

JOURNAL OF **Environmental Management**

Practical and Current Information for Environmental, Health and Safety Professionals

ARIZONA

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From the Editor



I am holding a glossy color brochure I received yesterday from the auto repair service center at the dealer's where I purchased my vehicle. This Japanese automaker must be an environmentally friendly company, and they deserve my business. I know this because the brochure has photos of beautiful green trees with leaves shining in the bright clear sunlight, and it is printed with green ink throughout. The word "green" is printed in bold on the cover. But, is it "green" or "greenwash"? Read Katea Ravega's article, page 6.

I highly recommend you read Dr. Hild's column, "Dichlorodiphenyl Trichloroethane vs A Million Deaths per Year", pg. 9. Dr. Hild addresses the ban on DDT vs the consequences: millions of deaths by malaria.

You may notice some changes to the Journal layout recently. For example, the Association Pages section has been 'tightened up' to reduce wasted space, and at the same time provide associations with room for longer articles. There is a little less "white space" throughout the Journal. These minor changes allow more editorial content, using less space, and help keep production costs down while we continue (in our 7th year of publication) to provide the Journal free of charge to thousands of Arizona EH&S professionals.

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Marketing Claims: "Green" or "Greenwash"?

Legal Requirements
Applicable to
Environmental
Marketing Claims

by Katea M. Ravega

The variety of terms and frequency of use to advertise the environmental attributes of products and services that find their way to the marketplace has exploded. One indication of this explosion is that manufacturers introduced 328 new "environmentally friendly" products in 2007, up from only 5 in 2002.¹ This proliferation of everything 'environmental' is also making its way to the U.S. Patent Office – from 2006

to 2007, trademark applications using the word "green" more than doubled, while applications with other environmental terms such as "eco", "environment", "planet" and "organic" also increased significantly.² Practical business decisions push companies toward making these environmental claims for their products and services. Environmental claims help a product or service stand out from its competitors and attract customers. The claims also communicate the company's commitment to pressing environmental issues like climate change, energy conservation, or sustainability. In addition to marketplace competition, tax incentives and other preferential treatment for an array of environmental projects, increasing environmental legislation, and even building codes all add incentives to promote the environmental attributes of products and services.

As the number and types of environmental claims increased, however, there has also been an increase in the number of deceptive or misleading claims. One recent study found that consumers frequently prefer products and services with environmental claims but that the claims themselves are often misleading. The environmental marketing agency reviewed 1,018 separate products bearing over 1,700 environmental claims.³ Out of this review, only 1 product made substantiated, non-deceptive claims.⁴ In light of these statistics, this article summarizes the federal requirements applicable to environmental claims and the penalties for noncompliance. It also highlights additional issues that companies should be aware of if they use any environmental claims in the marketing of their goods and services.

The Federal Trade Commission ("FTC") is the federal agency primarily responsible for enforcing the law governing environmental marketing claims.⁵ In addition, the advertising industry's self-regulation authority, the National Advertising Division ("NAD") of the Better Business Bureau also monitors and regulates environmental claims. An overview of the regulatory role and requirements of each of these two organizations, plus applicable penalties for noncompliance, is presented below. Note that several states, including California, impose additional requirements on environmental claims.⁶ A state-specific survey, however, is beyond the scope of this article.

FTC "Green Guides"

The FTC Act prohibits deceptive practices affecting commerce, including deceptive or misleading advertising.⁷ To delineate how the FTC implements this prohibition in the arena of environmental advertising, the agency promulgated the "Guides For the Use of Environmental Marketing Claims," better known as the "Green Guides."⁸ The Green Guides are not themselves enforceable as law,

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but they provide the examples and guidelines the FTC uses to determine whether environmental claims violate the prohibition against misleading or deceptive advertising.⁹ The FTC described the Green Guides as a “safe harbor” for parties making environmental claims - if the claim conforms to the examples in the Green Guides, it is less likely to run afoul of the prohibition against misleading or deceptive advertising.¹⁰

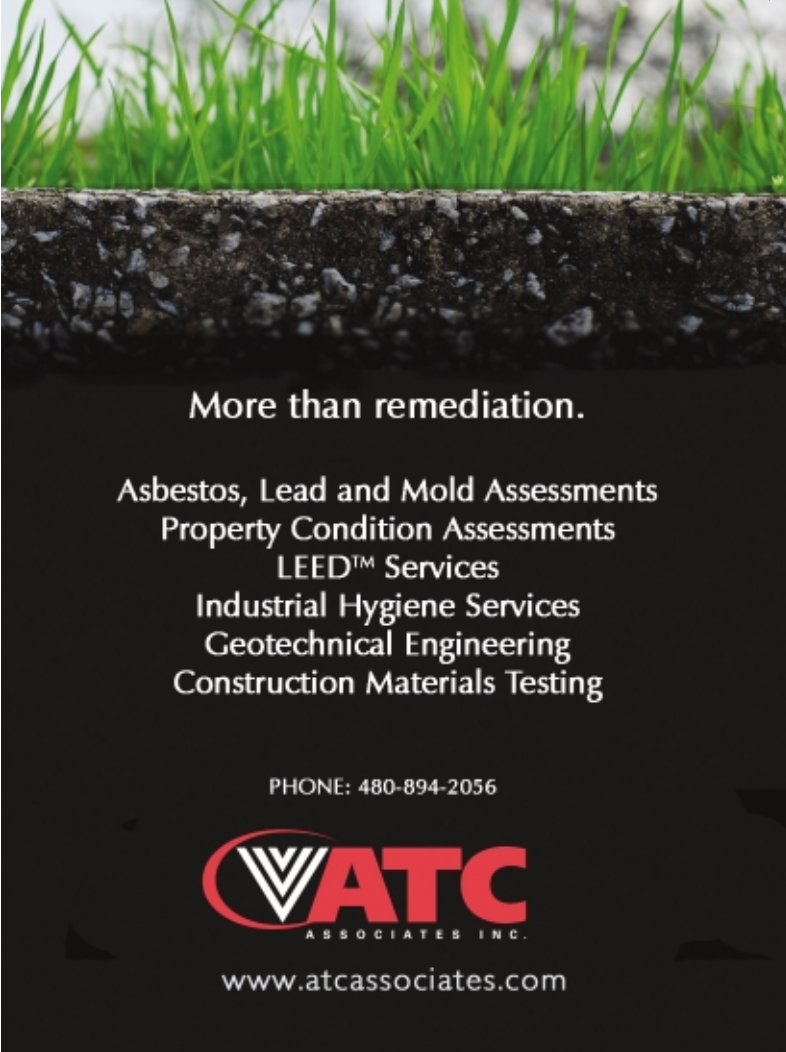
The agency bases its decisions on what is not deceptive on the perspective of what an average consumer thinks the environmental claim means. Pursuant to the Green Guides, an environmental claim is not deceptive if it (a) qualifies any statements, (b) makes clear whether the claim applies to a product, the packaging, or both, or to a service, and (c) is not an overstated claim.¹¹ Additionally, if the claim is a comparative statement (e.g., “20% less waste”), the basis for the comparison must be clear.¹² The FTC further emphasizes that the party making the claims must “possess and rely upon a reasonable basis substantiating that claim.”¹³

Because the FTC requires substantiation of the claim to prove that it is not misleading or deceptive, it is important to understand what is meant by a “reasonable basis” for substantiating the statements made. FTC guidance indicates that a party can demonstrate a “reasonable basis” for its claim in a few different ways. Environmental claims may require “competent and reliable scientific evidence” or alternatively “evidence based on the expertise of professionals in the relevant area” in order to be substantiated.¹⁴ As explained in more detail below, third-party certification, logos, or seals do not automatically substantiate an environmental marketing claim.

Specific claims – such as a claim that a product is recyclable – may be easier to substantiate than a general claim. The FTC states, “broad environmental claims should either be avoided or qualified, as necessary, to prevent deception about the specific nature of the environmental benefit being asserted.”¹⁵ Demonstrating that recycling facilities for the product are widely available, for example, may be one way to substantiate a claim that the product is recyclable. Substantiating a general claim, such as a claim that a product or service is “eco-friendly,” however, may be more difficult and entail more effort. In addition, substantiation of claims regarding emerging areas – like carbon offsets or purchases to achieve carbon neutrality – must account for the fact that there are no widely accepted standards to refer to or comply with yet. As a result, all environmental claims must be evaluated and substantiated on an individual, case-by-case basis.

Using widely accepted standards, logos or seals that are available does not automatically indicate that the claim is not misleading or deceptive. For example, the U.S. Green Building Council (“USGBC”), the non-profit organization that developed the nationally recognized building rating system known as Leadership in Energy and Environmental Design (“LEED”), has expressed concern about the increasing trend of marketers misusing the USGBC logo and LEED rating system in a deceptive way. USGBC, for example, only certifies buildings through LEED, and does not certify any specific products or services. USGBC stated, however, that “some marketers have used the USGBC logo on product packaging and in advertisements alongside claims that products are certified by USGBC or LEED, or can be used to achieve LEED credits.”¹⁶ These types of claims not only mislead consumers, but also link the third-party certifier to products or services that it has not actually reviewed or approved. In addition to prohibiting deceptive claims, in regards to third-party certifications, the Green Guides also require qualifying language that clarifies which aspects of the product or service are subject to the third-party certification.¹⁷


There is not space here to explain the requirements for each term that is specifically addressed in the Green Guides or potentially subject to the guidance, but two common environmental claims – biodegradable and recyclable – provide insight into concerns relevant to all environmental claims. Claims that a product is biodegradable or recyclable are misleading if the claims cannot be fulfilled under typical conditions that consumers are likely to encounter. For example, the Green Guides require that an unqualified claim that an item is “biodegradable” should be substantiated by evidence that the item will biodegrade “within a reasonably short period of time after customary disposal.”¹⁸ For many items, “customary



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disposal” means that the item is deposited into a landfill. Because landfills are managed in a way that renders them largely anaerobic, many items that would degrade under some circumstances will not degrade in a landfill. As a result, labeling a product that is likely to end up in a landfill as “biodegradable” can deceive the consumer and violate the FTC Act.¹⁹

Similarly, labeling a product as “recyclable” can also be misleading. Claims that an item is recyclable should be qualified “to avoid consumer deception about any limited availability of recycling programs and collection sites.”²⁰ If recycling facilities for that item are not widely available, the “recyclable” claim may be misleading even if technology to recycle the product exists.²¹ A consumer may purchase the item believing that it can be recycled when in fact the consumer will be unable to locate any recycling facility that will accept the item.

FTC Enforcement

The FTC prosecuted 37 reported cases against companies for deceptive or misleading environmental claims from 1992 to 2000.²² Claims at issue during these enforcement cases included claims like “ozone friendly,” “CFC-free,” and “environmentally safe.”²³ During the Bush administration, the FTC did not take a single enforcement action involving environmental claims.²⁴ In light of the simultaneous increase in environmental claims while enforcement lagged, it is generally anticipated that the FTC will resume its enforcement responsibilities under the new administration. As a result, companies that previously did not consider the possibility of enforcement may be at risk of an FTC investigation of their environmental claims.

If the FTC suspects that a claim is misleading or deceptive, or if it receives complaints regarding an allegedly misleading or deceptive claim, the agency can conduct an investigation. The penalties for noncompliance can be significant. In the event that the FTC identifies

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Ravega: Marketing Claims

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a violation of the FTC Act, including violations through misleading or deceptive environmental claims, the FTC is authorized to impose civil penalties, obtain an injunction against the company to prevent use of the misleading or deceptive claim, and require the company to disgorge itself of profits it obtained through the deceptive claim.²⁵ Perhaps even more financially threatening, some courts have certified class action lawsuits by consumers against companies based on allegedly deceptive environmental marketing claims.²⁶

The Green Guides, originally promulgated in 1992, are currently under review by the FTC to modernize and expand the regulations.²⁷ During 2008, in light of the rapid increase in environmental marketing claims and the emergence of new areas of environmental claims, such as claims related to carbon neutrality, that were nascent or nonexistent when the Green Guides were last updated, the FTC initiated a review and revision process for the regulations. The agency held public workshops regarding updating Green Guides to include claims related to carbon trading, product labeling, and renewable energy certificates.²⁸ The agency is currently reviewing the comments it received and revised regulations have yet to be released.

National Advertising Division of the Better Business Bureau ("BBB")

The National Advertising Division ("NAD") of the BBB is the self-regulatory arm of the advertising profession. NAD, similar to the FTC, investigates misleading and deceptive advertising claims. The NAD is not a governmental agency, and during the past ten years has been more active than the FTC in taking action against misleading environmental claims. The NAD has had about 30 cases involving misleading environmental claims. Even though NAD enforcement decisions are not binding on companies, those decisions are usually complied with; failure to comply can be embarrassing and injure the firm's reputation.

Because of the potential for consumer confusion and increasing likelihood of enforcement, environmental claims should be carefully evaluated and, if needed, revised to ensure that the claims comply with the law. The claims should also be revisited if the Green Guides or other regulations are revised to ensure continued compliance.

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Footnotes:

- 1 CBS News, "A Closer Look At 'Green' Products," May 18, 2008, available at <http://www.cbsnews.com/stories/2008/05/18/eveningnews/main4105507.shtml>.
- 2 GreenBiz Staff, "Eco Trademarks Made Big Gains in 2007," Apr. 28, 2008, available at <http://www.greenbiz.com/news/2008/04/28/eco-trademarks-made-big-gains-2007>.
- 3 TerraChoice Environmental Marketing, Inc., "The Six Sins of Greenwashing: A Study of Environmental Marketing Claims in North American Consumer Markets," November 2007.
- 4 Id.
- 5 The U.S. Environmental Protection Agency ("EPA") regulates claims regarding a few specific products, such as pesticides, but not environmental claims in general. As a result, the EPA is outside the scope of this article.
- 6 See e.g., California Assembly Bill 1972, effective January 1, 2009. The bill establishes additional requirements for environmental claims related to plastic products.
- 7 15 U.S.C. § 52.
- 8 16 C.F.R. Part 260.
- 9 16 C.F.R. § 260.2.
- 10 16 C.F.R. § 260.3.
- 11 16 C.F.R. § 260.6.
- 12 Id.
- 13 16 C.F.R. § 260.5.
- 14 Federal Trade Commission, "Complying with the Environmental Marketing Guidelines," available at <http://www.ftc.gov>.
- 15 16 C.F.R. § 260.7(a).
- 16 Letter from Michael Moore, Senior Vice President of Policy and Public Affairs, U.S. Green Building Council, to the Federal Trade Commission, regarding "Green Packaging Workshop - Comment, Project No. P084200," undated, available at <http://www.regulations.gov>, Docket No. P084200.
- 17 16 C.F.R. § 260.7(a).
- 18 16 C.F.R. § 260.7(b).
- 19 Id.
- 20 16 C.F.R. § 260.7(d).
- 21 Id.
- 22 Federal Trade Commission, "Enforcement: The FTC's Environmental Cases," available at <http://www.ftc.gov/bcp/gmrule/enviro-cases.htm>.
- 23 Id.
- 24 See Id.
- 25 12 U.S.C. § 54(i).
- 26 See e.g., *Kraus v. Trinity Management Services*, 23 Cal. 4th 116 (Cal. 2000).
- 27 "Guides for the Use of Environmental Marketing Claims," 72 Fed. Reg. 66,091 (Nov. 27, 2007).
- 28 Id.



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Nicholas R. Hild, PhD.

Dichlorodiphenyl Trichloroethane: vs A Million Deaths Per Year

The *'issue'* of DDT use is still as controversial as any single environmental topic in the news today. It is a chemical that was used and abused for 50 years on agricultural crops around the world. And, Arizona is considered to be "...the most DDT'd state in the country," according to the EPA.

Until it was banned, DDT was an effective chemical for keeping pink boll worms from devastating cotton crops. Then, in the mid-1970's, University of Arizona agricultural scientists developed a strain of cotton that was resistant to boll worms known as BT cotton and saved the cotton industry—not just in Arizona, but all over the world — at a time in history when it looked like the worms would win the war.

But where DDT was used most effectively was against mosquito-borne diseases like dengue, yellow fever, and malaria. In the U.S. and, most notably in third-world countries in Africa and Asia, malaria had all but been eradicated until Rachael Carson's *Silent Spring* was publicized in 1962 and the then-fledgling 'environmentalist' movement seized the moment. As a result, the world stopped using DDT and malaria began a resurgence that today, is epidemic.

The legacy of the ban on DDT: 40 Million dead, millions more exposed and another million dying as this is being written. Today, malaria claims the largest number of victims of any single 'disease' in the world except for HIV. And worse, there is no cure for malaria so a major portion of the exposed population suffer a horrible death—the victims, already living in abject poverty conditions are the weak, and the sick, the pregnant, and the very elderly and the very young.

But mostly, its babies that are the easy victims—and its all because there was no replacement plan for the repellant DDT program; make no mistake about it.

Before he retired, President Bush authorized \$1.2 Billion (*that's with a 'B'*) for research to find better ways to **treat** (but not prevent) malaria because, he said, "... *current 'methods' are not effective in slowing or stopping the malaria-caused death rate...*" Africa's official response to his announcement was

enthusiastically underwhelming. Finding a vaccine and getting it approved will take years, they say.

In Rwanda, Zanzibar, Zambia, and Ethiopia, they point out that the recent availability of insecticide-treated bed nets has malaria rates going down by as much as 50% just in the last two years they've been available—the *insecticide being used for those nets by the way, is DDT*.

The Bill Gates Foundation is helping with that effort, spending millions to get the Global Fund to distribute 60 million more nets, but even that will only reach a small percentage of the countries that need help. In addition, the Bill Gates Foundation is spending another Billion or so to fund drug research aimed at finding that vaccine that will ultimately stop the spread of Malaria—and that is a good thing—for sometime in the *future*.

But, the millions who will die before the vaccine is found shouldn't have to. We need to look back at what doomsday scenarios the environmentalists predicted that *didn't* happen when DDT was being successfully used against malaria: not a single death has been caused by environmental exposure to DDT in all the years since DDT was banned (or before); the obliteration of higher trophic levels did *not* occur; *no* species became extinct; the California Sea Lion population *increased* before, during the use of DDT spraying programs, and *after* the ban.

According to Dr. D.R. Roberts, who has studied and published works on malaria and DDT extensively, in testimony before the U.S. Senate Committee on Environment and Public Works on the role of Science in Environmental Policy Making (September, 2005), "...the National Library of Medicine lists over 1,300 on DDT since the year 2000, almost all of which in the "environmental" literature and only a handful can be found in studies about malaria." He further pointed out that only a handful can be found on DDT used as a **repellant** (which is how it was successfully used before the ban, NOT as a pesticide or insecticide) to achieve the success it did prior to 1970 in home spraying programs around the world.

Dr. Roberts went on to say that when DDT was taken out of use around the world for mosquito **repellant** spray-on-the-walls programs, third-world populations had no screens or ability to build walls that kept out disease-carrying mosquitos as the western world did. The result: a resurgence of mosquito-borne malaria cases that, today, has taken 40 Million lives. Roberts testified that, only a program to implement DDT use in house spraying again, will stop the continued carnage until such time that such a vaccine can be found. Bed netting programs will surely help but to really make a difference, wall-spraying programs have to be implemented because mosquitos don't just attack victims in their beds at night.

In the best of predictions, it will take at least ten years of intense research to get a disease prevention vaccine approved and endorsed by the World Health Organization. In the meantime, we should use emergency powers to revive the repellant use of DDT.

How many more must die before a vaccine is found? And what about their children's, children's, children who will never be born?

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

Associations Pages

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



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We have had some recent changes to the SAEMS executive committee that we would like to share with you! SAEMS President Shari Bauman accepted a position with the US EPA in Washington D.C. and unfortunately had to end her term early. However, I am pleased to have the opportunity to take over as President of the organization and wish Shari the best of luck in her new position! I would also like to take a moment to thank all the SAEMS members that volunteered for the Trash n Bash Undocumented Migrant Waste Site Cleanup on March 21st and the Tucson Earth Day Festival & Parade on April 4th. Please mark your calendars for these upcoming events!

April 29 – Monthly Luncheon, Kathy Arnold, Director of Environmental and Regulatory Affairs for Rosemont Copper will be speaking about Water and Waste Management Issues.

May 7 – The 2009 Annual RCRA Seminar will be held in Tucson at the University Marriott. The seminar regularly draws over 200 attendees and we are looking forward to another great event this year!

May 27 – Monthly Luncheon, Roger Ferland, Attorney with Quarles & Brady Streich Lang will be speaking about Environmental and Energy Initiatives of the Obama Administration

For more information please visit our website or email me at ssillman@globalsolar.com.

Sarah Sillman
President



SESHA AZ Chapter Semiconductor Environmental Safety & health

www.seshaonline.org

The local Arizona Chapter of SESH held a Chapter Meeting on January 28th at the ASU University Club. The meeting was very well attended! Presentations included: "Environmental Auditing" by Mike Sherer, "Enhancement of Risk Management through Interactions with Outside Agencies" by Paul Finley, and "Description of an Arc Flash Incident" by Martin Fekete.

I am excited to announce that SESH's 31st Annual International High Technology EHS Symposium and Exposition is being held locally at the Hilton in Scottsdale, AZ. A LEED Workshop and EHS Professional Development Courses are being held on May 18th and 19th, respectively. The SESH Symposium and Expo runs from May 20th-22nd. Symposium topics include: EHS Concerns with Nanotechnology,

Emergency Response, Toxic Gas Monitoring, REACH, Sustainability Standards and Metrics, Greenhouse Gas Inventories, Hazards in a Photovoltaic Research Facility and much more! Exhibitor booths are still available.

Great News: SESH is offering a **Stimulus-Reduced Registration** of \$200 less than the 2008 registration. This is an affordable way to earn Continuing Education Units/Points to maintain professional certifications. For more information, please go to www.seshaonline.org. Hope to see you there!

Christine
Pomeroy
President



www.awma-gcs.com

For the third year, AWMA-GCS partnered with the Environmental and Natural Resources Law Section of the Arizona State Bar to co-host an evening meeting on February 26, 2009. Roger Ferland of Quarles & Brady LLP presented an informative lecture on "What You Should Know About The Obama Administration's Environmental & Energy Initiatives." Mr. Ferland provided valuable insight into the types of environmental and energy areas that are expected to be pursued by the Obama Administration.

Colleen McKaughan of EPA's Region 9 was the speaker for the meeting on March 26. Colleen gave a presentation on the pending nonattainment designation for PM-10 in Pinal County.

Our next meeting will be a site visit on April 24 to the AZ BioDiesel facility in Gilbert which is currently undergoing a significant expansion. Please check our website for additional meeting information and upcoming meeting topics.

Michelle De Biasi
Chair



AHMP Thunderbird

www.thunderbirdchmm.org

ACHMM has a new name: **ALLIANCE OF HAZARDOUS MATERIALS PROFESSIONALS.**

AHMP Thunderbird Chapter Membership. Member benefits include reduced dues for monthly meetings and savings on GRR registration. Chapter membership is only \$50.00 for the year, and we now offer a **Student Membership** for only \$15.00 per year! For more information, go to the Chapter website-

www.thunderbirdchmm.org, or contact Chuck Paulausky at cpaulausky@cpsafety.net.

Essentials of Hazardous Materials Management - Due to popular demand, the Thunderbird Chapter is working to schedule the **Essentials of Hazardous Materials Management** 4-day course for sometime this fall. Watch for information about the course in JEMA and via emails. If you want to be on the Thunderbird email list for event notices, and regulatory updates, send a note to cpaulausky@cpsafety.net.

The AHMP/EPAP monthly lunch meetings are held from 11:30-1:00 on the **second Thursdays of each month**, at the SRP PERA Club in Tempe, so check your emails for the meeting notice. Meeting details: www.thunderbirdchmm.org or www.epaz.org. AND, don't forget the **Thunderbird Happy Hour** on first Thursdays, 5:30 PM - ??

Calendar Items: **May 7** - T-Bird Happy Hour, The Keg, Tempe; **May 14** - Luncheon Meeting, TBD; **June 4** - T-Bird Happy Hour, Old Chicago, Mesa; **Fall 09** - Essentials of Hazardous Materials Mgmt. course.

Chuck
Paulausky
Board Member



www.azchamber.com

The Arizona Chamber's Environment Committee's May 13, 2009 breakfast meeting will feature Dennis Dickerson, the newly appointed Maricopa County Air Quality Department's Ombudsman. Mr. Dickerson will be discussing his new role as an advocate for business regulated by the Department. Breakfast meetings are held at the Phoenix Sheraton Airport Hotel located at 1600 South 52nd Street in Tempe. Breakfast is served at 7:00 AM with speakers beginning at 7:30 AM.

To register go to <http://www.azchamber.com/events/chamber-events>. Efforts have also begun to plan the 2009 Environmental Summit. Those with ideas for speakers and topics can contact Jeff Homer at 480-441-6672.

Jeff Homer
Co Chairman
Environmental
Committee



www.azhydrosoc.org

The Phoenix Chapter held a dinner meeting on Mar. 10th and Dr. Abe Springer, Professor, Northern Arizona University, and Steve Flora, AZ Dept. of Water Resources, discussed work recently published in a new book, "Arid Land Springs in North America." On April 15, Stan Leake, USGS will make the presentation

"Use of Models to Map Potential Capture of Surface Water by Ground-Water Withdrawals" at a dinner meeting in Phoenix. The Tucson Chapter held a dinner meeting on Mar. 19 and Dr. Robert Webb, USGS, made a presentation on his new book, "The Ribbon of Green - Change in Riparian Vegetation in the Southwestern United States." On Apr. 14, Joe Abraham, Arizona Climate Assessment for the Southwest, will make a presentation on the Arizona Hydrologic Information System at the Tucson Chapter meeting.

The Arizona Hydrological Society and the Arizona Hydrological Society Foundation will award three \$3,000 student scholarships this year. The deadline for application is April 30, 2009. Information regarding selection criteria and the application process is available through the AHS website at <http://www.azhydrosoc.org>.

The Arizona Hydrological Society Corporate Board will meet in Phoenix on April 18 to discuss budgetary issues and make plans for the 2009 AHS symposium. The 2009 symposium is scheduled for Aug. 30 to Sept. 2, and will be held at the Westin Kierland Resort in Scottsdale, AZ. The symposium theme will be "Managing Hydrologic Extremes."

Nick Melcher
Executive
Director



www.eia-az.org

The Environmental Information Association is executing its outreach programs for public awareness in full force! Our joint effort with State OSHA and Maricopa County Air Quality for NESHAP compliance is being pushed by the EIA Compliance Forum which next meets April 15, 2009. The Forum will provide information regarding their efforts and proposed approach to compliance at the Dinner Meeting scheduled April 23, 2009 and also host a panel of experts to discuss current industry events. The final asbestos regulatory seminar jointly with EIA and ASU is scheduled Mar. 30th and the next EIA Asbestos Seminar, regular schedule, will be in Tucson Apr. 17, 2009.

Please visit <http://www.eia-az.org> or call 602-437-3737 ext. 123 for info. on all upcoming events sponsored by EIA-AZ and for membership and sponsor opportunities. We encourage participation from members and non-members (environmentally concerned community) involvement with our outreach programs.

Vicky Aviles
President



American Society of Safety Engineers

We've been receiving a lot of questions about driving issues so February and March programs addressed driving. In February, in conjunction with the Southern Arizona Safety

Council, we heard from the Photo Enforcement Unit of the Tucson Police Department and in March, Janet Brown, CSP, Risk Management Specialist at Metro Water District, talked to the group about Fleet Safety.

Both presentations were very interesting and attendees had the opportunity to ask these very knowledgeable people questions about both programs. We're expecting an FBI agent to talk about security issues at our April 14 meeting.

This year we're having our annual Awards Banquet at the Tucson Botanical Gardens on May 22.

Shari Di Peso
Secretary



EPAZ

www.EPAZ.org

The Gatekeeper Regulatory Roundup, co-sponsored by EPAZ, Arizona Emergency Response Commission and the Thunderbird Chapter of ACHMM was held on February 17 and 18 at the Chapparal Suites in Scottsdale. The theme was "Evolving Issues in a Changing Political Climate." Luncheon keynote speakers at the conference were Vernon Maseyesva of the Hopi Tribe and Martin Spong of Valley Metro Light Rail. Two full days of excellent presentations were given by representatives of various government and industry entities. A total of \$8,000 in EPAZ scholarships were awarded to students pursuing environmental careers during the conference. We wish to thank the many attendees, volunteers, sponsors and exhibitors who make this event possible.

Captain Michael Spencer, Operations Officer for the Arizona National Guard Civil Support Team (CST) addressed our March luncheon meeting. The capabilities and resources of the CST that are available to assist industries in emergency situations were described. Many were unaware that the availability of these resources.

In addition to proceeds from the Gatekeeper Regulatory Roundup, one of the primary sources of funds for the EPAZ Scholarships is our annual golf tournament, which was held this year on Friday, April 3 at the Club West Golf Club. We want to thank our co-sponsors Columbia Analytical Services and Eddie Martinez-Keller Williams Realty, and our premier sponsor Republic Services as well as the other sponsors and golfers for their support of this event.

EPAZ normally holds monthly luncheon

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meetings on the 2nd Thursday of the month from 11:30 am to 1:00 pm. EPAZ also gathers on the 4th Wednesday of the month for a casual cocktail mixer at various locations throughout the valley. For more details see our newly renovated website at www.epaz.org or contact me at (602) 393-4800.

Mannie
Carpenter
President



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www.azalliance.org

In February, the regular Alliance monthly meeting was hosted by Mark Salem at Salem Boys Auto. After concluding the business part of the meeting, attendees were taken on a tour of Mark's state-of-the-art automotive shop. Salem Boys Auto, a 20 bay repair shop opened in 1994, is not just any kind of repair shop. It has won numerous awards for its design, its environmental strategy, its beauty and functionality. The Alliance thanks Mark for his hospitality.

In March we learned that the EPA has halted the National Environmental Performance Track program. This announcement came as disappointing news to the Alliance. Alliance members have been strong supporters of this program, and we also played an influential part in launching the Arizona Environmental Performance Track program. Performance Track provides incentives to businesses that go above and beyond regulatory compliance and documents the environmental achievements of participants. At the time of this writing, there are no announced changes in the Arizona PT program.

To contact me or the Alliance office call 480-422-7392.

Len Drago
Chair





Larry Olson, PhD.

It's All About Chemistry

Nitrogen for Your Tires?

Is it Just Hot Air?

It's hard these days to avoid the advertising blitz for using nitrogen (at \$5 or more per charge) to fill your tires rather than just compressed air. Among the benefits claimed are:

- better control of tire pressures because the loss rate is less for nitrogen than air
- lower rolling resistance for tires resulting in better gas mileage and treadwear
- lower running temperatures and fewer blowouts due to tire failure.

First of all, I'm not a car guy and claim no particular expertise in this area. But from a chemical standpoint, is there any basis for these claims?

Dry air is composed of about 78.1% N_2 , 20.9% O_2 , almost 1% Ar, and various other gases in ppm quantities. So air used to fill your tires is already mostly nitrogen and even the nitrogen gas available at tire centers is not pure. Typically it may be between 94-99% N_2 .

The molecular weight of O_2 (32 g/mole) is higher than that of N_2 (28 g/mole) and that means the N_2 molecules are moving faster than O_2 by a factor of $\sqrt{32/28} = 1.07$. If there was a small hole in your tire or in the seal between the rim and tire, then nitrogen molecules would be expected to leak out more quickly.

But diffusion through the walls of the tire is a different matter. Here the size of the molecules is important and N_2 is actually a slightly larger molecule (4.1 Å long and 3.0 Å wide) than O_2 (3.9 Å long and 2.8 Å wide). This may seem counterintuitive since there are more electrons around O than N, but there are also more protons. Since all the valence electrons in O are about the same distance from the positively charged nucleus, they don't shield each other very well and so an electron

in O feels a stronger positive charge making oxygen atoms smaller than N atoms.

Tires lose pressure continuously since rubber is permeable to gas molecules as well as from losses through the tire/wheel/valve interface. There are a lot of anecdotal claims about nitrogen's performance vs compressed air, but one of the best controlled studies was led by James D. MacIsaac Jr. of the National Highway Traffic Safety Administration (<http://www.regulations.gov/fdmspublic/ContentViewer?objectId=0900006480739e82&disposition=attachment&contentType=ppt8>). He looked at 17 different tire types and measured the Inflation Pressure Loss Rate (IPLR) using ASTM standard F1112-06 which measures the static loss of pressure over time under controlled temperature and pressure conditions. Pressure transducers able to measure to 0.25 psi and accurate to $\pm 1\%$ were used. He found that the average IPLR for nitrogen was only 66% of that for air and that the benefits applied to all tire types and inflation pressures. A similar, but less rigorous, test by Consumer Reports was conducted with 31 different tire types (<http://blogs.consumerreports.org/cars/2007/10/tires-nitrogen-.html>). One tire of each type was filled to 30 psi with 95% N_2 and another was filled with air. After 1 year, the tires filled with air lost on average 3.5 psi and those with nitrogen lost 2.2 psi – also a difference of 66%. So it does appear there is evidence that the IPLR for nitrogen is less than that for air.

MacIsaac found no direct effect on rolling resistance for tires filled with N_2 . Any improvement in mileage or treadwear for a nitrogen filled tire was therefore likely due to lower fluctuations in tire pressure. So the lesson is that you may need to check your air filled tires more frequently than if they were nitrogen filled, but performance for properly inflated air tires is equivalent to nitrogen.

They also tested tires filled with a 50:50 mixture of oxygen and nitrogen and oven aged for 5 weeks at 65 °C. These tires showed significant deleterious effects, but there were no differences between tires filled with nitrogen or compressed air. The claim that air accelerates tire degradation was not borne out, at least in this test.

GM (<http://www.gminsidenews.com/forums/f53/what-gm-says-about-nitrogen-tires-2005-already-51446/>) acknowledges that pure nitrogen should reduce oxidation of tire components, but since only a small amount of oxygen is necessary for oxidation, the commercially available nitrogen that may be only 95% N_2 might not provide any real benefit in this area. Interestingly, the NHTSA study found that tires inflated with almost pure nitrogen (>97%) actually showed diffusion of oxygen *into* the tire after 90 days. Thus, even if you start with nitrogen, ultimately there will be some oxygen present inside your tires.

So what is the verdict? All tires, no matter what gas is used to inflate them, lose pressure over time, but the loss rate for nitrogen is only about 2/3 that for air filled tires. If you don't keep a close check on your tire pressure, there can be some advantage for using nitrogen. But in normal driving you can derive essentially the same benefit, for less cost, from simply maintaining proper air pressure.

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

PING

Strengthens Bottom Line While Enhancing Environmental Quality

Recently Phoenix-based PING received recognition for environmental excellence for achievements that go beyond regulatory requirements. PING, located on a 40-acre site, is a family-owned company founded in 1959 that manufactures and assembles golf clubs and golf-related products. As a member of both the Arizona and National Environmental Performance Track [See also *Newsbriefs* article on Performance Track, pg. 14], PING, part of the Karsten Manufacturing Corporation, has made impressive environmental progress during its three-year membership. The facility has slashed energy use, found water-based alternatives for mineral spirits, reduced emissions of particulate matter (an air pollutant) and cut paper use.

- PING has made energy efficiency a priority by slashing energy consumption 19% or 17,000 mmBTU (25% normalized — when adjusted for increased production of golf clubs over the last three years) and reduced its carbon footprint by 11% or 1,600 metric tons of carbon dioxide equivalent emissions (18% normalized). PING accomplished this with new process equipment, like cycling compressed air dryers. Cycling air dryers operate only when compressed air is needed, instead of continuously operating like older dryers. The facility has also implemented the Five S program, a method of organizing and managing work to improve efficiency by eliminating waste and optimizing operations. PING has set an aggressive goal to further reduce energy use by an additional 15% over the next three years.

- PING cut its use of mineral spirits, a hazardous material and air pollutant, 44% (34% normalized) by installing a water-based parts washer. PING aims to further reduce its use of mineral spirits by an additional 52% over the next three years.

- PING reduced its emissions of particulate matter into the air by 70% or 43 pounds (60% normalized). The facility implemented a variety of technologies in order to exceed its goal, including upgraded dust collection filters and air pollution control equipment as well as improving operational efficiencies.

- PING decreased paper use by 18% or more than 8,000 pounds (25% normalized). To achieve this reduction, PING has asked employees to print documents on both sides of a page, and increase their use of electronic media instead of paper. PING is negotiating with a supplier to purchase paper with 30% post-consumer content,



From left: Matt Conway, Environmental/Safety Manager; Ken Kays, Facilities Manager; and Rob Barnett, Director of EMS and QMS stand by a new more efficient particulate filter that helped PING reduce its PM emissions by 70%.

in bulk with little packaging.

"PING is an excellent example of how business can prosper and reduce its risks by finding safe solutions that go beyond regulatory requirements. I congratulate PING for its environmental leadership and innovation," said Wayne Natri, former Administrator of EPA Region 9.

PING's Director of Environmental and Quality Systems, Rob Barnett, emphasized, "Through our Performance Track membership and environmental management system, PING has been able to enhance environmental quality while strengthening our economic bottom line."

Rob Barnett can be reached at 602-687-5255 or by email at Robb@pinggolf.com. Matt Conway can be reached at 602-687-5285 or by email at MattC@pinggolf.com.

Information in this article provided by Rob Barnett at PING and the US EPA.



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News Briefs

Automation Plating to Pay \$100,000 In Civil Penalties

❖ ADEQ recently announced that Automation Plating, a California based electroplating company in Tucson, has agreed to pay a \$100,000 civil penalty for hazardous waste violations in the latest settlement resulting from the Arizona Department of Environmental Quality's "Plating Initiative." Since 2007, seven Arizona electroplating facilities that were not in compliance with hazardous-waste rules have been brought into voluntary compliance.

"As a result of this initiative to increase oversight of the electroplating industry, most of the facilities inspected by ADEQ improved procedures to ensure that hazardous waste is managed appropriately," said Patrick Cunningham, ADEQ's acting director. "The goal of this initiative is to better protect human health and the environment in Arizona." ADEQ launched the initiative after plant inspections in 2004 and 2005 showed that many electroplating facilities were not in compliance with the federal Resource Conservation and Recovery Act (RCRA), which regulates hazardous waste. Most problems with electroplating facilities involve mismanagement of chromium VI, an odorless, tasteless chemical which has been known to cause lung and stomach cancer, asthma and other respiratory ailments, ulcers, anemia, allergic reactions, developmental problems in children, and damage to the male reproductive system.

In 2005, after a worker was trapped in a chemical tank at Automation Plating's Tucson facility and killed, the Pima County Department of Environmental Quality (PDEQ) forwarded the case to ADEQ. During the subsequent inspection and a 2007 inspection conducted by PDEQ at ADEQ's request, PDEQ found many RCRA violations, including failures to minimize the risk of a hazardous waste release, to prevent leaks from tanks, to respond to a leaking tank, to label containers of hazardous waste, to train employees to manage hazardous waste, to conduct weekly inspections, and to have an emergency plan.

In addition to the civil penalty, Automation Plating has also cleaned up its site and conducted an assessment for ADEQ to confirm that all hazardous waste was cleaned up.

EPA Administrator Lisa Jackson Halts Performance Track Program

❖ EPA Administrator Lisa P. Jackson has directed the Agency to halt the National Performance Track program. Jackson stated in a memo dated March 16, 2009, "Now it is time to pause and reflect on Performance Track's achievements and opportunities for improvements. Performance Track was developed in a different era and may not speak to today's challenges. There has been much recent discussion about the benefits of the program. Members of Congress and stakeholders have also asked us to pause and consider what approaches might be best for the future. Therefore, I have decided to halt the current Performance Track Program with the intent of refining those concepts that can lead us to a stronger system of environmental protection as we go forward."

Over 500 facilities and 200 companies are partners in the program, including Intel, Ping, the City of Scottsdale, and other leading Arizona facilities. Performance Track provides incentives to businesses that go above and beyond regulatory compliance and documents the environmental achievements of members.

APS Takes Action Against Climate Change

❖ The U.S. EPA has recognized Arizona Public Service for reducing emissions of the most potent greenhouse gas, sulfur hexafluoride (SF6), — the equivalent to annual emissions from more than 200,000 cars. "APS is to be commended for its early action on climate protection and its commitment to sharing information across the sector," said Deborah Jordan, the EPA's Air Division director for the Pacific Southwest region. "This company demonstrates that through partnerships and dedication to emissions reductions, the power transmission sector can

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reduce emissions of SF6 significantly."

SF6 is a greenhouse gas that traps heat in the atmosphere at a rate of about 23,000 times higher than carbon dioxide, making it the most potent greenhouse gas currently in use. One pound of SF6 has the same global warming impact of nearly 11 tons of carbon dioxide. Once emitted, SF6 remains in the atmosphere for over 3,000 years, resulting in an essentially irreversible impact on the climate. SF6 is used by the electric power industry as an insulator in the high voltage equipment that transmits and distributes electricity between generating stations and customer load centers.

Two companies, APS and Consolidated Edison Company of New York, were awardees announced at the U.S. EPA's 2009 Workshop on SF6 Emission Reduction Strategies in Phoenix.

APS prevented more than 100,000 pounds of SF6 from entering the atmosphere during the period from 2001 to 2007 by adopting improved handling and maintenance practices and increasing SF6 recycling. Consolidated Edison Company of New York prevented 671,014 pounds of SF6 from entering the atmosphere from 1999 to 2007 – the equivalent to the annual emissions from over 1.3 million cars — by replacing equipment and improving leak detection.

The SF6 Emission Reduction Partnership for Electric Power Systems, which was launched in 1999, is a collaborative effort between the EPA and the electric power industry to identify and implement cost-effective solutions to reduce SF6 emissions. Currently 81 utilities participate in the voluntary program.



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Gatekeeper / Regulatory Roundup 2009



The 5th Annual Gatekeeper Regulatory Roundup, presented by EPAZ, the Thunderbird Chapter of AHMP (formerly ACHMM), and AZSERC, was held in Scottsdale on February 17th and 18th. The conference opened with remarks by Patrick Cunningham, Arizona Department of Environmental Quality Acting Director, and Division Updates from ADEQ Division Directors (photo above). Opening day was packed with speakers and workshops too numerous to mention here, but a few examples include: Air

Quality Panel, moderated by Roger Ferland, Quarles & Brady; Greenhouse Gas Regs & Climate Change Panel, moderated by Mannie Carpernter, GEC; and a session on EPA's new RCRA recycling rules - Entropy in Action, by Barton Day, Bryan Cave, LLP. Day two opened with Louis Trammell, Director, ADEM, Chair, AZSERC, speaking on AZSERC and Emergency Management. Day two also was packed with sessions too numerous list, and included an 8-Hour HAZWOPER Refresher course for those selecting this option. Hundreds of Arizona EH&S professionals participated in the two day conference, one of Arizona's premier environmental events. Sponsors included Goodrich, GEC, ITSI, Bryan Cave LLP, CP Safety & Environmental, and LFR (an ARCADIS company).

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EPAZ Awards Scholarships

Mannie Carpenter, EPAZ Pres. (far left) and Julie Hoskins, EPAZ Scholarship Comm. Chair (far right) present scholarships (L to R, center): Rebecca Matthews, Alexander Davis, Christopher Sexton, and Drew Bryck. Not shown are: Jeremy Rand and Karika Bridgers.



AHMP Awards Scholarships

Chuck Paulausky, left, presents AHMP Scholarships: Christopher Sexton (center) and Dane Whitmer (right). Not present: Camille Naaktgeboren.



Gatekeeper/RR 09 Planning Committee

L to R: Skip Harden, Columbia Analytical; Eddie Martinez, Keller-Williams; Sylvia Castillo, AZDEMA; Julie Hoskin, ADEQ; Mark Howard, AZDEMA; Laura Malone, Goodrich; Lisa Culbert, IES Southwest; Mannie Carpenter, GEC; Chuck Paulausky, CPSE; Nance Netsky, ITSI; Andy Ewing, EPSI; Brad Cross, LFR; *Not Shown:* Mike Ford, Bryan Cave LLP; Dwight Clark, Ninyo & Moore; Jennifer Thomason, WD Schock Company; and Patricia Clymer, ITSI.



*ADEQ Acting Director Patrick Cunningham presented opening remarks, followed by updates from the ADEQ Division Directors.
At Podium: Amanda Stone, Waste Programs Division Director.*

Committee Volunteers "give back to the community", "value sense of accomplishment"

The Gatekeeper Regulatory Roundup is put together annually by a committee of volunteers. This is a huge accomplishment and the members (photo, left page, at bottom) rightly deserve the appreciation of the EH&S community. The Journal asked why do they devote so much time and talent to the G/RR, and what would they say to others who may be contemplating participating next year. Some of the responses were:

The Gatekeeper Regulatory Roundup provides a great opportunity for attendees to learn what is happening in a lot of different areas at a bargain price. However, without volunteers like those on the planning committee it could not happen—at least not without greatly increasing the price to attend. Having a group of people on the planning committee that are collectively knowledgeable in various aspects of environmental and hazardous material management ensures that the conference program is current, relevant, and high quality. In addition, the old adage that "many hands make light work," while trite, is nonetheless true and the more people there are to share the workload, the less of a burden it is on any one individual or company.

Mannie Carpenter, GEC, EPAZ President

I am so proud to be a part of the Gatekeeper Regulatory Roundup planning committee. It is always such a sense of accomplishment to see the conference come together to provide fellow environmental/safety professionals with up-to-date information. It's also a great feeling to help out and coming environmental/safety professionals with their college expenses.

Laura Malone, Goodrich, EPAZ Vice President

Being involved on the planning committee for the Gatekeeper Regulatory Roundup has allowed me to grow both professionally and personally. I've worked with some outstanding individuals in our industry that are both dedicated to their employers or clients and to the associations they serve. The networking opportunity has been invaluable, granting me access to resources and/or referrals that are just a phone call away that I would not have otherwise. Most importantly, serving on the planning committee has given me a sense of community with my fellow environmental professionals. Every year at the conclusion of the conference I marvel at what we have accomplished as volunteers to our organizations. And finally, those that have served along side of me have become good friends of mine, not just business colleagues. I know that regardless of the changes that the future might hold for us on our professional journey that we will stay in touch and wish each other well.

Lisa Culbert, IES Southwest, EPAZ Website Chairperson


I've been pleased to be a part of the GRR Planning Committee since its inception in 2005. I think it's about two things- Giving back to the EHS community for all

that they have taught me over the past 18 years, and being able to provide the same networking opportunities for EHS professionals that I've enjoyed. GRR has grown since the start to be the premier professional development event in AZ, mainly due to the efforts of the Planning Committee to bring in interesting speaker and topics, as well as opportunities for vendors to display the latest in technologies and services.

Chuck Paulausky, CP Safety & Env., Thunderbird Chapter, AHMP





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Sustainability in the Downturn



The most feedback I've received about an article submitted to the Journal was entitled "Selling Sustainability" (Aug-Sept 2008) and was published just before the severity of our economic condition had come into view. In preparation for this edition of "Prospecting" I was reading over the article and realized how dramatically things have changed since then and thought I'd put my thoughts down on how this economy is affecting the sustainability movement.

The initial premise of the article is that the enormous volume of media attention about sustainability is inconsistent with the amount of business it generates. How has this concept evolved over the last eight months? Frankly, I am surprised by the way the movement has held up. It would be easy to assume the expense associated with sustainability to be high on the list of items cut from budgets being reduced by corporations. But the commitment to sustainability seems to be, for the most part, remaining. The media attention has diminished due to other pressing economic stories to tell, but the fact that companies are even still talking about sustainability, to me, is an encouraging sign.

Sustainability's measure of success being linked to its positive impact on the bottomline is being tested. If corporations were flush with cash and had few economic worries, a sustainability program with marginal bottom line impact might be easier to accept. But now, when every expense is heavily scrutinized, only programs most critical to profitability are supported and funded. If a sustainability program helps the bottom line, it stays. If not, it goes. We have seen companies selecting individual components of their program to keep, and discarding those less beneficial. The result is an evolution of sustainability initiatives with a heightened focus on their return on investment.

The economic downturn is a good environment to validate the content of sustainability programs as a whole by identifying what elements *really* contribute to the financial well-being of the company, and which ones are of soft benefit. A cleansing, if you will. You can be sure the adjustments that are made now in the content of sustainability programs will be based in reality and, in my opinion, will be the components that stick around for the long term. Only the most appropriate,

productive and high ROI items will remain. This economic downturn may be the best thing that has happened to the sustainability market place.



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

Joe C. Holmes



by Cameron Flower

As the current economic downturn continues, growing numbers of property owners are affected by Maricopa County Department of Environmental Quality (ADEQ) Rule 310.01. The revised rule requires owners to provide the same level of site stability as an active construction site. While a construction contractor usually manages site stability on active sites, it becomes the owner's responsibility on vacant sites.

There are two components to site stabilization:

1. Adherence to dust regulations
2. Adherence to stormwater regulations

Construction contractors generally obtain the dust and stormwater permits for active jobsites. These permits obligate contractors to designate their supervisor responsible for compliance with the terms and conditions, and liable for any violations. However, once construction activity ceases and a contractor's personnel no

longer manage the site, that responsibility is transferred to the owner. While dust and stormwater permits are typically issued together, they differ in their close-out requirements. Owners may cancel the dust permit if they can demonstrate that their property is stabilized for dust. However, the stormwater permit must remain open until owners can prove 70 percent uniform stability on site.

For example, it is acceptable to stabilize dust using water crusting, which requires spraying water over the entire site to form a hard crust. Often, water crusting is enough to keep dust stabilized, but fencing also may be required to minimize trespassing. As long as a site can pass one of the stabilization test methods described in Maricopa County Rule 310.01, that site is considered stabilized.

While water crusting is an effective form of compliance for dust control, it does not constitute stabilization for stormwater pollution. To meet stability requirements for stormwater pollution prevention, the project must use suppressants, palliatives, vegetation or rocks.

Owners are responsible for demonstrating compliance. The county issues notices of violation to which owners have 30 days to respond, detailing how they will stabilize the property and prevent future trespassing. The county has the authority to stabilize the property of any owner who fails to respond and then to bill that person for the work (Rule 310.01 Section 301.2a and Section 301.2b).

Owners are responsible for their property stabilization; pleading ignorance is no defense. Property owners must understand their responsibility and take into account this new cost of doing business.

Cameron Flower is Senior Manager, Kitchell Environmental Services. He has more than eight years experience in environmental services. Cameron can be reached at 602-212-6644 or by email at CFlower@Kitchell.com.



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