

# The RT Review

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**MOLD PROJECTS RECEIVE INCREASED ATTENTION - RT PROJECT PROFILES**  
by Christopher R. Eyre C.M.C.

New Jersey

RT completed an indoor air quality investigation of a multi-tenant commercial building in NJ in response to a tenant complaint. The tenant complained of allergies and respiratory problems which were attributed to the building. The IAQ work consisted of the collection of air samples for viable mold, and an inspection of the building common areas, the tenant space, basement, and HVAC units on the roof.

The inspection found areas of visible mold growth on ceiling tiles and gypsum wallboard in the basement. Water damage related to a flood was apparent on the gypsum wallboard essentially throughout the basement. Visible surface mold growth was additionally identified on the wood ceiling above the drop ceiling in the tenant space and on debris in the roof level utility rooms. Filters for the HVAC systems were not being changed regularly. Roof leaks were the cause of the mold growth on the tenant space ceiling.

Culturing and fungal identification for the air samples found amplification of numerous mold species compared to the exterior levels. Amplification means that the mold is growing and potentially producing mycotoxins. Three risk management mold species were identified in the basement and in the tenant space. Risk management mold species can be toxic, carcinogenic, or present other risk to human health.

Based on the investigation findings, mold abatement work was performed, and engineering controls were implemented (installation of high efficiency particulate air (HEPA) filters and changing filters regularly). Abatement included the removal and replacement of all water damaged and microbial impacted building materials and debris within

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## BARRY BRIDGE PARK EXPANSION ENHANCES CHESTER RIVERFRONT

As the only public boat launch facility along Delaware County's twelve-mile stretch of riverfront, the current Barry Bridge Park provides free access to the Delaware River for small pleasure boat operators. However, the need for an expanded Barry Bridge Park has been identified to enhance riverfront use and area attractiveness, particularly with adjacent Brownfields site redevelopment underway. The City of Chester is expanding the Barry Bridge Park to turn it into one of the most dynamic waterfront parks in the region. The proposed expansion will provide an enhanced recreational and entertainment outlet for Chester residents and visitors. The Park's proximity to the Preferred Real Estate Investments Rivertown project will further enhance one of the region's most significant economic development projects.

Overall, the City has committed \$3.0 million for various upgrades to the Barry Bridge Park and certain public infrastructure improvements to create better access to the Park. A new "Seaport Drive" has already been built. On completion of the construction of the Flower Street Recreational Pier and a "City Landing," a series of broad steps will descend to the Delaware River from a riverwalk promenade.

Landside Improvements Include:

- Multi-purpose Open Fields including a new 3.5 acre parking area at the former Wade site; conversion of the parking area at the existing 4.6 acre Barry Park to open fields
- Resurfacing of Flower Street
- Improved parking
- Improved crosswalks
- Pedestrian walkways
- Improved turnaround at boat launch
- Site lighting

- Screen trees on east side of parking lot and trees in parkland
- New stormwater pipe along Flower Street to collect and discharge runoff from the new parking lot

Waterside Improvements Include:

- Maintenance and Improvements to existing Boat Ramp, including grouting sinkholes, resurfacing upper level deck, and repairs to the rip-rap shoreline



Barry Bridge Park Expansion Project

- A "City Landing" which will provide a series of broad steps descending to the Delaware River

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## BARRY BRIDGE PARK PROJECT CONTINUED FROM PAGE 1

- Bank Stabilization and Maintenance along 350 linear feet of the Delaware River
- Pedestrian and bicyclist bridge over the CSO Discharge and its tidal ditch

The waterfront park redevelopment is being coordinated with PREI's redevelopment of the former PECO Generating Station into commercial office space. New roadways are being built to improve access. The cap on the adjacent Wade Superfund site is also being enhanced to serve as a parking lot.

RT Environmental Services is assisting

the Chester Economic Development Authority as environmental consultant on this important project. Urban Engineers and Wallace Roberts and Todd designed the expanded park layout. At *RT Review* press time, the City was expected to announce the start of construction, which is projected to be completed by late fall. RT is proud to assist Chester with turning a former Superfund site and several Brownfields sites into an exciting new public access park at one of Pennsylvania's most important gateways!

## PENNSYLVANIA'S LAND RECYCLING PROGRAM IMPROVEMENTS PROPOSED BY KATHLEEN A. MCGINTY, SECRETARY, DEPARTMENT OF ENVIRONMENTAL PROTECTION

As recently announced by DEP Secretary McGinty, DEP is considering certain changes to the program that are essential to its continued success. From testimony by the Secretary, she provides her focus to improve the program as follows:

• The continued success of Pennsylvania's Brownfields Program depends in no small measure on Governor Edward G. Rendell's "Plan for a New Pennsylvania." The Governor's plan includes \$2 billion in bonds and loan guarantees over the next three years, leveraging these funds to generate a minimum of \$5 billion in private investment in economic development projects across the state. Investments are to be directed toward blighted rural, urban and suburban sites, and offer critical new capital resources to small cities and communities.

• Our successful Brownfields Program is now in its eighth year. In order to ensure continuous improvement in the Program, DEP has undertaken several reviews of program performance. In 2002, DEP conducted an audit of the program. And in the last several months, I conducted a series of informative focus groups to examine various aspects of the program in detail with experienced practitioners. The results of these efforts follow.

• **MOA with EPA:** Although the liability protection provided to properties successfully remediated under Act 2 is far-reaching on the state level, there continues to be concern among the remediation community about liability that still may exist at the federal level. Specifically, there is concern that liability will remain pursuant to the federal Resource Conservation and Recovery Act (RCRA) and the CERCLA Programs. The Department will pursue an agreement with EPA to address these concerns and clarify the sites that can be remediated under Act 2 will simultaneously satisfy all RCRA and CERCLA requirements as well.

• **Applicability of Act 2 to Responsible Parties:** Confusion and inconsistency was reported in the focus groups on the issue of whether those individuals and entities who are wholly or partially responsible for contamination at a site may pursue a cleanup under Act 2 or if the act was intended to be applied only to those who bear no responsibility for the contamination. DEP will address this issue with new guidance that will make clear that all parties may participate in Act 2 cleanups, and that the opportunity to resolve environmental liabilities through the Act 2 process is available to owners of property with active operations. At the same time, we will reiterate that Act 2, of course, was not intended and does not absolve any party from continued liability in ensuring the full and successful cleanup of any and all contamination for which they are responsible.

• **"Best Management Practices" for Small Properties:** Several focus group participants pointed out that small brownfield sites often fail to attract investor interest because costs associated with characterization, assessment and remediation are too high for a small project to bear. In light of this concern, I have directed Department staff to investigate whether a "Best Management Practices" manual could be developed that could be used at sites that are small, that will be cleaned up under a statewide health standard or special industrial area process, and that have no associated groundwater issues. The aim would be to cut costs by avoiding detailed site-specific work at these small sites. Certification of plans of this nature by a Professional Engineer could further streamline the process. Cleanups pursued in this way could provide limited liability relief and/or a "No Further Action" letter. We will report back to the Committee on this matter after further investigation.

• **Consistency:** Issues related to inconsistent implementation of the Land Recycling Program

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## MOLD PROJECTS RECEIVE INCREASED ATTENTION - RT PROJECT PROFILES

(continued from page 1)

containment and under negative air with RT oversight and air sampling. The roof was planned to be replaced to eliminate the moisture source in the tenant space.

### Louisiana

RT completed an indoor air quality inspection of a men's restroom at a commercial building in Louisiana. The maintenance staff observed visible surface mold growth inside a utility access panel in the restroom. The IAQ investigation consisted of an inspection of the restroom and adjacent rooms.

The inspection found that the wall mounted toilets were improperly hung which had caused the wall to deflect. Interview information confirmed that the restroom was regularly power washed using hot water and a sanitizing soap. Power washing apparent caused damage to the ceramic floor tiles along the restroom walls and below the wall mounted toilets. The compromised ceramic tiles caused wash water to wick up the gypsum walls at various locations in the restroom. Surface mold growth was observed on the interior side of the gypsum walls inside the utility access panel, and along the floor in the trough and sink areas of the restroom. No surface mold growth was apparent above the ceiling. The restroom had a dedicated ducted supply and exhaust HVAC system.

Air samples did not identify fungal amplification in or around the restroom; however, a risk management mold species was identified inside the utility access panel.

Based on the investigation findings, mold remediation work was performed. The remediation involved removal of water damaged materials and fungal impacted materials. The abatement was performed under containment and negative air, with RT oversight and confirmatory sampling.

RT now has five certified Microbial Consultants ready to assist with mold projects.

These project profiles are good examples of how mold investigation and remediation work is performed in response to building occupant complaints. Chris Eyre can be reached at (856) 467-2276, Ext. 113.

## PA'S LAND RECYCLING PROGRAM IMPROVEMENTS PROPOSED

(continued from page 2)

were frequently raised. In an attempt to at least partially address this matter, and to build on earlier Department efforts to build remediation teams combining regional and central office staff, I have directed Department staff to examine potential revisions to the Chapter 250 regulations to provide greater guidance for both the remediation community and DEP staff in conducting and reviewing assessment and attainment demonstration procedures. Among the ideas the Agency will explore are several minimum standards for soil and groundwater sampling, review and approval of characterization and attainment monitoring work plans and reports, and establishing a fee structure for intermediate reviews and approvals by DEP staff throughout the remediation process.

• **Safe Fill:** One of the most challenging issues since the inception of the Land Recycling Program has been the interface of the voluntary remediation process with the waste management program. New "Safe Fill" regulations have been under development at the Department for several years. Focus group participants raised concern about several key features of these Safe Fill proposals. It was underscored that the Safe Fill regulations should not regulate movement of materials on site. Further, it was suggested that the Safe Fill regulations provide authorization

under approved cleanup plans for the beneficial management of waste encountered on site as part of property development. I have directed Department staff to ensure that the Safe Fill regulations work smoothly in conjunction with Act 2 and all of these suggestions will be considered for incorporation in the final Safe Fill regulations with this in mind.

• **Arsenic:** Natural background concentrations of arsenic in many areas of the Commonwealth exceed the statewide health direct contact standard. A revision to the Chapter 250 regulations may therefore be in order to address this situation and enable the movement of materials that contain arsenic if the levels are below background at a receiving site. I have asked the Cleanup Standards Scientific Advisory Board to review this issue and report back to me with a recommendation. (The CSSAB recommended that a Background/out option be included in the Safe Fill delineation.)

Gary Brown, RT's President, participated in the Environmental Remediation Consultants Group Land Recycling Focus meeting. He will be participating in an arsenic tank force meeting as well. We hope the fresh look at Pennsylvania's Act 2 Program will lead to more improvements to what we believe is the nation's most successful Brownfields Program!

### Feature Article

## MAYORS SEE ECONOMIC BENEFITS FROM U.S. 'BROWNFIELDS' PROGRAM

The nation's mayors are reporting the first signs of economic benefits from a federal program designed to fight urban sprawl by helping cities rehabilitate and redevelop pollution-tainted area called "Brownfields."

A survey of 244 cities by the U.S. Conference of Mayors found that 19,000 acres of urban land are being redeveloped and that the program could boost local tax revenue by \$790 million to \$1.9 billion a year, as well as add as many as 570,000 jobs.

So far, according to the survey, 45 cities have had combined revenue gains of \$90 million from former Brownfield sites. They are often deserted industrial sites that developers shunned because of liability for buried wastes and other pollution-related risks, which also scared away mortgage lenders.

The U.S. Environmental Protection Agency began working with states and cities 10 years ago, providing grant money to explore the prospect of cleaning up inner-city sites. It found that the U.S. Superfund law, which makes owners of such sites strictly liable for lingering environmental

damage-whether or not they caused the mess-was a major deterrent to potential developers. They often found it easier to buy undeveloped sites on the edge of cities.

"When that happened, we then had to put in new roads, water and sewer lines," noted Charlotte's Mayor McCrory-and it encouraged sprawl. With strong backing from the mayors, the Bush administration changed the law in January 2002, providing about \$170 million a year in cleanup funds and a formula for rehabilitating properties that would permit a federal liability waiver.

"Hopefully with this we're also saving some greenfields, rural land that won't be developed," he added.

According to the U.S. General Accounting Office, there are some 400,000 Brownfield sites throughout the U.S., including industrial properties, old gas stations, vacant warehouses, former dry cleaning establishments and abandoned residential buildings that may contain lead paint or asbestos.

(John J. Fialka, Wall St. Journal - 6/9/03)

## RT STAFF AND PROJECT NEWS

RT has expanded its staff this year in response to strong client demand. Kevin Bilash, a Temple University Environmental Engineering graduate, has joined Walter Hungarter's King of Prussia Engineering Group. Jamie Gemberling joined Paul Frederick's Corporate Accounting Group. Justin Lauterbach joined Peter Malik's King of Prussia Hydrogeological and Remediation Group. Justin has experience in completing Phase I Environmental Site Assessments and has a Bachelor of Science in Environmental Science from Allegheny College.

Tim O'Hare is a graduate of the University of South Florida, and has a Masters Degree in Hydrogeology. He joins Tom Brady's New Jersey Group. Michael Bauer joined Tom Brady's New Jersey Group as well; Mike has a Bachelor of Science in Environmental Science from Drexel University. In addition, Kathy O'Connor, a Penn State graduate, joined RT as Marketing Coordinator. Dan Stencler also joined RT's Administrative Group in King of Prussia.

Two of RT's staff also received their Certified Microbial Consultant certifications from the American Indoor Air Quality Association. Congratulations to Chris Eyre and Brian Havanki on this important achievement. RT continues to provide expanded services in the mold investigation and remediation area. Projects in late spring and summer were completed in

Harrisburg, Florida, Mississippi, Jenkintown, Hazlet and Michigan. A large number of new local projects are underway as well. The wet weather conditions have led to increased mold problems in buildings up and down the east coast.

Walter Hungarter's King of Prussia Engineering Group is finalizing the design of a vapor barrier, for a south Philadelphia site being redeveloped for a major national 'big box' retail store. In addition, a state of the art treatment plant with nitrogen removal was expected to receive a final NJ Discharge to Groundwater Permit in the New Jersey Pinelands area. The Pinelands Commission and NJDEP asked for a state of the art system to be designed, and cost effective nitrogen removal technology is now available, which avoids costly lagoons and aeration systems for nitrogen removal. New anoxic treatment technology makes nitrogen removal treatment systems more cost effective than ever before.

Peter Malik was working on several assignments related to Brownfields sites, including one at a large northern New Jersey industrial facility, and another at a mostly remediated Superfund site in New Jersey which was a steel mill. In another major accomplishment, the Pennsylvania Department of Environmental Protection approved the final report, and thereby

issued Cleanup Liability Protection for the former Raymark Industries Lower Mill facility in Manheim, PA. RT was working at the Raymark site, on landfill closure, tank removal, and overall Upper and Lower Mill Act 2 projects since 1996, and due to changes in DEP regulations and guidance, vapor pathway issues had to also be addressed. RT worked with DEP's South Central Office to make sure vapor concerns were addressed, by focused vapor monitoring, and through implementation of post closure care measures as well.

Paul Moscatello was hard at work on several Virginia Environmental Site Assessment projects, and, at a PA Superfund site, RT was working with EPA and the United States Geological Survey on a four month shutdown/rebound test so that remedial progress over a ten year period when remedial pump and treat operations were conducted could be properly measured.

Finally, Tom Brady's New Jersey Group was hard at work on a major assignment involving asbestos inspection and remediation services at a large portfolio of financial institution properties throughout the Northeast.

As of August, RT's sales continue to exceed those of prior years, so we continue to expect that 2003 will be RT's strongest year ever. As always, we thank all of our clients for the continued opportunity to be of service.

## FEDERAL REGULATORY UPDATES

### REGULATIONS CUT U.S. CARBON MONOXIDE EMISSIONS

The U.S. regulation of carbon monoxide is "one of the great success stories in air pollution control," an independent panel of scientists reported. According to a National Academy of Sciences committee, tighter vehicle emissions standards and federal air quality standards have combined to dramatically lower levels of the colorless, odorless but potentially deadly gas across much of the United States.

The panel found that there are few areas in the Western United States still susceptible to accumulating high levels of the pollutant, but said there is no need to further tighten federal carbon monoxide (CO) emissions standards on motor vehicles.

The federal emissions standards for cars and trucks, the panel reports, are the main reason for the drop in levels of the gas and have helped prevent some 11,000 deaths from accidental CO poisoning over the past three decades.

*(Environment News Service - 4/27/03)*

### EPA PROPOSES RCRA WASTEWATER RULE CHANGE TO INCREASE ACCURACY

EPA has proposed a fundamental change to how the agency determines if wastewater should be regulated as hazardous under the Resource Conservation & Recovery Act (RCRA), which industry officials say will result in a more accurate assessment of how much hazardous waste is in a waterway.

On April 8, EPA published proposed rule

changes to the wastewater treatment exemptions for hazardous waste mixtures in the *Federal Register*. In the notice, the Agency proposed changing the testing methods it uses to determine if solvents in wastewater are hazardous waste under RCRA's mixture rule. The rule regulates solid waste, including solvents, which are mixed with hazardous waste.

Under the previous test, known as the mass balance calculations, EPA would divide the maximum total weekly use of listed solvents by the average weekly flow of wastewater through the headworks of a facility's wastewater treatment system to determine if the solvents should be regulated as hazardous waste under RCRA's mixture rule.

The American Chemistry Council had objected to the earlier rule in 1999, arguing that it was inflexible and forced industry to regulate millions of gallons of wastewater that should not have been regulated under RCRA.

But under the proposed rule, EPA is proposing an alternative test, which would directly monitor the wastewater to determine if it was contaminated enough to be regulated as hazardous waste.

*(Superfund Report - 4/28/03)*

### EPA EXTENDS SPCC DEADLINES BY 18 MONTHS

The U.S. Environmental Protection Agency (EPA) has extended by 18 months the compliance dates in the Spill Prevention, Control and Countermeasures (SPCC) regulations, an Agency spokesman said today. Facilities now will have until August 17, 2004, to amend their SPCC plans to conform with revisions to the SPCC

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regulations that became effective last summer - and until February 17, 2005, to implement those amendments.

*(Environmental Compliance Alert - 4/15/03)*

### EPA RELEASES BEST PRACTICES GUIDE ON INDUSTRIAL WASTE

EPA announced the release of a comprehensive voluntary industrial waste management guide that identifies best management practices for the full range of non-hazardous industrial wastes - covering more than 60,000 industrial facilities in the United States that produce and manage an estimated 7.6 billion tons of this industrial waste.

The Guide provides valuable assistance to anyone interested and involved in industrial waste management, from states to industry to citizens. States currently have varying industrial waste programs and can use the Guide to address any gaps in their programs or review their existing rules and guidance and replace them with parts of this Guide as they see fit.

The Guide encourages effective communications and pollution prevention, and it provides useful information on waste management topics such as siting, designing, operating, monitoring, taking corrective action, and closing industrial waste management units.

## FEDERAL REGULATORY UPDATES (CONTINUED)

The Guide is available on an interactive multimedia CD-ROM. It is available on the Web at: <http://www.epa.gov/epaoswer/nonhw/industd/in dex.htm>.

(Env. Tip of the Week - 4/20/03)

### EPA TACKLES NON-ROAD DIESEL

The EPA announced a new proposal to cut 90 percent of harmful emissions from non-road diesel engines used in construction, industrial, and agricultural equipment by 2014. Officials with the U.S. Environmental Protection Agency (EPA) say the plan will significantly reduce emissions of smog and acid rain forming pollutants and will result in major public health benefits.

The proposal lowers the sulfur content of diesel fuel and mandates the use of less polluting engines, similar to regulations set for road diesel engines that will begin in 2006. Along with an EPA led effort to retrofit older diesel school buses, EPA Administrator Christie Whitman said, "these actions will be the most far reaching diesel programs in the world today."

The plan would reduce the level of pollutants from diesel exhaust, which contains particulate matter (PM) and nitrogen oxide (NOx) - leading components of smog-as well as sulfur dioxide (SO<sub>2</sub>), another harmful pollutant that causes acid rain.

The proposal requires reduction in the sulfur content in non-road diesel fuel from the current average of 3,400 parts per million (ppm) to 500 ppm in 2007-the same standard as current highway diesel fuel.

It calls for this standard to be further tightened to 15 ppm by 2010.

(By J. R. Pegg - Environment News Service - 4/15/03)

### APPEALS COURT RULING ON SCIENCE EVIDENCE MAY STIFLE EPA, TORT SUITS

A recent federal appeals court decision overturning a multi-million dollar verdict in a toxic tort case may curb future EPA enforcement and toxic tort suits by requiring special pre-trial hearings on whether scientific evidence is consistent with Supreme Court standards, according to plaintiffs' attorneys and legal experts.

The U.S. Court of Appeals for the 10<sup>th</sup> Circuit late last month reversed two jury verdicts totaling over \$40 million in toxic tort suits brought against the Cotter Corp. uranium mill in southern Colorado by local residents. The residents are seeking to recover damages for health impacts and for the cost of medical monitoring they say is necessitated by increased exposure to uranium and other contaminants.

But the 10<sup>th</sup> Circuit ruled in *Dodge et al. v. Cotter Corp.* that the district court judge in the long-running legal action had ignored past direction from the court to ensure that scientific findings were consistent with the Supreme Court's landmark 1993 decision in *Daubert v. Merrell Dow Pharmaceuticals*, which set standards for the admissibility of scientific evidence in legal trials.

The appeals court held that the trial judge

should have agreed to a defense motion to allow special, pre-trial review of all scientific evidence, even though the judge had heard much of the evidence in earlier trials in the same case. Instead, the judge asked the defendants to summarize lengthy scientific submittals, testimony and studies into a 20-page summary.

In *Daubert*, the Supreme Court listed a series of factors trial judges must consider to determine the adequacy of scientific testimony, including whether any scientific conclusions are susceptible to testing; whether the opinion has been subjected to peer review; whether there is a known or potential rate of error associated with the methodology used; and whether the theory has been accepted in the scientific community.

In cases where there is sufficient controversy about how scientific evidence is handled at trial, *Daubert* reiterates federal evidentiary rules that judges act as gatekeepers to limit evidence juries can hear. Judges are required to carefully manage technical information presented to the court to "ensure that any and all scientific testimony or evidence admitted is not only relevant but reliable," the judges ruled in *Daubert*.

An expert in science and the law said that "Federal district court judges will have to rise to a new standard... [this ruling places] toxicologists and geologists in the heart of *Daubert*-country."

(Defense Environment Alert - 5/20/03)

### EPA SAYS TOXIC RELEASES, WASTES DECLINED IN 2001

U.S. industries released 15 percent fewer toxic chemicals and generated 22 percent less toxic waste in 2001 than they did a year earlier, according to new data released by the U.S. Environmental Protection Agency (EPA). The Agency says these figures illustrate a continuing decline in the amount of wastes released into the nation's air, land and water, but environmentalists caution that the EPA's data only provides part of the picture.

The data was collected under the framework of the federal Toxics Release Inventory (TRI). The TRI includes information on releases and other waste management methods for 667 toxic chemicals.

Although this total is less than one percent of chemicals registered for use and represents a limited range of sources, the TRI is widely considered the most comprehensive source of information on toxic pollution in the United States.

Of the 6.16 billion pounds of toxic chemicals released into the environment in 2001, 65 percent were released to land on and offsite, 27 percent were released into the air, four percent to water and four percent to underground injection on-and offsite.

The metal mining industry reported the largest total release of toxic chemicals, accounting for 45 percent of the nation's total, followed by the electric utilities industries with 17 percent and the chemical industry with 9.5 percent.

Twenty chemicals accounted for 88 percent of the total release, with copper compounds totaling some one billion pounds and zinc compounds some 960 million pounds. Some 422 million pounds of lead and lead compounds were released in 2001 - the first year facilities were

held to a 100 pound threshold for lead.

The reporting industries managed a total of 26.7 billion pounds of toxic waste, with Texas, Louisiana and Illinois accounting for 30 percent of nation's total.

The chemical industry was responsible 40 percent of the nation's toxic waste, with the primary metals industry accounting for 12 percent and the metals mining industry for 11 percent.

The 22 percent decrease in toxic waste of from 2000 to 2001 comes on the heels of a 25 percent increase from 1999 to 2000.

(By J.R. Pegg, Environment News Service - 7/1/03)

### PANEL DIVISIONS THREATEN TO DELAY BROWNFIELDS LIABILITY RULE

Disagreements on a panel crafting liability exemption rules under the new Brownfields Law may delay the regulation, sparking concerns because the law must be promulgated by a January 2004 deadline. At a recent meeting of the negotiated rulemaking panel, environmentalists and industry sparred over the level of diligence parties remediating brownfields sites must show to secure liability protections.

At the same time, proposals to use language from a model rule developed by a private entity have run aground because EPA says copyright protections prevent the Agency from duplicating that standard.

The hurdles threaten to delay the rulemaking beyond the statutorily imposed deadline, leading some panelists and outsiders to question why the Agency chose the notoriously contentious negotiated rulemaking process given the time constraints. Negotiated rulemaking have dragged on for years without a consensus among stakeholders in the past, and EPA has used them infrequently in recent years. One industry observer describes the process as a "trainwreck waiting to happen" because of competing interests among environmentalists, lenders and developers.

But one panelist says general consensus already exists on the panel about the clear benefits of redeveloping brownfields, and disagreement among various sectors will eventually be worked out. An EPA-sponsored report also recommended using the negotiated rulemaking process.

At issue is a requirement under the Brownfields Liability Relief Law, signed last year by President Bush, that EPA promulgate standards for conducting "all appropriate inquiry" at brownfields sites describing the level of diligence prospective purchasers of contaminated sites must conduct to exempt from Superfund's stringent liability scheme. The Brownfields law exempts such sites from Superfund liability if purchasers agree to remediate them.

Panelists are already expressing strong disagreement over the level of due diligence required under the law. At the panel's second meeting in Washington, DC, on June 10-11, environmentalists, state officials, lenders and developers debated whether draft regulatory language should include requirements to interview past neighbors who lived or worked adjacent to a

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property, in addition to interviewing past owners and operators.

The panel's activities are also complicated by the fact that a due diligence standard developed by the American Society for Testing & Materials (ASTM) that EPA recently adopted as the interim standard for all appropriate inquiry is copyrighted by the organization. While many officials had considered the standard as a model for developing the all appropriate inquiry regulations, EPA officials told the panel that copyright law prevents the Agency from using the language in the regulation, or even distributing copies of it. "We will respect the copyright," an EPA official told the meeting.

*(Superfund Report - 6/23/03)*

**BUSH ORDER ALLOWS U.S. AGENCIES TO DETERMINE BROWNFIELDS LIABILITY**

President Bush signed an executive order that allows federal agencies, including those facing Superfund liability, to determine which parties qualify for the liability exemptions contained in the Brownfields law.

At issue are the exemptions from Superfund liability created by the Brownfields law for *de minimis* quantities and municipal solid waste. The law provides the authority to grant such exemptions to the President.

In a June executive order, President Bush delegated the authority to "the heads of executive departments and agencies," in consultation with EPA, to determine which parties qualify for the exemptions.

*(Superfund Report - 6/23/03)*

**EPA PROPOSES NEW DRINKING WATER RULES**

EPA is proposing rules that would require drinking water systems to monitor for and increase protection against *Cryptosporidium* while expanding the monitoring and control of disinfection byproducts. Building upon rules now in effect, the Long Term 2 Enhanced Surface Water Act and were developed in partnership with a wide range of interests including water systems, environmental groups, and state and local health officials.

New data on *Cryptosporidium* indicate that most public water systems currently provide sufficient treatment. Some systems, however, may require greater protection because they are more vulnerable to *Cryptosporidium*. The proposed LT2 rule targets additional treatment requirements to these higher-risk drinking water systems. Specifically, the rule requires additional treatment by filtered systems with higher levels of *Cryptosporidium* in their water sources as well as by systems that do not filter surface water.

EPA estimates that full implementation of the LT2 rule will reduce cases of cryptosporidiosis by as many as 1,020,000 per year, with an associated reduction of up to 140 premature deaths. The economic benefit ranges up to \$1.4 billion annually. The additional treatment required under the LT2 rule may also reduce exposure to other pathogens.

Annual costs of the LT2 rule are estimated to

range from approximately \$73.5 to \$111 million. The average annual household cost is estimated to be \$1.07 to \$1.68 per year, with more than 98 percent of households experiencing annual costs of less than \$12 per year. EPA's Web has additional information on the proposed LT2 rule at: <http://www.epa.gov/safewater/lt2/index.html>.

*(Env. Tip of the Week - 7/22/03)*

**EPA LIMITS WASTE REPORTING, RESPONDS TO INDUSTRY, OMB PRESSURE**

EPA is limiting its reporting of offsite waste releases by no longer referring to waste sent to offsite disposal facilities as "releases" under the Toxic Release Inventory (TRI) program, after receiving pressure from the Office of Management & Budget (OMB) and industry groups. Industry sources are applauding the change, saying the move eliminates improper double counting of such releases.

In a July 1 *Federal Register* notice, the Agency announced that it would change the information included in its measurement of offsite waste releases under TRI. Previously, EPA had counted waste that were sent to offsite disposal facilities, including landfills licensed under Subtitle C of the Resource Conservation & Recovery Act (RCRA), as "releases." Now the Agency will remove these activities from that list, instead referring to these wastes as being an "offsite contained disposal."

*(Superfund Report - 7/21/03)*

**EPA GUIDANCE: OWNERS MUST FOLLOW INSTITUTIONAL CONTROLS TO MAINTAIN SUPERFUND LIABILITY RELIEF**

According to interim EPA guidance issued March 6, 2003, bona fide prospective purchasers, contiguous property owners and innocent landowners are required, among other things, to comply with all institutional controls on a site in order to maintain the relief from liability they received under the Small Business Liability Relief and Brownfields Revitalization Act.

To maintain liability relief, the guidance requires compliance not only with any institutional controls present when the owner purchased the property, but also those subsequently imposed by local, state or federal authorities. The guidance also addresses the other requirements in the Act for maintaining liability relief, such as taking "reasonable steps" with respect to releases, cooperating with cleanups and compliance with information requests. The guidance is available at: <http://www.epa.gov/Compliance/resources>.

*(Wolf Block - Environmental Vol. 2-03)*

**AMENDED EPA RULE TO PROVIDE REGULATORY RELIEF TO FACILITIES THAT USE POLLUTION PREVENTION**

On May 15, 2003, EPA announced in the *Federal Register* that it is seeking comment on proposed rule amendments that are designed to encourage and promote pollution prevention. In

this action, EPA is proposing amendments that would provide regulatory relief to facilities that use pollution prevention (P2) to achieve emission reductions. Reducing hazardous air pollutant (HAP) emissions to the maximum achievable control technology (MACT) level of control or a better level, required under applicable National Emission Standards for Hazardous Air Pollutants (NESHAPs), qualifies under this proposal. EPA is also proposing additional incentives specifically designed for, and only available to, facilities that are members of the National Environmental Performance Track Program.

These amendments are proposed in direct response to the perception that the current rule discourages the development and implementation of P2 measures after a MACT level of control has gone into effect, by mandating that a facility must continue to comply with specific source MACT requirements.

The full text of the proposed amendments can be found in the *Federal Register* (68FR26249).

*(Env. Tip of the Week - 7/14/03)*

**EPA LAUNCHES NEW ASBESTOS AWARENESS EFFORT**

The U.S. Environmental Protection Agency (EPA) launched a national consumer awareness campaign to provide homeowners with information on vermiculite attic insulation, which may contain asbestos.

The new campaign, coordinated by EPA and the Agency for Toxic Substances and Disease Registry (ATSDR), informs homeowners how to identify vermiculite attic insulation. The government warns that some vermiculite attic insulation contain very low levels of microscopic asbestos fibers.

The effort aims to make consumers aware of the precautions they can take to protect against disturbing and inhaling the asbestos fibers.

Vermiculite is a granular product - absorbent and resistant to heat - that has been in commerce for almost 80 years. Much of the vermiculite used to make attic insulation originated from a mine in Libby, Montana, where there were natural veins of asbestos in the earth.

The Montana mine was closed in 1990. The agencies explained that there is still no easy way or dependable testing method to differentiate between vermiculite insulation that might have some asbestos fibers and vermiculite insulation that does not.

Home testing vermiculite in attics is not currently practical, according to the EPA, which suggests that it is best to assume that the material may contain asbestos and take the appropriate precautions.

The campaign includes the nationwide distribution of a joint EPA and ATSDR pamphlet that outlines how to identify and manage vermiculite. The pamphlet will be disseminated to the national news media and through major hardware store chains, and through prominent display on EPA's web site at <http://www.epa.gov/asbestos/>.

*(Environment News Service - 5/22/03)*

**RT's 24 HOUR URGENT LINE  
(800) 725-0593**

## FEDERAL REGULATORY UPDATES (CONTINUED)

### OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION - FINAL RULE

The Occupational Safety and Health Administration (OSHA) is deleting two provisions of the Occupational Injury and Illness Recording and Reporting Requirements rule published January 19, 2001. These provisions required employers to check the MSD column on the OSHA 300 Log if an employee experienced a work-related musculoskeletal disorder (MSD), and stated that MSDs are not considered privacy concern cases. The effective date of these provisions has been delayed since publication of the Recordkeeping rule in January 2001; consequently, the requirements deleted by this final rule have never been in effect.

The amendments in this rule will become effective on January 1, 2004.

### DRINKING WATER ASSOCIATIONS OPPOSE PRODUCT LIABILITY IMMUNITY

Two national drinking water associations highlighted their opposition to provisions in House and Senate energy legislation, which the groups say provide product liability immunity to producers of the fuel additives methyl tertiary butyl ether (MTBE) and ethanol.

The House energy bill contains both provisions the Senate version only contains the ethanol product liability immunity.

Representatives of the Association of Metropolitan Water Agencies (AMWA) and the American Water Works Association (AWWA), which together represent water systems serving approximately 180 million Americans, warn that these provisions would be harmful to public health if enacted.

The U.S. Environmental Protection Agency (EPA) considers MTBE a possible human carcinogen and it is known that it renders water undrinkable due to its foul taste and odor of paint thinner. AMWA and AWWA say that drinking water systems and their customers potentially face billions of dollars in costs and cleanup contaminated supplies and secure new sources of water to replace shutdown wells.

"If water systems are denied their day in court to prove this product is defective, the ultimate victims of immunity from liability will be the American people, who will lose their aquifers to contamination and their money to cleanups and new sources of water," said Tom Curtis, deputy executive director of the American Water Works Association (AWWA).

Liability immunity supporters say that MTBE use was mandated by the Clean Air Act, and thus the product deserves Congress's protection. But neither the Clean Air Act, nor EPA's reformulated gasoline regulations, require the use of MTBE in any way.

(*Environment News Service - 5/15/03*)

### OSHA ISSUES FIRST OF SEVERAL INDUSTRY DIRECTED GUIDELINES FOR ERGONOMICS

OSHA issued its first set of voluntary ergonomics guidelines on March 13, 2003 directed to the nursing home industry. OSHA is presently working on draft guidelines for retail grocery stores and the poultry industry. Plans to develop guidelines for the shipyard industry were announced April 1, 2003.

OSHA's *Ergonomics for the Prevention of Musculoskeletal Disorders: Guidelines for Nursing Homes* are voluntary guidelines aimed at reducing the number and severity of work-related musculoskeletal disorders (MSD's). MSD's include conditions such as low back pain, sciatica, rotator cuff injuries, epicondylitis and carpal tunnel syndrome.

While the focus of the guidelines is generally on ergonomics, the emphasis of the guidelines is on the lifting of residents which result in a higher of MSD's. OSHA recommends that manual lifting of residents be minimized in all cases and eliminated when feasible. OSHA further recommends that employers implement an effective ergonomics process which includes management support, involves employees, identifies problems, implements solutions, address reports of injuries provides training and evaluate ergonomics efforts. The guidelines provide recommended

solutions for resident lifting and repositioning as well as recommended solutions for other ergonomic concerns.

At present, ergonomic guidelines are voluntary. They will be implemented in three additional industries in the near future and will almost certainly be implemented in other industries where MSDs are prevalent.

In addition to issuance of the guidelines, OSHA has entered into 23 national alliances to focus on specific industry standards. Thirteen of these focus on ergonomics. For instance, OSHA recently entered into alliance with the National Association of Directors of Nursing Administration in Long-Term Care to address ergonomic concerns in nursing homes and long-term care facilities.

(*Cozen and O'Connor-Labor and Employment Observer-Summer, 2003*)

### EPA PROPOSES TO INCREASE MAXIMUM CIVIL PENALTIES FOR VIOLATING FEDERAL ENVIRONMENT LAWS

In proposed rulemaking in the July 3, 2003 Federal Register, the Environmental Protection Agency ("EPA") proposed to increase the maximum daily civil penalties under the federal environmental statutes. Pursuant to the proposal, the maximum daily civil penalty for most environmental violations occurring after the final effective date of the rule will be as high as \$32,500. Additionally, it is expected that EPA will require parties calculating proposed penalties in accordance with EPA's Penalty Policy Guidance Documents to make appropriate adjustments for inflation. As required by the Debt Collection Improvement Act of 1996 (the "Act"), the EPA is required to revise the maximum civil penalties that can be imposed for environmental violations every four years in order to adjust for inflation. The July 2003 proposed rule marks the second time in approximately the past year that the EPA has attempted to adjust civil penalty amounts in order to comply with the Act.

(*The Administrative Watch - Babst Calland Clements Zomnir - July 2003*)

### Governor Lewitt Appointed EPA Administrator

President Bush continued his agenda to appoint an experienced state political leader, focused a cooperative approaches, to run EPA. Michael Lewitt, 52, is a former insurance industry executive. He has been Utah's Governor for a decade!

While Lewitt was Governor in Utah, its water quality improved and he worked energetically to limit sprawl.

(*Phila. Inquirer 0 8/17/03*)

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# TECHNOLOGY UPDATES

## LIQUID BOOT USED AT RT MASSACHUSETTS CLEANUP SITE

Liquid Boot, a cold, spray applied membrane was used by RT as a vapor barrier at a Massachusetts cleanup site. The site has high, shallow perchlorethylene concentrations as it was formerly a dry cleaning site. Under the Massachusetts Contingency Plan, the vapor pathway was addressed by implementation of an SVE system and installation of a positive pressure HVAC system during reconstruction of a retail donut store which currently occupies the premises.

The Liquid Boot vapor barrier was more cost effective than other vapor barrier options. Assisting RT on this project is J. Andrew Irwin, P.E., L.S.P., an RT Regional Partner.

For more information, call Gary Brown or Thomas Brady.

## HIGH MERCURY LEVELS FOUND IN RAIN

Rain falling over 12 eastern states has been found to contain high levels of mercury that exceed federal safe standards for people and wildlife, according to a new National Wildlife Federation report.

The paper, titled "Cycle of Harm: Mercury's Pathway from Rain to Fish in the Environment," found that mercury contamination levels in rain and snow falling over Alabama, Florida, Georgia, Indiana, Louisiana, Maryland, Mississippi, New York, North Carolina, Pennsylvania, South Carolina and Texas consistently exceeded the Environmental Protection Agency's safe standard for mercury in surface water.

Air pollution is considered the major cause of mercury in lakes and streams. Eighty five percent of all mercury pollution is created by coal fired power plants and municipal medical waste incinerators that send mercury into the air, where it falls back to Earth as rain or snow, according to the Mercury Policy Project, a nongovernmental organization formed in 1998 to raise awareness about the threat of mercury contamination.

To read the full report, visit:  
<http://www.nwf.org>.

*(Environment News Service - 5/30/03)*

## HYDROGEN LEAKAGE COULD EXPAND OZONE DEPLETION

Hydrogen is generally considered an environmentally friendly alternative to gasoline as a transportation fuel, but new research indicates that leakage of hydrogen gas could cause problems in the Earth's ozone layer.

In an article appearing in the journal "Science" researchers from the California Institute of Technology (CalTech) report that the accumulation of leaked hydrogen gas resulting from a hydrogen economy could indirectly cause as much as a 10 percent decrease in atmospheric ozone.

The ozone layer is a concentration of ozone molecules in the stratosphere which extends from about six to 30 miles above the Earth's surface. Stratospheric ozone is a naturally occurring gas

that filters the sun's ultraviolet (UV) radiation. A depleted ozone layer allows more radiation to reach the Earth's surface, exposing people to skin cancer, cataracts, and weakened immune systems. Increased UV can lead to reduced crop yields and disruptions in the marine food chain.

If hydrogen were to replace all fossil fuels for transportation and to power buildings, the CalTech researchers estimate that 60 to 120 trillion grams of hydrogen would be released each year into the atmosphere, four to eight times as much hydrogen as is released today by human sources. The scientists assumed a 10 to 20 percent loss rate due to leakage.

*(Environment News Service - 6/15/03)*

## SHORT TERM EXPOSURE TO ESTROGEN CUTS FISH FERTILITY

When adult male fish are exposed to short term and low concentrations of a synthetic estrogen, their fertility can drop by as much as 50 percent, according to a study by scientists at the Department of Energy's Pacific Northwest National Laboratory (PNL).

Estrogen is an active ingredient in most oral contraceptives and when excreted, finds its way into lakes, rivers, and streams through sewer systems. The study, conducted with the University of Idaho, says the other studies have focused on how estrogen from contraceptives may alter sex organs of juvenile fish.

The study looked at the impact of a synthetic estrogen called ethynylestradiol, which is the chemical in oral contraceptives. Irvin Schultz, the PNL toxicologist who led the study, said the research reinforces evidence that impacts are not limited to juvenile fish.

Hormone levels did decrease in fish exposed to a greater concentration of 100 nanograms of ethynylestradiol.

The study appeared in the June issue of the journal "Environmental Toxicology and Chemistry."

*(Environment News Service - 6/5/03)*

## AIRBORNE MOLDS & ASTHMA SEVERITY

A recent study investigated airborne mold sensitization as a key factor in severe adult asthma. This European epidemiological study involved 1,132 adult participants between the ages of 20 and 44. Results suggested that frequency of sensitization to molds increased with increasing asthma sensitivity, showing mold to be a high risk factor for severe, life-threatening asthma in adults.

Of the 1,152 people involved in the study, 50 percent had mild asthma, 29 percent moderate asthma and 21 percent severe asthma. Seventy-three percent were sensitized to at least one allergen and 65 percent to two or more allergens. Only nine people showed sensitization to mold alone. A study of the effects of environmental mold in pollen season revealed the mold spore concentrations to be higher on days when asthma-related deaths occurred. No association was found between asthma severity and sensitization

### TECHNOLOGY UPDATES

- Liquid Boot Vapa Barrier - pg. 8
- Molds and Asthma - pg. 8
- London Unclogged! - pg. 9
- State VCPs Not Risky - pg. 10

to pollens. However, severity of asthma was linked to sensitization to *D. pteronyssinus*, *Alternaria* and *Cladosporium*.

More information is available at:  
<http://bmj.com/cgi/content/full/325/7361/411>.

*(AIAQC - 2/3/03)*

## MOISTURE MODELS AID ARCHITECTS

ASTM Task Group on Air Leakage and Ventilation Performance is soliciting participation from architects, building designers, inspectors, forensic experts and others interested in the development of a "Standard Guide for the Selection and Use of Modeling for Moisture Control Design in Building Envelopes." Chairman of the Task Group Achilles Karagiozis, PhD explains that such standards are increasingly necessary since a consistent approach in conducting design investigations is presently unavailable.

Use of design modules will allow investigators to discover the underlying fundamentals of each design in any moisture control activity. A moisture model is defined as "a steady state or preferably transient model of the fundamental heat, air and moisture transport in single or multi-component building envelope systems." Models will include storage, evaporation and condensation, freeze/thawing, vapor diffusion, capillary suction and thermal or air transports. Models will allow building designers to quantify and distinguish between different design options, making more informed decisions concerning building materials and designs for building envelopes in various climatic conditions. This data will enable architects to design for moisture control, significantly reducing mold and water damages.

*(AIAC - 4/5/03)*

## FRESH ANALYSIS OF SATELLITE DATA REVEALS GLOBAL WARMING

A U.S. government funded analysis of satellite data collected since the late 1970s from the lowest few miles of the atmosphere indicates a global temperature rise of about one-third of a degree Fahrenheit between 1979 and 1999.

The results differ from previous studies that show virtually no warming in the satellite record over the same 20 year period. The findings published by the journal "Science," a publication of the American Association for the Advancement of Science.

Over the past 25 years, a series of instruments aboard 12 U.S. satellites has provided a unique temperature record extending as high as the lower stratosphere. Each sensor intercepts microwaves emitted by various parts of the atmosphere, with the emissions increasing as temperatures rise. These data are used to infer the temperature at key atmospheric layers.

Since the 1990s, skeptics have pointed to the absence of a warming signal in the satellite

## TECHNOLOGY UPDATES (CONTINUED)

derived temperatures, which stood in contrast to a distinct warming trend in average air temperature at Earth's surface.

For the new study, a group based at Remote Sensing Systems in Santa Rosa, California, applied a revised set of corrections to the satellite data. These corrections accounted for the effects of heating on the radiation sensor itself - the first time this source of error had been addressed fully, according to the authors - as well as new adjustments for the drifting orbit of each satellite and other factors.

The group found a warming trend of 0.16 degree F per decade in the layer between about 1.5 and 7.5 miles high, compared to a trend of 0.02 degree F in the previously published UAH analysis. Both estimates have a margin of error of nearly 0.2 degree F (plus or minus).

According to the authors, the new results are a closer match with surface warming, as well as with four computer model simulations of 20th century climate produced by NCAR and Los Alamos National Laboratory.

*(Environment News Service - 5/2/03)*

### GROUP WARNS OF CONTINUED ASBESTOS THREAT IN THE WORKPLACE

Asbestos is still a significant workplace safety concern, according to a new paper from the American Society of Safety Engineers (ASSE).

The group warns that materials containing asbestos are still being produced in the United States, even as negotiators for businesses, insurers, labor unions and Congressional leaders iron out an agreement aimed at creating an industry-financed national asbestos trust fund to pay several billion dollars to hundreds of thousands of people with asbestos-related illnesses.

In an ASSE paper titled "It's Back - Asbestos Gets a Second Wind," the organization details that asbestos is still a problem and could grow even larger with new issues and risks evolving everyday.

A ban by the U.S. Environmental Protection Agency in 1989 on asbestos products was altered by a 1991 court decision that allowed materials containing asbestos that were being produced in the United States at the time of the ban are now legal to produce, import and use today, according to the paper's author Jeff Camplin.

A mineral fiber that is extracted from rock, asbestos has been used for centuries for its fire resistance and because it is not easily destroyed or degraded by natural processes. But these qualities that made asbestos such a useful material make it extremely difficult to completely remove.

"Asbestos can reappear even if all asbestos has been removed from the building," Camplin said. It can still be an issue even if inspection reports state no asbestos is present in a building.

Camplin, a licensed asbestos professional and ASSE staffer, reports that a U.S. Geological Survey study found that 13,000 metric tons of asbestos were imported into the United States in 2001 and that worldwide mining of asbestos was estimated by the government at 2,050,000 metric tons in 2001.

According to Camplin, the following materials

may still be imported or produced with asbestos include cement, clothing, pipeline wrap, roofing felt, vinyl floor tile, cement shingle, millboard, cement pipe, automatic transmission components, clutch facings, friction materials, disc brake pads, drum brake lining, brake blocks, gaskets, non-roofing coating and roof coating.

*(Environment News Service - 5/1/03)*

### EPA UNVEILS NEW ANALYSIS OF CLEAR SKIES PROPOSAL

EPA released a new analysis of the "Clear Skies" program that shows higher health benefits than previously estimated. The new analysis, released by the U.S. Environmental Protection Agency (EPA), incorporates the most recent air quality data, census information, and modeling techniques.

EPA said its improved figure includes benefits from planned state and federal measures and new assumptions about senior citizens, who face higher risk from air pollution. The analysis finds that Clear Skies' health benefits are higher than previously estimated and that the nation would come close to full attainment for the national fine particle standard based on the benefits of Clear Skies, the administration's proposed off-road diesel rule and additional existing requirements.

Current annual emissions of SO<sub>2</sub>, a leading cause of acid rain and soot, are some 11 million tons. Some five million tons of NO<sub>x</sub>, the leading contributor to smog, are emitted annually from power plants. Power plants emit some 48 tons of mercury each year.

The plan's NO<sub>x</sub> and SO<sub>2</sub> requirements affect all fossil fuel-fired electric generators greater than 25 megawatts, and mercury requirements affect only coal-fired electric generators greater than 25 megawatts.

The analysis reaffirms that Clear Skies will reduce air pollution while "cost-effectively helping to ensure that we have a reliable, affordable supply of electricity along with cleaner air," said Jeffrey Holmstead, EPA's Assistant Administrator of the Office of Air and Radiation.

The EPA estimates the annual cost of Clear Skies will be some \$6.3 billion, but it could achieve health benefits of some \$110 billion by 2020. Early analysis had shown benefits of \$93 billion by 2020.

"Our updated modeling incorporates the best scientific and technical information available, and shows us how imperative it is for the Congress to enact Clear Skies this year," Holmstead said.

*(Environment News Service - 7/4/03)*

### COURT UPHOLDS ARSENIC STANDARD FOR DRINKING WATER

A three-member panel of the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA's controversial 10 parts per billion rule for arsenic in drinking water June 20.

The state of Nebraska and several small water systems argued in a lawsuit that the arsenic rule and the Safe Drinking Water Act were unconstitutional. However, in the court's decision, Judge A. Raymond Randolph wrote that the suit's

argument fell "well short" of being valid.

The court held that Congress has the power under the Commerce Clause of the U.S. Constitution to regulate poisonous chemicals like arsenic in water systems that sell across state lines. Thus, the court rejected Nebraska's "facial" challenge to the constitutionality of the Safe Drinking Water Act.

In addition, the court ruled that the Safe Drinking Water Act is consistent with the Constitution's 10th Amendment, which restricts federal government regulation of states, because the law does not compel states to regulate arsenic in tap water. (They may cede that authority to the federal EPA.)

The court's five-page ruling is available at [pacer.cadc.uscourts.gov/docs/common/opinions/200306/01-1101a.pdf](http://pacer.cadc.uscourts.gov/docs/common/opinions/200306/01-1101a.pdf).

*(Water & Wastewater Products Enews - 7/3/03)*

### HALF U.S. CLIMATE WARMING DUE TO LAND USE CHANGES

The growth of cities and industrial agricultural is responsible for more of the rise in temperature across the United States than scientists previously believed, according to a new study by scientists at the University of Maryland. They found the land use changes may account for up to half of the observed surface global warming. Meteorologists Dr. Eugenia Kalnay and Dr. Ming Cai have found evidence that the observed temperature increase of 0.13 degrees Celsius (.234 degrees Fahrenheit) over the past 50 years has been influenced by changes in land use.

"Our estimates are that land use changes in the United States since the 1960s resulted in a rise of over 0.2 degrees Fahrenheit (F) in the mean surface temperature, an estimate twice as high as those of previous studies," said Kalnay. "We expect to extend our study to obtain global results later this year," she said.

Kalnay and Cai estimated the impact of land use effects by comparing trends in surface temperature measurements taken at 1,982 surface weather stations around the country with trends based on data from satellite and weather balloons from the U.S. National Centers for Environmental Prediction and the National Center for Atmospheric Research.

*(Environment News Service - 5/29/03)*

### LONDON ARTERIES CLEARING

Nearly three months after the city started charging motorists to drive into the center of London, traffic jams have shrunk, taxis are unusually abundant, and red double-decker buses zip along at 7.5 m.p.h. Things are going so well that supporters and earlier critics alike agree that the ambitious and contentious "congestion charge" is working - at least so far.

With 20 percent fewer private cars clogging the narrow, twisting roads of central London, even the capital's notoriously complaining cabbies are impressed. While they grumble that faster journey times are cutting individual fares, they are happy to spend less time in traffic jams. "It's made things a lot easier, definitely," said

## TECHNOLOGY UPDATES (CONTINUED)

Barry Gold, a cabbie. "A lot of cabbies complain because fares are down. But I think it'll bring people back to cabs."

Since February 17, motorists have had to pay 5 pounds - about \$8 - on weekdays to enter an eight-square mile zone that includes the financial district and the entertainment heartland of the West End. Mayor Ken Livingstone argued the toll would significantly cut congestion in the zone, where car traffic was crawling along at horse-and-cart speeds of 10 m.p.h. during the day. He also hopes to earn \$205 million a year to spend on public transportation.

Transport for London, the agency overseeing the charge, says traffic in the zone is down by close to the target of 20 percent, with 100,000 people a day paying the toll. Residents of the zone get a 90 percent discount, while disabled people, taxis, emergency vehicles, moped riders and car powered by alternative fuels are exempt.

More people are taking buses, trains and the subway, known as the Tube. A month into the toll, the average rush-hour bus speed had risen from 6.5 m.p.h. to 7.5 m.p.h., Transport for London said. Still, the agency said it would take at least six months to determine whether the plan meets all its targets.

*(Philadelphia Inquirer - 5/11/03)*

### CADMIUM DISRUPTS ABILITY OF CELLS TO FIGHT CANCER

Cadmium, a naturally occurring metal found in food, water and cigarette smoke, disrupts a DNA repair system that is important in preventing cancer, according to researchers at the National Institute of Environmental Health Sciences (NIEH). The metal, primarily used to make batteries, is a known human carcinogen and has long been known to cause human lung cancer in cadmium-related industries unless strict safeguards are taken.

But unlike most carcinogens that work by attacking DNA directly, an NIEHS study indicates that cadmium causes mutations in another way, explains the study's senior author Dr. Dmitry Gordenin. The NIEHS research team showed that cadmium causes mutations by inhibiting the ability of cells to repair routine errors made when the DNA is copied to make new cells.

"Unless cadmium is unique in its mechanism, it would seem that environmental factors may cause genetic defects and cancer not only by attacking our DNA directly but also by undermining the mechanisms by which faulty DNA replication is repaired," Gordenin said.

Cadmium is a natural element, found in all soils and rocks, including coal and fertilizers. Its natural presence in air, water, soil and foodstuffs results mainly from mining and metal processing operations, gradual rock erosion and abrasion, as well as from volcanic eruptions.

Some seventy percent of its use is in rechargeable nickel-cadmium batteries. Until banned by the EPA in 1997, cadmium carbonate and cadmium chloride were used as fungicides for golf courses and home lawns.

*(Environment News Service 6/10/03)*

### NEW DATA SHOW EMISSIONS FROM NON-ROAD DIESEL ENGINES

New emissions data reveals that particulate matter in nonroad diesel engines, which power tractors, bulldozers, trains and ships nationwide, account for nearly 50 percent of all particulate matter pollution.

Metropolitan areas in New York, Los Angeles, Houston, Boston and Chicago top the list for the amount of emissions of particulate matter from these engines, according to an analysis released by the Union of Concerned Scientists.

The highest emissions of smog forming nitrogen oxides were found in the Los Angeles and New York metropolitan areas. Texas, California, Illinois, Louisiana and Ohio have the highest particulate matter emissions.

The report compiled and analyzed the latest emissions inventory from the Environmental Protection Agency and California Air Resources Board. It found that in the New York metropolitan area, non road diesel engines emitted more tons of particulate matter than in any other area evaluated.

Four major metropolitan areas along the East Coast corridor - Boston, New York, Philadelphia and Washington D.C./Baltimore - have some of the highest concentrations of nonroad diesel emissions in the country.

Diesel exhaust particles are small enough to be inhaled deep into the lungs and have been linked to cancer and premature death, as well as serious respiratory illness. The dangers of diesel exhaust have led to stricter tailpipe standards for highway trucks and buses over the past 30 years.

But nonroad engines are allowed to pollute at much higher levels. While particulate pollution from highway vehicles has been cut in half over the last two decades, emissions from nonroad engines have increased 23 percent.

The Union of Concerned Scientists study breaks down pollution data on non road diesel engines and other mobile sources in all states, countries and major metropolitan areas. The report also provides a cost analysis of producing cleaner engines, finding that for one of three percent of the cost of equipment, pollution controls for particulate matter and nitrogen oxide can cut emissions by 90 percent or more.

*(Environment News Service - 6/10/03)*

### STUDY FINDS STATES RARELY SEEK ADDITIONAL REMEDIATION AT VOLUNTARY CLEANUP SITES

An EPA-funded study has found that state regulators rarely require developers to conduct additional cleanup at sites already remediated under state voluntary cleanup programs, possibly lending a boost to redevelopment efforts by eventually lowering insurance costs for brownfields projects. The report finds that of more than 11,000 cleanups in 46 states, less than one-tenth of 1 percent were "reopened" for more cleanup by state regulators, leading to "less hand-wringing" in the lending community.

*(Superfund Report - 5/26/03)*

### REPORT SHOWS MARINE BIODIVERSITY FLOWERED IN LAST 50 MILLION YEARS

The apparent increase in marine biodiversity over the last 50 million to 100 million years is real and not just a false reading produced by the inconsistencies of the fossil record, according to report published in the journal "Science."

The study, conducted by a team of paleontologists led by the University of Chicago's David Jablonski, could help scientists place the future of global biodiversity in its proper context.

"If you want to understand what is going to come in the future you need to understand the dynamics that led up to the biodiversity we see now," said Jablonski, a geophysical sciences professor and chair of the Committee on Evolutionary Biology at the University of Chicago.

According to Harvard University paleontologist Richard Bambach, the study sheds important light on the true extent of biodiversity during the Cenozoic Era, which began after the dinosaurs went extinct 65 million years ago and continues today.

The team studied bivalves, which are clams, scallops, oysters and mussels, to address the issue because they are one of the major contributors to marine animal biodiversity.

*(Environment News Service - 5/19/03)*

### BLACK SOOT INCREASES GLOBAL WARMING

Black carbon particles of soot are more plentiful in the world's atmosphere and contribute more to the climate change than was previously assumed by the Intergovernmental Panel of Climate Change (IPCC), a team of university and government researchers has found. They conclude that soot contributes about twice as much to warming the climate than had been estimated by the IPCC.

The researchers, led by scientists from Columbia University and the National Aeronautics and Space Administration (NASA), concluded if these microscopic soot particles are not reduced at least as quickly as light colored pollutants, the world could warm more quickly. Both soot and the light colored particles, most of which are sulfates, pose problems for air quality around the world.

The findings appear in a recent issue of the "Proceedings of the National Academy of Sciences."

*(Environment News Service - 5/16/03)*

### BACTERIUM FEASTING ON TOXIC WASTE IS FOUND

Scientists have identified a microbe that gobbles up toxic waste deep underground, offering a potential way to clean up a particularly nasty chemical that has contaminated the water underneath hundreds of the nation's industrial and military sites.

Microbiologist, Frank Loeffler said the bacterium, known as BAV1, was found in soil samples 20 feet down at a hazardous-waste site in Oscoda, Mich. BAV1, flourishes in the packed

## TECHNOLOGY UPDATES (CONTINUED)

earth where there is no oxygen, feeding off certain toxic compounds, he said.

Other microbes that eat toxic waste have been discovered over the years and are used in some limited fashion to cleanup contaminated sites. However, this is the first one found that thrives on vinyl chloride underground.

Loeffler has tested the bacterium on vinyl chloride at the contaminated site in Michigan. Its ability to eat the toxic compound - and render it harmless was hastened in one test by adding plant fertilizer and other nutrients to the soil. In another trial, vinyl chloride was destroyed by injecting the soil with concentrated amounts of BAV1 developed in the lab. Loeffler's work is presented in the journal *Nature*.

Scientists have long suspected that deep in the ground some type of microbe found vinyl chloride palatable. Loeffler spent four years searching for it, isolating BAV1 from a bustling community of microscopic organisms that included thousands of kinds of bacteria.

(By Chris Kahn, *Philadelphia Inquirer* - 7/3/03)

### CALIFORNIA PULLS PLUG ON BATTERY ELECTRIC VEHICLES

California officially pulled the plug on electric vehicles opting instead to rely on gasoline-electric hybrid vehicles and ultra-clean gasoline

powered vehicles to meet clean air standards. However, in a bow to advocates of zero emission vehicles and renewable energy, the state also held out the distant flicker of hope that hydrogen powered fuel cell cars might enter the early phases of commercialization within a decade.

The California Air Resources Board eliminated its existing standard requiring automakers to sell thousands of battery powered electric vehicles in the Golden State. The long awaited move was designed to head off litigation against the state's zero emissions vehicle rules.

"Mandates alone cannot overcome the laws of physics," said Air Board chairman Alan Lloyd shortly before the vote in Sacramento. Automakers have maintained that short driving ranges and long recharge times made battery electric vehicles impractical for motorists.

In a nod of agreement, the Board voted instead to require automakers to produce 250 fuel cell powered cars by the end of 2008.

(*Environment News Service* - 5/1/03)

### CITY POLLUTION TOUGHER ON RURAL TREES

Scientists have found that trees in New York City grow as twice as well as counterparts grown some 50 miles from the city.

"I know this sounds counterintuitive, but it is true," says Jillian Gregg, lead author of the study. City grown pollution - and ozone in particular - is tougher on country trees. Gregg's findings were published in the journal *"Nature."* As a graduate student at Cornell, Gregg began planting identical clones of cottonwood trees in and around New York City.

For three consecutive growing seasons Gregg returned to the site to plant cottonwoods, harvesting them to weigh their biomass and to perform other kinds of analysis. She controlled for differences in light, precipitation, season length and soil factors, making air quality the primary factor of concern.

Gregg and her colleagues at Cornell and the Institute of Ecosystem Studies determined that the rural trees did not grow as fast because of higher sustained levels of ozone that originated in the city.

"Ozone is what we call a secondary pollutant," Gregg explained. "So while the primary precursors for ozone are emitted in the city, they must act in the presence of sunlight, over time, before ozone is formed. By then, the air mass has moved to rural environments."

(*Environment News Service* - 7/10/03)

### RT ASSISTS PA CONTRACTORS

#### BUILDING DECONSTRUCTION AFFORDS EXPANDED CONSTRUCTION MATERIALS RECYCLING

(continued from page 16)

"Concrete can be crushed and used for road base and paving projects," Java said. "Asphalt is one of the number one recycled materials in the nation." Steel, lumber, rock, soil, even sheet rock can be processed and live again in new construction.

City mandated construction and demolition waste diversion programs have been growing in California, in part because of 1989 legislation requiring California cities and counties to cut their landfill dumping in half by the end of 2000. The City of San Jose found 30 percent of its garbage was construction and demolition debris. City administrators drew up a program requiring a deposit from contractors before their projects commence. The deposit is calculated on the project's square footage, and whether its new, a remodel, residential or commercial. Smaller projects are exempt. Under this system, new residential construction over \$115,000 is charged a deposit of \$.20 a square foot.

So far, efforts like these have been succeeded in cutting California's total landfill stream by 48 percent. East Palo Alto, where Whole House operates, diverts 45 percent; nearby Atherton, the upscale residence of venture capitalist and retired NFL players, recycles 31 percent. The small northern California town of Blue Lake now diverts 92 percent of its waste.

At the forefront, Massachusetts salvages 77 percent of its construction and demolition (C&D) waste and is implementing a complete ban on its unprocessed disposal.

Kurt Buss of the Used Building Materials

Association (UBMA) said that construction and demolition waste is estimated to be 20 to 40 percent of the national municipal waste stream. According to the EPA, that was about 136 million tons in 1996.

"One national level, we generate enough C&D waste to build a wall ... that's 30 feet thick and 30 feet high, up and down both costs of the United States every year," said Jim Primdahl.

There are an estimated 3,500 construction and demolition salvage operations around the nation. As a consultant, Primdahl has crisscrossed the county to advise new operations in Seattle, Detroit, Salt Lake City, Cleveland, Kansas City, New Haven and New York.

Currently Primdahl is working on an urban renewal project in Philadelphia, where as many as 19,000 homes are slated for removal. "If we harvest just half of the floor joists out of these units, it works out to roughly 3.8 million board feet of lumber per year, for five years," he said. That lumber is furniture grade old growth fir, hemlock and yellow pine with a tight, knotless grain - "a natural, national resource," he said. "Once the material is gone, it can never be replaced."

Primdahl points out that what is considered a niche market in the United States is the norm for the rest of the world.

(Jennifer Huang, *Environment News Service* - 7/14/03)

RT has already been instrumental in helping to increase the recycling of construction materials

in PA. We have helped obtain beneficial use permits for asphalt, concrete, mulch, compost and other building materials, for more than 50 clients. A number of additional applications are also in preparation in our King of Prussia Engineering Group.

*Recycling of construction materials is now becoming more important throughout the state as the Safe Fill regulations move toward finalization. Upon the finalization of the Safe Fill regulations it is estimated that a cost of \$2 to \$7 will be added to the cost of managing materials. To keep costs of projects down, contractors will be forced to seek the most cost effective methods of managing materials. One increasingly popular method is to manage the materials under a Beneficial Use Permit; process the material to a usable product and return it to the generating site or stockpile the product for resale at a later time. Recycled products (RAP and concrete) can even be processed to meet PENNDOT Specifications which would allow the contractors to reuse the material on the same highway project site where it was generated; saving hauling and disposal costs. A Beneficial Use Permit will allow a contractor to stay ahead of their competitors, and minimize the probability of cost increases after bid acceptance and contract award.*

For more information on Beneficial Use Permits, contact Walter H. Hungarter, III Engineering Group Manager, 610-265-1510, Ext. 38.

**FEDERAL REGISTER NOTICES**  
[http://www.epagov/homepage/fedrgstr/.](http://www.epagov/homepage/fedrgstr/)

**Mine Safety and Health Administration**

Verification of Underground Coal Mine Operators' Dust Control Plans and Compliance Sampling for Respirable Dust; Proposed Rule.  
(Federal Register, 3/6/03)

**ENVIRONMENTAL PROTECTION AGENCY**

Revision of Wastewater Treatment Exemptions for Hazardous Waste Mixtures (``Headworks Exemptionië); Proposed Rule.  
(Federal Register, 4/8/03)

**ENVIRONMENTAL PROTECTION AGENCY**

Revision to the Guideline on Air Quality Models: Adoption of a Preferred Long Range Transport Model and Other Revisions; Final Rule.  
(Federal Register, 4/15/03)

**ENVIRONMENTAL PROTECTION AGENCY**

National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production.  
(Federal Register, 4/21/03)

**ENVIRONMENTAL PROTECTION AGENCY**

National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing; and National Emission Standards for Hazardous Air Pollutants for Clay Ceramics Manufacturing; Final Rule.  
(Federal Register, 5/16/03)

**ENVIRONMENTAL PROTECTION AGENCY**

List of Hazardous Air Pollutants, Petition Process, Lesser Quantity Designations, Source Category List; Proposed Rules.  
(Federal Register, 5/30/03)

**ENVIRONMENTAL PROTECTION AGENCY**

Criteria for Classification of Solid Waste Disposal Facilities and Practices and Criteria for Municipal Solid Waste Landfills: Disposal of Residential Lead-Based Paint Waste.

This final rule will expressly allow residential lead-based paint waste that is exempted from the hazardous waste management requirements as household waste to be disposed of in construction and demolition landfills.

(Federal Register, 6/18/03)

**PENNSYLVANIA BULLETIN NOTICES - TECHNICAL GUIDANCE**  
<http://www.pabulletin.com>

**Draft Technical Guidance - New**

Operator Certification Program Guidelines. Anticipated Effective Date November 1, 2003.

**Draft Technical Guidance - Substantive Revision**

Pennsylvania's Interim Program for Operator Certification. Anticipated Effective Date November 1, 2003.

**Validating Abandoned Underground Mine Maps and Establishing Barrier Pillars**

Anticipated Effective Date October 11, 2003.

**Draft Technical Guidance - Substantive Revision**

Pennsylvania's Interim Program for Operator Certification. Anticipated Effective Date November 1, 2003.

**Final Technical Guidance**

Guidance on MS4 Ordinance Provisions. Effective Date August 2, 2003.

**Final Technical Guidance Issued**

DEP ID: 363-2134-013 Title: Permit Guidelines for Phased NPDES Stormwater Discharges Associated with Construction Activity Permits, Chapter 102 Erosion and Sediment Control Permits, and Chapter 105 Waterways Restoration Project Permits Description: DEP's Phased Permit Guidelines for construction and waterway restoration activities promotes the development of long range project plans, provides for public participation, ensures compliance with applicable rules and regulations, eliminates redundant application and permit processing functions and streamlines the permitting process. Effective Date March 29.

**Final Technical Guidance Issued**

DEP ID: 383-0810-106 Title: Summary of Key Requirements for Surface Water Filtration Description: This document applies to public water systems using surface water sources or groundwater sources that are under the influence of surface water. Effective Date May 24.

**Rescinding Technical Guidance**

DEP rescinded its 'Complaint Handling/Problem Assessment for Conservation Districts' Guidance, as of May 24. The Guidance is being incorporated into draft revisions of DEP's Compliance Assistance and Enforcement Manual.

**DEP Issues Draft Technical Guidances**

Small Flow Treatment Facilities Manual. Anticipated effective date is October 25<sup>th</sup>.

Evaluation of Underground Storage Tank Liners. Anticipated effective date is November 29<sup>th</sup>.

**DEP Issues Final Technical Guidance**

Alternate Method of Test Drilling. Effective date July 26<sup>th</sup>.

Policy for NPDES Permits of Stormwater Discharges Associated with Construction Activities at Oil and Gas Wells Description: Effective date: July 26<sup>th</sup>.

## PA UPDATES

### Feature Article

#### ADVANCE NOTICE OF FINAL RULEMAKING ISSUED BY DEP FOR SAFE FILL REGULATIONS

At *RT Review* press time, the RT was working with the PA Asphalt Pavement Association's Environmental Committee to submit final comments on the Pennsylvania Department of Environmental Protection Safe Fill regulations Advance Notice of Final Rulemaking (ANFR). The Association initially commented on certain items that were not addressed by DEP in the ANFR in early July, and the Environmental Committee requested DEP to make additional changes in the final regulations, to include the following:

- It was critical to define what a *de minimis* spill or release is, so if there are small areas of spilled material in soils (less than 500 cubic yards, but less than 5% of material, that still meets the Safe Fill Limits, that the material still qualifies as "Safe Fill". A revision was also requested to be added that even if these criteria are exceeded, that the material can be moved with DEP permission.

- The PAPA Environmental Committee also requested DEP consider a straightforward procedure, like that used in New Jersey, to use appropriate sampling methodologies to determine whether or not arsenic is naturally occurring. If naturally occurring arsenic found up to 28 mg/kg, then no further action would be required. Higher concentrations, or, arsenic from historical atmospheric emissions would require a "bioavailability" test, to see if the arsenic present is of concern to human health. If so, the materials could still be moved, but only under Permit-by-Rule provisions.

DEP is also working on an updated cost/benefit analysis, which is expected to be included in the final regulations.

On a related issue, Gary Brown, P.E. President of RT, is also working on a task group on how to deal with arsenic, which is ubiquitous in many surface soils in Pennsylvania, due to extensive historical coal burning. Arsenic is also present in many coal mining residual materials. DEP Secretary McGinty has set up several task groups under the Act 2 Land Recycling Program, including the one on arsenic. The task group on arsenic was scheduled submit a report to the Secretary by the end of August.

RT expects the Safe Fill comments, once reviewed by DEP, to lead to the issuance of final Safe Fill Regulations, late in 2003. There is also a proposal to develop an acceptable outlet for managing clean or marginally impacted materials, from small excavation projects, including sidewalks, driveways and local street areas. Surface mines may play a role in helping to manage such materials, as surface mines can apply for a special permit condition, where incoming materials which are not believed to be contaminated, are

screened, tested, and appropriately managed, on an ongoing basis. A meeting with DEP Mineral Resources Secretary was to occur in mid August, to help determine how to implement this management option.

Contractors and site owners are reminded that the 1996 Clean Fill Guidance Document remains in effect, and they are advised to be especially careful when moving any materials onto residential properties, and to be especially careful at former industrial sites, where "historic fill" materials may be present.

#### NEW STUDY LOOKS AT PENNSYLVANIA'S WASTE COMPOSITION

DEP recently completed its first-ever comprehensive waste composition study. The study shows, with statistical validity, the makeup of waste generated and disposed in Pennsylvania. The study examines both residential and commercial waste from urban, suburban and rural areas of the state.

Sorting took place in all four seasons in 2001 and 2002. The study will yield much useful information for recycling and environmental planners and help target materials for future recycling and waste minimization efforts.

<> The full report is available on DEP's website (directLINK "DEP waste study").

#### DEP DEVELOPS STORMWATER PERMITS FOR PHASED PROJECTS

DEP has finalized a series of permits addressing stormwater discharges for long-term, large-scale projects. Permit Guidelines for Phased NPDES Stormwater Discharges Associated With Construction Activity Permits, Chapter 102 Erosion and Sediment Control Permits and Chapter 105 Waterway Restoration Project Permits are now available.

"Many activities that are subject to DEP permitting requirements are long-term or large-scale projects that may take several years to complete," DEP Acting Secretary Kathleen McGinty said. "These types of projects, often referred to as phased projects, often referred to as phased projects, are funded, planned or designed in phases or stages to facilitate project implementation."

DEP developed the phased permit application, review and approval process to provide greater flexibility for permit applicants, while meeting all permitting requirements including provisions for public notice and public participation. The draft guidance was developed using existing practices in the NJDES program and waterway restoration permits program as models, and included the results of a pilot waterway restoration permitting process tested by the Department.

Under the phased project approach, a permit application can be submitted that explains the goals and scope of the project, the sensitive environmental areas located on the proposed site and the general types and locations of anticipated activities for the entire project site without detailed construction plans and drawings for the entire project up front, but with sufficient detail

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- ANFR - Safe Fill Regs. pg. 13
- Haz Waste PBR - pg. 14
- Vapa Building Intrusion - pg. 14
- Construction Equipment Exemption - pg.

to assess the potential environmental impacts of the entire project. Permit applicants will provide detailed construction drawings, plans, Erosion and Sediment Control Plans, and other required information for review and approval for the initial phase of the project that will be constructed, along with more generalized plans for the subsequent phases under construction.

<> The final guidance is posted on the DEP Web site; select "Participate" then "Final Technical Guidance/Bureau of Watershed Management."

#### DEP eFORM U GOES LIVE

DEP released its electronic Form U (eForm U) application Commonwealth-wide in June. The web-based application allows landfill operators to submit and DEP chemists to review the Waste Management Program's Request to Process or Dispose of Residual Waste.

DEP recently completed a training initiative on the electronic Form U. Two days of training were held at each of DEP's six regional offices - with the first day of training presented to DEP chemists, management and administrative staff, and the second day offered to Pennsylvania-registered landfills that are affiliated with the region.

#### DEP REVISING GUIDELINES FOR ALTERNATE ONLOT SEWAGE SYSTEM

Alternate System Guidance - DEP is revising its guidance which applies to the siting, design and construction of alternate onlot sewage treatment systems. Alternate systems may be used to serve residential development or other facilities producing sewage having chemical characteristics typical of untreated domestic wastewater.

The proposed revision to the Alternate Systems Guidance adds a new listing for aerobic tank systems and expands the approved uses of the CO-OP RFS III system.

For additional information contact DEP's Milt Lauch, Bureau of Water Supply and Wastewater Management at 717-787-8184.

#### CHANGES ARE BEING CONSIDERED TO CHAPTER 250, PA'S LAND RECYCLING REGULATIONS

Changes being considered to Chapter 250 are summarized below:

- The NIR form may be updated to include identification of non-media solids disposed on the site. In addition, the ability of the remediator to select the releases of concern, and the medias and contaminants of concern, within each release selected, will be clarified.
- The *Pennsylvania Bulletin* and Department web site would be used to provide notice of nonuser aquifer designations, institutional controls and engineering controls.
- Chapter 245 Corrective Action sites meeting NRSHS and SSS standards for petroleum releases are not currently deed acknowledgeable upon

## PA UPDATES

transfer of the land. In addition, sites meeting a background standard (BGS) higher than the RSHS or sites meeting an RSHS for groundwater at the Point of Compliance (POC) with higher contaminant levels within the site are not deed acknowledgeable either. These currently excepted sites would have a requirement for deed acknowledgment as well so that all properties with contaminants above a RSHS are handled similarly. Consistency in deed acknowledgment would be a new regulatory provision.

- To provide consistent treatment of sites with contamination above the RSHS, a post remediation care plan would be required under all cases of institutional or engineering controls.

- The SHS does not incorporate all SMCL's only those that are compound specific. In a revision, in additions to meeting the MSC at the point of compliance, drinking water use of groundwater impacted by a release shall have to be made suitable for at least meeting the primary and secondary MCLs at all points of use.

- Diffuse groundwater discharges would be handled the same way as permitted point source discharges which rely exclusively on modeling to determine discharge limits without any reliance on stream sampling. A middle ground is to allow sampling in a stream to demonstrate compliance with WQ standards when the diffuse groundwater discharge is a substantial contributor to the stream flow.

- If modeled results indicate that surface water quality standards are not being achieved, in stream sampling may be performed to help evaluate whether surface water quality standards are being achieved at design flow conditions provided that the groundwater discharge is a significant contributor to surface water flow.

- The final report would have to include site characterization information identified in 250.204(b)-(e) (relating to final report), which identifies by sampling and/or fate and transport analysis areas where the concentrations of regulated substances are above the selected Statewide health standard within each media of concern.

The Technical Guidance Manual would be changed to indicate that institutional and engineering controls or a combination of both are a option of the remediator when pathway elimination is proposed for a cleanup plan under the SSS and that such controls must be permanent to be approved by the Department should be placed in the regulations.

An inability to use GW site characterization data in concert with an attainment demonstration results in significant delay and added cost to complete an Act 2 transaction. A minor revision could provide such clarification, to include a provision that the Department may accept characterization data as demonstrating of attainment if such data indicate that the concentrations of regulated substances in groundwater do not exceed the selected standard.

(CSSAB Meeting - July 22, 2003)

### AIR PERMIT EXEMPTION ISSUED FOR SOME CONSTRUCTION EQUIPMENT

DEP, in late July, granted an exemption for certain crushing and conveying equipment, rated at 150 tons per day or less. The exemption applies to tub grinders as well, as related conveying equipment.

The permit exemption applies as follows:

- The following is a list of those sources and classes of sources determined, in accordance with § 127.14(a)(8), to be exempt from the Plan Approval requirements of §§ 127.11 and 127.12. Unless labeled otherwise, emission rates are to be considered actual ton per year (tpy).

- 6. Internal combustion engines regardless of size, with combined NOx emissions less than 100 lbs/hr, 1000 lbs/day, 2.75 tons per ozone season and 6.6 tons per year on a 12-month rolling basis for all exempt engines at the site.

- 12. Portable crushers that are controlled with properly located water sprays or with fabric filters, have a rated capacity less than 150 tons per hour, operated during daylight, and located on a site for less than 60 days; provided, however, that the crushers do not process materials containing asbestos. This exemption includes; associated screens and drop points; tub grinders used to mulch grubbing waste; and, internal combustion engines meeting the criteria for plan approval exemption described in category 6 above.

Go to the PA Bulletin online ([www.pabulletin.com](http://www.pabulletin.com) - July 26, 2003 Edition) for more details.

### DEADLINE APPROACHING FOR HAZARDOUS WASTE PERMIT-BY-RULE ACTIVITY

Revisions to Pennsylvania's hazardous waste regulations, which took effect Dec. 14, 2002, require the owners or operators of permit-by-rule facilities, in operation on that date, to notify the DEP of such activity by December 8, 2003. New hazardous waste permit-by-rule facilities must meet the notification requirement prior to commencing operation. Notification must be made on a form provided by the Department.

Hazardous waste permit-by-rule regulations at 25 Pa. Code §270a.60 contain the notification requirements as well as the requirements applicable to each type of hazardous waste management activity eligible to operate under permit-by-rule. Activities eligible to operate under hazardous waste permit-by-rule include: elementary neutralization (treatment of waste in containers or tanks where the waste is classified as hazardous only due to corrosivity); wastewater treatment units (treatment of hazardous wastewater in tanks prior to regulated discharge to surface water or a public sewer system); generator treatment of hazardous waste in units complying with generator accumulation standards (containers, tanks, or containment buildings); treatment of spent, lead-acid batteries prior to reclamation of the batteries at a battery manufacturing facility; treatment of hazardous waste prior to reclamation of the waste onsite at the site where it is generated; and treatment of hazardous waste to

make it suitable for reclamation of economically significant amounts of certain precious metals.

<> For more information, or to obtain a notification form, contact Dwayne Womer by email at [dwomer@state.pa.us](mailto:dwomer@state.pa.us).

### PADEP ISSUES FINAL DRAFT GUIDANCE FOR BUILDING VAPOR INTRUSION

Indoor air quality (IAQ) from the vapor intrusion of containment into buildings from groundwater and soil is not assessed under the Statewide health standard in Act 2, Chapter 250 regulations. New guidance for assessing potential subsurface vapor intrusion of volatile organic and semi-volatile contaminants into buildings from contaminated groundwater and soils under the Statewide health standard has been issued by PADEP.

The guidance issued is for assessing vapor intrusion under the Statewide health standard. Remediators who choose to forgo the sampling activities outlined in the guidance document may proceed directly to a site-specific analysis (which may also ultimately require some limited IAQ sampling) or alternatively may proceed directly to mitigation.

Several options are provided for determining if IAQ is a concern. These include:

- Comparison of media concentration to previously available soil and groundwater medium specific concentrations (MSCs).

- Comparison of media concentration to conservative default screening values for groundwater and soil (see Tables 1-2 and Tables 4-5) calculated using Pennsylvania-specific parameters and the Johnson and Ettinger (J&E) Vapor Intrusion model (USEPA, 2001).

- Comparison of media concentration to soil gas values derived using the MSC for indoor air quality (MSCIAQ) and a transfer factor to account for attenuation between the outside and inside of buildings.

- Comparison of media concentration to MSC developed for IAQ (MSCIAQ) using measured indoor air concentrations.

If indoor air quality is determined to be a concern based on the use of these matrices, one may address (mitigate) the contamination or perform a site-specific evaluation.

RT already has substantial experience in addressing vapor pathway concerns. Most sites with significant petroleum or solvents releases will need to complete soil or indoor air monitoring and use the site specific standards. It is very important to address this before a Notice of Intent to remediate is submittal to PADEP. For more information call Peter Malik or Chris Orzechowski at 610-265-1510.

**DOT HAZ MAT REGS**  
**Changes Kick in 10-1!**  
**Revisions to Labeling Requirement**  
**and**  
**Material Classification Changes.**  
**New Categories, Too!**  
**(See the 7/31/03 Federal Register)**

## NJ REGULATORY UPDATES

### PINE BARRENS TREE FROG TAKEN OFF ENDANGERED LIST

The Pine Barrens tree frog has jumped off the state's endangered species list.

The brightly colored amphibian now is considered a threatened species, an improvement from its prior status, said Bradley M. Campbell, Commissioner of the state's Department of Environmental Protection.

The change reflects a finding biologist that the frog "is locally abundant" and that its habitat is protected by the Pinelands Commission's comprehensive management plan, said Bradley.

The Pine Barrens tree frog favors a habitat of Atlantic white cedar swamps carpeted with dense mats of sphagnum moss. Its population is now stable in New Jersey.

*(Courier-Post - 5/4/03)*

### NEW DISPUTE RESOLUTION FOR SITE REMEDIATION AND LANDFILL CLOSURE

NJDEP has established a new dispute resolution policy to address site remediation and closure requirements. This new policy fills what has been a gaping void in the existing regulatory dispute resolution process by allowing technical, legal and policy issues to be determined by a Technical Review panel comprised of NJDEP

managers at the Division-Director level. A party subject to the Technical Requirements for the Site Remediation, N.J.A.C. 7:26E, or landfill closure requirements that disagrees with a Case Manager decision may obtain dispute resolution using this process.

Dispute resolution is initiated by elevating the dispute between the Case Manager and remediating party to the NJDEP's Site Supervisor, and then to the Bureau Chief if the matter can not be resolved between the Site Supervisor and the remediating party. Legal and policy issues, and those matters not satisfactory resolved by the Bureau Chief, will be determined by the Technical Review Panel.

A party seeking review by the Technical Review Panel must submit a written Technical Review Request, including a summary of the issue, efforts to resolve the dispute with NJDEP oversight staff and any scheduled tasks that should be stayed pending a decision. A meeting with the Technical Review Panel may be requested. If the dispute involves a legal or policy issue, or it involves another Division within the Site Remediation or Solid Hazardous Waste Programs, then the remediating party also may suggest who should sit on the Technical Review Panel. The panel members and the need for a meeting will be determined by the Division Director.

If a request for dispute resolution is granted, a Notice of Convening of Technical Review Panel will be transmitted to the remediating party.

*(Riker Danzig - Environmental Update - 5/03)*

### BILL AIMS TO TACKLE PROBLEMS WITH MOLD

Calling toxic mold a "residential epidemic," two New Jersey legislators urged fellow lawmakers to create a program to fight the scourge.

Stender and Assemblywomen Nellie Pou (D., Passaic) authored a bill, that would require home sellers to disclose in writing the presence of known mold and allow the buyer 10 days to conduct an inspection.

The bill also call for allowing the buyer out of a contract if the rules are not followed and also would require landlords to preform mold inspection every five years.

California is the only state that has legislation specifically relating to mold. Toxic mold has gotten increasing attention in recent years as stories circulate of families become ill of having to move from contaminated homes.

The bill also would create standards for dealing with the problem, including certifying those who could test or clean mold.

*(By Mitch Lipka, Philadelphia Inquirer 5/7/03)*

## STATES ARE MISAPPLYING METALS STANDARDS; ARSENIC MOST FREQUENT PROBLEM

There is growing consensus in the environmental management community that state cleanup standards for metals, principally those for "direct contact" are being inappropriately used and applied. At the Federal level, EPA's toxicologists long ago realized that site specific decisions need to be made where there are natural background conditions of metals, and that the matrix that the constituent is present in is critical to determining risk. State environmental agencies seem to be generally unaware that the US Department of Agriculture, in the 1990's, conducted nationwide research to determine the bioavailability of constituents of concern in food. Unfortunately, most state cleanup standards assume that all chemicals of concern in soil are "bioavailable" which is not usually the case.

Both Pennsylvania and New Jersey are currently struggling with this issue, which is quite unfortunate because tools have been available for quite some time to determine the real degree of risk at individual sites. It has become clear that "one size fits all" numerical limits, for metals, does not work as a broad brush approach at remediation sites.

Arsenic is a prime example. Arsenic can be present at sites:

- Due to natural background conditions (up to several hundred mg/kg).
- Due to atmospheric deposition from historical coal burning.
- Due to use of arsenical based herbicides and pesticides, including lead arsenate.

All three of these situations have different remediation approaches, yet some sites with the highest concentrations, which, for example, could include up to 360 mg/kg of arsenic in peat materials, actually have no significant risk at all.

The United States Department of Agriculture and the USEPA are teaming together to look more broadly into the issue of bioavailability of metals in soils. This in depth national research is critical because the EPA has

to deal with very large western United States mining sites, which are now in the Superfund program. RT has found that it is critical to determine the source of the metal in the soil, so that a proper investigation can be completed, and the proper analytical techniques applied, which usually involve either new bioavailability leaching techniques, and/or synthetic precipitation leaching techniques so that there can be a direct measure of whether the constituent involved is of concern to human health, or is it a threat to groundwater.

USDA has found that the simplest techniques to deal with excess levels of metals on surface soils may be to simply properly re-vegetate and adjust the pH of the soils, and add other nutrients, as appropriate to convert them to a "calcareous form." Unfortunately, the metals are still present, so state regulators appear uncomfortable with remediation that is being increasably proven to fully address direct contact risk. When the metals involved are, in fact, converted to insoluble forms, ingestion is no of concern, which can be proven, as the constituent simply cannot be digested in the human stomach.

A number of toxicologists have informed RT that toxicologists, by training, are simply not equipped to make the type of decision necessary to adjust cleanup standards based on material matrix. New Jersey, on one hand, has been using site specific protocols to document natural background arsenic for about five years, with a high degree of success. On the other hand, in Pennsylvania, under the award winning Act 2 Program, use of a site specific standard is available, but regulators remain reluctant to approve remedial plans for sites scheduled for residential development or park use, unless the 12 mg/kg direct contact standard is met in PA (20mg/kg in New Jersey).

In the Cleveland, Ohio area, the situation regarding arsenic from atmospheric deposition from historic coal burning has become a joke among environmental professionals, as the state requires a non urban "back-

ground" sample for each and every project. A certain interstate interchange outside Cleveland has become the favorite location to take the "background" sample for the region, but unfortunately, many property owners have been forced to apply a one foot of "clean" soil to cover up high arsenic concentrations, which did not likely present any significant risk. Increasing evidence shows that arsenic from atmospheric deposition is only partially bioavailable, typically around 40%, which means that the low single digit or single ten digit direct contact cleanup standards are unnecessarily overprotective.

Author David Belluck, Ph. D. of Risk Writers, a Minnesota consulting firm, predicts a coming regulatory crisis unless state officials can learn to deal with this\*. RT concurs that unless state cleanup standards are made more flexible, this will be likely to happen.

One Pittsburgh based environmental consultant did take a site through the Act 2 Program and had to deal with arsenic in soils, reports great difficulty in finding soils for the top two feet of "clean cover", where the arsenic standard is not exceeded. He reports having tested many sites throughout the area. When this situation arises, site and surrounding property owners want to know from an environmental consultant why regulatory offices have not dealt with the issue, if it is really of concern. There are a few explanations that consultants can give to property owners as to why large areas of states, including urban areas, are considered "unsafe" by measure of soil cleanup standards being exceeded, and the government has done little or nothing to address the contamination an overall basis.

We at RT hope that state regulatory officials quickly begin to become familiar with the USEPA/USDA work. More flexible standards are needed. More information can be found on extensive bioavailability research work on the USDA research web page at: <http://www.ars.usda.gov/research>.

\* International Journal of Toxicology, 22:109-28,2003.

**RT ASSISTS PA CONTRACTORS  
BUILDING DECONSTRUCTION AFFORDS  
EXPANDED CONSTRUCTION MATERIALS RECYCLING**

“Building Deconstruction” is used to break the wasteful cycle of demolishing old structures and rebuilding with all-new materials.

In the San Francisco area, Whole House invites the public to homes schedule for deconstruction. Doors, windows, cabinets, countertops, toilets, plants, light fixtures, molding, tile, brick and more - all are sold at bargain basement prices.

Donors get a tax write off for diverting salvageable materials from the structures they are having destroyed. Do it yourself minded homeowners and savvy contractors come armed with crowbars and chisels to take away everything that’s nailed down. Anything left unsold is left by the Whole House crew and taken to its salvage yard in East Palo Alto.

Whole House founder Paul Gardner has been concerned with reuse and recycling ever since his days as a carpenter’s apprentice 15 years ago.

During the remodeling of an I. Magnin store, Gardner saw mahogany doors and brass fixtures hauled out to the trash. “It was my job to put this stuff in the debris box,” he said, “This is nuts! This is valuable stuff!” Gardner went on to become a general contractor, and on the side started publishing a newsletter for people buying and selling used building materials.

Gardner has tapped into a rich vein of resources. According to California’s Integrated Waste Management Board, waste from construction and demolition made up 12 percent of the state’s waste stream in 1999. Of that debris, “a great deal is recyclable” said Roni Java, a board spokesperson.

Beyond the “soft strip” technique preferred by Whole House, walls including panels, insulation and wainscot, framing, roofing and even foundations can be dismantled and reused, a process called “deconstruction.”

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