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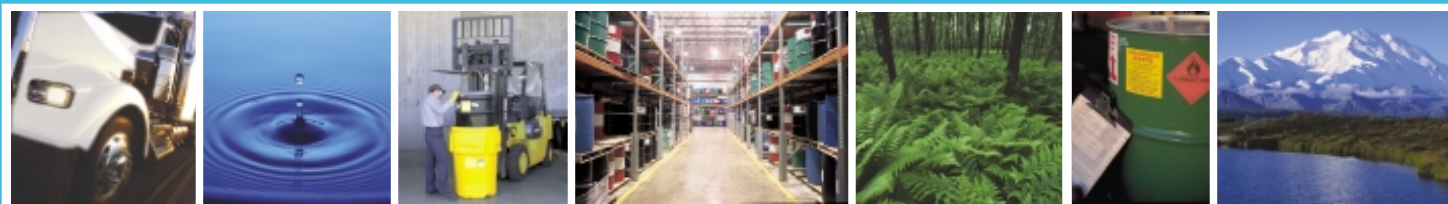
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From the Editor



By the time you read this issue of the Journal, the Arizona Resource Exchange website (AZReX) will be on-line and already serving the community as a web-based exchange system for reusable non-hazardous materials. AZReX (at www.azrex.org) is the result of years of planning and work by the Arizona Environmental Strategic Alliance (Alliance) and

Earth 911, supported through a grant from ADEQ. I won't discuss the details in this column (please read "From Trash to Treasure" on page 25, and Rob Barnett's Alliance article on page 15) but I think you will find the site worth your time to review. And don't forget to pass this website along to your company's purchasing agent — if he/she can procure a material you need for free or at a deep discount, why not take advantage of it while also helping keep materials out of the landfills?

New advertiser: the Journal welcomes EDM (Environmental Data Management) as a new advertiser (ad on page 21) in the Journal. Please contact the team at EDM (480-315-0227) and say hello!

Articles: the Journal has always been very fortunate to receive a steady flow of great articles for publication. As an environmental/safety professional, you are the expert in your area of practice — so consider writing about a recent project, a successful implementation of an EMS system, or perhaps even a major failure (we can learn from our mistakes!) Contact me anytime about submitting an article! Thank you.

Sincerely,

Jim Thrush, MS

Journal of Environmental Management Arizona

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Putting Environmental Quality on the Performance Track

Modeled after EPA's National Environmental Performance Track, Arizona's Performance Track program offers benefits to local businesses with excellent environmental practices.

by Steve Owens

In 2003, shortly after the Napolitano Administration took office, the Arizona Department of Environmental Quality (ADEQ) previewed our desire to develop a program to promote sound environmental management through recognition and regulatory flexibility. We have received a tremendous amount of valuable input from the regulated community since then, and in

March of this year, we officially launched the Arizona Environmental Performance Track project.

Simply put, the Arizona Environmental Performance Track encourages and rewards businesses that are good environmental stewards. A voluntary partnership between ADEQ,

Maricopa, Pima, and Pinal Counties and environmentally responsible businesses, the Arizona Environmental Performance Track is designed to encourage companies to go above and beyond the minimum requirements of the law in their business practices.

The result will be a better regulatory environment for participating businesses and a cleaner and healthier environment for our children, families, employees, and neighbors.

Role models

The Arizona Environmental Performance Track is based on the federal Environmental Protection Agency's National Environmental Performance Track, which started in June 2000 and includes more than 350 companies in 46 states and Puerto Rico. Five Arizona companies are current members of EPA's version of Performance Track: the Grand Canyon National Park, Honeywell, Motorola, Xanterra Parks & Resorts at Grand Canyon National Park and Xanterra South Rim, and Verkamps, Inc.

Our program was also shaped with significant input from the Arizona Environmental Strategic Alliance, which includes several of Arizona's major corporations and other members of the regulated community.

While we learned and borrowed from others, in the end we have created a program that is right for Arizona.

Looking for a few good companies

What do we mean when we talk about good environmental stewardship? To earn membership in Arizona Environmental Performance Track, a company must have a good record of environmental compliance. Among other things, this includes no criminal violations in the previous five years, no significant civil violations in the past three years, and no ongoing federal, state, or county initiated environmental litigation against the company owning the facility.

The company also must have adopted and implemented an Environmental Management System (EMS) that has undergone an independent assessment. At a minimum the EMS must include:

A commitment to environmental protection
This commits the company to compliance with legal requirements



Steve Owens, Director
Arizona Department of Environmental Quality

and voluntary commitments, including an effective pollution prevention program.

Planning.

The EMS must identify significant environmental aspects and legal requirements of company facilities and programs to achieve the objectives, targets, and commitments in the EMS.

Implementation and operation.

The EMS must identify a top management representative with authority and responsibility for the EMS, and include environmental training programs for all employees, operation and maintenance programs, and an emergency preparedness program.

Checking and corrective action.

The EMS must include an established compliance audit program and an EMS audit program, including a program for making corrective actions.

Community outreach.

The EMS should include procedures for identifying and responding to community concerns and informing the community of important matters that affect it.

Finally, members must make a demonstrable commitment to using products or services that have a reduced effect on human health and the environment when compared with competing products or services.

Member benefits

Companies participating in the Arizona Performance Track program will receive benefits in recognition of their commitment to environmental protection. Among the incentives for participation:

Reduced inspection frequency.

The frequency of routine (i.e., non-complaint based) inspections will be reduced for Performance Track members, and they will also receive advance notice of on-site, non-complaint based inspections on a case-by-case basis. Members will be able to conduct self-inspections using department-approved inspection checklists.

Notification and enforcement.

If ADEQ must issue an NOC (Notice of Opportunity to Correct), NOV (Notice of Violation), administrative order, or civil complaint, members will receive a courtesy telephone call at least 24 hours before such notices are issued.

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Computer visualization courtesy of dbx.

CMX adding environmental ly-friendly touch to new **AZ Cardinals Stadium**

Can a new NFL stadium be both tailgate-friendly and environmentally-friendly?

For the \$450 million Arizona Cardinals Stadium opening next year in Glendale, the answer is yes – thanks in part to the efforts of CMX, an Arizona-based civil engineering company.

The stadium, which has received international acclaim for its

on-site parking, as well as lighting, water, sewer and drainage systems – features unique environmental components.

Natural Grass is a Key Element

First, natural grass will also be a key element outside the stadium. According to CMX Senior Project Manager Jim Jones, there will be 25 acres of grass parking at the stadium. In addition, there will be a five-acre, tree-lined grass area for fan enjoyment on game days, perhaps serving as a gathering area for cultural and youth events on other days.

“The Cardinals have made clear they want every facet

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unique design by noted architect Peter Eisenman and HOK Sport, already has been selected to host the first-ever BCS college championship football game in 2007 and Super Bowl XLII in 2008.

On behalf of Hunt Construction, CMX is overseeing the design of two diverse stadium elements – the innovative natural grass playing field that will “roll” in and out of it as well as much of the infrastructure around it.

While CMX is receiving more attention for the “roll-out” field, the first of its kind in North America, its infrastructure work – the design of the stadium’s access roads, the 120 acres of

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of the stadium to provide fans with the best possible game-day experience – and that includes the parking areas which will be very well landscaped,” said Jones. “More grass means less asphalt – which will be great for tailgating.”

On-site Stormwater treatment units

Like the field, CMX has taken an innovative approach to the stadium's storm water drainage system. To maximize the amount of stadium parking – and yet meet federal standards – CMX has designed a system of seven on-site storm water cleansing units to collect and treat storm water and then direct it to a nearby flood control canal.

The units, ranging from up to 16 feet across to 16 feet deep with large collection bins – and often used in shopping center parking lots – will remove trash, oil and other pollutants from storm water through a centrifugal-force separation chamber, move the treated water into a diversion chamber and then direct it to the canal.

“Without the treatment units, we would have been required to build either an onsite retention area or an underground pipe system emptying into dry wells or the soil,” Jones said. A water retention pond would have taken up almost 14 acres of land – nearly half the size of the stadium and surrounding plaza. That obviously was not an option.”

With national, state and local regulators increasingly looking at storm water as a cause of non-point source pollution, CMX is working to make sure that the project exceeds federally-mandated Best Management Practices (BMP) guidelines.

“The goal is to capture the ‘first flush’ – or first half-inch of rain – that falls,” Jones added. “The first flush is enough to dislodge the trash and oils that will accumulate in the parking lots. The runoff from additional rain in heavy storms, although more pure, also will be caught and treated through the cleansing units.

“The system will meet environmental requirements, provide more land for tailgating and other stadium activities – and save about \$1 million.”

Roll-out field

CMX has been involved in the planning for the roll-out field for more than a year – including overseeing the testing and evaluation process for the tray's turf grass, field base and drainage as well the eventual turf system installation.

The field tray, manufactured by Uni-Systems LLC of Minneapolis, will stretch 234 feet wide and 403 feet long and be powered by small electric motors. Guided by 542 steel wheels riding along 13 rails, the tray will take approximately 65

minutes to move along its 740-foot path.

Team and stadium officials estimate that the rollout field will save nearly \$50 million in construction costs since it is more economical to move the field than having the entire roof retract to allow sunshine to reach the grass.

According to CMX Sports Engineers President Mike Lloyd, the tray will hold more than 94,000 square feet – over two acres – of natural grass. The grass system will have a uniform depth of 12 inches, consisting of between one to inches of grass placed over nine to ten inches of sand and root zone materials with a one-inch drainage mat at the bottom.

CMX has been involved in other major projects with the Cardinals – including designing the team's three grass practice fields, serving as construction management for the building of the team's offices in 1989 and overseeing the renovation of the playing field at ASU's Sun Devil Stadium for the playing of Super Bowl XXX.

“As a home-town company, we are honored to be part of an exciting project and such a high-caliber project team,” said CMX Chief Executive Officer Don Dillon

This article was provided courtesy of CMX. CMX maintains a website at www.cmxinc.com. For more information contact Don Dillon at 602-567-1900.

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OWENS: Performance Track

Continued from page 7

Permits, reporting and inspection.

ADEQ also will consider flexible and consolidated permit requirements, to allow for unified expiration and renewal dates. We will also make best efforts to conduct multi-media inspections (including coordination with other state, local, and federal agencies) if a member requests.

Meetings and pilot projects.

ADEQ will host regular meetings with members to discuss department priorities and initiatives. ADEQ will also provide recognition on its web sites and in applicable publications, and members can use the Arizona Environmental Performance Track logo in their own literature and website. ADEQ will also invite members to participate in pilot projects designed to relieve administrative burdens of the regulated community, including, for example, web-based reporting opportunities.

Why Environmental Performance Track?

The Performance Track program is a win-win for ADEQ, the regulated community, and the people of Arizona. It is based on the premise that government should complement existing regulatory programs with new tools and strategies that not only protect our children, families and the environment, but also provide incentives for companies that want to do the right thing.

ADEQ has moved away from a "one size fits all" approach to compliance and enforcement and is concentrating its energies and resources on major violators and repeat offenders. As a result, the department is better able to focus on those facilities that require increased scrutiny, and maximize the time and resources

devoted to protecting our environment.

A brochure outlining the high points of Arizona Performance Track, and a more detailed description, can be found on ADEQ's Web site: <http://www.azdeq.gov/>. We also invite your questions and comments via e-mail darwin.henry@azdeq.gov or phone (602-771-2328).

Steve Owens is Director of the Arizona Department of Environmental Quality, and has been a practicing environmental attorney in Phoenix for over 15 years. ADEQ maintains a website at www.azdeq.gov. Please direct questions related to this article to Henry Darwin at the email and phone number shown above.

EPAZ First Annual Golf Tournament

The Environmental Professionals of Arizona's (EPAZ), first annual golf tournament was a great success, according to Eddie Martinez, President. EPAZ gives special thanks to Heath Bradley from Emergency Restoration Experts for co-sponsoring and helping EPAZ with the tournament and Rob Barnett and PING for helping with prizes. With help from our Grand Prize Sponsor, Allied Waste and two Promotional Sponsors, Del Mar Analytical and Romic Environmental all 80 golfers received a PING umbrella and lots of donated raffle prizes. First place winners received 4 Ping drivers, Second place winners received 4 Ping bags, and Third place received 4 Ping putters. EPAZ was able to raise \$5,600 for its Scholarship fund, thanks to all our sponsors.

FORD: County Air Permit Program

Continued from page 18

- Development of policies and procedures for permit issuance to assure consistency, more timely processing, and achievement of Title V requirements.
- Splitting the compliance division into two sections, with one focusing exclusively on earthmoving and dust compliance.
- Addition of inspection and enforcement staff.
- Revision of the enforcement and penalty policies.

MCAQD's objective is to address EPA's concerns and retain permit authority in the County, as well as improve its services to business. The challenges presented by the size and growth of the County are significant, and the next few months will be critical for the direction of the program. MCAQD's actions will be closely monitored by EPA, and hopefully sufficient to convince EPA it does not need to become the primary permitting and enforcement agency for County permittees.

¹ *Maricopa County Environmental Services Department Title V Operating Permit Program Evaluation Final Report*, dated May 18, 2004, available at <http://www.epa.gov/region09/air/titlevevals.html>.



Sustainability and Sustainable Development:

"Shades of Green . . ."

*Didn't You Know? There's More Than One
"Shade" of Green . . . Who'da Thought?*

Nicholas R. Hild, PhD.

Having been involved in some aspect of Environmental Management for 30+ years now, and particularly the march toward environmental "sustainability" since it was first called a '*movement*,' it came as a surprise to me to learn that you can actually build "green" buildings that are *light* green, *medium* green, or *dark* green: "different shades of green..." Who'da thought?

What got me thinking about different shades of green was a February, 2005 article in E-Magazine about how the Habitat For Humanity (HFH) program has quietly taken steps to incorporate features into their standard homes that feature "...affordability and energy saving measures...sold to families for the cost of construction...which *they* describe as "*medium*" green.

I have to say, that caught me completely by surprise! Who'da thought?! In fact, a few years ago, one of my students suggested to the HFH headquarters office the possibility that some sustainable features might be incorporated into their standard designed homes and were told, in effect, it would be too costly for the program over the hundreds of HFH homes constructed across the country. Therefore, when I read that HFH now designs and builds their HFH homes "*medium*" green, it just naturally was a big surprise so I needed to know more.

What I learned was, the HFH definition of what "*medium* or *dark*" green is and it's actually pretty "grey," as explained by HFH's New York City advocacy director. He said, "To get to '*medium*' green," the (HFH) group considers practices that are good for the community, such as water efficiency and resource conservation." He further states that, "A '*dark*' green approach, makes choices good for the planet, like site selection and alternative energy."

Well, gee. I've looked all through the U.S. Green Building Council's literature and I'm darned if I can find any references to different "shades of green" for 'light,' or 'medium' or 'dark' green-built homes. Or, even for points awarded for features that are '*good for the community*' versus being '*good for the planet*.' Maybe, I wondered, what the HFH "shades" correlate to are the LEED certification program's silver, gold, or platinum ratings? Hummmmm...how about shades of karats...like 10 karat, 14 karat, or maybe 24 karat? Would that correlate to "*really, really, dark* green?

The HFH justify their "shades" of green noting that they have to build dwellings for under \$50,000 that allow the occupants to reap operational savings over a reasonable time in the home. Most HFH home owners are on the lower income side of the community scale where they reside, so HFH needs to select "green" features that will pay back over several years. It makes being "*dark* green" almost impossible, HFH says, but they can be *light* or *medium* green on a house-by-house basis.

The HFH "shades of green" ideology gets mixed reviews from sustainable development proponents, and rightly so. It's good that they are at least trying to make their 'habitats' more durable, sustainable, and environmentally friendly. But, slipping the "shades of green" into our measuring criteria for whether or not something is "sustainable" doesn't really play well in Peoria.

But, the HFH interests prove that sustainability features can, in fact, be affordable when compared to conventional-built homes. The real problem is, allowing various *shades of green* to qualify as "green-built" lowers the bar, and in the long run, that won't contribute to a sustainable future for our children's, children's, children.

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

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's Webpage:
www.azind.org

AAI

AAI will be holding its 14th Annual Environmental Summit at the Hilton El Conquistador in Tucson on August 10th -11th and 12th. There will be a reception the evening of the 10th, a full day of technical presentation on the 11th and a Golf Tournament on Friday August 12th. Opportunities to sponsor are also available. Contact James Tunnell at 602-252-9415 for more information. No EHS Committee breakfast meeting will be held in August because of the Summit.

*Jeff Homer,
EHS Committee
Chairman*



The AAI's EHS Committee maintains a number of subcommittees that meet regularly to discuss issues associated with manufacturing and industry. These subcommittees include Air, Water and Waste and Remediation. These subcommittees are chaired by Roger Ferland, Katy Brantingham and Barton Day respectively. Please contact the subcommittee chair or Jeff Homer at 480-441-6672 for further information.

Please note my new email address:
jeff.homer@gdc4s.com.

ACHMM Thunderbird



UPCOMING EVENTS:

July 20, 2005 Thunderbird Chapter meeting, 5:30, 6:00 - 7:30, Program: Member Forum Series- Spill I Remediation Options- Dwight Clark, Ninyo & Moore

August- SUMMER BREAK- NO MEETING

September 21, 2005 Thunderbird Chapter meeting, 5:30, 6:00 - 7:30, Program: Member Forum Series- Accidental Spill I Reporting- Mike Ford, BryanCave

A number EHS professionals sat for the CHMM certification exam on April 15th after attending the Overview Course. We hope to have the results soon. We will be offering the course again next April and possibly in March 06 in Tucson. Watch for details.

*Chuck Paulausky,
Vice President*



The Thunderbird Chapter is presenting a Member Forum Series at the monthly meetings. The Series will focus on various aspects of **Chemical Spills**, and will run for three months, June, July, and September. The first in the Series addresses Emergency Response Procedures. Next up is Spill Remediation Options followed by Accidental Spill Reporting. Matt Jacobs, Dwight Clark, and Mike Ford will lead the meetings. This series should provide excellent information and a great opportunity for discussion on a topic of concern to most EHS professionals.

Regular monthly dinner meetings start with a social/networking opportunity at 5:30 PM on third Wednesdays. Unless noted otherwise, meetings are held at the Old Spaghetti Factory, 1418 N. Central Ave., Phoenix. Details: www.thunderbirdchmm.org



*Frank Bonillas,
President*

The SAEMS new fiscal year is fast approaching. The new fiscal year, starting June 1, 2005, always brings forward a new Executive Board.

Currently, elections are under way in preparation for the installation of the new Board at the Annual Meeting, June 29, 2005. The candidates (bios listed on the website) for this year's election are Cynthia (Syndee) Wundrock for Vice President, Desiree Bramhall for Secretary, K.R. (Korky) Vault for Treasurer, Shari Bauman for Communications Coordinator, and Bob Estes for President-Elect. Michelle Freeark will assume the position of President for 2005-2006.

The current Board worked hard this past year ensuring that SAEMS activities continue to move forward. This year SAEMS and AZSERC sponsored the first Tucson Gatekeeper Conference, and successful P2 and RCRA Seminars. Thanks to the success of these seminars two full tuition scholarships will be awarded this year. The newsletter and website were also enhanced. In addition, a member-wide electronic survey was conducted recently, which has provided valuable input from the membership. The survey results will assist future Boards plan to continue advancing the organization.



*Ed Collette,
Secretary*

The American Society of Safety Engineers Southern Arizona Chapter would like to remind you that the 100 degree temperature is here and to watch out for

Heat Stress. Watch out for these symptoms of Heat Distress: Dizziness, Headache, Weakness, Rapid heartbeat, Nausea, Cramps, Chest pain, Labored breathing and diarrhea and if the victim exhibits Elevated temperature, Dry, flushed skin, elevated or depressed blood pressure or Confusion or delirium, or loss of consciousness. Call for medical assistance immediately.

The next meeting of the Southern Arizona ASSE will be on July 12, 2005 at Kino Community Center at 2805 East Ajo Way in Tucson. Call Edward Collette at (520) 419-5329 for directions or go to our web page: <http://southaz.asse.org>.

The quarterly meeting of the Southern Arizona Safety Council & ASSE held on May 17 had 86 participants show up for the 8:30 to 12 Noon presentations. The next quarterly meeting is scheduled for August 16, 2005. Everyone is welcome to join us at Granite Construction training room at 4115 E. Illinois Street, Tucson.

Coming soon to Tucson "TUCSON SAFETY EXPO" Sponsored by Arizona Builder's Alliance (ABA), ASSE & State Compensation Fund Arizona (SCFAZ) supported by your Southern Arizona Safety Council (SASC) on October 6-7, 2005 at Doubletree Hotel @ Reed Park. The seminar will be for field and management personnel. Check out our web page for contact information in the future. Registration sponsorship and booths information e-mail: edward.collette@wwm.pima.

SAEMS



Visit our website at
SAEMS.ORG

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

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

Luncheon Topics:

June: Grady Gammge,
Gammage & Burnham; water
planning and resources in
Arizona

July: To be Announced

American Society of Safety Engineers

For Information:

visit <http://southaz.asse.org>
for our local chapter
or call 520-740-2656

Send Email to:
edward.collette@www.pima.gov

AZ ELM



For Information Visit
www.azelm.org or call
 Rich Polito at 602-506-5102

*"AZELM is most grateful
 to EPA and to our
 panel members who
 generously contributed
 their time and
 knowledge to help
 produce the 1st 2
 workshops in Arizona."
 Rich Polito*

AZ Chapter Semiconductor Environmental Safety & Health Association

For More Information:
 E-mail : sesha@burkinc.com.

NEWS FLASH: The West Coast Collaborative is pleased to bring two diesel emission reduction workshops to Arizona. The Collaborative is an ambitious partnership between leaders from federal, state, and local government, the private sector, and environmental groups in California, Oregon, Idaho and Washington, Alaska, Canada and Mexico committed to reducing diesel emissions along the West Coast. And, as part of the National Clean Diesel Campaign, we are expanding the Collaborative to all of our states in West, Northwest and Southwest.

Moving Down the Road to Cleaner Air is the first in a series of partnership forums aimed at bringing the tools, the technologies, funding, and the partners together to identify opportunities to expand existing diesel emission reduction programs and to inspire new projects.

The first of two workshops will be held in Tucson on June 29, 2005. U.S EPA Region is pleased to work with Pima County Department of Environmental Quality, Pima Association of Governments, Clean Cities Program and Arizona Department of Environmental Quality in Tucson.

June 30, 2005 marks the date for the Phoenix workshop. We thank the many partners including Maricopa County Air Quality Department, Arizona Department of Environmental Quality, for making this workshop a reality. We are also grateful for our sponsors including the Salt River Project, AZ ELM and Valley of the Sun Clean Cities Coalition.

For more information about the Arizona workshops, please visit the West Coast Diesel Collaborative website at url: www.westcoastdiesel.org or contact Sue McDowell, U.S. EPA Region 9 at 415-947-4188 or E-mail: mcdowell.susan@epa.gov.

Richard Polito



The Semiconductor Environmental Safety and Health Association (SESHA) held their 2005 Symposium in Scottsdale, AZ on May 9 - 13. The Symposium brought in speakers, students, EH&S professionals, and vendors from throughout the US (and a few from Europe as well). The Symposium was a success on many levels, not the least of which was the opportunity for EH&S professionals to network and to learn more about emerging issues as well as those issues from which we cannot escape.

The National Symposium will be moving on to other locations next year, but you can still participate with the local chapter of SESHA at our local events. Our chapter holds quarterly chapter meetings and a mini-conference in the area. Typically, the EH&S information has a slant towards the Semiconductor industry, but our membership represents a cross section of industries and their EH&S professionals. Past topics at the local meetings have included ergonomics, waste water, EH&S Management Systems, safety metrics, OSHA top ten violations, and others.

If you would like to learn more about SESHA or the benefits of membership like our career center, please send an e-mail to sesha@burkinc.com. If you want to be made aware of local chapter meetings and mini-conferences please contact Tim Jones at timothy.jones@onsemi.com or Dave Moyer at moyersd@airproducts.com.

Tim Jones,
 President





*Rob Barnett,
Chairman*

AZReX Live!!!

The Arizona Environmental Strategic Alliance has partnered with ADEQ and Earth911 to develop the Arizona Resource Exchange

(AZReX). AZReX is a web-based material exchange similar to Ebay that encourages reuse and recycling by allowing users to post and search for appropriate materials. At the time of this publication, the Arizona Resource Exchange (AZReX) should be live and ready for registration and use.

Why use AZReX?

- AZReX makes good, usable materials available to new users at a fraction of the cost of new.
 - Allows user to post and view items with no costs.
 - Every item reused reduces purchase costs and gives that item an extended active life before recycling or destruction/disposal.
 - Reuse holds the greatest potential for reducing landfill disposal.
 - BOTTOM LINE - Use AZReX to save money and the environment.
- REGISTER NOW!!!** Go to <http://www.azrex.org> to begin to use the system.

Call Barbara Lockwood at (602)250-3361 for additional information on AZReX participation.

The Arizona Environmental Strategic Alliance is always looking for companies that want to be environmental leaders and work in partnership with the regulatory agencies to improve the environment in our state. If your company is interested in applying for membership, please contact Jim Thrush at 480-422-4430 x42.

Arizona Environmental Strategic Alliance



*Eddie Martinez,
President*

May's EPAZ luncheon meeting featured Taimur Burk, Environmental Engineer Intel Corp. His presentation was titled "Challenges of Chemical and Waste

Management during a Fab Conversion" If you weren't present you missed a great meeting and presentation. Taimur shared with our audience the unique challenges that were presented to Intel and it's team of environmental professionals. This team of EHS, CS, and CS Construction Base Build Project Managers, Hazardous Waste Techs, Fab Chemical Techs and Property Management representatives developed innovative solutions that saved Intel >\$800K in cost avoidance for waste disposal and generated >\$400K in revenue via recycling.

June's luncheon meeting on the 9th featured Rob Barnett, Director of Environmental Services at PING, Inc. During his presentation he introduced the Arizona Resource Exchange (AZREX) website that was recently launched to further help businesses recycle, reuse and exchange materials. This is a great concept that promotes Pollution Prevention within the business sector.

EPAZ holds monthly luncheon meetings on the 2nd Thursday of the month at the Prime Hotel, 44th Street & Van Buren from 11:30 am to 1:00 pm. Cost is \$20 members/\$30 non-members. EPAZ also gathers on the last Wednesday of the month for a casual cocktail mixer. Visit our web site at <http://www.epaz.org> for more details regarding upcoming meetings and our monthly mixer location or contact me at (480) 961-1300 x181.

EPAZ



June - The networking mixer will be held on June 29th at the Monestary (near Peoria Sports Complex).

July - The luncheon meeting on July 14th will feature Kathleen Graf, Maricopa County Air Quality Division, Acting Permit Manager, presenting an "Update on Maricopa County Response and Changes to Address EPA Title IV Audits". The networking mixer on July 27th will be in at Macayo's (on Central).

August - No Meeting will be held during August.

Valley Forward



VALLEY FORWARD TO PRESENT ENVIRONMENTAL EXCELLENCE AWARDS

For information, call
(602) 240-2408 or visit
www.valleyforward.org.

Valley Forward Association will hold its 25th annual Environmental Excellence Awards program on Friday, September 9 at the Hyatt Regency Scottsdale at Gainey Ranch. Held in partnership with SRP, the event will recognize contributions to the environment in 22 categories.

*Diane Brossart,
President*



Arizona's oldest and largest competition of its kind, the Environmental Excellence Awards program attracts some 700 business and civic leaders, including a host of state and local dignitaries.

The event, which includes dinner and a multi-media presentation, is open to the public. Individual seats are \$180 and a table for 10 is \$1,700. Reservations are available by calling (602) 240-2408

A new category in the awards competition is being introduced this year – open space and connectivity – which are key quality of life indicators and at the heart of Valley Forward's ongoing work program. Other award categories include: buildings and structures; site development and landscape; art in public places; environmental technologies; education/communication; environmental stewardship; and livable communities.

First-place winners in each category will receive the handcrafted, sand-etched glass Crescordia award, named for the Greek term, "To Grow in Harmony." Valley Forward will also confer its most prestigious honor, the President's Award, on an individual or organization that has had an exceptional impact on the Valley's environment.

Valley Forward has been bringing business and civic leaders together since 1969 to convene thoughtful public dialogue on regional issues and to promote cooperative efforts to improve the environment and livability of Valley communities.

AESF



The Arizona AESF would like to welcome all who are interested in metal plating, metal finishing, surface cleaning, metal coating or those interested in environmental issues that

affect industry to join us. For 2005 we are planning a new format with fewer meetings. The AESF is working to arrange high profile speakers for each region. Meeting times and speakers will be announced at the end of summer.

All are welcome to attend; you do not need to be a member to attend. If you would like to be notified of upcoming AESF events and receive our news letter or have your business/business card listed on the news letter please call or send an e-mail to Barry Westerhausen at bwesterhausen@lachim.com (480) 206-4107 or Mark Thede at markthede1@cox.net (480) 695-4344.

*Barry Westerhausen,
Sergeant at Arms*



Continued on page 19



It's All About Chemistry

The Precautionary Principle

Larry Olson, PhD.

Over ten thousand years ago, the advent of agriculture not only had a tremendous impact on the structure of human societies, but represented the first time that humans began to transform their environment in significant ways. This ability to modify their surroundings continued through the Industrial Revolution and now into a post-modern society with worldwide travel, instant communications, nuclear energy, free trade moving massive amounts of goods around the globe, and, unfortunately, the constant threat of war. No one could now question that human beings have the potential to create massive havoc with natural ecosystems.

Technology has always represented a mixed blessing. Without irrigation, fertilizers, pesticides, and new crop varieties the world could not feed over 6 billion people, many of whom have never worked on a farm. Yet the result has been water pollution, toxins in food, and degraded land. Is there a better way to introduce new technologies while avoiding potential problems?

In 1992 the Declaration of the UN Conference on Environment and Development at Rio de Janeiro stated that: "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation." Among other things, the Precautionary Principle changes our approach to new technological advances. Rather than requiring sufficient data for a complete risk assessment before action is taken, the Precautionary Principle measures the potential harm that could result against the potential benefits and focuses on prevention, rather than remediation.

There are several important recent examples of the use, or misuse, of the Precautionary Principle. The rapid spread of chlorofluorocarbons (CFCs) as solvents after World War II was stimulated by their low toxicity, non-flammability, and chemical inertness. But these benefits were outweighed by the discovery of their role in catalytically destroying ozone in the stratosphere. It took over ten years for sufficient evidence to develop for world-wide action to be taken, beginning with the Montreal Protocol in 1987. Looking back, few would now argue that banning CFCs was not warranted – but this was very controversial at the time.

Even bigger political hot potatoes are global warming and genetically modified organisms (GMOs). The potential for massive global environmental impact certainly exists in each case, and thus they are appropriate candidates for application of the Precautionary Principle of measuring potential harm vs benefits and focusing on prevention rather than remediation. But there has been no consensus yet on effective strategies to control greenhouse gases or the release of GMOs, partly because countries are used to competing with one another to gain advantage, rather than cooperating to prevent harm.

An even bigger issue is how do we apply the Precautionary Principle without hamstringing all future technological advances? For it will always be possible to foresee negative consequences. Should the Precautionary Principle have stopped the development of air travel, automobiles, plastics, or computers? No, but it might have helped us avoid some of the problems we now face if we had thought about them earlier. Plastics are much easier to recycle without certain dyes or inks. If as much effort had gone into designing safe, fuel efficient, and less polluting automobiles in the 1950s and 60s as went into designing tail fins and chrome we would have had healthier air to breathe and fewer victims of accidents to mourn. Maybe the Precautionary Principle is mostly about our vision and perspective. We can only hope to learn from our past mistakes.

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

Legal news you can use

Regulatory Developments

Maricopa County Revamps Air Permit Program in Response to EPA Audit

Michael C. Ford, Attorney



A major overhaul is in progress for Maricopa County's air quality permit program, including a new separate department, a new director, additional funding and staffing, and a more "activist approach" to obtaining air pollution control goals. The changes are due in large part to a recent EPA evaluation of the County's program which found deficiencies in meeting federal Clean Air Act requirements necessary to maintain program authority in lieu of EPA.

EPA Region 9 began its evaluation of the County's program in May of 2004 as part of a EPA-wide effort to improve state and local Title V operating permit programs and speed up the permit issuance process. The evaluation was conducted by a team of auditors from EPA, and involved file reviews, interviews with past and present employees, and a survey of key stakeholders. The evaluation culminated in the issuance of a final report, dated May 18, 2005, and the publication of a Notice of Deficiency in the Federal Register on June 2, 2005.¹

The major issues identified include:

- Inadequate resources dedicated to air issues at the director, enforcement and staffing levels.
- Missed deadlines for issuance of initial Title V permits due to a number of factors, including understaffing, allowance of an indefinite period for negotiation of permit conditions, and difficulties with enforcing fee payment provisions.
- Processing of significant permit revisions incorrectly as minor permit revisions (which do not include a public notice requirement).
- Poor coordination and communication among the enforcement, compliance, technical support and permitting offices.
- Issuance of "synthetic minor" permits (where enforceable emissions limits are taken to ensure major source thresholds are not triggered) without proper conditions, such as production limits or limits on hours of operation.
- A tendency to interpret its rules too narrowly.

Permittees should be aware that the final report also discusses a number of specific permits, and includes EPA's recommendations to address various deficiencies identified.

Under Clean Air Act procedures, the County has 90 days to demonstrate "significant action to assure adequate administration and enforcement" of the program, and 18 months to correct the deficiencies, or EPA may pursue certain sanctions including withdrawing approval of the program, in which case EPA would become the air permit program administrator for the County. However, the County's response to the evaluation began even before the report and notice were issued, and has been aggressive.

In November, 2004, the County Board of Supervisors approved a plan to create a new Air Quality Department (MCAQD) to focus solely on air issues, in place of the former Air Quality Division of the County Environmental Services Department. Effective March 7, 2005, the County also named a new Director for MCAQD, Mr. Robert Kard, former Director of Compliance for a major California Air Pollution Control District. Additional changes are underway in the areas of enforcement, permitting and compliance, including:

Continued on page 22

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.

Associations Pages

Continued from page 16



Charlie Popeck,
President

Major Arizona Corporations are Committing to Green Building. General Dynamics C4 Systems is one of the latest corporations in the

valley to commit to Green Building. The company's Roosevelt Facility, located on the Scottsdale campus at the corner of McDowell and Hayden has just been certified under the LEED for Existing Buildings (LEED-EB) program by the U. S. Green Building Council as the largest industrial facility in the United States to be operated in a sustainable manner.

Unlike other LEED certification programs, LEED-EB targets the operation and maintenance of facilities. Several strategies were implemented with the program, including additional use of recycled water used in the plant's operation, installation of low-flow and waterless plumbing fixtures, and water-efficient landscaping. Patrick Okamura, Engineering Construction Manager at the facility has focused on potable water use reduction as a major strategy for the facility. "One common sense thing that we've done is to stop overseeding our lawns in the winter." "We've been watering that lawn with potable water for many years, but it just doesn't make sense to do that in the desert" said Okamura.

The 650,000 square-foot manufacturing and office building is the first existing building in Arizona to receive the certification, and has saved over 2 million gallons of potable water this winter.

For information contact Charlie Popeck at 602-512-0557 or Charlie@egreenideas.com.

US Green Building Council Arizona Chapter



Peter Kroopnick,,
President

Summer is here, and for AHS, that means only a couple more months until our 18th Annual AHS Symposium: "Conservation &

Innovation in Water Management." It is time to start marking your calendars for September 21-24, 2005. The Flagstaff Chapter is hosting the event which will be held at the Radisson Woodlands Hotel in Flagstaff. What a great way to escape the late summer heat and retreat to the high country!

This year's symposium promises a multidisciplinary focus where water managers from Arizona and several other southwestern states will compare their innovative conservation and management strategies in an extended plenary session. As always, there will be a diversity of oral and poster presentations as well as field trips. To learn more about the Symposium and other local AHS activities this summer, visit www.azhydrosoc.org.

Arizona Hydrological Society



please visit the AHS web site:
<http://www.azhydrosoc.org>

news briefs

Tucson Brownfields Contracts Awarded

❖ AMEC, an international project management and services company, announced recently it has been awarded a contract to help the City of Tucson administer its Brownfields Program.

The city's Brownfields Program seeks to return contaminated and abandoned or under utilized industrial sites in and around the downtown business area to productive use. The area includes a warehouse district, rail yard, vacant and abandoned inner-city structures and closed landfills.

There is no specific award of funding in the contract. Rather, AMEC's Earth & Environmental Division, which has won multiple national awards for brownfields excellence, would be among four contractors to be called on as needed by the city to oversee or conduct brownfields work. The other contractors are Kleinfelder, SCS Engineers/HDR, and Allwyn Environmental.

AMEC has much experience in all elements of brownfields projects, from interaction with regulators and the public to the implementation of cost-effective, time-saving and technologically advanced remediation techniques. In the past five years the company has won four national Phoenix Awards, which are selected annually by a panel of brownfields experts that includes representatives of state and national environmental regulatory agencies. For information contact Brad Christensen, media relations director, AMEC Earth & Environmental: 602-432-1339 or brad.christensen@amec.com.

Diversified Trans. Inc. announces website

❖ Dianne Sholl, President & CEO of Diversified Transportation, Inc., recently announced DTI's new website at www.diversifiedtransportation.us. DTI is a transportation/environmental waste services company, specializing in hazardous, non-hazardous, general commodities and specialized commodities. Dianne can be reached at 602-455-0350.

ADEQ Announces \$100,000 penalty For Cyanic Gas Release

❖ Arizona Department of Environmental Quality (ADEQ) Director Steve Owens announced recently that Metco Metal Finishing has agreed to pay a \$100,000 penalty for hazardous waste violations at the company's south Phoenix facility, where a toxic-gas release rendered two employees unconscious in late 2003.

On Dec. 2, 2003, a night-shift employee at the Metco facility mixed potassium cyanide with a tank of sulfuric acid, which caused a cloud of poisonous cyanic gas to erupt and left two employees unconscious. Both employees were hospitalized after being dragged to fresh air.

ADEQ inspected the facility after the incident and cited Metco for numerous violations, including improper storage, handling, and labeling of hazardous waste; treating, storing, and disposing of hazardous waste without a permit; and failing to protect against the release of hazardous waste that would endanger human health.

"This penalty sends a clear message that careless and improper handling of hazardous waste will not be tolerated," said Owens. "These practices exposed the company's own employees to cyanic gas and potentially put the health and safety of the surrounding community at risk as well."

Hundreds attend SESA's 27th Annual Symposium in Scottsdale

❖ Several hundred high tech environmental, safety and health engineers from around the world participated in the Semiconductor Environmental, Safety & Health Association's (SESHA) 27th Annual Symposium & Exhibits in Scottsdale from May 9-12.

Jim Feldhan, President of the Phoenix-based Semico Research Corp., provided a forecast of the semiconductor industry and emerging markets for semiconductors. He also discussed nanotechnology—both the challenges it presents and what the future holds—in his keynote address.

Read more about the Symposium in SESA's Association Pages article on page 14. Photograph of exhibit and lunch hall shown on page at right.

SAEMS RCRA Seminar

❖ The Southern Arizona Environmental Management Society, Inc. (SAEMS) presented its 15th Annual RCRA Seminar in Tucson on May 5, 2005. Hundreds attended the seminar that offered updates on ever changing regulations and training options. Read more about SAEMS and the RCRA Seminar in the Association Pages, page 13. *Photographs of the seminar shown on page at right.*



*Photos at top and above: SAEMS RCRA, May 5.
Photo at left: SESA 27th Annual Symp. and Expo.
See corresponding Newsbrief articles on page at left.*

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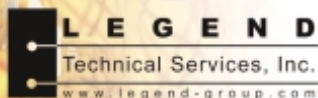
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PROSPECTING:

For Environmental
Business

More on the
Sales/Operations
Relationship



Last months submittal struck a nerve! The great response indicates that managing the internal relationships between business development and operations is more than a side-bar conversation. It affects a broad spectrum of companies over a multitude of service and product lines. I dare say that this is an issue not at all unique to our industry, but is a historic battle that has challenged management for decades. This is evident in stories about my Grandfather's experiences as a career salesman.

My grandfather was a steel salesman in the Midwest from the 1930's into the 1950s. My father told of distinct memories about his father arriving home furious from work and how it always seemed to be the fault of "the guys at the factory". My father would go on and on and these experiences obviously had an impact on him because of the stress it caused the family at the time. He also described how bitter my grandfather was and how he always felt that my Grandfather didn't do enough on his own to fix the problem, but always blamed others.

Hearing this made me realize that the sometimes intense nature of the sales/operations relationship is not unique to me, my company, my industry or even my era, but has been in place for years and will probably always be a challenge for management. If I may be so bold as to generalize a bit, there is a fundamental difference in people that populate different job types, no matter the industry, and managing these differences in order to foster good internal relationships is difficult. In the last column I provided some bigger picture solutions that could be instituted by management on a formal level, which I still agree are applicable, but for this submittal lets talk a little about personal responsibility.



"Personal responsibility? Oh jeez!" you say rolling your eyes. I'm sure the last thing you want is for me to jump on my soap box and preach about how every person in an organization has some form of business development responsibility and each person should

Joe C. Holmes

Continued on page 24

220 EH&S and Crisis Management
Professionals attend:
**ESS EXPO 05:
Users
Conference**



ESS completed its five-day business conference and workshop "EXPO 05" on April 28. More than 220 clients, partners and professionals—from 11 countries—working in the environmental, health and safety (EH&S) and crisis management disciplines took part in the event, making this one of the largest EH&S and Crisis Management users conferences in the country.

ESS EXPO 05, held at the Pointe South Mountain Resort in Tempe, Ariz, featured a wide variety of sessions, training and certification opportunities. The event's



keynote speaker was Bruce Piasecki, a nationally recognized expert and author of at least five books about corporate EH&S strategy and the impact of crisis events on organizations. In his remarks, Piasecki said EH&S and Crisis Management professionals were, "doctors of a new form of capitalism" that focuses on price, quality and social responsibility. "EXPO was valuable for networking and sharing information with users and directly with ESS developers,

managers and other experts," said Cary Campos, Project Manager for T3, a longtime ESS implementation partner.

ESS is a leading provider of integrated software and services for EH&S and Crisis Management. The Essential Suite™ and Compliance Suite™ solutions have helped more than 35,000 businesses, government agencies and other organizations comply with international, federal, state and local regulations and industry standards.

The information in this article was provided courtesy of ESS. For more information, contact Dawn Kerr at 480-346-5526 or by e-mail at ess-media@ess-home.com. ESS maintains a website at www.ess-home.com.



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Holmes: Prospecting

Continued from page 22

be willing to take actions on their own to participate. That is not where I'm going. Personal responsibility in this case refers to business development people alone. You see, I am a firm believer that a sales person has two distinct sets of clients; external and internal and focused time should be spent developing both. Each person whose job it is to nurture business should be diligent in their efforts to make sure the delivery mechanism within the organization understands customer expectations and that there is a strong relationship in place to work out problems when they arise. To carry this out, I have always been a believer that the sales person is typically in the best position to take the lead in making sure these relationships exist and are maintained. Operations people need to be confident that input from the sales side is valuable and should always be considered, but it's the sales person's responsibility to make sure the value is there. How to accomplish this encompasses many intangibles and depends a great deal on the personalities of the people involved along with their willingness to take ownership of their job responsibilities.

As you might guess by now, I am pretty passionate about this topic and I could go on, but I am at my space limit. So.... To be continued? You tell me.

Joe C. Holmes is National Director of Sales & Marketing with Environmental Data Management. Joe can be reached by email at Joe.holmes@edm-usa.com.



Photo courtesy of Planet Ark

From Trash to Treasure

One person's trash is another person's treasure. The Arizona Environmental Strategic Alliance and Earth 911 have developed a web-based material exchange system called Arizona Resource Exchange (AZReX). Similar to E-bay, AZReX users can post materials for exchange or they can search the user-friendly site for items they need. This site is intended to create a market for reusable and recyclable materials, directing them away from landfills. Because it is web based, it can be accessed by anyone with a computer. It will reach Arizona's rural communities, as well as small and large companies.

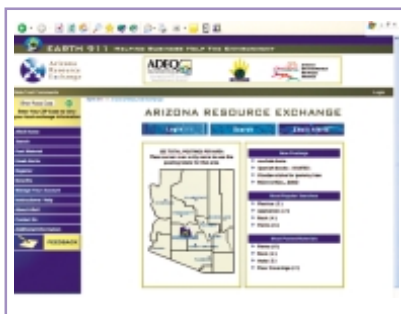
A Z R e X allows business to implement the "reuse" portion of the well known hierarchy of waste management - reduce, reuse, recycle. Responsible citizens and businesses continually look for ways to reduce and reuse materials. It is not only environmentally responsible but it is economically responsible as well.

AZReX will only accept non-hazardous waste materials for posting on the site. Items include packing and containers, construction materials, electronics, landscaping, fabrics, equipment and machinery, office furniture and equipment, scrap metals, vehicles, paints and most other reusable items.



**Arizona
Resource
Exchange**

The site features an e-mail alert that can notify AZReX users when something they are looking for is posted. Once an AZReX user has found something they would like to acquire, they can contact the owner of the posted material and



View of AZReX homepage

Arizona Resource Exchange

WWW.AZREX.ORG

negotiate the exchange. It should be noted that like most web-based exchange systems, the system operators (the Alliance and Earth 911) are not involved in the discussions and/or arrangements for exchanges made between parties. AZReX serves only as a resource to connect interested parties.

AZReX is being made possible by Waste Reduction Assistance funding from the Arizona Department of Environmental Quality's Recycling Program and developed by Earth 911. The AZReX site can be found at <http://www.azrex.org>.

The Arizona Environmental Strategic Alliance is a partnership of business and government dedicated to finding innovative ways to improve our environment. AESA is always looking for companies that want to be environmental leaders and work in partnership with the regulatory agencies to improve the environment in our state. If your company is interested in applying for membership, please contact the Alliance at 480-422-7392, or call Jim Thrush at 480-422-4430 Ext. 42 or Rob Barnett at 602-687-5000.



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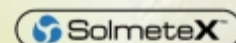
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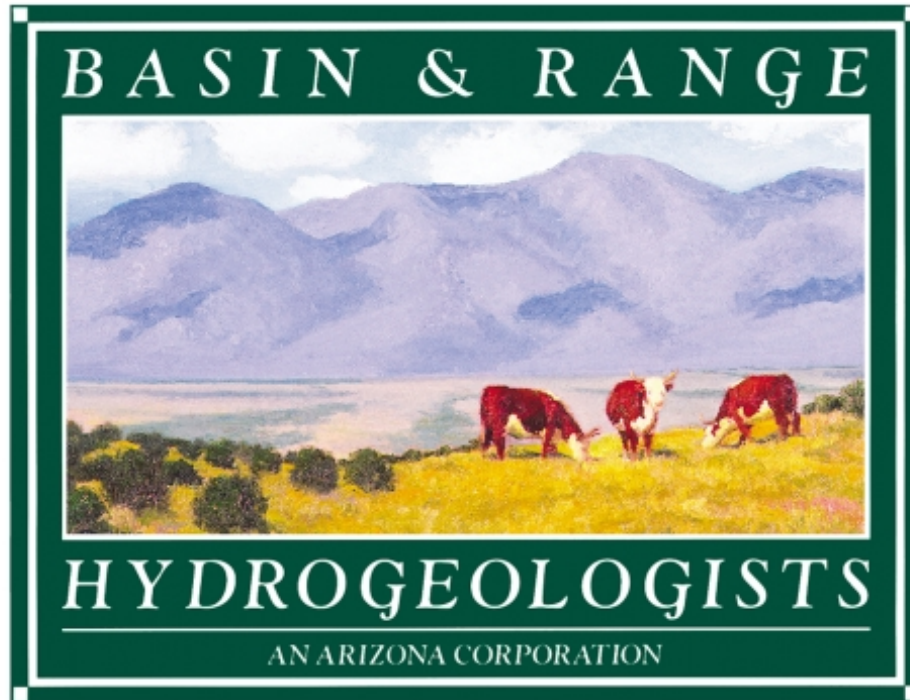
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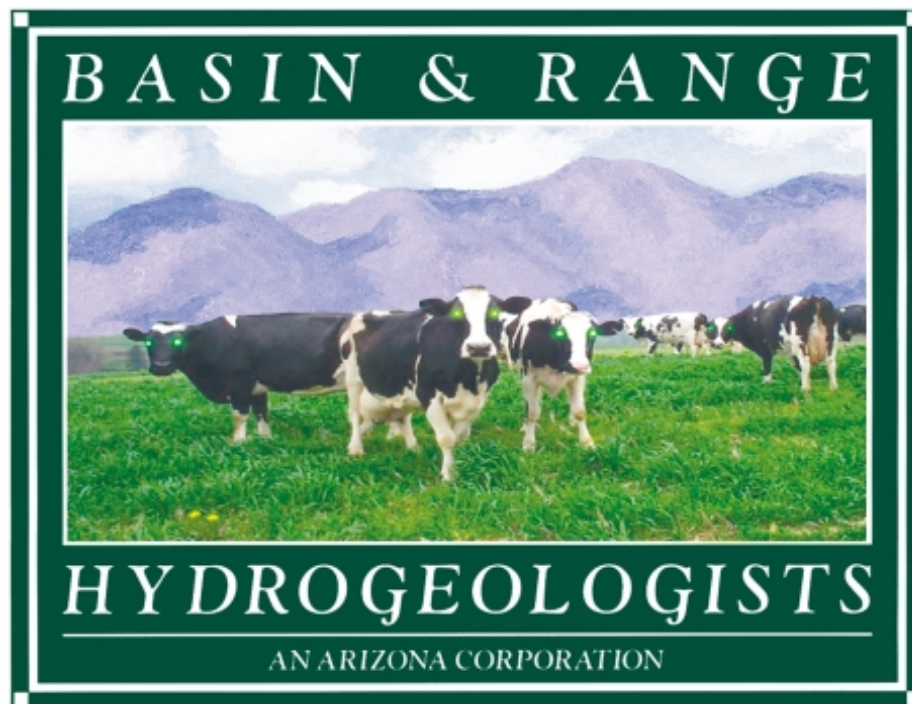
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