



PRESIDENT'S MESSAGE

By: Steve Luzkow, MAEP President

This year's Professional Development Meetings (PDMs) held in February and March have proved their worth to the membership. Capacity attendance for both events featuring MDEQ presenters, among others, demonstrates the need for ongoing dialogue between the MDEQ and the consulting community. On behalf of the MAEP Board, a special thanks to Matt Williams, who along with other speakers, Bob Zwald and Jeff Crum, went beyond the call of duty and stayed late into the evening to answer questions.

Our next PDM will be held on June 11, 2008 at the Crystal Gardens Banquet Center in Howell and will feature presentations by Larry Kinsman with Orin Remediation Technologies, and Patty Brandt and Sara Pearson with the MDEQ. The topic will be In-Situ remediation and will cover case histories and the MDEQ requirements.

On June 18, 2008 Professional Concepts Insurance Agency will be holding a seminar on "Risk Management Techniques for Environmental Professionals" in Brighton. This seminar is tailored to those who are responsible for project management, execution or quality control. More information can be obtained from mwarnock@pcionline.com.

A special thank you to our event sponsors for the 2008 MAEP 12th Annual Spring Training, held May 1-2. They make it possible for MAEP to offer this training each year.

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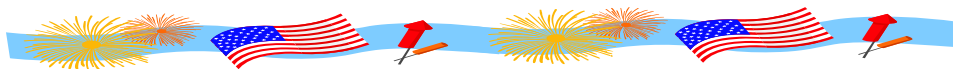
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Sponsors are still needed for the 10th Annual MAEP Golf Outing to be held at the Moose Ridge Golf Course in South Lyon. More information can be obtained on the MAEP website at www.maep.org or contacting Tim Cullen, Golf Outing Sponsor Chair, at trcullen@umich.edu.

Once again, I want to thank you for your membership and continuing feedback. Keep asking the questions!



MOLD CONTINUES TO SPREAD AS LIABILITY RISK

By: Professional Concepts Insurance Agency
MAEP Institutional Member

This material is provided for informational purposes only. Before taking any action that could have legal or other important consequences, speak with a qualified professional who can provide guidance that considers your own unique circumstances.

The media hysteria regarding “toxic mold” and its threat to human health has died down somewhat. Multi-million dollar judgments, celebrity lawsuits and staggering class action lawsuits no longer fill the headlines. But does that mean that mold and related claims of personal injury and property damage are no longer a threat to environmental and design consultants? Hardly. Mold remains a significant potential hazard to the health of any environmental firm, regardless of size, type or location.

Virtually any professional involved in building and systems design – environmental consultant, architect, engineer, contractor, owner and material supplier – faces exposure to mold-related claims. Environmental professionals face the prospect of defending claims charging failure to incorporate mold prevention into their designs or failure to identify the presence of mold during construction or renovation.

Mold Is Nothing New

Mold is an ancient life form. According to the Insurance Information Institute, there are more than 100,000 species of mold and at least 1,000 types of indoor mold. A fungus, mold thrives in warm, humid environments and spreads by releasing airborne spores, similar to a plant spreading its seeds.

Some molds are considered toxic. Indeed, there are demonstrated cases of livestock dying after eating mold-laden grain. However, there is much debate about whether toxic molds inside homes and buildings can – by themselves – cause serious human health problems. According to the Centers for Disease Control, most documented cases of such health problems involve people who ate moldy food. Other studies have concluded that there is no evidence



MOLD (CONTINUED)

that mold in levels found in homes and offices can cause chronic or life-threatening health problems.

Still, that is not to say that mold is not a viable health hazard. It's just that the so-called toxic molds are typically not the culprit. A large number of molds are "allergenic." That is, they release spores that cause allergic reactions and can trigger serious health conditions such as asthma, chronic respiratory disease and sinus infections. In addition, individuals with compromised immune systems are particularly susceptible to lung congestion and infection that can be caused by inhaling mold spores.

So why is mold, which has been around forever, suddenly such an issue within the design and environmental industry? The answer depends on whom you ask.

Ask a fellow environmental professional and he or she will likely point to plaintiffs' lawyers and the media frenzy surrounding big jury awards and the high profile cases of celebrities like Ed McMahon and Erin Brockovich. Mold has been called the "next asbestos" in some legal circles, while "mold is gold" is a favorite slogan of some plaintiffs' attorneys. Indeed, there is money to be made from mold and cottage industries have sprung up surrounding mold litigation and remediation. Testing, inspection and extraction have become big business, as have industrial hygiene and other mold consultant services.

Environmental consultants will also point to building owners as a source of the mold problem. Older buildings with leaky roofs and plumbing, drafty windows and doors, poor ventilation or improperly maintained HVAC systems are major contributors to the problem. Ask any environmental firm that has undertaken major renovation projects and they will likely have horror stories regarding the black slime discovered under floorboards and inside walls.

Another culprit, say designers, are contractors who use cheap materials or who fail to provide proper water barriers due to poor workmanship.

Ask plaintiffs about mold, and you get an entirely different story. They often point to the design industry as the cause. The advent of so-called "airtight" buildings designed to enhance energy conservation has contributed greatly to the problem, they say. Should moisture get into the interior of such a building, it can't get out. Complicating the problem, plaintiffs say, are designers who specify building materials such as paper-covered drywall and certain adhesives that provide an excellent food source for mold.

Complex designs for many of today's high-style buildings can lead to radical roof, window and wall angles, increasing the chances of gaps and water intrusion. Inadequate or faulty HVAC systems are also pointed to as a cause of excess humidity. Finally, today's fast-track projects lead to faulty workmanship and insufficient time for materials to thoroughly dry before sealing them into an airtight environment.

A Cause for Concern

Regardless of the cause, mold presents a significant liability concern for environmental professionals. What's more, you will not find a lot of guidance regarding design standards, allowable limits of mold, or insurability. States and even the federal government have passed or proposed legislation regarding toxic mold, but to date, design and construction standards and regulations are neither clear nor complete.

A major concern for environmental firms is that mold-related problems can evolve into construction defect claims that trigger class-action lawsuits alleging bodily injury due to long-term exposure to toxic mold. Often, statutes of limitation do not apply to these bodily injury claims. What's more, bodily-injury claims can be accompanied by other claims from project owners and tenants for breach of contract, property damage, delays, business interruption and loss profits.



MOLD (CONTINUED)

Should you be faced with these charges, will your insurance company be there to protect you? More and more, we are seeing mold exclusions added to homeowners' and commercial property insurance policies. According to the latest estimates, 46 states and the District of Columbia have adopted mold exclusions in such policies. With these exclusions, mold contamination is covered only if it is the result of a covered peril such as a burst water pipe or if covered by a specific policy endorsement.

Even where specific mold exclusions are not included in policy language, some insurers may try to exclude mold claims under existing pollution, contamination, seepage, or deterioration/wear-and-tear exclusions. Courts have ruled both for and against the denial of mold claims based on the standard pollution exclusion.

Blanket mold exclusions have yet to appear in most professional liability policies. However, as mold claims mount for insurers, exclusions may begin to be applied to perceived high risks. And consider this: If your professional liability insurance is the only policy covering a problem building that doesn't have a mold exclusion, the odds increase that a plaintiff's lawyer will file a claim against you.

Get Bold with Mold

Designing a mold-proof building is impossible. However, there are steps that environmental and design professionals can take to help prevent mold problems and reduce the chances of expensive claims. Here are seven steps you can take to fight mold:

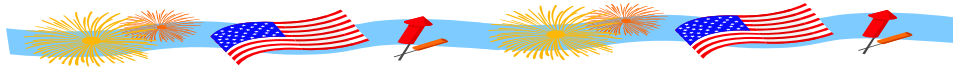
1. **Educate the owner.** Discuss with your client the potential for mold problems and the need to design remedies into the structure, rather than deal with the problem somewhere down the road. Point out that the owner could be liable for such problems should tenants, clients, customers or other third parties allege that they have suffered bodily injury due to mold.
2. **Know your locale.** Mold is not a problem restricted to hot, humid climates like the Gulf Coast and the Southeastern United States. British Columbia, for example, faced a rash of million-dollar mold claims due to envelope failure and water intrusion involving poorly designed condominiums. Therefore, thoroughly investigate the history of mold problems in your locale. Check for any standards that may come into play in your area. If you are working on a project outside of your normal territory, consider peer reviews of your HVAC design and other humidity control measures by local consultants familiar with that environment.
3. **Design with mold in mind.** Don't skimp on mold-control measures, particularly in locales where it is a proven problem. Pay particular attention to plumbing, HVAC equipment and humidity-control systems. Ensure there is proper ventilation and filtration, including adequate crawl spaces, exhaust fans and dehumidifiers. Specify leak-proof window and door installations and mold-resistant materials and products. Ensure proper drainage and runoff controls so water doesn't collect underneath structures. Roofing and envelope systems are perhaps the most critical water barrier. Provide complete details for flashings. Document your efforts to avoid mold and water intrusion. If the owner refuses your recommended mold-control items, document that fact in your contract or project files. Additional information can be found in *Managing the Risk of Mold in the Construction of Buildings*, published by the Associated General Contractors of America (www.agc.org/content/public/PDF/Safety/may03_mold.pdf).
4. **Draft protective contract language.** A clear and accurate scope of services specifying your responsibilities and those of the owner and contractor is essential. Press for indemnity language that allocates liability for mold-related claims to those in the best position to control the building environment. Seek a general limitation of liability for all claims that result from the project, including personal injury claims. Avoid guarantees, warranties and other such language concerning the absence of mold.
5. **Hold regular meetings during construction.** In your working agreement, call for regular inspection, testing and disclosure of existing mold and conditions that could lead to mold. When necessary, retain qualified industrial



MOLD (CONTINUED)

hygienists or other expert engineers to provide inspection and remediation services. Document all findings, changes in project scope, project upsets and other information that could be used in your defense of a subsequent claim.

6. **Provide maintenance guidelines.** Require that the contractor or manufacturer provide equipment inspection and maintenance programs for HVAC and other humidity-control systems. Call upon the building owner or manager to regularly inspect all structures for signs of water and moisture intrusion; fix plumbing leaks and clean up and dry any water spills within 48 hours; keep HVAC units inspected and maintained according to manufacturer specifications and provide proper venting of any installed moisture-generating appliances or machinery. Include in your recommendations an overall guideline to maintain low indoor humidity (generally below 60 percent). For more guidelines, see the EPA's *Mold Remediation in Schools and Commercial Buildings*, available at www.epa.gov/iaq/molds/.
7. **Check your insurance coverage.** Your insurance agent can help you check for mold exclusions on your policies, and determine whether special endorsements for mold or other environmental coverages are needed and available.



MDEQ REPORT PROVIDES STRATEGY FOR MERCURY REDUCTION

By: Steve Szura — Barr Engineering Company

The Michigan Department of Environmental Quality's Mercury Strategy Workgroup (MSWG) issued its *Mercury Strategy Staff Report* in January of 2008. It was convened two years earlier with the overall goal of developing a strategy for eliminating all anthropogenic (manmade) mercury releases in Michigan. An inventory of 2002 releases estimated that the state contributes approximately 3.83 percent of anthropogenic mercury releases to air, surface water, and land in the U.S.

The report provides a general mercury-reduction strategy, but also outlines ten priority action items (from a larger list of 67 items). For example, it recommends that the MDEQ develop and maintain a defined baseline to measure mercury releases in Michigan. It also recommends reducing releases and past contamination from coal-fired utility plants and Portland cement plants. Another recommendation involves phasing out mercury-added products if feasible alternatives exist.

The MSWG's report also provides an overview of current mercury control technology and remediation practices, including air-emission control, groundwater treatment, soil treatment, and mercury removal at wastewater treatment plants. For more information about the MSWG's work and a link to the report, check out

http://www.michigan.gov/documents/deq/MDEQ_MS WG_FinalReportJan2008.pdf_222256_7.pdf



EDITORIAL: Note—the views expressed below are those of the author and not necessarily those of the MAEP

HAPPY BIRTHDAY PART 201! MICHIGAN ENVIRONMENTAL LAW TURNS 13 A COMPARISON OF LEGISLATIVE INTENT TO WHAT WE HAVE NOW

**By: Steve Kulpanowski, MAEP Board Member and
Senior Geologist, Bureau Veritas North America, Inc.**

Happy Birthday Part 201 Amendments! The exciting amendments to our previous environmental cleanup regulation (i.e., Michigan Environmental Response Act - Act 307 [recodified as Part 201 in 1994]) were born on June 5, 1995. The Part 201 amendments are a teenager now!

The proud parents of the amendments to Part 201 are the Michigan Legislature, including Senator Loren N. Bennett, Chairman of the Natural Resources and Environmental Affairs Committee, and Representative Kenneth R. Sikkema, sponsor of House Bill 4596.

The reformation of Act 307 included significant changes to the liability structure and some relief from unnecessary and expensive cleanups. These unprecedented reforms were based on recommendations from both the “Core City Revitalization Package” submitted by the Urban Core Mayors and the “Proposed Improvements For Urban Industrial and Commercial Revitalization” report submitted by a group of business and industry representatives led by the Michigan Manufacturers Association. Like many children, Part 201 was conceived with the best of intentions (known as “legislative intent”) and has been instrumental in creating numerous redevelopment opportunities in Michigan.

According to Senator Bennett,* the focus of the legislative changes was “to provide for important revisions to liability provisions, risk assumptions levels, adoption of streamlined cleanup procedures, and the forging of important new partnerships with the private sector to better allocate cleanup resources.” These changes were great ideas and were supported by most.

House Bill 4596, as described by the legislature itself,** contained very specific and “**strong statements of legislative intent**” to provide further direction for the department during the administration of the program. The strong statements of “legislative intent” included:

- Liability for contamination is imposed upon only those who are responsible for the contamination.
- The purpose of the act is to eliminate unacceptable levels of risk to the public health, safety or welfare (or to the environment) and not to eliminate all environmental contamination.

* *Keep Michigan Clean - Reforming Michigan’s Environmental Response Act and the Leaking Underground Storage Tank Act*, Senate Natural Resources Committee, Senator Loren Bennett, Chairman, May 11, 1995

** *House Bills 4596-4598 (Act 307 Amendments)*, Memorandum from Bob Wilson (Senate Majority Policy Office) to Senate Republican Caucus, May 11, 1995



EDITORIAL (CONTINUED)

- The department should act reasonably in its exercise of professional judgment in implementing these provisions.

After the passing of this historic legislation, the entire program was handed over to the “new” MDEQ for implementation and enforcement. This transfer from legislation to implementation essentially made MDEQ the proverbial “step-parents” of Part 201. Unfortunately, one could immediately sense that the step-parents did not appreciate our infant law. I remember, like it was yesterday, talking to certain staff at MDEQ who were mad when this legislation was adopted because the new cleanup criteria were ridiculously high. I thought to myself, “another victory for science.”

Now that our historic environmental law is 13 years old, let us quickly compare each of these “strong legislative intents” (and other written intentions) to the Part 201 program as it exists today.

Legislative Statement of Intent #1. “Liability for contamination is imposed upon only those who are responsible for the contamination.”

This intention has resulted in a very successful, and relatively intact, part of the program thanks to the Baseline Environmental Assessment (BEA) process. Unfortunately, I suspect that many of the legislators would cringe if they knew what it takes to get a Category “S” BEA (or sometimes any type of BEA!) affirmed by MDEQ.

In some cases, a Category “S” BEA forces a purchaser or occupant to accept liability for certain hazardous substances because the ability to distinguish them from a future release is not definitive enough for approval. “Stipulated conditions” were devised by MDEQ as an acceptable mechanism for preparing certain Category D and S BEAs. The end result is that some purchasers after June 5, 2005, had to sign a document that essentially forfeits the right of the submitter to use the BEA for liability protection for certain types of contamination that they clearly did not cause. When MDEQ was asked if stipulations are used for a specific hazardous substance in a BEA... Are they liable for that compound, regardless of whether they have a new release? The answer was: “Yes - strictly liable.”***

For an alternative viewpoint about liability, I have always been disappointed that the legislators did not include a statement of intent regarding the enforcement of liability for previous owners. As intended, the BEA process relieves the purchaser from most liability concerns, but simultaneously ignores the potential for cleanup obligations that a seller may have had by causing the contamination. A consequence of the BEA system is that many contaminated properties have changed hands (as intended), but the actual polluters have effectively distanced themselves from cleanup obligations which still exist under Part 201.

Legislative Statement of Intent #2. “The purpose of the act is to eliminate unacceptable levels of risk to the public health, safety or welfare (or to the environment) and not to eliminate all environmental contamination.”

This was an excellent intention that formed the basis for risk-based cleanup. This system worked great for many years until MDEQ gradually added more memoranda, more criteria, and new rules into the program.

I am sure that I am not the only consultant who was surprised when attending the most recent mandatory MDEQ training for Part 201 and Part 213 Cleanup Criteria in June 2007. Although there have been no significant changes to the cleanup criteria since 2002, MDEQ required this training five years later. The training was promoted as way to make MDEQ regulations appear more consistent and transparent but, ultimately, was a thinly veiled attempt to allow MDEQ to re-interpret the source removal obligations. If I listened correctly, MDEQ now

*** *BEA Update Bulletin, MDEQ, April 7, 2004.*



EDITORIAL (CONTINUED)

requires the removal of theoretically-saturated contaminated soil regardless of the type of contamination or the level of risk posed by the contamination. The use of the words; free-product, free-phase, and saturated soil (Csat) were manipulated like a shell game at the carnival! Let's dig.

Legislative Statement of Intent #3. "The department should act reasonably in its exercise of professional judgment in implementing these provisions."

I must admit that this intent is difficult to evaluate because the terms "reasonable" and "professional judgment" are very subjective. Leaving contamination in-place (allowable under Part 201 provided that risks are addressed) can conflict with MDEQ's Vision Statement (i.e., to protect and enhance Michigan's environment and public health) as well as the prevailing conservative views of the department leaders. What is reasonable to some... is unreasonable to others. MDEQ's purpose forces the department to err on the side of conservatism. There is significant pressure on the department to not miss or allow anything that will eventually result in unacceptable human exposure or natural resource damage.

With full acknowledgement that MDEQ has a tough balancing act, I am certain that almost every reader can give numerous examples of when "professional judgment" was discarded by the department (often without reason) in favor of a clearly unreasonable decision. Many of these types of decisions are made by a Quality Review Board who meet in a non-public setting, generally has no knowledge about a project other than what is revealed to the Board during a short presentation, but yet has full veto rights as to whether a project should be closed.

By their sheer number, BEA petitions provide numerous examples where the implementation of Part 201 has significantly deviated from its original intent. One of my favorite examples is when MDEQ contended that I did not adequately demonstrate that a candy store property was a "facility" for Category "N" BEA purposes because the analytical results were 2½ years old, while completely ignoring the fact that the former gas station that caused the contamination closed 20 years prior. I appealed to the highest of MDEQ levels, lost, and then had to collect new data one week prior to the 6 month deadline. To add insult to injury, MDEQ insisted that we pay another \$750 for an additional BEA review. All of our members probably have a story like this one.

In the last few years, BEA denials are on the rise and the denial letters tend to include increasingly longer lists of so-called deficiencies that have absolutely no bearing on the ability to distinguish a new release from existing contamination. As a result, consultants, attorneys, and even some MDEQ staff, are quick to recommend submitting BEAs for Disclosure over Petition.

Legislative Intent #4. Dependence on Rulemaking Versus Use of Operational Memoranda.

Here's a good one. The 1995 Legislature sought to eliminate the need for a large number of operational memoranda that were published to guide the enforcement of regulatory programs. Under the Act 307 program, MDEQ had gradually published a series of 18 separate Operational Memoranda. To address some legislators' concerns that these interpretations should be addressed through a more scrutinized process such as rule-making, MDEQ committed to produce a package of rules that spell out how all the legislative changes will be interpreted. The legislature should be pleased that MDEQ met its commitment to publish the Rules and has reduced the number of Operational Memoranda to only six. Unfortunately, they are probably not aware that these six Operational Memoranda include a combined 28 separate attachments (some of which remain unpublished). So much for that idea.

Legislative Intent #5. The legislature sought to adopt streamlined cleanup procedures.

When Part 201 was an infant, there were only a few cleanup criteria. For groundwater, there were three columns



EDITORIAL (CONTINUED)

of criteria; Health-Based Drinking Water Value, Aesthetic-Based Drinking Water Value, and GSI Value. For soil, we had 20X Drinking Water Value, 20X GSI Value, and Direct Contact Value. The cleanup/closure process was new and appeared to fulfill each of the legislature's intentions. There were more site closures in the first few years of Part 201 than perhaps the entire total since that time. At present, closures in Michigan are at an all-time low. What went wrong?

The department has become increasingly conservative in its implementation of Part 201 and as a result, the number of site closures has gradually decreased. The streamlined cleanup process that appears to exist on paper has been hindered by interpretive changes to the groundwater/surface water interface (GSI) pathway. GSI criteria are often the most stringent and inflexible of all cleanup criteria and are the same for all land uses. In 1995, the GSI pathway was relevant if the groundwater was hydraulically connected to a surface water body. From 1999 to 2002, the rules were drafted to regulate groundwater that is venting to a storm sewer the same as if it were entering a stream. With a strict interpretation of this rule (i.e., a presumption that venting must be occurring and with no allowance for dilution), many properties with no previous environmental concerns are now considered to be contaminated. The net effect of this rule change was a significant increase in the number of properties for which GSI criteria became applicable and, therefore, an increase in the number of properties that are classified as "facilities" (as defined by Part 201). GSI issues are difficult to resolve and difficult and/or costly to remediate.

Conclusion

The legislative intentions of the amendments to Part 201 appear to be as reasonable and appropriate today as they were 13 years ago.

The legislators' intention to place liability solely on the party that caused the contamination has been extremely successful with regard to property re-use and redevelopment. As an indirect consequence, far fewer properties have been, or ever will be, cleaned up.

The legislators' intention to eliminate unacceptable levels of risk and not to eliminate all environmental contamination was quite successful for many few years, but now faces significant challenges as MDEQ's recent emphasis is to clean up source areas where Csat is exceeded. The previous changes to the GSI pathway and the new emphasis on source area removal have reduced the opportunities for a true risk-based cleanup.

The legislators' intention that the department should act reasonably in its exercise of professional judgment in implementing these provisions cannot be fairly judged due to the extremely subjective nature of cleanup decisions. However, it is apparent to the regulated community that MDEQ will continue to interpret Part 201 as conservatively as possible. In addition, I am concerned about MDEQ's most recent policy to discourage meetings with the regulated community because they are viewed as "hand holding". Such directives usually increase tension between MDEQ and the regulated community and also appear to contradict MDEQ's own Commitment Statement (refer to: <http://www.michigan.gov/deq/0,1607,7-135-3306-74510-,00.html>).

The decreasing number of site closures and the increasing number of BEA denials are ample evidence that MDEQ's current implementation policies are not entirely consistent with legislative intent. This is not a new conclusion and there have been substantive discussions regarding specific changes to Part 201. I have reviewed the "*Michigan's Part 201 Environmental Remediation Program Review: Final Report and Recommendations*" dated April 2, 2007, and "*RRD Assessment of Part 201 Discussion Group Recommendations*", dated October 2007. The recommendations and responses appear to be very reasonable and, if implemented wisely, have the ability to get our teenager back in line.

Happy Birthday Part 201 and many more!



LEFT-OVER ENVIRONMENTAL LIABILITIES -- WHAT'S NOT COVERED BY YOUR PROSPECTIVE PURCHASER AGREEMENT?

By: Charles M. Denton (MAEP Board Member) and Pennie S. Johnson, Varnum Law Firm

Developments in environmental law, such as the Brownfields Revitalization and Environmental Act of 2001 and the Michigan Part 201 legislation effective June 1995, have encouraged the purchase and development of contaminated properties by affording developers shelter from certain pre-existing environmental liabilities. Despite these protections, however, purchasers of Brownfields may still be held responsible for contamination on their newly purchased property - regardless of the fact that they themselves did not cause the release of hazardous substances on the property.

This article describes three ways that innocent purchasers are still vulnerable to liability despite protections such as a Baseline Environmental Assessment (BEA) or Prospective Purchaser Agreement (PPA).^{*} First, under the Federal Resource Conservation and Recovery Act ("RCRA"), 42 USC §6901 *et seq.*, U.S. EPA Correction Action authority may be applied to the current owner and even a private "Citizen Suit" may be brought against a present owner for a previous owner's left over hazardous wastes where the property presents an "imminent and substantial endangerment" to human health or the environment. Second, innocent purchasers can be held liable under common law "toxic tort" theories, such as negligence, nuisance and trespass. Finally, corporate land owners can find themselves subject to "successor liability" where they acquired new land through in effect merging with or purchasing the business assets of the contaminating party. This article is not meant to act as a comprehensive analysis of all possible liability a prospective Brownfield purchaser or developer should consider prior to entering a purchase agreement, and of course such purchases should only be entered with the guidance of an experienced environmental law attorney. Rather, this article outlines some of the often overlooked legal liabilities potential purchasers of contaminated property should keep in mind and assess up-front.

Corrective Action Under RCRA: According to U.S. EPA, "Corrective Action" under RCRA § 3004(u) for accidental spills or other hazardous waste disposal at RCRA-permitted facilities is the responsibility of the property owner regardless of when the release occurred. Also, under RCRA § 7003(a), the U.S. EPA can bring suit against "any person (including any past or present generator, past or present transporter, **or past or present owner or operator** of a treatment, storage, or disposal facility) **who has contributed or who is contributing to** such handling, storage, treatment, transportation, or disposal..." of pollutants where resulting contamination may present an "**imminent and substantial endangerment** to health or the environment." [emphasis added]. Further, RCRA § 7002 allows a private citizen to bring suit against a land owner under the same circumstances.

RCRA responsibilities are typically excluded from PPA and BEA coverage, so will need to be assessed and resolved separately—either with the agency or seller/responsible party.^{**} A purchaser of potentially contaminated property should be most concerned with the phrase "has contributed or who is contributing" to contamination. While one might reasonably conclude that a non-polluting purchaser is not "contributing to" contamination on the property, and therefore should not be held liable under this statute, the EPA has held to the contrary. In 2000, for example, RCRA was used to hold both former and current owners of a 77-unit, multi-family residential building in Washington D.C. for the remediation of lead paint contamination (*In matter of 17th Street Revocable Trust*). Current owners of the building did not "contribute" to the presence of the lead paint in the traditional sense of the word, as the paint

* Of course, an owner's failure to operate with "due care" or "exacerbation" of pre-existing contamination can trigger liability.

** Pollution liability insurance may also be used to address this risk.



LEFT OVER LIABILITIES (CONTINUED)

was applied prior to the time of purchase; nevertheless, EPA found that the current owners had "contributed" to the contamination by failing to maintain the painted surfaces, and essentially by not removing the lead paint or attempting to minimize its accumulation. Similarly, in *United States v. Price*, a New Jersey federal court held that a property owner who purchased property that was contaminated at the time of purchase "contributed" to contamination based on their "studied indifference" to the environmental condition of the property.

On the other hand, several courts have rejected the notion that passive buyers of contaminated property may be liable under RCRA since the new owner is not a person "who has contributed or who is contributing" to such contamination, as failing to remediate pre-existing waste disposal is not a "contribution." Nevertheless, there is some precedent for passive liability under these RCRA provisions, and a potential purchaser should consider in pre-acquisition diligence the likelihood that hazardous waste corrective action or other RCRA liability could be imposed.

Toxic Torts: Potential purchasers should also be aware of common law "toxic tort" liability. Toxic torts are torts arising out of alleged contact with a toxic substance. In the Brownfields context, the threat is that neighbors may sue an owner of a contaminated property from which hazardous substances continue to migrate. Claims generally are based on theories of negligence, nuisance and trespass. Damages for such torts include property damage (such as diminution in value), interference with use and enjoyment of property, and personal/bodily injury (an increased risk of cancer and other medical claims).

Debates over whether an innocent purchaser may be liable under toxic tort theories are similar to the RCRA "contribution" debate. Under the nuisance toxic tort theory, an innocent landowner's liability "is not based upon responsibility for the creation of the harmful condition, but upon the fact that he has exclusive control over the land and the things done upon it." (Restatement (Second) of Torts §839.) Suits brought under the nuisance cause of action, for example, impose liability where "upon learning of a nuisance and having a reasonable opportunity to abate it," the landowner failed to remove the contamination. (*N.Y. v. Shore Realty Corp.* (2d Cir. 1985)). Thus, like the "contribution through studied indifference" theory, nuisance suits may impose liability for a "failure to abate."

Like nuisance actions, toxic trespass actions sometimes impose liability where the current, innocent owner of property becomes aware of environmental contamination and fails to remediate. In *Rudd v. Electrolux Corp.* (1997), a North Carolina court held that the current owner of a property might be liable for maintaining a nuisance and continuing trespass where the owner failed to remove and abate contamination from an underground storage tank. Once the current owner had knowledge of the contamination, it was liable in trespass under the theory of "continued migration of contaminants." As the landowner knew of the "migration of contaminants" and failed to prevent further trespass, liability was imposed.***

Successor Liability: Finally, acquiring another business risks the potential for successor liability under Federal CERCLA and Part 201. While the amended statutes and PPA/BEA provisions may limit environmental remediation liability for an "innocent" purchaser, a business entity may still be held liable where they are found to be the successor of the contaminating party.

While CERCLA and Part 201 do not specifically address the issue of successor liability, many courts have addressed the issue and held that liability can extend to successors. The surviving entity of a corporate merger will almost always be liable for the contamination of the merged corporation. Where a corporation simply purchases the assets of another corporation, however, the purchaser is *generally* not subject to successor liability. Scenarios where asset purchasers may be liable, however, include (1) where the purchasing party contractually assumes li-

** The MDEQ Part 201 "Notice of Migration" requirement complicates this toxic tort risk by providing for warnings to neighbors which could of course trigger heightened concerns and claims for abatement.



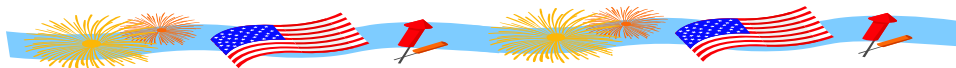
LEFT OVER LIABILITIES (CONTINUED)

ability, (2) where the corporation purchases so much of the another entity that there is a *de facto* merger, (3) where the purchase was for the fraudulent purpose of avoiding liability, and (4) where the corporation is merely a continuation of the selling corporation. Thus, a corporation should consider the possibility of successor liability when deciding whether to purchase another business.

Beyond the environmental remediation protection for prospective purchasers of contaminated "Brownfield" properties, risk assessments should also consider RCRA, TOXIC TORT, AND SUCCESSOR LIABILITIES. While certainly these "left-over" environmental risks are not frequent or pervasive, and PPA/BEA protections are typically adequate, *caveat emptor* still applies when purchasing contaminated sites.

MEMBER NEWS

The Washtenaw County Board of Commissioners recently appointed **James M. Harless**, Ph.D., CHMM, RBP, to the Washtenaw County Brownfield Redevelopment Authority (WCBRA). Dr. Harless is a Senior Consultant at **Soil and Materials Engineers, Inc.** He has over 30 years of experience, including four years with SME, in environmental evaluations and consulting. Dr. Harless is a long-standing MAEP member.



Michael O'Hearn, P.E., of **MACTEC Engineering and Consulting, Inc.** in Novi, recently completed an intensive training and certification course in the application of "Spatial Analysis and Decision Assistance" (SADA) to environmental data analysis. The SADA software integrates modules for data visualization, geospatial analysis, statistical analysis, human health risk assessment, ecological risk assessment, remediation cost/benefit analysis, sampling design, and decision analysis in a GIS-like environment. SADA is developed and maintained in The Institute for Environmental Modeling at the University of Tennessee with funding from the USEPA Region 5 and the Nuclear Regulatory Commission. Michael has been an MAEP member since 1992.



SEVERAL PRACTICAL ASPECTS OF MDEQ PART 201 SEDIMENT QUALITY ASSESSMENTS

By: John Barkach (MAEP Board Member), Dennis McCauley and Mailee Garton
Great Lakes Environmental Center

INTRODUCTION

Sediment quality and remediation of impacted sediments is an emerging issue in the State of Michigan. Contaminated sediments, as well as impacted groundwater venting to surface water are significant threats to surface water quality. Consequently, many States have initiated new regulatory requirements that examine the environmental impact of contaminated ground water and sediment on aquatic life. The evaluation of water and sediment quality has expanded beyond chemical monitoring to include toxicity and on-site ecological impacts, so that impacts on aquatic life may be determined using integrated approaches.

Sediment quality investigations and ecological risk assessment are required components of (1) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) Remedial Investigations (RIs), (2) Resource Conservation and Recovery Act (RCRA) Facilities Investigations (RFI), and (3) MDEQ Part 201 site investigations where a Remedial Action Plan will be submitted. More frequently, MDEQ Part 201 sediment quality investigations are conducted where sediment quality impacts are suspected based on soil and groundwater quality assessments that have been conducted at a site and on site observations. These impacts can include:

- ◆ contaminated groundwater venting to a surface water body (especially if acute ground water/surface water criteria are exceeded);
- ◆ free phase liquid discharge to a surface water (e.g. oil seeps);
- ◆ aerial deposition (e.g. smelters, pre-permit air emissions, etc.);
- ◆ industrial waste water discharges to surface water;
- ◆ landfill leachate releases to surface water;
- ◆ direct placement of industrial fill material into surface waters (e.g. coal ash, foundry sand, mine tailings, etc.); and
- ◆ stormwater runoff from industrial sites.

Integrated sediment quality investigations focus on released compounds (as well as degradation bi-products), typically focusing on identified chemicals of concern so that sediment quality impacts related to a particular site can be separated from other anthropogenic sources.

On August 3, 2006, the MDEQ Remediation and Redevelopment Division (RRD) Operational Memorandum No. 4, Characterization and Remediation Verification, Attachment 3 - Sediments (RRD OM-4, Attachment 3; MDEQ, 2006) was released as an interim final document. This document provides guidance regarding: characterization of impacted sediments; development of site-specific sediment cleanup criteria; and corrective action. This paper briefly summarizes this MDEQ Operational Memorandum with respect to characterization of sediment quality, and discusses several practical aspects of MDEQ Part 201 sediment quality investigations.

OVERVIEW OF SEDIMENT CHARACTERIZATION CONTAINED IN MDEQ PART 201, OM-4, ATTACHMENT 3, SEDIMENTS

Where impacts to sediments are suspected, the MDEQ recommends a phased approach (MDEQ, 2006). The first phase involves a preliminary assessment. The preliminary assessment is designed to determine the presence or



SEDIMENT QUALITY ASSESSMENTS (CONTINUED)

absence of impacted sediment, and is focused on areas of suspected sediment contamination. During the preliminary assessment, potential source areas and sediment accumulation areas are targeted for sampling. In rivers and streams sediment accumulation areas include pools, backwaters, and the inner portions of river bends (i.e. point bars) where contaminated sediment can accumulate.

During the initial sampling phase, the sediment quality data are compared to published sediment quality guidelines (SQGs) including: (1) USEPA (2002c) consensus-based threshold effects concentrations (TECs) and probable effects concentrations (PECs), and (2) USEPA (2003) ecological screening levels (ESLs). A TEC is an estimated chemical concentration at which harmful effects on sediment dwelling organisms are not expected (USEPA, 2002c; MacDonald, Ingersoll, Berger, 2000). The PEC is an estimated chemical concentration where harmful effects to sediment dwelling organisms are expected frequently (USEPA, 2002c; MacDonald, Ingersoll, Berger, 2000).

Based on the results of bulk sediment testing, if exceedances of USEPA (2002c and 2003) sediment quality guidelines are not observed, then no further evaluation is required. If compounds detected in sediment exceed USEPA sediment quality guidelines, then the site investigation proceeds to the second phase. The second phase begins with the preparation of a work plan to evaluate the lateral and vertical extent of sediment quality impacts.

MDEQ's OM-4 Attachment 3 states that the work plan must be submitted to the MDEQ project manager prior to implementation of a sediment quality investigation (MDEQ, 2006). Additional guidance regarding the preparation of a sediment quality assessment work plan is contained in a USEPA (2001a) guidance manual titled *Methods for the Collection, Storage, and Manipulation of Sediments for Chemical and Toxicology Analyses*.

In the event that the evaluation of the horizontal and vertical extent of sediment contamination reveals that the contaminants are present at concentrations greater than the sediment quality guidelines (USEPA 2002c and 2003), the MDEQ will require that additional testing be conducted to evaluate toxicity and/or bioaccumulation (MDEQ, 2006). Whole sediment toxicity testing may be required when the MDEQ determines that the concentrations of compounds in sediment indicate the potential for (a) toxicity to aquatic life, (b) bioaccumulation, and/or (c) an exceedance of water quality standards (MDEQ, 2006). As noted previously, OM-4 Attachment 3 states that a sediment toxicity sampling and testing work plan must be submitted to the MDEQ prior to implementation.

PRACTICAL ASPECTS OF SEDIMENT QUALITY ASSESSMENTS

MDEQ's OM-4 Attachment 3 does not contain specific guidance regarding the design of a sediment quality investigation work plan. Rather, the MDEQ references extensive USEPA guidance regarding sediment quality assessments that are contained in a three volume set titled "*A Guidance Manual to Support the Assessment of Contaminated Sediments in Freshwater Ecosystems*" (USEPA 2002a, 2002b, and 2002c). The following section discusses several practical aspects of sediment quality investigations.

Sediment Sampling Considerations

For preliminary sediment quality assessments, sediment samples are typically collected near source areas (e.g. industrial waste water outfalls, industrial fill material, etc.) and sediment accumulation areas, whereas to evaluate diffuse impacts (e.g. venting impacted groundwater, aerial deposition, etc.) samples are collected along transects spaced at approximate 100 to 200 foot intervals. Often three to five sediment sample locations are chosen along each transect. For rivers that are defined as "navigable waters," sediment quality investigation areas are generally located outside of the legal boundaries of the navigation channel.



SEDIMENT QUALITY ASSESSMENTS (CONTINUED)

It is important to understand that rivers and streams are dynamic systems, and that contaminated sediments can be transported (particularly during storm events) and re-deposited. The dynamic nature of sediment transport in rivers and streams can complicate the analysis of historic sediment quality data, and emphasizes the importance of mapping existing sediment accumulation areas relative to source areas prior to designing a field sampling plan.

The extent of sediment quality testing is negotiated with MDEQ based on a site specific evaluation of the chemicals involved, transport and attenuation mechanisms, and source characteristics. Often sediment samples are collected for bulk sediment chemistry at 6-inch vertical intervals throughout the first two feet, and at 1 to 2-foot intervals thereafter until refusal.

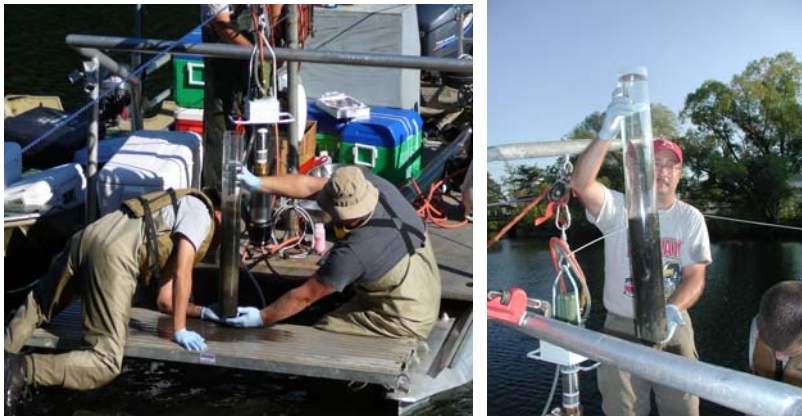


Figure 1. Vibracore sediment sampling

Refusal is not a defined term, and depends on the type of sediment sampling equipment used and physical characteristics of the underlying sediments. Sediment samples are often collected with core samplers, box corers, and Vibracore sampling equipment. Sediment sampling equipment is chosen based on water depth, access, and the vertical extent of sediment required for sampling.

Bulk Sediment Chemistry Quality Assurance

Sediment samples are analyzed using standard MDEQ (2004b) sampling and testing procedures. Due to low percent solids, communication with laboratory personnel is necessary to achieve MDEQ (2004b) OM-2 Target Detection Limits. In addition, the MDEQ typically requires that sediments samples collected for volatile organic compound (VOC) testing, utilize either the methanol sampling procedure or Encore samplers.

Selection of Samples for Whole Sediment Toxicity Testing

There are a number of approaches to select samples for whole sediment toxicity testing. One approach is to select sediment samples for whole sediment toxicity testing based on a comparison of the bulk sediment chemistry data to USEPA (2002 and 2003) SQGs. In this case, sediment samples are selected to represent sediment quality impacts that (a) are above either USEPA (2002c) Threshold Effects Concentrations or USEPA (2003) Ecologic Screening levels, but below USEPA (2002c) probable effects concentrations (PECs), and (b) sediment samples that exceed USEPA (2002c) probable effects concentrations.

A second approach is to select samples based on expected whole sediment toxicity, taking into account both potential attenuation and bioavailability. In this approach, sediment samples are selected for whole sediment toxicity testing at concentrations both above and below levels where sediment toxicity is expected.



SEDIMENT QUALITY ASSESSMENTS (CONTINUED)

Between 2003 and 2008, USEPA released a series of documents addressing the development of sediment quality benchmarks using equilibrium partitioning guidance. The equilibrium partitioning guidance was used to develop sediment quality benchmarks with respect to endrin and dieldrin (2003b and 2003c), polycyclic aromatic hydrocarbon (PAHs; USEPA, 2003d), metal mixtures (cadmium, copper, lead, nickel, silver, and zinc; USEPA, 2005b), and nonionic organics (e.g. aliphatic and aromatic compounds, phthalates, and pesticides; USEPA, 2008). The USEPA equilibrium partitioning guidance assumes:

- ◆ the concentration of chemicals in sediment and in interstitial waters correlate to observed biological effects (e.g. toxicity) on sediment dwelling organisms across a range of sediment;
- ◆ partitioning models relate sediment concentrations to freely dissolved concentrations in interstitial water;
- ◆ the distribution of sensitivities of benthic organisms to chemicals is similar to that of the water column organisms; therefore, currently established water quality criteria, final chronic values or secondary chronic values, can be used to define the acceptable effects concentration of a chemical freely dissolved in interstitial water.

For the 32 nonionic compounds (USEPA, 2008) and 34 PAH compounds (USEPA, 2003d), the equilibrium partitioning models assume that bioavailability is controlled by the presence of organic carbon; these models relate sediment concentrations on an organic carbon basis to freely-dissolved concentrations in interstitial waters. For organic carbon normalized PAHs, additive effects of the 34 PAHs are assumed by totaling the ratios of the individual PAHs, divided by the PAH specific equilibrium partitioning sediment benchmark. If the sum of the ratios exceeds one, the whole sediment may be toxic if the PAHs are bioavailable.

For organic carbon normalized non-ionic organic compounds, chemicals are evaluated on an individual basis in the same manner as PAHs, except that two equilibrium partitioning sediment benchmarks are utilized, one based on chronic toxicity and a second based on narcosis. For organic carbon normalized non-ionic compounds, the concentration of the individual compound is divided by the chemical specific equilibrium partitioning sediment benchmark. If the ratio exceeds one, the sediment sample may be toxic if the non-ionic compound is bioavailable.

For certain metal mixtures (cadmium, copper, lead, nickel, silver, and zinc), the USEPA (2005b) equilibrium partitioning model assumes that bioavailability is controlled by the presence of acid volatile sulfide and organic carbon. This model uses the sum of the sequential extracted metals minus acid volatile sulfide, divided by fraction organic carbon, where:

$$\begin{aligned} &\text{if } \left(\sum SEM - AVS \right) / f_{oc} > 3,000 \text{ } \mu\text{mole/g}_{oc}, \text{ then whole sediment toxicity is likely} \\ &\text{if } \left(\sum SEM - AVS \right) / f_{oc} \text{ is between } 130 \text{ and } 3,000 \text{ } \mu\text{mole/g}_{oc}, \text{ then whole sediment toxicity is uncertain} \\ &\text{if } \left(\sum SEM - AVS \right) / f_{oc} \text{ is } < 130 \text{ } \mu\text{mole/g}_{oc}, \text{ then whole sediment toxicity is not likely} \end{aligned}$$

The holding time for sediment samples selected for AVS/SEM testing is 14 days. Also, the sediment sample volume requirements can exceed three liters if a sediment sample interval is tested for bulk sediment chemistry, whole sediment toxicity, and potential attenuation mechanisms.

The USEPA (2003, 2005b and 2008) equilibrium partitioning guidance is often used in conjunction with whole sediment toxicity tests to explain why a sediment sample is or is not toxic based on the results of the acute (or chronic) whole sediment toxicity tests. Whole sediment toxicity tests have different strengths and weaknesses compared to chemical specific sediment quality guidelines, and the most powerful inferences can be drawn when both are used together (USEPA, 2008).



SEDIMENT QUALITY ASSESSMENTS (CONTINUED)

Whole Sediment Toxicity Testing

Unlike chemical specific SQGs, whole sediment toxicity tests are capable of detecting any toxic chemical, if the chemical is bioavailable and is present in a concentration that is toxic to the test organism. This information is particularly useful for evaluating the combined affects of chemical mixtures (USEPA, 2008). The interpretation of whole sediment toxicity tests in conjunction with bulk sediment chemistry can be complicated for a number of reasons, including (USEPA, 2007):

- ◆ the presence of unmeasured chemicals (e.g. ammonia);
- ◆ changes in bioavailability (e.g. fluctuating concentrations of AVS);
- ◆ chemical mixtures (e.g. additive toxicity associated with PAHs, co-correlated sediment contaminants).

The number and location of samples used for whole sediment acute toxicity tests varies from site to site and is negotiated with the MDEQ, and typically ranges from nine to 12 samples. Typically, the MDEQ requires that whole sediment toxicity be evaluated using a standard 10-day whole sediment acute test using two species, the freshwater insect *Chironomus dilutus* (previously known as *C. tentans*) and the benthic amphipod *Hyalella azteca*. On projects with federal jurisdiction, acute as well as chronic whole sediment toxicity tests (20-day *Chironomus dilutus* and 28-day *Hyalella azteca*) are sometimes performed.

The end points of the acute whole sediment toxicity tests include survival, expressed as the average percent survival upon termination of the test, and growth, as measured by the total dry weight gain of the organisms measured at test termination. This procedure is described in detail in the USEPA (2000) guidance document titled *Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates*.

A whole sediment toxicity test is typically conducted utilizing eight replicate samples, and requires a minimum of two liters of sediment from each sample location. Due to this sample volume requirement, re-mobilization to the site to collect additional sediment for toxicity testing may be necessary after the analysis and evaluation of contaminant concentrations is completed. Unless the sediment samples are frozen, sediment samples selected for toxicity testing are typically tested within eight weeks of sample collection.

Evaluation of Other Ecological Components of a Stream or Lake

In addition to bulk sediment chemistry and whole sediment toxicity, the third leg of an integrated or “multiple lines of evidence” approach to a Screening Level Ecological Risk Assessment (USEPA, 1997 and 2001b) is biological evaluation. Although not typically required by the MDEQ in a Part 201 sediment quality assessment, biological evaluations of surface water bodies can provide important and useful information regarding the impact of contaminated sediments on fish and macroinvertebrate populations.

For wadeable streams, detailed sampling procedures are contained in a document titled “GLEAS Procedure 51, Qualitative Biological and Habitat Survey Protocols for Wadeable Streams and Rivers” (MDEQ, 2002). Scoring metrics are contained in a second document titled “GLEAS Procedure 51 Metric Scoring and Interpretation, Manual of Fisheries Survey Methods II” (MDEQ, 2000). GLEAS Procedure 51 includes benthic macroinvertebrate sampling, fish sampling, and water quality and habitat assessments. Similar procedures have been developed by the MDEQ for lakes and large rivers.

Disclaimer

This article is not comprehensive and is not intended to be a substitute for the Operational Memoranda and guidance documents that have been prepared by MDEQ and USEPA that address this subject. Those documents should be referred to prior to beginning an evaluation of sediment quality in compliance with MDEQ Part 201 requirements.



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MAEP SHOWS ITS STUFF AT BROWNFIELDS 2008

By: **Bob Zwald (MAEP Board Member)**
Fishbeck, Thompson, Carr & Huber, Inc.

"Roadmap to Revitalization," the 2008 National Brownfields Conference, cosponsored by International City/County Management Association (ICMA) and the U.S. Environmental Protection Agency (USEPA), took place May 5-7 at the Cobo Center in Detroit, Michigan. According to ICMA, there were more than 6,600 registrants, 500 speakers, and 250 exhibitors, making the conference one of the most successful in the event's history.

As ICMA describes it:

Since 1996, the National Brownfields Conference has provided a forum for stakeholders to discuss the clean-up and redevelopment of abandoned, underutilized, and potentially contaminated properties. As an international industrial giant that knows firsthand the many challenges related to brownfield properties, this year's host city of Detroit provided a great backdrop for the conference. The city and its neighboring communities in southeast Michigan have many valuable lessons to share, and conference attendees could explore examples of local brownfield redevelopment through eight different mobile workshops and walking tours.

This year's Brownfields Transaction Forum highlighted more than 700 available properties through a preconference listing service using Google Maps and an onsite networking event where site owners, developers, investors, and other transaction professionals could make connections and discuss opportunities. The forum was by far the largest since the concept was introduced as part of the 2004 conference.

Former Detroit Mayor Dennis Archer moderated a panel featuring the CEOs of several companies that have chosen to invest in downtown redevelopment. Panelists Dave Bing, NBA Hall of Famer and president/owner, the Bing Group; Dan Gilbert, founder and chairman, Rock Financial/Quicken Loans; and Mark Petroff, president, Marketing Associates, discussed what motivated them to invest in their downtown marketplace, including the need to attract young workers and stimulate investment interest. Gilbert emphasized the importance of recruiting smart young employees by saying "They can go anywhere they want. You talk with these young people, and they really want to be in an urban setting." All three panelists agreed that the development of livable, urban spaces is central to attracting young talent to places like Detroit.

ICMA President Ed Daley kicked off the conference on Monday morning, May 5, by introducing Bill Strickland, CEO of Manchester Bidwell Corporations, who spoke at the 2007 ICMA Annual Conference in Pittsburgh. A longtime supporter of the Brownfields Conferences, President Daley had this to say:

"Throughout the conference, it was very helpful to hear discussions from the different perspectives of local communities, developers, consultants, and federal and state agencies. These stakeholders come together to help bring new life to unused and underutilized properties. I was particularly impressed with the Transactions Forum, which has grown in popularity and participation to become a conference highlight in recent years."



MAEP SHOWS ITS STUFF (CONTINUED)

As an endorser, exhibitor, and with high member participation, MAEP was a part of it all!

The MAEP booth was in full display in the exhibition hall throughout the conference. Despite many various opportunities for attendees, including educational programs, a film series, marketplace roundtables, and a poster gallery about the latest issues, solutions, and trends in brownfield redevelopment, foot traffic through the exhibition hall was high all through the conference.

The booth was manned by volunteers from the MAEP board and general membership. Visitors included the familiar faces of both new members and those who have been with us for a long time, as well as a large number of those unfamiliar with the organization. It was a great opportunity to introduce the MAEP to prospective members who share our vision. For those who stopped by, giveaway pencils made from recycled currency were a big hit, as was the fishbowl raffle for an iPod Shuffle.

In addition to the numerous MAEP members who attended the conference, many members were also presenters at the informational sessions, including President Steve Luzkow (two sessions), newly elected MAEP board member Charlie Denton, former MAEP President Gary Klepper, and many others. There's no doubt that the face of MAEP was shown in a great light.

In summary, Brownfields 2008 was a great success not only for the City of Detroit, but also for the advancement of brownfield redevelopment nationwide, for the environmental industry, and for MAEP.

Special thanks to the following booth volunteers:

John Cuthbertson – GZA GeoEnvironmental, Inc.
Bill Frez – Arcadis
Matt Frisch – Fibertec, Inc.
Jennifer Hardy – RTI Laboratories, Inc.
Donald Kaylor – Professional Service Industries, Inc.
Kathy Klein – Waste Management
Steve Kulpanowski – Bureau Veritas
Steve Luzkow - Fishbeck, Thompson, Carr & Huber, Inc. (FTC&H)
Tim Walsh – Consumers Energy
Bob Zwald – FTC&H



MAEP Board Member John Cuthbertson at MAEP's Brownfields 2008 booth



CLASSIFIED AD

Facilitative Mediator

DUSTIN P. ORDWAY

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Mr. Ordway has more than 25 years experience in environmental litigation and compliance matters. He is the chair of the firm's Environmental practice group. In addition, he has 10 years mediating commercial litigation.

He received his law degree from the University of Michigan Law School and his undergraduate degree from the Massachusetts Institute of Technology.



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MEMBER NEWS



Barr Engineering Company announced that senior environmental engineer Steve Kapeller has joined Barr's staff in Ann Arbor, Michigan.

According to Barr vice president Dan Umfleet, Steve brings 12 years of experience in environmental engineering, having served as an environmental manager for Pfizer Global Research and Development and as a consulting engineer. At Barr, he will work on projects involving environmental management and permitting, compliance assistance and auditing, water-usage and discharge evaluations, and mercury reduction and emergency response planning.

Barr is an engineering, environmental, and information-technology consulting firm, with a staff of more than 400. Barr has offices in Ann Arbor, Michigan; Minneapolis, Duluth, and Hibbing, Minnesota; and Jefferson City, Missouri.



MEMBER NEWS

UPCOMING COURSES OFFERED BY CONESTOGA-ROVERS AND ASSOCIATES

DOT Hazardous Materials Shipments and RCRA. June 24 (8:30 a.m. - 4:30 p.m.). June 25 (8:30 a.m. - 2:00 p.m.). Cost: \$595. The course will be held at CRA's facility located at 14496 Sheldon Road, Suite 200, Plymouth, MI 48170.

Resource Conservation and Recovery Act. June 18 (9:00 a.m. - 11:00 a.m. or 2:00 p.m. - 4:00 p.m.). Cost: \$75. CRA's facility.

HAZWOPER 8-Hour Refresher. June 19 (8:00 a.m. - 5:00 p.m.). Cost \$150. CRA's facility.

To make reservations, register online at www.cra-assets.com or call Nancy Sullivan @ 734-453-5123.

WELCOME NEW MEMBERS

The following is a list of new members who have joined the Michigan Association of Environmental Professionals from March 2008 – May 2008. A warm welcome to our newest members!

March 2008

Bojesen, Paul, SECOR International

Goeddeke, Dan, Pace Analytical

Hunt, Robert, Green Line Environmental

Mein, Duncan, Somat Engineering, Inc.

April 2008

Jazdyk, Dianne, TestAmerica Laboratories

McWhinnie, Scott, GES

Narsh, Gregory, Pepper Hamilton LLP

Sutherland, Gail, FTCH

Wiesemann, Shayne, DTE Energy

May 2008

Mavi, Avtar S. , Advanced Env. Management Group

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Inquiries, suggestions and contributions are welcome and may be directed to the Executive Director at 517/349-1970, via fax at 517/349-9949 or via email: exec-dir@maep.org.

Articles should be sent in Word format (not Adobe Acrobat). Articles can be accompanied by original photographs or graphics as separate electronic files (i.e., they cannot be embedded in the article).

Contributors' opinions are their own and not necessarily those of MAEP.

THE MICHIGAN ENVIRONMENTAL PROFESSIONAL retains the right to edit submissions.



THE MICHIGAN ENVIRONMENTAL PROFESSIONAL

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