are a few things to ponder.

Under the Emergency Planning and Community Right to Know Act (EPCRA), the threshold planning quantity for chlorine, an extremely hazardous substance, is 100 pounds. That means that in Arizona you've got to have a plan that addresses the elements identified in Arizona Revised Statutes Title 26, Chapter Two, Article Three. That plan needs to be sent to the Emergency Response Commission (AZSERC), your local emergency planning committee and the fire department/district with jurisdiction for your facility. So let's

Participants in a recent Emergency Preparedness Exercise



say you never had 100 pounds at your facility at any one time during the course of the calendar year. Under EPCRA, you don't need to have a plan (you might have needed something under your jurisdiction's fire codes and I'd suggest finding that out from your fire marshal.) Now let's say you've had the release that's talked about above, namely 60 pounds of chlorine. So here you are without a plan and it looks like without any preplanning as well and sitting on a list of requirements.

Interestingly, you've got to report the release you've had. Under the Community Right to Know laws (both federal and state), as well as the Comprehensive Environmental Response Compensation Liability Act (CERCLA), a release of 10 pounds of chlorine triggers that emergency notification and that IMMEDIATE notification must go to the Emergency Response Commission (in Arizona the initial notification of such a release is made telephonically to the AZ Dept of Environmental Quality at 602-771-2330 who accepts that call on behalf of the Commission), to the National Response Center at 1-800-424-8802 and to ANY Local Emergency Planning Committee (LEPC) or Emergency Response Commission (ERC) likely to be impacted by the release. Don't forget notification to Tribal jurisdictions as well! Put your facility on the California, Nevada, Arizona borders and you've got lots of talking to do, to include, (depending on the size of the release), the Fort Mojave Tribe. Know how to get hold of them? Now let's up the ante!

Let's put lots of ammonia and chlorine at your facility. Lots of it! Let's build in not only accidental release concerns, but concerns about intentional acts to cause releases, as well. Let's consider your requirements under not only Community Right to Know, but under the Clean Air Act Risk Management Planning requirements, as well. Got 2500 pounds of chlorine? Got 10,000 pounds of anhydrous ammonia? You're a player. Your concerns regarding site security are real!

So, in addition to an annual Tier Two Hazardous Chemical Inventory submission, triggered by having 500 pounds of ammonia or 100 pounds of Chlorine, you're now invited into the world of Risk Management Planning and the requirements are significant and important to be met, not only because of regulatory compliance but because of security and safety for your facility, workers and community. If you otherwise use more than 10,000 pounds of either chlorine or ammonia during the course of the year, you're also invited into the world of Toxic Chemical Release Inventory (FORM R) reporting, another Emergency Planning and Community Right to Know (EPCRA) requirement. If you manufacture or process the chemicals, the threshold is 25,000 pounds. Lots to think about and do. And it really needs to be done yesterday!

Any changes in your life since September 11, 2001? If yours hasn't changed, something was either done in a

superlative manner prior to that date or you're missing some significant steps in protecting your infrastructure, workers and/or your community. So, where do you turn for some assistance and/or appropriate referrals?

Reporting a terrorist act or a release of a chemical:

National Response Center
1-800-424-8802

Risk Management Plans/EPCRA

EPA Call Center:
1-800-424-9346
Angie Proboszcz, Region IX
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415-972-3077
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Enjoy your newspaper and coffee.

Daniel Roe is Executive Director of the Arizona Emergency Response Commission. He can be reached at 602-231-6345 or by email at RoeD@dem.state.az.us.



Continued from page 7

TERRORISM DEFENSE

This acronym stands for chemical, biological, radiological, nuclear, and explosive. Another common acronym is B-NICE which stands for biological, nuclear, incendiary, chemical, and explosive. Biological weapons have emerged as an extremely formidable threat. Contrary to popular thought, many bio-weapons are easily produced. Chemicals that can be used for a terrorist agenda include something as easily obtained as chlorine. While the average citizen considers chlorine as a part of everyday life, it is extremely dangerous. The IDLH of hydrogen cyanide is 50 ppm while that of chlorine is 10 ppm!

There are basically five elements to an effective terrorism defense program. These include:

- Intelligence
- Threat definition/assessment
- Anti-terrorism programs
- Counter-terrorism capabilities
- Public/employee information

While the quality and quantity of intelligence reports are generally outside of the control of most organizations, some idea of terrorist activity, capability, and motivation is required to effectively define and assess the threat to your individual company. Anti-terrorism programs are those that attempt to detect and/or deter terrorist advances. Examples include security programs, infrastructure protection, and personnel background checks. Counter-terrorism capabilities include those necessary to meet terrorists up close and personal. Examples include the Army's Delta Force and specially trained SWAT teams. The linchpin that makes the program work, however, is an effective information program with realistic risk communication. Each and every employee must become a soldier in the war on terrorism.

While we have witnessed many

changes to our awareness of new hazards such as terrorism, we have only begun to see the profound changes in our manner of doing business. In March of this year, DOT published a final rule regarding security requirements for Offerors and Transporters of Hazardous Materials (49 CFR 172). This rule established requirements to enhance the security of hazardous materials transported in commerce. Included in these enhanced security measures is a requirement to develop and implement security plans. As with most plans, certain training is specified that includes security awareness and in-depth security training. It is probably only a matter of time before similar requirements start creeping into site safety and health planning in general.

Currently, there are no federal laws that explicitly require chemical facilities to plan for terrorist attacks. That could change in light of President Bush's National Strategy for the Physical Protection of Critical Infrastructures and Key Assets. Chemical industries, however, are not the only targets of would be terrorist. Product tampering has long been a terrorist tool to frighten the multitudes. Imagine the vulnerability of a baby food manufacturer.

The American Chemistry Council, Chlorine Institute, and the Synthetic Organic Chemical Manufacturers Association published a document titled *Site Security Guidelines for U.S. Chemical Industry* (available on the internet, www.cl2.com). This is an extraordinary document for developing a site specific security program that benefits practically any organization. Among the many benefits of a security program identified by this guide include the following:

- Safeguards employees, the community and the environment
- Maintains the integrity and effectiveness of operations
- Reduces litigation risk, insurance costs, and theft
- Reduces the risk of vandalism and sabotage by employees and non-employees
- Protects trade secrets
- Improves relationships with local authorities and surrounding communities
- Provides a mechanism for personal control and accounting in case of emergency

As we can see, the events of 9/11 have profoundly changed the basic paradigm of emergency management. The role of emergency management has become part of a larger picture of Homeland Security. Increased attention to terrorism defense has suggested that we incorporate such programs into our specific safety and health plans as well as emergency response plans. The future will likely see mandatory compliance. For the short term, a viable site security plan can pay great dividends in our quest for effective terrorism defense.

Danny Peterson, PhD., is an Associate 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.



SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT: SUSTAINABILITY EXAMPLES

SO MANY EXAMPLES; SO LITTLE TIME . . .

Nicholas R. Hild, PhD.

The broad subject of Environmental Sustainability and Sustainable Development is so exciting, because it has so many facets. It reminds me of the early days of hazardous waste management panic that the Resource Conservation and Recovery Act and CERCLA-Superfund regulations caused. Those laws, ‘*motivated*’ tremendous efforts all across America to rid ourselves of groundwater contamination and to find technologies that could be used to make our nation’s water fishable, swimmable, and drinkable again.

Sustainable Development and its many environmental benefits and benefactors, are in much the same state of infancy today as our collective RCRA/CERCLA response was back then: it took herculean efforts by thousands of technical problem solvers from divergent backgrounds, just to *define* a majority of the hazardous waste problems, much less to correct or remediate them.

Not that the problems are all resolved. We find new sites every day, but we have made great progress in the 20+ years since the RCRA regulations were promulgated, in developing prevention strategies and clean-up technologies that continue to evolve.

Given that we are preaching to the choir here, much as we did back in the early ‘80’s when we took on the job at ASU of training thousands of remediation specialists required by laws like 40CFR265.16 and OSHA’s HAZWOPER Standards under 29CFR1910, I would like to share some positive examples of companies that have stepped up to the sustainability challenge. These companies have done something really great which will have a very positive impact on our children’s, children’s, children’s (future) life style. Take their example as motivation to go ye forth and do likewise.

RECYCLING IN THE LAND OF THE MIDNIGHT SUN

The Matsushita Eco Technology Center (METEC) recently opened a new state-of-the-art recycling plant in Hyogo, Japan which is designed to recycle one million “end-of-life” electric home appliances each year. The goal is to have a “zero emissions” facility which completely reuses everything in every home appliance that comes into the factory.

The motivation that led to the development of this facility, (just as with our hazardous waste clean-up efforts in this country), came from a law passed in 2001 called the Japan Home Appliance Recycling Law that requires retailers to collect old air conditioners, TV sets, refrigerators and washing machines and deliver them to a METEC recycling center.

“End-of-life” products coming out of a given appliance must be returned to the original manufacturer and the law dictates how much of the total product, by weight, must be recycled with the government charging dumping fees for materials that must be landfilled. Officials say its not a perfect solution to land-short municipalities where people have every electronic gadget known to man, but its a step in the sustainable future.

Continued on page 14

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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HILD: SUSTAINABILITY, SO MANY EXAMPLES

SHOT FROM GUNS: ENVIRONMENTALLY FRIENDLY FUEL

Forty years ago, I worked as a design draftsman in the Plant Engineering department of the oldest cereal mill in the world: Quaker Oats Cedar Rapids (Iowa) plant. Back then, I was amazed at the age and sheer mass of the heavy machinery that grains were processed through in route to becoming cereal, pancake mix, and cattle feed. A lot of that equipment had been kept running for fifty years and a plethora of skilled craftsmen kept everything running like a fine Swiss watch. Even the puffing “guns,” a full six stories in height, were mid-1800’s technology that still worked a 24 hour shift, six days a week! (Note: believe it or not, puffed rice and puffed wheat really *are* ‘shot from guns’) The workforce took great pride in running and maintaining a ‘sustainable’ factory, even though at that time, no one had even thought about that term. And, it turns out that, today, more than 80% of that old equipment is still chugging along and working fine.

“Pollution” had not yet become a part of everyday language and no one was looking for ways to be more *sustainable*. Our “pollution” concerns

back then were mostly based on keeping the annual Cedar River flood crests from impacting our ability to produce Puffed Wheat and Puffed Rice (and Cap’n Crunch!). Our biggest concern back then, for a large cereal processing facility like Quaker Oats, was the potential for dust explosions and fires of catastrophic proportions throughout the facility and in the huge grain silos adjoining it.

Today, just as then, the process of sorting wheat and oats, dehulling and separating the chaff, occurs in a multi-story “cleaning house” that generates tremendous amounts of dust. Every floor of the cleaning house (there were 13 stories back then; more today), had at least one baghouse collector with a cyclone separator that made each floor a veritable dust chamber where any stray spark could instantly cause a flash fire. It gave new meaning to the term “*indoor air pollution*” (also, not yet a phrase in common use) and I spent a lot of my time just dealing with static electricity grounding as the grains traveled through serpentine piping pathways from floor to floor and into the grain silos to await further processing.

The hulls of the oats were almost useless since they didn’t become a part of any feed or cereal product and livestock wouldn’t eat them, so tons and tons went to the landfill every day. But, that was then. Today Quaker Oats has partnered with the University of Iowa, thirty miles down the road, to deliver 50,000 tons of hulls each year as a replacement for 30,000 tons of coal in the University’s coal-fired power plant. The University estimates the savings they will reap will be around \$1 Million a year while they generate 72,000 pounds less of CO₂ greenhouse gas, and 60 tons less a year of SO₂ from not burning coal that the hulls replaced! Quaker Oats benefits by “avoiding” landfilling fees at around \$20 a ton which is money that goes directly to the bottom line, helping them be more competitive in the cereal marketplace. And, the University, of course, is the big winner.

However, as always, the biggest beneficiaries of these two industry examples of sustainability innovation, are our children’s, children’s, children. Go ye forth and do likewise.

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REGULATORY DEVELOPMENTS

LEGAL NEWS YOU CAN USE

CLAIMING THE RECYCLING EXEMPTION

Michael C. Ford, Attorney

Recycling of scrap industrial materials may be an environmentally and economically sound decision, but it also raises the potential for the generator of the recyclable material (among other parties) to incur cleanup liability. Numerous CERCLA cases involve contaminated recycling facilities and the potentially liable generators of the material that ended up at the contaminated site.¹ However, generators can take advantage of a relatively recent amendment to CERCLA designed to encourage recycling that allows parties arranging for recycling to avoid cleanup liability if certain conditions are met.²

The "recycling exemption" requires that, at the time of the transaction, the material:

1. qualified as a "recyclable material";
2. met a "commercial specification grade";
3. had an existing market;
4. was made available, in substantial part, for use as a feedstock for the manufacture of a new saleable product; and
5. could have been used as a replacement or substitute for a virgin raw material, or the product to be made from the recyclable material could have been a replacement or substitute for a product made, in whole or in part, from a virgin raw material.³

The types of recyclable materials eligible for the exemption are: scrap paper, scrap plastic, scrap glass, scrap textiles, scrap rubber (other than whole tires), scrap metal, or spent lead-acid, spent nickel-cadmium, and other spent batteries, as well as minor amounts of material incident to or adhering to the scrap material as a result of its normal and customary use prior to becoming scrap," and exclude certain shipping containers and PCB-containing materials.⁴ Scrap metal is further defined to include "bits and pieces of metal parts (e.g. bars, turnings, rods, sheets, wire) or metal pieces . . . which when worn or superfluous can be recycled."⁵

In addition to the material- and process-specific requirements noted above, the exemption requires that the generator of the recyclable material exercise "reasonable care" to determine that the consuming facility (where the material is handled, processed, reclaimed or otherwise managed) was in compliance with all applicable and substantive management requirements.⁶ "Reasonable care" is determined using criteria that include (but are not limited to) the price paid for the material; the ability of the generator to detect the nature of the consuming facility's operations; and the result of inquiries made to appropriate environmental agencies regarding the consuming facility's compliance with applicable and substantive requirements for managing the material, e.g. permits.⁷

The exemption is lost in certain circumstances, including where the generator had an "objectively reasonable basis to believe" at the time of the transaction, that the material would not be recycled, or that hazardous substances had been added to the material for purposes other than processing for recycling. The factors relevant to the "basis to believe" are similar to those relevant to the "reasonable care" criteria for evaluating the consuming facility: the size of the generator's business; customary industry practices; price; and the ability to detect the nature of the consuming facility's operations. The exemption will also be lost if the generator fails to exercise reasonable care with respect to the handling of the material and, presumably, if the generator has an objectively reasonable basis to believe that the consuming facility was not in compliance with substantive applicable regulations.⁸

The extent of the effort necessary to satisfy the "reasonable care" standard is uncertain; however, it is clear that the exemption requires some degree of due diligence regarding the consuming facility. While the price paid may evidence the value of the material for recycling, this factor alone should not determine the

Continued on page 17

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.

FIVE COMPONENTS OF A

HAZARDOUS WASTE CONTINGENCY PLAN

What is required in your plan? ADEQ identifies five key components that are often not completely addresses by a facility

by Jacqueline Maye

A Hazardous Waste Contingency Plan is a written plan developed by a facility to describe specific actions that personnel must take in a response to an unplanned event that could result in the release of hazardous waste to the air, soil, or surface water at the facility. Although this article provides the highlights of the requirements, it is always recommended that you read the regulations, which can be found in the Code of Federal Regulations (40 CFR § 264.52).

Full and complete written hazardous waste contingency plans are required documentation for large quantity generators (LQG) and for treatment, storage and disposal (TSD) facilities of hazardous waste. The owner or operator of the facility is responsible for having a written and updated plan on site. Many facilities are also choosing to develop the plan in an electronic format that is accessible to local fire station personnel in the case of an emergency. Regularly scheduled drills are highly recommended in order to identify any weaknesses in the implementation of the plan.

For small quantity generators (SQG), the phone number of the facility emergency coordinator is required to be

posted by each telephone. Conditionally exempt small quantity generators (CESQG) have no requirements, but it is usually recommended that they post appropriate emergency phone numbers by all phones.

Key components of a Hazardous Waste Contingency Plan for LQGs and TSDs that are often not completely addressed include:

1. A description of the actions facility personnel must take in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility. The plan should include specific response and containment procedures for each type of chemical or operation. For instance, the type of gloves, clothing, respirator, fire extinguisher, and absorbent for each type of waste chemical, and appropriate instructions for their use.

2. A list of names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator. Persons designated as emergency coordinators must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, location of records, and the facility layout. Additionally, this person must have the authority to commit the resources needed to carry out the contingency plan.

3. A list of all emergency equipment at the facility such as fire extinguishing systems, spill control equipment, personal protective equipment, and communications and alarm systems. This includes hydrants, extinguishers, sprinkler systems, shut-off switches, standby power, and drainage retention areas. The list should also include, for each piece of equipment, the location, physical description, and a brief outline of its capabilities. SQGs, don't forget, you too need to have and maintain appropriate emergency equipment.

4. An evacuation plan for facility personnel that outlines the primary and secondary exit routes, and a description of the audible or other signal to be used to begin evacuation. The plan should also include provisions for advising evacuation of the surrounding community.

5. The plan should include phone numbers for other response assistance and spill reporting, including 911 or the local fire department, facility response team staff, the National Response Center 24-hour spill report line (800-424-8802), the Arizona DEQ 24-hour spill report line (602-771-2330), and

the number for your Local Emergency Planning Committee (LEPC). LEPC phone numbers and other emergency planning information are available by contacting Dan Roe at the Arizona Emergency Response Commission at (602) 231-6346 or at www.dem.state.az.us/azserc/. (EDITORS NOTE: See Dan Roe's article on page 10).

As chemical safety professionals, we hope and plan to prevent catastrophic events from ever occurring. A good contingency plan can help you manage large events and small, routine spills. By using good practices during the small spills, and conducting periodic drills, you will be much better prepared if the worst happens.

For more information on Hazardous Waste Contingency Plans contact Jacqueline Maye at the ADEQ Facility Assistance Unit, (602) 771-4607 or jpm@ev.state.az.us.

Continued from page 15

FORD: CLAIMING THE RECYCLING EXEMPTION

applicability of the exemption either way, as it is not unusual in recycling transactions for the generator to pay the recycler. At a minimum, the generator should request in writing from governing agencies any information on the consuming facility's permit and compliance status. Electronic information sources, such as EPA and state and local agency websites are also relatively easy to search, and may have useful information. The generator should also request from the consuming facility itself evidence of all relevant permits, and any documentation regarding noncompliance. In addition, the generator should attempt to obtain sufficient information to confirm the nature of the consuming facility's operations, and the legitimacy of the recycling processes via direct inquiry of the consuming facility. Depending on the degree of hazard associated with the material, the volume involved, the complexity of the recycling process, and the location of the consuming facility, it

may be prudent for the generator's due diligence to include a visit to the consuming facility.

Generators of recyclable materials wishing to claim the recycling exemption should realize that the burden will be theirs to demonstrate "by a preponderance of the evidence" that all of the criteria were met at the time of the transaction. Generators should therefore compile adequate information to support their eligibility for the exemption before entering into the transaction, and retain files permanently thereafter.

1 One category of parties potentially liable for hazardous substance cleanup costs is those "who by contract, agreement, or otherwise arranged for disposal or treatment . . . of hazardous substances owned or possessed by such person . . ." 42 U.S.C. § 9607(a)(3) ("generators"). The exemption is also available to "transporters" of hazardous substances. 42 U.S.C. §§ 9627(a), 9607(a)(4).

2 Superfund Recycling Equity Act, enacted 11/29/99 and codified at 42 U.S.C. § 9627.

3 42 U.S.C. § 9627(c).

4 42 U.S.C. § 9627(b).

5 42 U.S.C. § 9627(d)(3). The same definition is used under RCRA (see 40 CFR § 261.1(c)(6)).

6 42 U.S.C. § 9627(c)(5) (for transactions occurring after February 27, 2000 (90 days from the enactment of the exclusion)).

7 42 U.S.C. § 9627(c)(6). Transactions involving scrap metal and scrap batteries have certain additional requirements, including that the arranger must demonstrate that, at the time of the transaction, the arranger was in compliance with applicable requirements for handling the material. 42 U.S.C. § 9627(d), (e).

8 42 U.S.C. § 9627(f).

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HWS-RGD-0240

February 9, 2001

REF: HWICU01-0037

Ms. Julie Rogers

Rogers Consulting Services

512 W. Brown, Tempe, AZ 85281

EVAPORATION OF HAZARDOUS WASTE RINSE WATERS

RE: Regulatory Status of On-site Evaporators Used at Plating Facilities

Dear Ms. Rogers:

The Arizona Department of Environmental Quality ("ADEQ") Hazardous Waste Section ("HWS") has reviewed your request for a written clarification on the regulatory status of evaporators used on-site by generators to remove water from hazardous wastes. In particular, you would like to know if the evaporation of rinse waters by metal plating facilities is allowable under current regulations. ADEQ has reviewed this issue and has the following comments:

Per 40 CFR § 262.10¹, "treatment" is defined as "... any method, technique or process ... designed [to] change the physical, chemical or biological character or composition of any hazardous waste so as to ... render such waste ... amenable for recovery, amenable for storage or reduced in volume." Based on the above, ADEQ believes that evaporation by plating facilities would meet the definition of "treatment".

Per 40 CFR § 262.34(a)(1)(i) large quantity generators ("LQGs") can accumulate hazardous waste on-site for 90 days or less in a tank if they comply with all applicable requirements of Subparts J, AA, BB and CC of 40 CFR part 265 except §§ 265.297(c) and 265.200. A permit or interim status is not required provided that the LQG meets all of the requirements outlined in 40 CFR § 262.34 (a) through (c). Small quantity generators ("SQGs") are allowed, under 40 CFR § 262.34(d) to accumulate in tanks as long as they meet the requirements of 40 CFR § 265.201. In addition, the federal register preamble to the final small quantity generator regulations promulgated on March 24, 1986 states that "... no permitting would be required if a generator chooses to treat their hazardous waste in the generator's accumulation tanks or containers in conformance with the requirements of § 262.34 and J or I of Part 265." Although this statement appeared in the small quantity generator regulations, it is applicable to all generators who accumulate waste in compliance with 40 CFR § 263.34. The preamble further stated that "Nothing in § 262.34 precludes a generator from treating waste when it is in an accumulation tank or a container covered by that provision."

In summary, ADEQ has concluded that under the existing regulatory scheme plating facilities would be allowed to treat (i.e., evaporate) rinse waters while these wastes are being accumulated for subsequent management without obtaining a permit or interim status. Generators must ensure that this process occurs in full compliance with all of the 40 CFR § 262.34 requirements.

Please note that federal, state and local environmental regulations are subject to change. Plating facilities should be periodically reviewing and assessing their waste management practices to ensure compliance with all current applicable regulations.

Senior Environmental Engineer,
Hazardous Waste Section, ADEQ

¹ References to Title 40 of the Code of Federal Regulations, Section 260 through 273 (40 CFR § 260 through 40 CFR 273), are as adopted by Title 18, Chapter 8, Article 2, Sections 201 through 280 of the Arizona Administrative Code (A.A.C. R18-8-201 through R18-8-280).



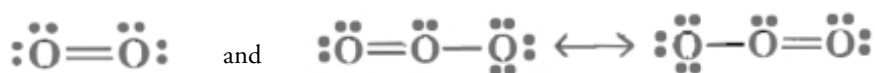
IT'S ALL ABOUT CHEMISTRY

GOOD VS BAD OZONE

Larry Olson, PhD.

Rarely has so much effort been expended to control one molecule whose existence, even under the best of circumstances, is fleeting. What is it about ozone that makes it so essential in the stratosphere, 10 – 50 km above the earth's surface, but so harmful at an altitude of 10 - 50 feet? Are there two different kinds of ozone that differ in bonding and chemical reactivity? Is there a good (stratospheric) ozone and a bad (tropospheric) ozone?

The answer is no. There is only one ozone molecule and it owes its distinctive behavior to its chemical bonding. Unlike the O_2 molecule, which contains an oxygen – oxygen double bond, the O_3 molecule has a bond order of $1\frac{1}{2}$, as seen by the Lewis structures shown below.



This lower bond order makes O_3 much more reactive than O_2 . Ozone is a more powerful oxidizing agent in water than is O_2 , with an E° of 2.07 V in acid solution vs 1.23 V for O_2 . In air, tropospheric ozone is particularly reactive with carbon – carbon double bonds (alkenes), where it acts as an oxygen donor to form an epoxide. Alkenes can be found in rubber, lung tissue, and green plants, which gives some idea of the damage that ozone can cause when it is present in our everyday world.

A bond order of $1\frac{1}{2}$ also means that ozone absorbs light at a different wavelength than O_2 . Planck's law ($E = hc/\lambda$) states that the energy of light is inversely proportional to its wavelength. Since it takes more energy to break the oxygen double bond, the absorption band for O_2 is centered at a lower wavelength, around 150 nm vs 250 nm for ozone. The two primary constituents of the atmosphere, N_2 and O_2 , don't absorb appreciably above 240 nm. Ultraviolet radiation can be divided into three categories: UV-A (314 – 400 nm), UV-B (280 – 325 nm), and UV-C (< 280 nm). UV-A is not particularly harmful to living organisms, but the shorter wavelength UV radiation can cause cellular damage, including skin cancer in humans. It is this UV radiation from the sun that would make it all the way to the earth's surface if not for the ozone molecules in the stratosphere.

Unfortunately, chlorofluorocarbons (CFCs) and other man-made ozone depleting substances have been found to catalytically react with ozone in the stratosphere. Mario Molina, F. Sherwood Rowland, and Paul Crutzen were awarded the Nobel Prize in chemistry in 1995 for their work in recognizing this threat. Thirteen years after the first warning by Molina and Rowland, the Montreal Protocol was signed in 1987. This groundbreaking international agreement and its follow-up Amendments, represent an unprecedented success story in forging a political solution to a global scientific problem. A 1% decrease in the ozone layer can cause a 1% increase in UV radiation at 310 nm, but a 10% increase at 290 nm. Thus, had stratospheric ozone continued to decrease at the 1980s rate of 0.4% per year, the increase in UV light at 290 nm would be 40% per decade. Speaking as a native Arizonan, with my own skin cancer issues, I don't need any more UV exposure!

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

ASSOCIATIONS PAGES

Editors note:
Arizona's many environmental associations provide a path for communication and education in the EH&S community. Among other benefits, they provide networking opportunities, educational resources, and keep members informed on professional news and technical advancements. Many of these resources are available to both members and nonmembers, so always look to these associations when you need assistance.

If your organization is not represented here, and you would like it to be, please call us. Being a part of the Associations Pages benefits both the organizations and the readers, most of whom belong at most to a only a few of the organizations, but still would like to keep current on all environmental activities.
Editor

AAI

AAI held its 12th Annual Environmental Summit on August 13th, 14th & 15th at the Prescott Resort in Prescott. The proceedings were conducted by former State Senator Rusty Bowers and included speakers from ADEQ and ADOSH along with many others. Jim Paxon, United States Forest Service Retired, also spoke about Rodeo/Chediski fire, wild-land fires in general and forest management. AAI would like to express appreciation and thanks to all of those who attended, participated in and sponsored this event.

With the exception of the month of August, AAI's EHS Committee Breakfast meetings continue to be held on the second Wednesday of each month from 7:00 to 9:00 AM. The next breakfast meeting is scheduled for Wednesday September 10th. For more information go to AAI's web page at www.azind.org under events or contact Brent Frazier (602-252-9415) or Jeff Homer (480-441-6672).

*Jeff Homer,
EHS Committee
Chairman*



ACHMM THUNDERBIRD

The Thunderbird Chapter of the ACHMM held a review course and certification exam in April 2003. Of the nine applicants who took the exam, seven passed and are now new CHMMs. The Thunderbird Chapter would like to congratulate these new CHMMs on their endeavor and hard work.

The Thunderbird Chapter meets the first Wednesday of each month at 6:00 pm at Garcia's, 2212 North 35th Ave. Please check out our website at www.thunderbirdchmm.org for more information.

*Matt Conway,
ACHMM
President*



AESF



The Arizona AESF will resume meetings the second Thursday of each month beginning September 2003. Meetings begin with social hour at 5:30 PM and dinner at 6:30 PM, discussion following. Topics planned for the second half of 2003 are environmental regulations, hazardous waste, new processes, and plating trends.

The AESF Annual Golf Tournament went off very well and we would like to thank all those who attended and contributed to the event. With the help of all the sponsors we had another successful event. We even had requests for an additional event to be scheduled during the winter. We will evaluate an additional tournament at the first meeting, but until then please mark your calendar for the next event in June 2004.

If you would like to be notified of upcoming AESF events and receive our newsletter or have your business/business card listed

*Barry Westerhausen,
Sergeant at Arms*



on the newsletter please call or send an e-mail to Barry Westerhausen at bwesterhausen@lachim.com (480) 206-4107.

We look forward to seeing everyone Sept 11th at the Doubletree Resort in Phoenix.



*David G. Young,
President*

The Arizona Environmental Strategic Alliance is taking some time off for the summer -- but will return to this spot in the October/

November issue! For information about the Arizona Environmental Strategic Alliance, please visit the website at www.azalliance.org.

ARIZONA ENVIRONMENTAL STRATEGIC ALLIANCE



*Mike Block,
President*

The Arizona Hydrological Society has embarked on its first fundraising campaign for Water For People

(WFP). The Society hopes to generate about \$4,000 for WFP in 2003.

Water For People is a non-profit, international development organization, founded in 1992 by the American Water Works Association. WFP provides funds to construct water and wastewater infrastructure in developing countries all over the world. Arizona WFP Committee volunteers have participated in design and construction of water supply and wastewater projects in Sonora, Mexico. Recently, the Arizona Committee provided \$4,000 for construction of a project in Vietnam.

An evening dinner, awards ceremony, and presentation are scheduled for early November in Tucson, featuring the WFP Executive Director, Steve Werner. The title of the evening's event is "AHS/WFP Bridging the Borders Dinner." Individuals, companies, and organizations that raise \$500 or more will be honored at the dinner and presented an award by Mr. Werner. AHS is seeking Dinner sponsors (\$250), Corporate sponsors (\$500), and Society sponsors (\$1,000). Sponsors will be acknowledged at the dinner, in program materials and the AHS newsletter, posted on the AHS website with a company link, and given a certificate of appreciation from Mr. Werner. Additionally, Mr. Werner will present awards to individuals who raise \$500 or more in individual donations. The WFP fundraising committee hopes to have prizes donated for a silent auction at the November event or to be given as gifts of appreciation to acknowledge individuals or organizations that exceed fundraising goals. If you or your organization would like to participate in our AHS/WFP Fundraiser, Tucson members may contact Mike Block at (520) 575-8100 or mblock@metrowater.com and Phoenix members may contact Dave Christiana at (602) 417- 2400, ext. 7339 or dchristiana@cox.net for further details.

ARIZONA HYDROLOGICAL SOCIETY



*AHS is raising funds for
Water For People*

If you are interested in volunteering on the Arizona WFP Committee, in Phoenix please contact Dave Christiana (see above). In Tucson, contact Asia Philbin at (520) 791-5080, ext. 1415 or aphilbi1@ci.tucson.az.us.

Please check the AHS website at www.azhydrosoc.org for details on our WFP fundraiser and for schedules of monthly AHS activities in your area.

AZ ELM



AZ ELM is gearing up for the Second Annual Environmental and Economic Development Symposium (SEED #2) to be held on Thursday, October 30, and Amateur

*David L. Kirchner,
President*



Golf Tournament on Friday, October 31, 2003. For information about the Symposium please see our full-page advertisement on page 29. You may also contact me directly, Mr. David L. Kirchner, AZ ELM President, at 602-840-3333 or by email at kirchner@basin-and-range.com. The AZ ELM website is at www.azelm.org. AZ ELM extends its appreciation to the Journal of Environmental Management Arizona for its co-sponsorship of SEED #2.

SAEMS



A primary focus for the Southern Arizona Environmental Management Society is environmental education and outreach. For several years we have awarded college students

*Pamela Beilke,
President*



scholarships for environmental studies. Over the last couple of years, SAEMS has expanded into other educational opportunities. Recently SAEMS supported the first GLOBE Celebration at Agua Caliente Park. Global Learning and Observation to Benefit the Environment (GLOBE) is an international environmental science program involving students in collecting and interpreting real scientific data. Students from around the world collect water quality data such as temperature, pH, conductivity, alkalinity and transparency. The data is then posted on the website www.globe.gov.

On June 25, SAEMS held its Annual Meeting with installation of the new Board of Directors. The new Board consists of Pamela Beilke, President; Frank Bonillas, President-Elect; Edna Mendoza, Vice President; Steve Johnson, Secretary; Michelle Freeark, Treasurer; and Karen Scrimshaw, Newsletter Editor. The guest speaker was Steve Owens, Director of the Arizona Department of Environmental Quality.

SAEMS luncheon meetings are held the last Wednesday of the month at the Viscount Suites, starting at 11:30. Future luncheon speakers include Jeff Schlegel, Schlegel & Associates speaking on Engineering Efficiency and Environmental Benefits in August and Fred Brinker, Tucson Airport Authority speaking on Airport Property Soil Remediation in September.



*Melissa Holmes,
EPAZ Program
Chairperson*

EPAZ will not be holding an Aug. meeting due to the AAI Annual Env. Summit. Our next monthly meeting will be Thursday, Sept. 11, and will feature Ms. Laura Malone of the

ADEQ Haz. Waste Unit. Ms. Malone will discuss what to expect from your next hazardous waste inspection.

Save the date! This year's Regulatory Roundup will be on Oct. 9th and 10th. The first day will feature such topics as: AZPDES – one year later and associated Stormwater Pollution Prevention Plan (SWPPP) issues and ADEQ's smart Notice of Intent (NOI); the overlap of Process Safety Management (PSM) and Risk Management Planning (RMP); Homeland Security Issues; Tier Two Chemical Inventory/Planning Requirements; various other topics have been planned but were not formalized at the time of publication. To make a request, recommendation, or suggestion regarding speakers or topics, please contact EPAZ Program Chairperson, Melissa Holmes by email at maholmes@craworld.com or by phone at (602) 749-9400.

We are very excited to be presenting a second day sponsored by Quarles & Brady Streich Lang. Roger K. Ferland, will host a half day seminar in which he will present what a company and their attorneys are doing prior to a suit being filed immediately following a major incident.

It's that time of year again! Membership renewals are due Oct. 1st and are \$40.00 per year. Renew your membership at our monthly luncheon or visit our website at www.epaz.org.

Thank you for your continued support. We look forward to seeing you at our Sept. meeting and at the Regulatory Roundup in October.

EPAZ



*Diane Brossart,
President*

All too often when we discuss environmental issues, we focus on the "bad things" – the threats and challenges to our quality of life. The good news is that these are exciting times for those working to assure a

smarter, better future for the Valley of the Sun. Public and private sector organizations alike are making significant positive contributions that inspire and give hope to generations to come.

In celebration of these accomplishments, Valley Forward's Environmental Excellence Awards program, held in partnership with SRP, recognizes contributions to the environment in 33 categories including: buildings and structures, site development and landscape, public art, environmental education, technology and environmental stewardship. Now in its 23rd year, the program is Arizona's oldest and largest environmental competition.

Some 700 corporate and community leaders from around the state are expected to attend the awards banquet on September 12 at The Phoenician Resort. First-place winners will receive the coveted handcrafted Crescordia award, named for the Greek term, "To Grow in Harmony." Valley Forward also will confer its most prestigious honor, the President's Award, on an individual or organization that has demonstrated a particularly special impact on the Valley's environment.

For more information on the Environmental Excellence Awards program, or to obtain tickets for the September 12 banquet, please call (602) 240-2408 or visit Valley Forward online at www.valleyforward.org.

VALLEY FORWARD

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*Environmental Excellence Awards
Recognize Accomplishments*

ADOSH INSPECTIONS

RESPIRATORY PROTECTION IN EMERGENCY RESPONSE

What do ADOSH compliance officers look for in a respiratory protection program?

by Sean Kriloff

The Arizona Division of Occupational Safety and Health (ADOSH) is one of a handful of regulatory agencies that has jurisdiction in an emergency scene response. ADOSH has overall responsibility for ensuring worker safety and health. OSHA has established numerous occupational safety and health regulations addressing worker safety during emergency scene response, including 29 CFR 1910.120 (Hazardous Waste Operations and Emergency Response), 1910.132 (Personal Protective Equipment), 1910.134 (Respiratory Protection), and 1910.1200 (Hazard Communication).

Emergency scene responses typically are multidimensional but one common link in the multi-agency response may be the responders' use of respiratory protection. ADOSH's responsibility is to ensure the health and safety of the first responders. Once that issue has been addressed to the extent possible, the response to the emergency can proceed. From the small house fire to a wide spread terrorism scene,



typical hazards can be anticipated and planned for, thus ensuring a greater chance for success.

One of the duties of an OSHA compliance officer is to conduct work-site inspections. Upon arrival, the compliance officer examines the written safety/health programs for the facility. Deficiencies are typically found with respect to the major sections of the written respiratory protection program requirements. In fact, many times, although employees are required to wear a respirator, no written respiratory protection program exists. In 29 CFR 1910.134, the "Respiratory Protection standard" requires the employer to develop a written respiratory protection program with required worksite-specific procedures and elements for required respirator use.

NINE (9) ELEMENTS MUST BE PRESENT IN A WRITTEN RESPIRATORY PROTECTION PROGRAM:

1. Procedures for selecting respirators in the workplace;
2. Medical evaluations of employees required to use respirators;
3. Fit testing procedures for tight-fitting respirators;
4. Procedures for proper use of respirators in routine and reasonably foreseeable emergency situations;
5. Procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, discarding, and maintaining respirators;
6. Procedures to ensure adequate quality, quantity, and flow of breathing air for atmosphere-supplying respirators;
7. Training of employees in the respiratory hazards to which they are potentially exposed (if known) during routine and emergency situations;
8. Training of employees in the proper use of respirators, including putting on and removing them, any limitations on their use, and maintenance; and
9. Procedures for regularly evaluating the effectiveness of the program.

Annual employee training is another major portion of the respiratory protection standard.

THE EMPLOYER MUST ENSURE THAT EMPLOYEES CAN DEMONSTRATE KNOWLEDGE OF AT LEAST THE FOLLOWING:

1. Why the respirator is necessary and how improper fit, usage, and maintenance can compromise the protective fit;
2. The limitations and capabilities of the respirator;
3. How to use the respirator effectively in emergency situations including situations in which the respirator malfunctions;
4. How to inspect, don, doff, use, and check the seals of the respirator;
5. What the procedures are for maintenance and storage of the respirator;
6. How to recognize medical signs and symptoms that may limit or prevent the effective use of the respirator; and
7. The general requirements of the respiratory protection standard.

Verify your site-specific written respiratory protection program. Does your written program address all the required elements? Does your training program address all the required issues? Are your employees proficient in these areas?

Admittedly, an emergency scene response is chaotic and ever changing and may not be fully understood until after the

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worker has been potentially exposed. Through pre-planning, employee training, and effective scene management, worker exposure can be minimized. ADOSH has a consultation office that can answer questions or help employers comply with the respiratory protection and other OSHA standards. The consultation sections can be reached at 602-542-1769 in

Phoenix, or 520-628-5478 in Tucson.

Sean Kriloff is an Industrial Hygienist for the Division of Occupational Safety and Health of the Industrial Commission of Arizona. Sean can be reached at 602-542-1664, or by email at kriloff.sean@dol.gov.

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- Overlap of Process Safety Mgmt & Risk Mgmt Planning
- Homeland Security Issues
- Tier Two Chemical Inventory/Planning Requirements

DAY TWO

- Roger K. Ferland will host a half-day seminar in which he will present what a Company and their attorneys are doing prior to a suit being filed immediately following a major incident

Visit www.epaz.org for the most current agenda

Questions regarding the conference?

Contact Melissa Holmes,

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Questions regarding exhibiting?

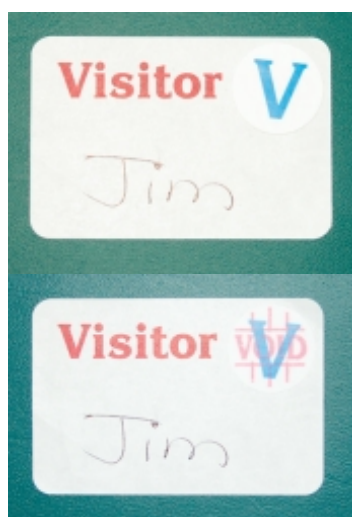
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UNIVAR USA

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Above, top: visitor badge just after issuing;
above, bottom: badge after 12 hours

Univar USA shares its expertise on facility security

by Barbara Young

In the wake of 9/11, many companies have changed and updated their security policies to protect their employees and neighbors from potential terrorist activities. As the largest chemical distribution and waste disposal company in the United States, Univar USA has stepped up to this challenge by implementing the following policies. For your convenience, we

have broken these down into four categories:

EMPLOYEE POLICIES

- Have emergency phone numbers of police, fire, FBI, etc. available at all times
- Report suspicious people to police immediately upon detection
- Have a spokesman prepared for media visits, especially for questions like "What is the worst thing that could happen at your facility if a terrorist were to act?"
- Make sure employees know to report a stolen uniform to a manager immediately
- Encourage personnel to ask questions if they see someone without a Visitors Badge

VISITOR POLICIES

- All Visitors MUST sign in and receive visitor pass
- A current drivers license is REQUIRED in order to receive a visitors badge
- Visitor passes MUST be worn at all times while inside facility
- Visitor passes MUST be surrendered upon exiting the facility.
- Use specially printed Visitors badges that revert to VOID after 10 – 12 hours (see photo at left)
- Only the main gate is allowed for visitor truck entry and exit
- Back gates are to be kept closed and locked when not in use by Univar personnel.
- Trucks must be parked outside the main gate while driver obtains visitors badge
- All drivers MUST stay at their truck while on Univar property
- Drivers are NOT allowed to wander around the warehouse or yard

TRANSPORTATION POLICIES

- Lock trucks while on Univar site when unattended
- Any loaded trailer must have a locked tractor under it or have a king pin lock in place and load braces in place while on a Univar site or unattended (see photo opposite page)
- Loaded trailers should be locked/sealed when pulled by a common carriers (Seal numbers should be recorded on Bill of Lading)
- When on the road, tractors should be locked when driver is out of the cab
- Reduce overnight runs, if possible. If required, park equipment in well lighted and secure area
- Fuel trucks prior to loading if possible; minimize any time away from unit
- Maintain line-of-sight with vehicle during any stops, including meal breaks
- NO non- business stops
- Route trips to avoid high populations areas when possible
- Keep alert for suspicious characters/situations at all times
- Check all loads carefully and regularly



Below: a security camera on facility building



Above, right: tank stand with 2-hour fire proofing coating; above: close-up of coating



- Stay in touch with dispatch; phone, Nextel, radio
- Cell phones should be in operating

condition and drivers should have emergency phone numbers readily available; phones are taken with the driver when he/she leaves the vehicle

FACILITY POLICIES

- Walk premises three times a day (morning, lunch, and night). Look for anything out of place. For example, a stuffed Teddy Bear next to a bulk tank or a briefcase under a flammable tank truck.
- Permanently lock rarely used doors and gates
- Ensure roll-down doors are locked and secure

Photo below shows position of king pin. Below, right: top photo shows king pin unlocked, bottom photo shows king pin lock in place.



- Follow written lockdown procedures for end of day shutdown
- Keep perimeter fences and gates in good condition
- Ensure shrubbery and trees are cut away from contact with fences
- Remove keys from forklifts and trucks during off-duty hours
- Bring all

forklifts inside building at the end of the day

- Store hazardous materials as far from fence line as possible
- Utilize motion-activated security cameras with film to monitor facility when vacant (see photo, left page)
- Question all vehicles that arrive in pairs that do not appear to be normal delivery vehicles

Would the implementation of these policies and procedures help protect your employees?

Barbara Young is a ChemCare Specialist with Univar. Barbara can be reached at 602-455-4017, or by email at barbara.young@univarusa.com. Univar maintains a website at www.univarusa.com.



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Arizona Environmental Leadership Through Mentoring (AZ-ELM)

Symposium for Environmental and Economic Development -- Staying On Track

2nd Annual Symposium

**Thursday, October 30, 2003
Doubletree Paradise Valley Resort**

Join hundreds of other professionals from private, academic, and government sectors in a collaborative setting, and help us to improve environmental performance and economic efficiency in Arizona.

Enjoy the prestigious Doubletree Paradise Valley Resort, while listening to a variety of dynamic speakers and increasing your awareness of current environmental issues.

The purposes of AZ-ELM's symposium and training workshops will be to focus on strengthening Arizona's partnerships between the public and private sectors and to showcase innovative approaches to solving environmental problems. One of AZ-ELM's primary goals is to help businesses comply with environmental regulations.

Amateur Golf Tournament

**Friday, October 31, 2003
Camelback Golf Club**

Continue your educational endeavors with a great day on the luscious greens at one of Phoenix's finest golf courses. Have fun networking in this four-person scramble tournament that promises to be competitive and rewarding. Hole prizes, longest-drive contests, and hole-in-one prizes are just part of the fun.



Hosted by Arizona Environmental Leadership Through Mentoring (AZ-ELM)

For information on sponsorships and exhibit booths, please contact David Kirchner.

kirchner@basin-and-range.com and at www.azelm.org

This event may qualify for Continuing Legal Education (CLE) credits.

AZ-ELM is a 501(c) 3, non-profit corporation; your donations may be tax deductible.

FIND IT!

FIND PEOPLE, SUBJECTS, &
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CALENDAR

ARIZONA ENVIRONMENTAL DATES, AUGUST 15 THROUGH NOVEMBER 15, 2003

AUGUST

SEPTEMBER

- 6 Aerotech Golf Tournament 2nd Annual Benefit Golf Tournament for American Cancer Society & Tamara Bolin MD Memorial Scholarship Fund. Contact Debra Weedon at 623-298-1021 or events@aerotechlabs.com.
- 10 AAI EHS Com. Bkfst Tempe. The location will change in September to the Fiesta Inn at Priest and Broadway in Tempe. See AAI's web page at www.azind.org under events or contact Brent Frasier 602-252-9415
- 11 AESF Dinner Meeting Phoenix. Contact Barry Westerhausen at 480-206-4107 or at bwesterhausen@lachim.com.
- 11 EPAZ Luncheon Luncheon features Ms. Laura Malone of ADEQ Haz Waste Unit, "What to expect from your next hazardous waste inspection." Contact Melissa Holmes at 602-749-9400 or visit www.epaz.org.
- 12 Valley Forward Banquet Environmental Excellence Awards in 33 categories. Info call 602-240-2408, or visit the website at www.valleyforward.org
- 17-20 AHS Symposium Mesa. Theme: Sustainability Issues of AZ's Regional Watersheds. For information visit the website: www.azhydrosoc.org.
- TBD 3rd Binational P2 Conf. Tucson. Exact date to be determined. Sponsored by SAEMS, Tucson Fire Dept., Pima County DEQ, and ADEQ. Contact Co-Chairs: Edna Mendoza 520-628-6710, or Gail Bliss at 602-771-4212.

OCTOBER

- 9-10 Regulatory Roundup Contact Melissa Holmes at 602-749-9400 or visit www.epaz.org.
- 15-17 WRPPN P2 Conf. Granlibakken, California. Western Regional Pollution Prevention Network conference. Contact Ed Gonzalez, WRPPN Regional Coordinator, 775-689-6675, or visit www.wrppn.org.

NOVEMBER

Note: Association monthly meetings are placed on the calendar only when, at minimum, a specific time & date for the meeting is provided to the Journal.

Environmental associations, regulatory agencies, non-profits, and others may suggest items for the Calendar. Deadline for submission is 6 weeks prior to publication date. Acceptance for publication is at the discretion of the editor. Editor: 480-422-4430 x42

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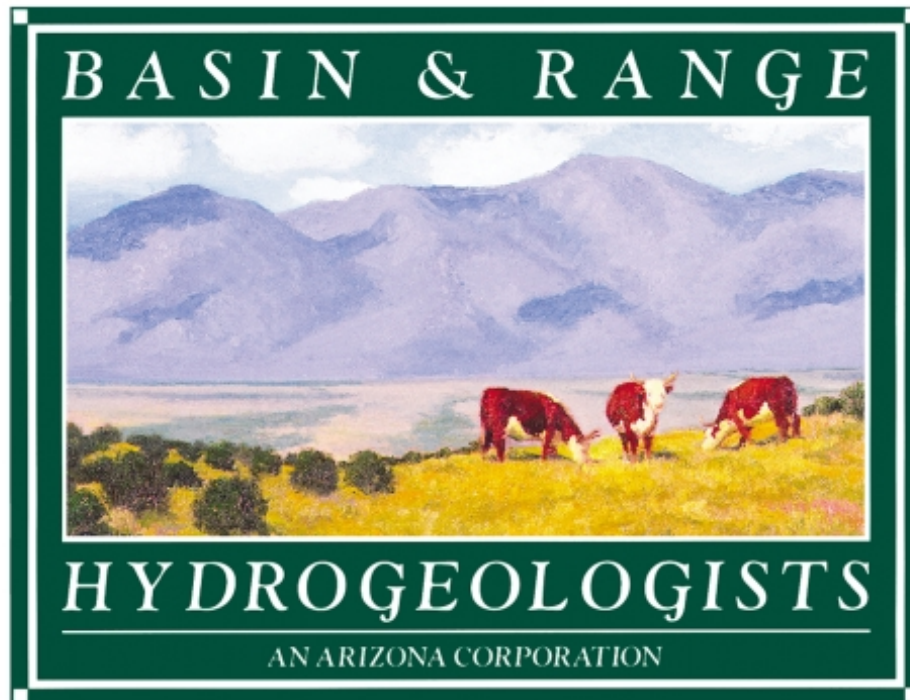
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