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Above: Daniel A. de la Torre, Chemical Transportation, Inc., presenting RCRA/DOT.

he Southern Arizona Environmental Managemetn Society (SAEMS) presented its one-day 2009 Annual RCRA Seminar, "RCRA: Recession Proof Compliance" on May 7 at the Marriott Tucson Univerity Park. The well-attended seminar included presentations on RCRA Basics, RCRA/DOT, RCRA/OSHA, Contractor Generated Waste, RCRA/Recycling, RCRA/Air Quality, Electronic Waste, and Universal Waste.

For more information visit www.saems.org.

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From the Editor



e are in the season for Arizona environmental conferences, and although attendance at several recent events has been down a little from past years, mainly due to the economy, all have been accomplished with great success. SESHA held its international conference in Scottsdale (see page 15) and SAEMS held its annual RCRA Seminar in Tucson (see page 3). SAEMS is also

planning its upcoming annual P2 Seminar for September (see notice on page 18), and the AHS is planning its annual symposium for the end of August/beginning of September (see page 2). At least two other major conferences are planned for early fall, but no details are available yet.

As a Journal reader, you are probably involved in some way or are concerned with environmental management in Arizona. So, if you are not attending at least one or two conferences each year, I suggest you take advantage of this opportunity to learn from and network with other environmental professionals. It is almost always a great investment of your time & money!

Thank you to our readers, authors, and advertisers!

Sincerely, Jim Thrush, M.S. Environmental Management Publisher & Editor



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COVER IMAGE: LIGHTNING STORM OVER ORADEA ROMANIA. COURTESY OF ENGLISH WIKIPEDIA; COMMONS.WIKIMEDIA.ORG. PHOTOGRAPHER: MIRCEA MADAU / NELUMADAU.

Conte<mark>nts</mark>

AZPDES MSGP 2009 Highl ights of ADEQ'S Proposed AZPDES Stormwater Permit

Highlights of the Proposed Arizona Pollutant Discharge Elimination System Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities

by Ed Latimer, PhD, PE, CPSWQ

Stormwater discharges in the United States are regulated under the National Pollutant Discharge Elimination System (NPDES) Program, which is part of the Clean Water Act. Several types of activities considered highly polluting of stormwater are regulated, including specific industrial activities. Since the mid-1990s in Arizona and elsewhere in the United States, stormwater discharges from regulated industry facilities have been permitted by way of a Multi-Sector General Permit (MSGP). In general, the MSGP is based on the premise that permitted facilities can prevent contamination of stormwater and consequently prevent degradation of the water quality of receiving streams by implementing and monitoring onsite structural and non-structural stormwater pollution prevention best management practices (BMPs).

The EPA (federal) MSGP is one large permit that regulates numerous separate sectors. Each sector represents a different type of activity and makes use of standard industrial classification (SIC) codes or narrative descriptions to identify the industries that require permit coverage. Since before Arizona received primacy over the NPDES Program in late 2002, regulated industrial facilities in our State have been authorized to discharge stormwater under the federal MSGP-2000 (65 FR 64746). This permit was issued on October 30, 2000, and was subsequently adopted by ADEQ to apply in Arizona until a new Arizona-specific industrial stormwater permit became available. As all general permits, the MSGP-2000 expired five years later on October 30, 2005. In absence of a new permit to replace it, the MSGP-2000 was administratively continued for facilities that were covered under the permit at the time it expired. The shortcoming was that until a new permit became available, new regulated industrial facilities would not be able to obtain permit coverage. Nonetheless, ADEQ has expected that operators of new regulated industrial facilities in Arizona to develop stormwater pollution prevention plans (SWPPPs), implement BMPs, and follow the appropriate sectorspecific requirements as described in the MSGP-2000. All facilities in Arizona subject to industrial stormwater permit coverage will be required to apply (or reapply) when the AZPDES MSGP is issued. MSGP-2000 permittees on record will be notified by ADEQ when the new permit becomes effective.

During the late 2004/early 2005 timeframe, ADEQ developed a draft multi-sector industrial permit that received significant stakeholder input, but was never finalized – largely due to the Ninth Circuit Court of Appeals vacating EPA's approval of the Arizona Pollutant Discharge Elimination System (AZPDES) permit program. By a narrow 5-4 vote, the Supreme Court overturned the Ninth Circuit decision in June 2007 and upheld the basis and legal validity of the AZPDES program.

THE NEW AND PROPOSED MSGPs

Nearly three years after the MSGP-2000 expired, EPA issued a new MSGP (73 FR 56572) that became effective on September 29, 2008 (MSGP-2008). The MSGP-2008 covers 30 separate "sectors" or categories of industrial activity that include such operations as airports, landfills, and scrap recycling facilities. It is important to note that a facility may be subject to the specific requirements of more than one sector if it has activities that are covered under the descriptions for multiple sectors. The new permit will be effective for five years, or until September 29, 2013. The MSGP-2008 is only applicable in Arizona within Indian Country due to the existence of the AZPDES Program. Since the release of the MSGP-2008, however, ADEQ now recommends that operators of non-permitted industrial activities follow the requirements of the MSGP-2008 (instead of the MSGP-2009) until the AZPDES MSGP is available.



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On April 10, 2009, ADEQ issued a proposed (informal draft) AZPDES MSGP for stormwater discharges associated with industrial activity for facilities located outside Indian Country in Arizona. To gather initial feedback from the public, two informal stakeholders' workshops were held during this informal review period - one in Phoenix on May 19. 2009 and the other in Tucson on May 21, 2009. Following the informal stakeholder input, ADEQ anticipates releasing a final draft of the AZPDES MSGP for a formal 30-day public comment period later this summer.

The informal draft AZPDES MSGP-2009 is largely a wholesale adoption of the federal MSGP-2008, which, by most standards, is a fairly extensive, broad-scoped, and highly technical general permit. Interestingly, ADEQ has issued a Fact Sheet that compares the proposed AZPDES MSGP-2009 to EPA's MSGP-2008, which has never been applicable to Arizona industry outside of Indian Country and thus, few have any familiarity with it and/or have dealt with its requirements. Further, the MSGP-2008 is structured differently than the MSGP-2000, adding to the confusion. The MSGP-2008 consists of nine (9) separate Parts and Appendices A through K. General requirements that apply to all facilities are found in Parts 1 through 7; then industry sector-specific requirements found in Part 8; and the State- and Tribal-specific requirements summarized in Part 9. The Appendices contain additional permit conditions that apply to all operators covered under this permit.

There are some basic differences between the proposed AZPDES MSGP-2009 and the federal MSGP-2008, mostly to do

with state-specific laws. One of these is the absence of any common requirement in relation to the Endangered Species Act (ESA), National Historic Places Act (NHPA) and National Environmental Policy Review Act (NEPA); since these programs are not applicable to AZPDES. Another logical difference is the requirement for any drywells that a facility has to be identified on the site map as part of the SWPPP, and their registration numbers listed in the SWPPP. In Arizona, drywells are a common method for disposal of stormwater - though a practice fairly unique to Arizona when compared to the majority of other states in the United States. Furthermore, drywells that drain areas where hazardous substances, including motor fuels, are used, stored, loaded or treated are required to obtain either an individual or a general aquifer protection permit under the Aquifer Protection Program (APP). Also, in addition to the use/reference of impaired water on matters of water-quality-based effluent limits, ADEQ has added the category of Outstanding Arizona Waters to prevent degradation of these unique water bodies.

SUMMARY OF MAJOR PERMIT CHANGES

In addition to the changes identified above, the MSGP-2008 differs from the previous permit in several ways. Several of the most significant changes are summarized below.

In the proposed AZPDES MSGP, ADEQ has essentially kept every new permitting and compliance requirement of the MSGP-2008, only selectively expanding a few of these to be more stringent. For example, the MSGP-2008 contains different requirements for new and existing discharges



Photo: Courtesy Ed Latimer

that are discharging to impaired water with a total maximum daily load (TMDL) as compared with those without a TMDL. New dischargers are only eligible for discharge authorization if they can document that the pollutant will not be exposed to stormwater at the site, or the impairment pollutant is not present at the operator's site, or that the discharge is not expected to cause or contribute to a water quality standards exceedance. ADEQ went a little further

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Norwood B. Melcher, Jr. (Nick) Memorium

Nick Melcher was only 60 years old when he passed away in April, 2009. Nick spent 34 years with the U.S. Geological Survey, starting as a staff hydrologist in Montana. Later he became a subdistrict office chief in Kentucky, and district chief in Iowa. He became the Director of the Arizona Water Science Center in 1994. In Arizona, Nick



was lauded for having one of the strongest Data Programs in the country and for having developed one of the broadest and most innovative ground-water programs in the USGS. Nick managed his office as effectively and efficiently as any Water Science Center in the country. He took an Arizona office in deep financial trouble and turned it into a highly performing organization with soaring morale.

When Nick retired from the USGS in 2007, he knew he didn't want to disengage from hydrology. As Secretary of the AHS Corporate Board from the Tucson Chapter, Nick participated in the many discussions about how best to handle the administrative needs of the Society. And when the need arose, Nick stepped forward with a proposal to act as Executive Director. He excelled in his new role, and brought order to the membership records, invoicing, and editing of the Newsletter. Nick was planning to ramp up his AHS activities by increasing representation of the Society and its goals and activities before the many decision-makers and influential professionals that he knew well, when he unexpectedly passed away.

Nick Melcher was the consummate professional, and an important member of AHS. His many friends at USGS knew Nick as one of the most generous, thoughtful and compassionate individuals in the Survey. Our profession is now diminished with his passing. He will not be forgotten.

Our thanks to Matthew Beversdorf for providing this Memorium. Editor.

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Latimer: AZPDES MSGP 2009

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Photo: Courtesy Ed Latimer

also upstream tributaries of the impaired waters. However, not all proposed new provisions would be perceived as "more stringent." One beneficial provision to Arizona permittees is the exemption from total suspended/dissolved solids (TSS/TDS) monitoring for discharges to ephemeral waters.

There is now a waiting period of up to 32 business days (30 calendar days for the MSGP-2008) after a Notice of Intent (NOI) has been submitted to ADEQ. Whereas EPA has launched an updated electronic system for submitting NOIs, ADEQ still requires the use and submittal of a hardcopy form. The NOI forms, however, have been revised to include information to help determine whether or not water quality-based requirements are necessary. The facility operator must also identify if it is a new discharger, the size of its property and any effluent guidelines to which it may be subject. If the facility has the potential to discharge to a municipal separate storm sewer system (MS4), the applicant must also provide specific information about the MS4 and notify the MS4.

Under the MSGP-2000, depending on the industrial sector, permittees had to measure how effective their BMPs were by either monitoring (2nd and 4th years of the permit) for specific analytical parameters and/or by taking quarterly visual samples in order to observe whether there were any solids, foam, discolorations, etc. If a permittee determined through analytical and/or visual monitoring, that a BMP was not working, the permittee would submit their monitoring data to the regulatory agency with

explanations of the benchmark exceedance and a description of the corrective actions that would be taken in the future. Under the proposed AZPDES MSGP, permittees must benchmark monitor four times, two times each wet season, during the first year (once quarterly for the MSGP-2008). ADEQ defines the wet seasons as "summer" (June 1 through October 31) and "winter" (November 1 through May 31). Following four representative samples of benchmark monitoring, if the average of the four monitoring values does not exceed the established benchmark, the permittee's benchmark monitoring requirements will be considered fulfilled for the duration of the permit term. Otherwise, the benchmark monitoring must continue until the average of four consecutive analytical results fall below the target benchmark for the parameter(s).

Under both the MSGP-2008 and the proposed AZPDES MSGP, a permittee must take corrective action if there are conditions that violate effluent limits or exceed applicable water quality standards if it determines through inspection, evaluation or monitoring that the control measures chosen to meet the limits are not adequately reducing discharge pollutants. Effluent limits are defined as qualitative and quantitative control requirements to which all permittees are subject. These permits also specify the types of conditions that trigger corrective action requirements, what must be done to address such conditions and ensure compliance with the permit, and the deadlines for completing corrective action. Fortunately, they also include provisions enabling dischargers to avoid corrective action and subsequent monitoring requirements; as well as a waiver for inactive and unstaffed sites for benchmark monitoring and quarterly visual assessments.

Permitted facilities under both the MSGP-2008 and the proposed AZPDES MSGP must also conduct quarterly site inspections, quarterly visual assessments of the stormwater discharge and annual comprehensive site inspections, unless exempt from one or all of these actions due to being inactive or unstaffed. Permittees are now also required to submit an annual report under the new permit. Both the MSGP-2008 and the proposed AZPDES MSGP include a provision requiring permittees to submit an annual report that includes the findings from the annual comprehensive site inspection and a summary of any corrective actions required and taken during the year. Annual reports must be submitted within 45 days of conducting the comprehensive site inspection.

Ed Latimer, PhD, PE, CPSWQ, of AMEC Earth and Environmental, Inc. in Tempe, serves as Manager and Technical Director of Water Resources. Dr. Latimer leads the firm's stormwater management and permitting services in Arizona, and can be reached at 602-818-2931 (cell) or by email at ed.latimer@amec.com.





Michael C. Ford, Attorney

Regulatory Developments

Supreme Court Narrows Cleanup Liability

"Thanks to my col I eague Wink Pearson for his contribution and insight to this articl e"

n May 4, 2009, the U.S. Supreme Court rendered a significant CERCLA decision that will impact the cleanup liability landscape in Arizona and nationally. The decision in *Burlington Northern & Santa Fe Railway Co. v. United States* ("*BNSF*") narrowed the category of companies who are liable as "arrangers" under CERCLA and broadened a liable company's "divisibility" defense to CERCLA's presumptive "joint and several" liability.

Narrowing of Arranger Liabil ity

The Court held that a company who transports its useful product (*e.g.*, raw chemicals) to a facility is not liable as a party that "arranged" for the disposal of hazardous substances unless the government can prove the company "intended" to dispose of its useful product. The Court rejected the government's argument that the company's knowledge that there would be minor spillage in the off-loading process was sufficient to trigger CERCLA liability.

In this case, a chemical supplier delivered its product to the user/facility owner. The supplier knew that minor, accidental spills occurred during transfer of the chemicals from the common carrier to the facility's storage tanks after the chemicals were under the facility's stewardship. However, the Court noted that the supplier took steps to encourage the facility to minimize spills during the transfer. The Court found that the supplier's knowledge of the spills and leaks was insufficient grounds to conclude that the supplier "arranged for" the disposal of its chemicals at the facility.

Practical Impact: Fewer companies who sell their useful but potentially contaminating products to contaminated sites will be pursued as an arranger based on incidental spills of the product at the time of delivery. The government and private parties will have a harder time pursuing these cases, as they will have to prove the companies "intended" to dispose of the spilled or leaked product. Companies who sell and transport such products should consider issuing and implementing safety notification procedures to their customers for the prevention of future spills and leaks. Such evidence will be useful in rebutting any inferences urged by plaintiffs that the company had the requisite intent to dispose of their products.

Broadening of the Divisibil ity Defense to Joint & Several Liabil ity

The Court also relaxed the scope and nature of evidence needed by a company at a multi-party CERCLA site to defeat the imposition of joint and several liability (joint and several liability enables the government to pursue any one of the companies at a multi-party site to recover 100% of its cleanup costs despite the fact that the target may have contributed a relatively minor share of the site's total contamination). Before this decision, it was universally recognized that a company had a "divisibility" defense to joint and several liability, *i.e.*, if a company could establish the existence of distinct harms at the site or a single harm that was reasonably capable of apportionment, the company's liability for cleanup costs would be limited to the separate harm for which the company was responsible or its apportioned share. However, under a strict interpretation of this defense in the past by the government and some courts, many companies could not defeat joint and several liability because they could not establish distinct harms or a reasonable basis for apportionment at their multiparty site. In the *Burlington Northern* decision, the Court affirmed the trial court's "reasonable basis" for apportionment based in part on a relaxed standard of estimates and inferences, rather than specific and detailed records.

In this case, a company operated a chemical distribution business for many years on two parcels leased from the railroad. The company released contamination across both parcels. The government pursued the railroad for joint and several liability for the entire site. Rejecting the government's position that the harm was indivisible and not capable of apportionment, the trial court apportioned the railroad a 9% share of liability for cleanup costs. The trial court reasoned that (i) the railroad owned 19% of the site; (ii) the railroad's ownership period encompassed 45% of the time that the site operated as a waste disposal site; and (iii) 66% of the chemical contamination was associated with the type of chemicals that were disposed of on the railroad parcel. Multiplying these factors together (.19 x .45 x .66), the trial court initially assigned a 6% share to the railroad and then increased its share by 50% (i.e., from 6% to 9%) to account for uncertainty in the analysis. The Supreme Court affirmed the trial court's apportionment by concluding that the record evidence before the trial court provided a reasonable basis for its 9% decision and thus rejected the government's claim that the railroad should be liable for all the cleanup costs at the site. In reaching this decision, the Supreme Court focused on whether the contamination at the site could be apportioned, implicitly rejecting the government's contention that the harm to be subjected to the apportionment analysis was the government's cleanup costs.

Practical Impact: Liable parties at some multi-party sites will be able to demonstrate apportionment with a more relaxed standard of proof to defeat claims of joint and several liability. Whether a reasonable basis for apportionment exists continues to be determined by the trial court in its discretion on a case-by-case basis.

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.



Sustainabil ity and Sustainabl e Devel opment

Nicholas R. Hild, PhD.

An Opportunity In The Budget Crisis

A t a recent conference where Arizona Department of Transportation (ADOT) engineers, administrators, transportation consultants, and other Arizona agencies who help build our highways and associated transportation systems gathered, Al Brown and I were asked to present papers on how highway construction projects can become more sustainable.

Some project examples that have been studied at the University of Washington, for instance, include hot mix asphalt processes being replaced with warm mix asphalt and diesel-fueled trucks burning more bio fuel—strategies that reduce greenhouse gas (GHG) by an equivalent of two and a half households worth of electricity use on a single DOT infrastructure project. Icing on the cake for DOT: the GreenRoads third party rating system gives BIG sustainability points for implementing those kinds of programs.

Just a cursory review of a few ADOT projects reveals that most require 'burning' a lot of fuels, just to keep our roads and streets in decent condition. The bigger the project, the more potential GHG savings and energy reduction opportunities there are—opportunities that provide for reducing ADOT's carbon footprint—just the thing that is likely to be a requirement of NEPA EIS's for transportation projects in the not-so-distant future (*refer to California's resurrection of the CO₂ emissions bill now that there's an empathetic ear in the Whitehouse*).

But, what really got me thinking about looking at ways in which big ADOT projects can do their part for our state's sustainability effort, at least during this conference, was the final day's luncheon speaker, interim (and probably confirmed by now), ADOT Director John Halikowski's very insightful presentation. While his focus and theme was mainly woven around the current budget woes and the legislature's particular impact to his ADOT budget, he was decidedly upbeat and presented a number of ideas he and his staff had brainstormed for managing the tremendous list of projects his agency has scheduled for 2010 and beyond.

John was impressive, except when he got to the ideas

he said weren't worth considering, when he stated flat out that,

"...the tax on a gallon of fuel has been eighteen cents since 1991...and there's no support at the legislature for raising it now." "But," he said further, "...(even) if we raised the tax by a penny, it would <u>only</u> amount to \$35 Million, so it would have very little impact... (against the billion dollar deficit that needs to be fixed).

Of course, reading between the lines, what he meant was...' *POLITICALLY*,' *there's no support*..." for increasing gas taxes. But, I'm not so sure that's true.

Ever since our 'new' governor first began to float her ideas that there might be a tax <u>increase</u> in future plans for addressing the 2010 shortfall, I've asked a few of my '*sources*' in State government what the temperature of the legislature is regarding the possibility of raising the tax on fuels. The Republican mantra of 'no new taxes' might have made good campaign strategy a year or more ago when our State budgets looked like they might survive what was unraveling at the federal level.

But, as 2008 began to wind down—and, especially after the elections when the politicians found themselves looking at some really painful cost-cutting measures— crude was \$140+ a barrel, close to \$4.00+ a gallon at the pump—-it became obvious that we no longer had the luxury of worrying about what fuel *costs* were——we had to pay what ever the going rate was and all we could really do was take personal responsibility for our own conservation efforts. And, a lot of folks did just that.

But, who da thunk it? In January, partly due to the driving public's successful efforts to drive less and conserve more, sweet crude began to drop like a rock, and in less than 5 months, BIG OIL (remember them?) started looking at supply-side constrictions while telling Uncle Sam their "profits" were going to cause their exploration programs to be severely curtailed.

Unfortunately, by early May, drivers had taken the drastic drop in prices at the pump as a signal to start driving more and conserving less—good for the economy; not so good for the environment.

My question is this: with prices at the pump now hovering around two bucks a gallon, why would anyone mind or even notice if we added a few pennies per gallon (tax) right now? ADOT Director Halikowski says a penny tax yields \$35 Million, so multiplying that times five or ten, yields a hundred fifty to three <u>hundred</u> million dollars!

Most people will gladly pay a little more if they know it will save teacher's jobs and other critical programs that are slated for the ax. But a dime a gallon is only an extra buck for a tank full of gas, and that won't get people to start driving less again; it's not enough.

So, here's a better idea: if we want to <u>really</u> make a win-win out of this, let's think <u>really</u> big: why stop at a penny, or even a dime? Why not put on a one-year, <u>twenty</u> <u>cent per gallon</u> tax—that would bring in *\$700 Million* and go a long way toward that Billion dollar bogey. And, at the same time, it will jolt the driving public back into driving less and conserving more—a win-win for the environment <u>AND</u> for our children's, children's, children.

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.



www.SAEMS.org

SAEMS held another successful RCRA seminar on May 7th in Tucson. I would like to take a moment to thank not only all the committed SAEMS members who volunteered their time to put the seminar together, but also all those who attended and sponsored the event. Without their continued support it wouldn't be possible to hold the seminar or award the scholarships that the proceeds fund. This year we had a record 56 scholarship applicants! After a very difficult decision making process we awarded four scholarships, two graduate and two undergraduate.

Please mark your calendars for the SAEMS annual meeting, which will be held at the Manning House on June 24th. We will be awarding scholarships, thanking the outgoing board members and committee chairs, as well as welcoming our incoming board members: President Elect – Kristie Kilgore, Vice President Craig Boudle, Secretary – Jeremy Lite, Treasurer – John Barr, Communications Coordinator – Ritchie Bump.

For more information on our organization, please visit our website or contact me at s s i l l m a n @ globalsolar.com.



ESH for High Technology

www.seshaonl ine.org

The 31st Annual SESHA Symposium and Exposition held in Scottsdale from May 19th-22nd was a huge success! The Professional Development Courses covering Silane Safety, and Point of Use Abatement were well attended. Overall attendance was a little lower than last year, but I think we can chalk that up to the state of the economy. Popular symposium sessions were on the topics of: REACH, Nanomaterials, EHS in Photovoltaics and Solar Industries, Sustainability and Resource Conservation. Excellent keynote speakers presented on:

"Keeping the Focus on EHS in a Down Economy", "Intergrated Circuits Industry Economic Forecast", and "U.S. Climate Change Regulations and the Perfluorocarbon Voluntary Agreement, Looking Forward".

I think I received the most benefit from the professional networking at this year's SESHA Symposium, because one never knows what the future may hold . . . Stay tuned for topics and the location of our next SESHA Arizona Chapter

Meeting in Q3. Meanwhile, keep this summer's v a c a t i o n s SAFE!!! For information see our website or contact me at c p o m e r e n k e @rohmhaas.com. Christine President

AIR & WASTE MANAGEMENT

www.awma-gcs.com

On April 24, AWMA members toured the AZ BioDiesel facility in Gilbert. AZ BioDiesel produces ASTM Certified B99 BioFuel from reclaimed oil at their processing plant in Gilbert, Arizona. The company's goal is to reduce air pollution in Phoenix by introducing 1 million gallons of BioDiesel in 2009. The facility has recently been expanded from producing 500 gallons per day to 4000 gallons per day.

At our May 28th meeting, Mr. Robin Boudreau, the Community Energy Program Manager for the Arizona Department of Commerce Energy Office, spoke about new grant opportunities under the Energy Efficiency and Conservation Block Grant (EECBG) Program. This program, administered by the Office of Weatherization and Intergovernmental Programs in the Office of Energy Efficiency and Renewable Energy of the U.S. Department of Energy, provides funds to units of local and state government, Indian tribes, and territories to develop and implement projects to improve energy efficiency and reduce energy use and fossil fuel emissions in their communities.

New members are always welcome! For

a d d i t i o n a l meeting info. and upcoming m e e t i n g topics, please check our Michelle De Blasi website.



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 or contact Chuck Paulausky at cpaulausky@cpsafety.net.

EHS Professionals - The Thunderbird Chapter is planning to offer a 3-4-day course in Arizona early November covering a wide range of HazMat topics. This course will be useful to anyone in the EHS field. Note that this will not be the "Essentials Course" offered by AHMP, but will also be useful for CHMM candidates. 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/EPAZ monthly lunch meetings are held from 11:30 ~ 1:00 on the second Thurs. of each month, at the SRP PERA Club in Tempe, so check your emails for the meeting notice. Meeting details on our website or www.epaz.org. AND, don't forget the Thunderbird Happy Hour on first Thursdays, 5:30 PM - ?? Calendar Items: June 19 - Northern AZ Meeting (Camp Navajo Tour/MSGP Presentation at W.L. Gore); July 2-T-Bird Happy Hour, Rock Bottom, Ahwatukee; July 9 - Luncheon Topic TBA; Aug. 6-T-Bird

Aug. 0-1-Blu Happy Hour, Gordon Biersch, Tempe; Aug-No Luncheon This Month; Nov. 2009 – Thunder-Chuck bird Chapter Paulausky HazMat Course. Board Member



www.azchamber.com

The Arizona Chamber of Commerce and Industry and the Arizona Manufacturer's Council held its annual Manufacturer of the Year Awards Luncheon on May 29th where PING and Universal Avionics were honored as Manufacturers of the Year. Congressman Trent Franks was the keynote speaker.

The Arizona Chamber's Environment Committee's April breakfast meeting featured Dennis Dickerson, Maricopa County Air Quality Department's Ombudsman and Greg Hedger, Director of EHS for SUMCO. June's breakfast meeting will be held on June 10th at the Sheraton Phoenix Airport Hotel. Jerry Worshem from Gammage and Burnham will present on the EPA's proposed greenhouse gas reporting rule and William Pearson from Bryan Cave LLP will address a recent supreme court decision affecting the scope and

applicability of CERCLA liability for clean up costs. For more information go to our website or contact Jeff Homer at 480- E 441-6672.





www.azhydrosoc.org

The local chapters continue to provide educational opportunities to their members. The Phoenix chapter had Greg Zekoff of Boart Longyear present "New Developments in Sonic Technology" at their June Meeting. The

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Tucson chapter had Dr. Margaret Wilder, Center for Latin American since retiring in 2007, Studies, present her study on "How water managers and emergencypreparedness planners use climate information in

Nick Melcher; AHS **Executive Director** unexpectedly passed away in April, 2009.

"Memorium", Page 8.

order to improve long range planning for droughts, floods, and the provision of adequate water supplies" at their May meeting. The Flagstaff Chapter had John Cochran, of Peabody Investments Corporation, give an overview of the Peabody well field, distribution system, and historic pumping. They also held a field trip to the Zuni Basin, led by Doug Wolfe, Renaissance Environmental Management. On this trip participants got to see dinosaur fossils as Doug painted a picture of life during the Cretaceous period.

AHS continues its tradition of supporting students with their annual internship program. The Phoenix chapter awarded the Herman Bouwer Internship award to Brad L. Vance, a senior in Geological Sciences at ASU. The Tucson chapter awarded their 2009 Leonard C. Halpenny Internship to Terra Michaels, an Engineering Management junior with a minor in Hydrology.

The Annual Symposium is scheduled for Aug. 30 to Sep. 2, 2009, and will be held at

Westin the **Kierland Resort** and Spa in Scottsdale, Arizona. Details and Registration are available at www. hydrosymposium .org

Matthew Beversdorf Executive Director



he EIA Compliance Forum has generated a check L list to be used by abatement contractors, consultants, and owners to assist in OSHA/NESHAP compliance during the removal of asbestos. The check list was produced partly from the OSHA/NESHAP regulations, existing check lists generated by well established environmental firms, and the input of experienced individuals in the industry. The check list is intended to serve as a guide only. The check list is laminated so it can be reused by on-site staff working at these sites. The check list would also serve for lead abatement and mold remediation. A copy of the check list is available free of charge from the EIA.

Our next environmental seminar is scheduled in Nogales, Az. May 15th and in Winslow June 19th. There seminars are free to all. Please visit our web site 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.



Please see

wrapping up our 2008-2009 year with a banquet and awards ceremony. In keeping with tradition, the event will be held at a well-known Tucson venue, the Tucson Botanical Gardens. Located on five acres near the intersection of Alvernon and Grant, the Tucson Botanical Gardens is a

preserve for birds and a center for horticulture education. The ASSE will announce the recipient of the Safety Professional of the Year award as well as the business organization selected for the Community Safety Award based on its support for safety in the community. We're expecting a wonderful evening at this tranquil oasis in the

American Society of

The Southern Arizona Chapter of the American Society of Safety Engineers is

Safety Engineers

heart of Tucson. For information contact me at 520-586-5204 or by email sdipeso @ssw.coop.



PAZ has been having an alternative energy

www.EPAZ.org

▲series of presentations, beginning with the April luncheon. Mr. Timothy MacDonald of Arizona Public Service Company told us about the active program for developing means of recovering energy from biomass through pyrolysis. This process can use biomass such as crop waste, waste wood and other plant fiber sources to generate biofuels and essential oils. These biomass sources are typically discarded or incinerated through open burning currently.

In May, Mr. Brian Pasbrig or Pinal Energy gave an overview of the production of ethanol as a biofuel source. The Pinal Energy plant in Maricopa, AZ, uses various cereal grains including sorghum, corn and wheat to produce ethanol. Their process creates no waste products, only useful products including ethanol, carbon dioxide (both as compressed gas and dry ice) and distiller's grains which are used for animal fodder.

EPAZ has 2 different luncheon meetings planned for June. On June 11. Ms. Katharine Kent of The Solar Store will give a presentation on solar energy products for homes

and business. Then on June 19. EPAZ will have a meeting in the Flagstaff area, with a tour of Camp Navajo in the morning followed by a meeting featuring Mr. Ed Latimer of AMEC Earth & Environmental on the AZPDES multi-sector general stormwater permit.

EPAZ normally holds monthly luncheon meetings on the 2nd Thurs.

of the month from 11:30 am to 1:00 pm. EPAZ also gathers normally on the last Wed. of the month for a casual cocktail mixer

at various locations throughout the valley. See our website for info. and meeting registration or contact me at (602) 393-4855.





www.AzBAS.net

s Chair of AzBAS, I am pleased to be able to Aintroduce our new organization, Arizona Businesses Advancing Sustainability (AzBAS) to Journal readers. AzBAS offers business leaders an opportunity to work with other business leaders committed to sustainable practices that promote strong communities, successful businesses, a healthy environment, and sound public policy.

We meet four times a year for the primary purpose of holding in-depth dialogues among participants to share, learn from, challenge and test the sustainability practices that are in place - or in developmental phases - in our companies. The overarching goal is for Arizona businesses to step forward together and grow sustainability concepts and activities in Arizona's diverse communities.

Our Primary Objectives:

• Build a platform and statewide venues to showcase sustainable businesses practices adopted by AzBAS members: • Collaborate with other organizations committed to promoting sustainability in Arizona; • Advance sustainability practices in the public policy arena; • Convey to the State and its communities that Arizona's business leaders support and encourage progressive, sustainable business practices; and • Serve as a resource - a knowledge base - for others on how to create and adopt sustainable practices in their companies.

AzBAS and its members have actively participated in the 2008 Green Summit, cosponsored a Sustainability Conference with the Arizona Chamber in May 2008 as well as a Business and Climate Change conference with the Arizona Investment

Council in 2007. For more info. on AzBAS see our website or contact Tracey Walker by email at Tracey. Walker @azbas.net.



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Larry Olson, PhD.

It's All About Chemistry

A Sustainabl e Source of Chemical s?

When crude oil prices reached \$140 per barrel and gasoline prices broke the \$4 per gallon barrier a year ago, there was tremendous interest in finding alternatives to petroleum based fuels and a focus on strategies to wean ourselves from "foreign oil." Biofuels facilities began to spring up all over the country, but as oil fell back below \$40 per barrel, many ethanol and biodiesel plants closed. This yo yo cycle has plagued efforts to produce a viable biofuels industry.

However, there is more to this story than just fuels. Petroleum refineries have evolved over the last century to produce not only a high volume, low value product like gasoline or diesel fuels, but also the starting materials for thousands of other higher value, lower volume chemical products. Although maybe only 7-8% of crude oil is used for chemical products, they represent the backbone of our modern society. Over many decades we have developed technologies to convert highly reduced carbon compounds into many forms of polymers and plastics, solvents with specialized properties, pharmaceuticals, etc. The return on investment for the petrochemical industry is greatly enhanced by this added value.

By contrast, a biorefinery utilizes highly oxygenated carbohydrate and lignin materials. Research and technologies for converting these chemicals into other products lags far behind traditional petroleum based chemistry and this technology gap needs to be reversed. Currently less than 10% of the raw materials for the chemical industry are derived from biomass.

It is estimated that 1.3×10^9 tons per year of sustainable biomass can be produced without upsetting food supplies or otherwise changing agricultural practices (http://nabc.cals.cornell.edu/pubs/nabc_20/NABC20_Part_3_2c-Bozell.pdf). That compares to about 1.2 x 10⁷ tons per year of oil produced worldwide (http://www.eia.doe.gov/ipm/supply.html).

Lignocellulosic biomass, the non-starch, fibrous component of plant material, is primarily cellulose (30-50%), hemicellulose (20-40%), lignin (15-25%), and other compounds including ash, resins, and minerals (5-35%). Cellulose (a polymer only of glucose) and hemicellulose (a more easily hydrolyzed polymer composed of five different sugars) can be fermented to ethanol. Lignin is the major non-carbohydrate structural component of wood. It is a highly aromatic phenolic polymer, with a molecular weight of about 10,000, derived from coniferyl alcohol.

There are many candidates for potential bioderived products. Hydrolysis of hemicelluolosic materials gives primarily sugars such as xylose and arabinose which can be fermented to give a four carbon compound, 2,3-butanediol, which can then be dehydrated to give MEK, methyl ethyl ketone. Genomatica, a San Diego based company, announced in February 2009 that it would license technology to produce MEK using genetically modified microbes ingesting sugar. At \$0.65 per pound, that is the equivalent of \$4.50 per gallon which gives a better margin than just producing ethanol. Xylose is also a starting material for biochemicals. Glycerol, a byproduct of biodiesel production, is found in antifreeze, cosmetics, detergents, and pharmaceuticals. Lignin can't be used in fermentation, but its highly complex aromatic nature makes it an attractive candidate for conversion to high value compounds, which is currently being explored in several universities and private companies.

Successful investments in bioderived fuels and chemicals must be market driven. But the way we calculate the bottom line may need to be changed. How will new regulations on climate change affect these calculations? How much is it worth to our national security to become independent of unfriendly oil regimes that can hold our economy hostage? There is a lot of work to be done, but the payoff is worth it.

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



SESHA

31st Annual International High Technol ogy ESH Symposium & Exposition

Scottsdale Resort in Scottsdale, Arizona, as the site of its 31st Annual International High Technology EHS Symposium & Exposition from May 18th to 22nd. The conference included a full week of speakers, technical courses, and exhibits. Keynote speakers at the May 20th opening ceremony included Dina Kruger,



US EPA, speaking on, "US Climate Change Regulations and the PFC Voluntary Agreement: Looking Forward", and Bruce McClean, IC Insights, who provided an "Industry Economic Forceast". The Arizona Chaper of SESHA (see Association Pages, pg 12) helped host the international event. For more information see www.seshaonline.org.





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News Briefs

\$30 Mil I ion in ASARCO Settl ements

Governor Jan Brewer announced recently the participation of Arizona in two settlements, valued at about \$30 million in cash and land transfers to the State, with the copper



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mining company ASARCO. The settlements were filed in April in U.S. Bankruptcy Court in Texas and are awaiting approval.

The settlements compensate Arizona for damages its natural resources and provide funds to Arizona to ensure cleanup of three historical mine sites—Sacaton, northwest of the city of Casa Grande; Salero, northwest of Town of Patagonia; and Trench, south of Patagonia.

The settlements also assist ASARCO in emerging from bankruptcy and help protect 2,500 jobs at the company's sites



San Pedro River. Photo courtesy of ADEQ

remaining in operation: the Ray Complex Mine and Smelter near Kearny, the Silver Bell Mine northwest of Tucson, and the Mission Complex south of Tucson. The settlements are known as the Remediation Trust Settlement and the Natural Resource Damage Settlement.

"The settlements represent many years of work and cooperation among our state agencies, ASARCO, and other cooperating states," Gov. Brewer said. "We welcome both the environmental settlements which will preserve three parcels of land that are treasures along Arizona's river system, and the big steps we take today to preserve Arizona jobs. The settlement today is indeed a win-win for Arizona's natural resources and for Arizona's economy as we emerge from a devastating economic downturn."

"The settlements also include a \$23 million Remedial Trust, funded by ASARCO, to clean up the three sites in Arizona," said ADEQ Acting Director Patrick J. Cunningham. "These sites are now owned by ASARCO but are no longer operating."

The Natural Resource Damage Settlement provides nearly \$4 million in unsecured claims for restoration, perpetual operation and maintenance and a transfer of three parcels of land, totaling about 1,000 acres, to the Trustees to be owned by the Arizona Game and Fish Commission and managed for wildlife.

The parcels, located along about 4 miles of the Lower San Pedro River south of the towns of Winkelman and Hayden near the confluence with Aravaipa Creek, are home to many diverse species, including neo-tropical migratory birds, nesting raptors, the endangered southwestern willow flycatcher, and waterfowl species. ASARCO and the State of Arizona have estimated the total cash value of the properties to be between \$3 million and \$4 million, and it compensates the State for damage done to Arizona's natural resources.

"This settlement will provide for the restoration of one of the most important riparian areas in our State," said State Land Commissioner Mark Winkleman.

The settlements to resolve damage to natural resources are the result of negotiations among ASARCO, ADEQ, the Arizona State Land Department, the Arizona Game and Fish Department, the Arizona Attorney General, and the U.S. Departments of Justice and the Interior, represented by the U.S. Fish and Wildlife Service and the Bureau of Land Management. The damages for release of hazardous substances are being awarded under the federal Superfund law, and ADEQ acts as Arizona's Natural Resource Trustee under federal law by delegation from the Governor.

These two settlements are in addition to two other agreements between ADEQ and ASARCO already filed with the U.S. Bankruptcy Court in Texas. In June 2008, ASARCO agreed with the State of Arizona and U.S. Environmental Protection Agency to clean up contamination from the company's mining activities in Hayden and Winkelman, and the agreement has received formal approval by the U.S. Bankruptcy

www.caslab.com

Court in Texas overseeing ASARCO's bankruptcy proceedings.

Under terms of the agreement ASARCO will spend \$13.5 million to clean up contaminated soils from residential areas in the towns with high levels of arsenic, copper or lead. ASARCO also will reimburse ADEQ and EPA for oversight activities related to the cleanup. In October 2008, ASARCO agreed to pay ADEQ \$880,000 to fund cleanup of the Helvetia mine site south of Tucson. The mine is no longer owned or operated by ASARCO.

Governor Names Benjamin Grumbles ADEQ Director

✤ Benjamin Grumbles, 48-year-old former administrator with the U.S. Environmental Protection Agency has been named by Gov. Jan Brewer as the next Director of the Arizona Department of Environmental Quality. Grumbles takes office June 22nd. Prior to that, he is serving for three months as an environmental policy advisor in the Office of the Governor.

Mr. Grumbles served as Assistant Administrator for Water at the US Environmental Protection Agency in Washington, D.C. He managed a \$3.6 billion, 2100 FTE (full time equivalent staff)

program for the Clean Water Act and the Safe Drinking Water Act and oversaw EPA's American Indian Enviromental Office. He has a B.A. degree from Wake Forest University in North Carolina, a J.D. degree from Emory Law School in Georgia, and an LL.M (Masters) degree in environmental law from George Washington Law School in Washington, D.C.

Director Grumbles comes to Arizona with his wife and two children. Welcome to Arizona!

Turner Laboratories, Inc. Announces New

► Shari Bauman, previously Laboratory Director at Turner Laboratories, Inc., Tucson, Arizona, has accepted an opportunity with the US EPA Office of Water, Office of Groundwater & Drinking Water, Standards & Risk Management Division, Targeting & Analysis Branch in Washington, D.C. The position involves research and development of potential drinking water contaminates, policy, and



Shari Bauman

involvement in the 6 year review of regulated drinking water contaminates. Shari will be missed by the environmental community who know her both through her work with Turner Laboratories, and through her many hours of volunteering

> Turner Laboratories has announced that Terri Garcia has been named Technical Director to replace Shari. Terri has worked Turner Laboratories for six years. Terri can be reached at 520-882-5880 or by email at

> tgarcia@turnerlabs.com. Congratulations

Terri! Turner Laboratories maintains a

website at www.turnerlabs.com.

with SAEMS.



Terri Garcia

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Benjamin Grumbles Director, ADEQ

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> Speakers and Sponsors are Welcome! To be a speaker please contact: Pamela Beilke at (520) 720-2114 To be a sponsor or for information contact: Heather Shoemaker at (520) 770-1789 or Syndee Wundrock at (520) 694-7475







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For Environmental Business

It's Not the Economy Blame the Sales Guy!

Everyone would agree that times are tough and it would be difficult to find anyone unaffected by the economic downturn in one way or another. Budget cuts, staff reductions, furloughs, reduced benefits and other cost cutting measures seem to be common-place and their negative impact on morale, not to mention the pressure put on the sales and marketing process, can be significant. I thought I'd share an experience related to this that recently occurred at one of our offices.

The decision was tough, but a senior-level project manager was targeted to be let go from an office in the West. Not because of performance issues, simply due to limited work and the need for that particular branch to cut expenses. We'll call her Stacey. On the day it happened she was disappointed but not surprised, took the news well and began packing up. As the time arrived for Stacey to make her round of good byes, she approached an area where I was standing with a few colleagues and said, "If sales and marketing were doing their job this wouldn't be happening." Thick with silence, my workmates peered from the corner of their eyes anticipating my response. "You know what Stacey?" I said. "You are absolutely right." The silence continued, but turned from anticipation to confusion. I'm not sure what they were expecting, but my response surprised them.

Times like these can be difficult on a sales and marketing department. The slow down in business and the uncertainty about where the next contract is coming from point directly to the department whose primary function is to solve the problem. People can become critical of tactics, methods, strategy and the overall effectiveness of the effort. Can you blame them? The bottom line: If my sales and marketing department brought in more business, Stacey may not have lost her job. Those are facts. Is that cause for me to doubt our plan? Should I question our tactics? Should we completely overhaul our machine? No. Part of being a professional business developer means understanding what needs to be done, what tactics are realistic and how you fit into the marketplace to the degree that the confidence in your approach can not be shattered by the difficulties along the way. I have great empathy for Stacey, but we have to look inward with a critical eye at our methods and be able to say,



without hesitation, "We're doing the right things." Even if the results aren't exactly what we would like. If we can't, my reaction to Stacey's comment may have been different.

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

Joe C. Holmes

Have You Received an NOV? Interacting with Maricopa County Air Qual ity Dept Has Just Become a Littl e Easier

A Viewpoint From an Ombudsman's Perspective

by Dennis Dickerson, Ombudsman, Maricopa County Air Quality Dept.

A nombudsman is a somewhat unique feature in governmental agencies. At its core, the role of an ombudsman is to provide a point of access; someone you can call when your interaction with a government agency becomes too daunting and bewildering to manage on your own. At its simplest, an ombudsman can help you find an answer to a nagging question that you have been trying to pin down without success. When you really need help, an ombudsman can listen to your side of the story after receiving a notice of violation that you are certain was issued in error – then, talking to an ombudsman can make all the difference.

With two months now past since I began my role as Maricopa County Air Quality Department's Ombudsman, it is timely to offer a few updates. First, the Office of the Ombudsman is up and running and I'm joined by Kathleen Sommer, a project analyst with experience in the rule making side of the department. In just these first two months there have been a number of requests for our formal intervention and a host of lesser inquiries. Also, a new policy is nearly complete that will provide a framework for ombudsman engagement. The Office of the Ombudsman was also given the major task of crafting a handbook on complying with the department's Rule 310 for dust generating activities.

Bringing a fresh perspective to the table is a lot of what the ombudsman role is about; starting from the perspective of the person seeking help and trying to find a way to lend assistance. This is most evident when the Office of the Ombudsman is reviewing the merits behind an issued notice of violation. While most NOVs are clearly valid there are some that can pose unique facts or circumstances where an argument can be made about interpretation. Upon request, the department encourages ombudsman engagement both immediately following the issuance of an NOV and following the receipt of a final offer to settle a penalty.

Another important ombudsman role is challenging the conventional wisdom about why or how we are doing things. Having the benefit of working with people who are faced with the challenge of air quality compliance allows the Ombudsman to be able to understand concerns with rules and to offer suggestions for revision or perhaps the creation of a policy that helps to clarify an ambiguous point.

The Office of the Ombudsman is off to a fast start. While every request for ombudsman intervention may not provide the relief being sought in every case, the opportunity to have an independent review is of value. The shared goal of the department and of the Office

of the Ombudsman is to achieve improved air quality and higher level s of compliance. By highlighting rules or processes which require improvement that shared goal can be realized. Should you ever need the services of the department's Ombudsman, I look forward to working with you toward our common goal of clean air.

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