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The RT Review

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ASPHALT INDUSTRY ENVIRONMENTAL INITIATIVE FOCUSES ON MORE BENEFICIAL USES AND ENVIRONMENTAL MANAGEMENT SYSTEM

Late in 2005, the Pennsylvania Asphalt Pavement Association (PAPA), whose Environmental Committee continues to be proactive in environmental issues, requested the Pennsylvania Department of Environmental Protection (PADEP) to establish acceptable criteria for recycled material content in various construction materials. A number of Members of the PAPA indicated that those constructing new facilities, including buildings, under the LEED Program are unsure which construction materials do or do not qualify as bona fide recycled materials. Gary Brown, PAPA Environmental Committee Member, has requested DEP's Steve Socash, Chief of Permitting of the Bureau of Municipal and Residual Waste to work with PAPA and establish appropriate recycled material content for construction materials including asphalt and concrete. It is hoped that once appropriate criteria are established, that beneficial use of materials and recycling of materials will increase, including by PENNDOT.

Concurrently, as DEP has requested that those beneficially reusing materials have Environmental Management System (EMS) in-place, the Association has forwarded to DEP a copy of its Environmental Guide, which is updated from time to time, as well as, a copy of the Best Management Practices Plan for Earthwork and General Construction, which deals with the Clean Fill Policy and ways to beneficially reuse construction materials. As PAPA already updates its Guide when needed, and as the PAPA has environmental update seminars for those in the industry, it is hoped that DEP will view favorably PAPA's efforts as an effective industry Environmental Management System.

If you would like to purchasea copy of either the Environmental Guide or the Best Management Practices Plan for Earthwork and General Construction, please contact RT Environmental Services at 610-265-1510, Extension 24.

EPA ALL APPROPRIATE INQUIRY RULE ISSUED; RT BRIEFS LENDING AND DEVELOPMENT COMMUNITY

In early December, RT held a seminar at the Windsor Hotel, to brief lending community and developer representatives on the new EPA All Appropriate Inquiry (AAI) Rule. This seminar started off with an overview by Gary Brown, and was followed by an in-depth presentation on the new rule by Kermit Rader, Esq. of Wolf Block/Schorr Solis-Cohen. In addition to Philadelphia area lender and developer interests, New York and Wall Street lending representatives attended as well.

The basic process of completing environmental due diligence will not change, but, impacts on property transactions are expected as "new approaches" for certain due diligence elements could result in finding new areas of concern, or, other issues which will need to be addressed, that had not been in the past.

Key issues related to the new AAI rule include:

• There are minimum performance requirements for completing the work, related to professional experience and identifying "data gaps."

• Determining whether data gaps are or are not significant is one of the largest, single changes in the environmental due diligence process, and will be the subject of much future discussion between clients and their consultants, and lenders.

• ASTM is issuing an update to the Phase I Environmental Site Assessment Guidance, which in nearly all respects, will mirror the AAI rule requirements.

• Consistent with past industry trends, although the new rule is not effective until November 2006, it is anticipated that many financial institutions will begin to require use of the new rule during the first quarter of 2006. The reason for this is simple, lenders do not want properties encumbered, and if the site is going to have to be foreclosed on and then restudied in the future, they would rather complete it now.

Justin Lauterbach General Manager of RT's New Jersey Office, gave an in-depth presentation on coordination of the AAI Rule with the New Jersey DEP Preliminary Assessment process. Many in the lending community were not aware that when Preliminary Assessments are completed in New Jersey, under the late 1990's New Jersey Brownfield's Law, properties qualify for cleanup under the Spill Act if any identified AOCs are found, which were not identified in the Preliminary Assessment. If one completes a Phase I Environmental Site Assessment or an assessment under the AAI Rule, it would not qualify for Spill Fund cleanup. Many in the development community are now viewing completing a Preliminary Assessment to be "low cost insurance," and RT, for a number of years, has been recommended completing the Phase I scope, as well as a Preliminary Assessment, because it makes basic financial sense. The cost of completing the additional elements of a Preliminary Assessment over and above the normal Phase I, at most sites, is only $300 to $500.

Walter Hungarter, Manager of RT's King of Prussia Office presented in-depth discussions on integration of the AAI Rule with Pennsylvania Act 2 land recycling process. Use of the AAI Rule will be considered to be automatically a part of the Pennsylvania Due Diligence process, as DEP cross-references ASTM guidance in the Act 2 Technical Guidance Manual. DEP has already recommended, statewide, that land recycling professionals attend ASTM seminars. ASTM is already, as part of their training process, covering the new AAI rule. If new AOCs are found in Pennsylvania at Act 2 sites, they are

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EPA ALL APPROPRIATE INQUIRY RULE ISSUED; RT BRIEFS LENDING AND DEVELOPMENT COMMUNITY *(continued from page 1)*

typically considered "reopeners," and it is up to the remediator, or person owning the site, to decide whether or not to address them. DEP is expected to be flexible, as they have in the past, under the Act 2 program, in this regard.

Gary Brown pointed out that, in comparing nearly states, that if the site is a New Jersey ISRA site, finding a large number of new AOCs can be problematic, particularly at large Brownfields sites. Several Brownfields sites, that RT has assisted clients with, started investigation and remediation processes in the mid 1990s and had never been through detailed area of concern reviews under the New Jersey Technical Requirements for Site Remediation. At several sites, finding large number of areas of concern increased remedial costs by many millions of dollars, and, in one case, delayed site redevelopment by more than nine months. In situations where sites are in New Jersey, which has a "supervised' cleanup program, or where there are privatized site investigation/remediation programs, as in Connecticut, Massachusetts, or Ohio, when there is a performance requirement that all areas of concern must be addressed, it is incumbent on the environmental professionals to update site investigation and inspection elements, and identify any new AOCs under "then current" rules, before final reports are submitted on sites to state regulatory agencies, to justify the finding that no further action is necessary. In those states, the AAI Rule will have impact when new areas of concern are identified as a result of application of the AAI Rule.

One remaining AAI Rule element also discussed is that it will now be mandatory to review local government files, which would be easy in Philadelphia with L&I files being available, but could be more difficult, costly, and time consuming in other municipalities where centralized files don't exist. Lastly, the AAI Rule will require contacting nearby residents or other "most knowledgeable persons" if current and immediately previous site owners, as needed, are not available to interview regarding site environmental history.

Overall, it was discussed that the due diligence projects process for most sites, will take about an additional week (three weeks rather than two weeks), and, the cost could rise from around $2,000 to $3,000, as a result of promulgation of the AIA Rule.

Our seminar was very well attended, and we appreciate the many compliments we received from lending and developer community attendees. A copy of the seminar Power presentation is available on our website at rtenv.com.

PHASE I ITEMS - HISTORIC MAPS
SANBORN MAPS

Sanborn maps are commonly used to identify historic issues at properties. One of the most common items identified by Sanborn maps is the presence of historic tanks above-ground and underground. Underground storage tanks (USTs) are often found on properties that were previously filling stations or, sometimes, industrial operations. The author has encountered two situations where previous Phase I's that did not use Sanborn maps missed the presence of historic underground storage tanks from filling stations that had operated at the site. Based on the Sanborn maps, RT was able to locate and identify by magnetic locator combined with ground penetrating radar (GPR) subsurface objects that were subsequently determined to be underground storage tanks during test pit excavation work.

In addition to identifying underground tanks, Sanborn maps can identity historic property uses, or adjacent property uses, that could impact future us of the subject property. Historic operations such as foundries, smelting operations, manufactured gas plants, and metal pressing operations are examples that would require additional investigation as to impact to the subject property. If historic Sanborn maps are not available for a property, a "No-Coverage" statement is provided by the Sanborn Company. Phase I's for properties that do not have a no-coverage statement or historic maps should be questioned as to the existence of historic maps or no-coverage.

On the other side of the coin, Sanborn maps can show that no underground storage tanks and/or questionable uses at the subject occurred.

By: Lawrence W. Bily

NEW ACCOUNTING STANDARD MAY REQUIRE GREATER DISCLOSURE OF ENVIRONMENTAL LIABILITY

Interpretation 47 was issued by the Financial Accounting Standards Board ("FASB") in March 2005 and may drastically change the way that some companies track liabilities arising from environmentally contaminated properties. Beginning in December 2005, this new interpretation of an accounting standard may change how companies account for liabilities associated with the "retirement" (the permanent removal from service such as by sale, abandonment or disposal) of long lived assets.

Interpretation 47 clarifies a prior FASB standard, Statement No. 143. Statement 143, issued in June 1001, defined the appropriate accounting standards for obligations associated with the retirement of certain assets. Under FASB 143, companies are required to record costs for the retirement obligations at the time those obligations were actually incurred, but only if the fair value of those costs could be determined at that time. Companies often found it difficult to establish the fair value of liabilities that were conditioned upon some future event wholly outside of the company's control.

This led to inconsistencies in accounting practices that made it difficult for investors to fully and accurately evaluate companies' liabilities and make meaningful comparisons among similarly situated entities. Interpretation 47 is intended to standardize the accounting practices for "conditional" asset retirement obligations.

Interpretation 47 defines a "conditional asset retirement obligation" as "a legal obligation to perform an asset retirement activity in which the timing and (or) method of settlement are conditional on a future event that may or may not be within control of the entity." Where in the past companies could defer recognition of costs related to a conditional obligation, now companies much identify all of their asset retirement obligations and, if they are able to reasonably estimate the fair value, recognize the liabilities at the time the liabilities are incurred. This interpretation will require a company to recognize the fair value of the liability it possesses for cleanup costs associated, for instance, with a plant closure even if the timing of the closure is unknown. The interpretation extends to any "asset retirement activity," even if that activity can be deferred indefinitely, provided there is an existing law, regulation or contract that requires the entity to perform the activity upon retirement of the asset. In other words, under this interpretation, the obligations associated with asset retirement are not considered conditional, only the timing of the retirement is conditional on a future event that may or may not be in the control of the company. Such an obligation can be reasonably estimated using purchase price, market value, or by calculating the estimated present value (according to FASB rules). If the fair value of the obligation cannot be reasonably estimated at the time liability is incurred, the liability must be disclosed and the fact that it cannot be reasonably estimated must be explained. Under Interpretation 47, investors will at least know of the obligations and the uncertainties associated with those liabilities.

In summary, Interpretation 47 established new accounting standards that will significantly change the manner in which companies disclose and account for a wide range of asset retirement obligations, including liabilities associated with contaminated properties and environmental laws. Entities should consult with their auditors, accountants and attorneys to adhere to these complex new accounting standards. For more information on Interpretation 47, see FASB's web page at www.fasb.org/project/interpretation_st143.shtml

(Murtha Cullina LLP, Environmental Alert – 9/05)

RT STAFF AND PROJECT NEWS

The late fall and early winter period, at RT Review press time, was expected to continue to be exceptionally busy, particularly, with more work at Brownfields sites in New Jersey and Pennsylvania.

Ernie Risha, new Senior Hydrogeologist in RT's New Jersey office, was busy working on a Central New Jersey site, where, plans were being made to facilitate development of a 50-acre new warehouse area on a site near the New Jersey Turnpike. RT is working closely with environmental managers for the previous facility owner to address soil and groundwater areas of concern at the site, as well as a wastewater system impacted by PCBs in a timely and cost effective manner, to help facilitate redevelopment.

Tom Donovan is preparing summaries of environmental issues for a number of Philadelphia riverfront sites, north of Center City, also being considered for redevelopment.

Patrick Cornell was working on updating a contingency plan at an asphalt plant near Reading, in advance of the final revisions to the Federal SPCC Rules, which will become effective in late 2006, based on recent announcements from EPA.

Ben Shaw was working on design of a vapor barrier system, at a Brownfields residential redevelopment site near Ardmore.

Justin Lauterbach was hard at work on a number of CVS sites, where due diligence work was being completed to facilitate retail pharmacy construction early in 2006.

RT has also expanded its New Jersey staff as follows:

Lauren Work joined RT in October of 2005. She has a B.S. degree in Environmental Science and Environmental Geology from William and Mary College. She was a contributing author on three abstracts which were published in The Paleontological and Sedimentological Journal. She is currently working with Justin Lauterbach and Dave Carlson on a large-scale bioremediation project located in Vineland, New Jersey.

Ernie Risha joined RT in November as a Senior Scientist. Ernie has over 17 years experience with New Jersey remedial investigations, remedial actions, UST removals, litigation support, and due diligence. He has worked on bringing large scale pharmaceutical, chemical, petro-chemical, and heavy manufacturing sites to closure with the NJDEP.

Both of these employees have already been major contributors to the success of RT.

Gary Brown was scheduled to complete a presentation on clean fill and contingency plan elements to Pennsylvania Asphalt and Concrete Association members, in early January. Gary is also working with PADEP, on behalf of the construction industry on revisions to the Clean Fill Policy, and making the Pennsylvania Beneficial Use General Permit process, more simplified and cost effective. An Asphalt Industry Construction Materials fact sheet is also expected to be developed early in 2006.

RT appreciates the opportunity to be of service to our clients and we look forward to being of continued service in 2006 and beyond.

PA UPDATES

PENNSYLVANIA EASES JOINT STATE-FEDERAL INDUSTRIAL SITE CLEANUP

Pennsylvania Governor Edward Rendell today announced new guidelines that make it easier to meet state and federal environmental law guidelines when cleaning up a former industrial site.

"My administration has made it easier and faster for companies to reuse our former industrial sites, meet their obligations under federal environmental laws and get liability relief under Pennsylvania's Land Recycling Program," Rendell said. "Improving the way developers do business here in Pennsylvania will help bring jobs to our communities and rejuvenate our boroughs, towns and cities."

The new guidelines implemented by the state Department of Environmental Protection (DEP) will allow developers to simultaneously satisfy their environmental obligations under the state's Land Recycling Program and the federal Resource Conservation and Recovery Act (RCRA).

In April 2004, DEP and the U.S. Environmental Protection Agency (EPA) signed a historic Memorandum of Agreement called Pennsylvania's One Cleanup Program, which makes it possible for developers to work toward meeting both state and federal cleanup standards at the same time. Previously, developers had to exert extra time and effort to comply with separate requirements under the Act 2 portion of the state's Land Recycling Program and federal EPA standards.

The agreement also clarified that sites remediated under the state's brownfields program also satisfy requirements for three key federal laws: RCRC; the Comprehensive Environmental Response Compensation Liability Act, commonly referred to as Superfund; and the Toxic Substances Control Act.

Currently, 11 sites around the state are being remediated under the agreement.
Now, most sites that enter the One Cleanup Program only need to fulfill the state's Act 2 requirements to meet their federal obligations, speeding up final cleanup approval and hastening redevelopment.

Another key feature of the streamlined process is the designation of a project manager who will serve as a single point of contact for developers. This person, usually a DEP project manager, will coordinate with EPA and all other parties necessary to make sure all cleanup requirements are met and the project is successful.

Removing the threat of federal legal action, once a site meets Pennsylvania's cleanup standards, will encourage more redevelopment of old industrial sites. RCRA is the most common federal law to come into play for cleanups, so streamlining the process for developers to satisfy requirements for this law will have the greatest effect.

These enhanced management approaches are part of Governor Rendell's comprehensive effort to update the state's brownfield program by streamlining permitting processes for reclamation projects and ensuring dedicated funding to help Pennsylvania achieve its economic and environmental protection goals.

State Department of Environmental Protection Secretary Kathleen McGinty, speaking this week at the Pennsylvania Brownfields Conference held in Harrisburg, told economic development, business and community leaders, "Streamlining the process to remove obstacles will attract more developers to abandoned industrial sites, revitalize our downtowns and bring more jobs to Pennsylvania."

Brownfields are abandoned, idled or underused industrial and commercial facilities where expansion or redevelopment is complicated by environmental issues.

(ENS – 9/30/05)

PENNSYLVANIA GOVERNOR PROMOTES COAL GASIFICATION

Pennsylvania Governor Edward Rendell launched a new initiative to support the coal state's manufacturing firms by providing low-cost, cleaner fuel, creating what he called a "homegrown" energy solution with advanced coal gasification technology.

Rendell's initiative, Energy Deployment for a Growing Economy (EDGE), promotes advanced coal gasification technology that gasifies coal to produce an array of products, including synthetic gas, which can be used to make chemicals and consumer products, synthetic natural gas to heat homes, transportation fuels or electricity. Plants that make all of these products at once are referred to as "polygen" plants said the governor.

"This new initiative is designed to help Pennsylvania import jobs and not fuel. It is a homegrown solution to keeping jobs and investment in the state," Governor Rendell said. "We are joining with business, labor and environmental leaders to create a unique energy solution that will enhance our competitiveness at home and in global markets while protecting our environment."

New federal clean air regulations are estimated to cost Pennsylvania businesses – mostly power plants and manufacturing facilities - $15 billion. Facility owners will need to decide whether to invest in new technology and pollution controls or to close plants that cannot meet the new federal air quality rules.

The Rendell initiative allows power generation companies a one-time option to invest in replacing old, dirty, inefficient plants with super-clean coal gasification.

Under the governor's proposal, utilities would have a limited time to keep the older plants running without updated controls if they agree to replace those plants with the vastly cleaner and more efficient gasifiers by January 1, 2013.

(ENS – 11/29/05)

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TECHNOLOGY UPDATES

HAZARDOUS WASTE HEADWORKS MIXTURE RULE

EPA announced that it has finalized revisions to the wastewater treatment exemptions for hazardous waste mixtures, an action also known as the "Headworks Rule Exemptions." The agency is taking steps to provide flexible and environmentally sound regulatory management through the following four revisions: (1) the addition of two solvents (benzene and 2-ethoxyethanol) to a list of solvents whose mixtures are exempted from the rules under the Resource Conservation and Recovery Act (RCRA); (2) the addition of an option to directly measure solvent chemical levels at the headworks of the wastewater treatment system to the current requirement; (3) a clarification in the preamble that scrubber waters generated from the incineration of spent solvents listed in the headworks rule would be eligible for the exemption; (4) the addition of listed hazardous wastes as eligible for the exemption as well as the addition of non-manufacturing facilities to those that qualify for this exemption if certain conditions are met. Many of these changes are based on the public comments that EPA received during the public comment period. The headworks exemptions have been revised occasionally as new wastes have been added to the lists of hazardous wastes. For more information on the headworks rule, see:
http://www.epa.gov/epaoswer/hazwaste/id/headworks/index.htm

(EPA – 9/28/05)

GLOBAL WARMING 55 MILLION YEARS AGO ALTERED ANCIENT FORESTS

The migration of subtropical plants to northern climates may occur if future global warming patterns follow a shift that took place in the distant past, new research by an international team of scientists suggests.

The findings, which appear in a November issue of the journal "Science," provide the first evidence that land plants changed during a period of sudden global warming 55 million years ago, said Jonathan Bloch, a University of Florida (UF) vertebrate paleontologist and member of the research team.

"It indicates that should we have a period of rapid global warming on that scale today, we might expect very dramatic changes to the biota of the planet, not just the mammals and other vertebrates, but forests also completely changing," said Bloch, who is a curator at the Florida Museum of Natural History on the UF campus.

Scientists have known there was a turnover in mammals during this rapid period of global warming called the Paleocene-Eocene Thermal Maximum, in which temperatures rose by perhaps as much as 10 degrees in the relatively short time span of 10,000 years, then lasting for another 80,000 to 100,000 years, Bloch said.

The warming was caused by a gigantic release of carbon dioxide into the atmosphere that was comparable to the atmospheric effects expected from human burning of fossil fuels, he said.
Global warming allowed mammals to emigrate across northern land bridges, marking the first appearance of perissodactlys in the form of the earliest known horse; artiodactyls, a group of even-toed ungulates that includes pigs, camels and hippos; as well as modern primates, he said.

But until now, no clues were available as to what happened to plants during this shift, considered one of the most extreme global warming events during the Cenozoic, the "Age of Mammals," Bloch said. "It was very puzzling because it looked like there was nothing going on with plants, which was rather strange and disconcerting."

Excavations by team leader Scott Wing, a paleontologist at the Smithsonian Institution, in the Bighorn Basin of northwestern Wyoming uncovered fossil leaves and pollen alongside fossilized mammals in rocks that were deposited during this geologic interval.

"Up until this point we have not had a place in which we have mammal and plant remains preserved in the same rocks spanning what we call the Paleocene-Eocene boundary," Bloch said. "Amazingly, these plants came from what would have been more tropical environments."

Some of the plant remains resembled those found in rock deposits of similar age unearthed in Mississippi, Louisiana and Texas, including relatives of poinsettia and sumac, Bloch said.

But plant fossils found in the same area before and after this period of rising temperatures showed typical mid-latitude forests of the time and included relatives of dawn redwood, alder, sycamore and walnut, he said.

Because his research specialty is mammals, Bloch said he wants to understand how the movement of plants affected the earliest evolution of modern primates, which first appeared throughout the world during this period.

Partly because of the dramatic change in mammals, including the first appearance of modern primates, and also because of the interval's rapid temperature change, there has been a wide range of scientific interest in the Paleocene-Eocene boundary, Bloch said.

Marking the start of the Eocene about 55 million years ago, the planet heated up in one of the most rapid and extreme global warming events recorded in geologic history. Sea surface temperatures rose almost 8° Celsius over a period of a few thousand years.

"You can't predict the future," Bloch said, "but there has been a time in the past where we had similar type of conditions, and we might look to that experience."

(ENS – 11/14/05)

POWER PLANTS CAN CUT MERCURY EMISSIONS WITH BOILER MODIFICATIONS

Researchers at Lehigh University's Energy Research Center have developed and successfully tested a cost-effective technique for reducing mercury emissions from coal-fired power plants.

In full-scale tests at three power plants, says lead investigator Carlos Romero, the Lehigh system reduced flue-gas emissions of mercury by as much as 70 percent or more with modest impact on plant performance and fuel cost.

The reductions were achieved, says Romero, by modifying the physical conditions of power-plant boilers, including flue gas temperature, the size of the coal particles that are burned, the size and unburned carbon level of the fly ash, and the fly ash residence time.

The changes in boiler operating conditions, said Romero, prevent mercury from being emitted at the stack and promote its oxidation in the flue gas and adsorption into the fly ash instead. Oxidized mercury is easily captured by scrubbers, filters and other boiler pollution control equipment.

The Energy Research Center scientists reported their findings in the article, "Modification of boiler operating conditions for mercury emissions reductions in coal-fired utility boilers," which will be published in a forthcoming issue of the journal "Fuel."

Mercury enters the atmosphere as a gas and can remain airborne for several years before it precipitates with rain and falls into bodies of water, where it is ingested by fish. Because mercury is a neurotoxin, people who consume large quantities of fish can develop brain and nervous ailments. Forty-four states have mercury advisories.

The U.S. Environmental Protection Agency last March issued its first-ever regulations restricting the emission of mercury from coal-fired power plants. The order mandates reductions of 23 percent by 2010 and 69 percent by 2018.

Four states - Massachusetts, New Jersey, Connecticut and Wisconsin - issued their own restrictions before the March 15 action by the EPA.

The Energy Research Center (ERC) team used computer software to model boiler operating conditions and alterations and then collaborated with Western Kentucky University on the field tests.

Analysis of stack emissions showed that the new technology achieved a 50 to 75 percent reduction of total mercury in the flue gas with minimal to modest impact on unit thermal performance and fuel cost. This was achieved at units burning bituminous coals.

Only about one-third of mercury is captured by coal-burning power plant boilers that are not equipped with special mercury-control devices, Romero said.

Romero estimated that the new ERC technology could save a 250-megawatt power unit as much as $2 million a year in mercury-control costs.

The savings could be achieved, he said, by applying the ERC method solely or in combination with a more expensive technology called activated carbon injection, which would be used by coal-fired power plants to reduce mercury

TECHNOLOGY UPDATES

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TECHNOLOGY UPDATES *(Continued)*

emissions. The resulting hybrid method, says Romero, would reduce the 250 pounds per hour of activated carbon that a 250 MW boiler needs to inject to curb mercury emissions.

The breakthrough follows years of work by Energy Research Center researchers in optimizing boiler operations to control emissions of NOx, CO, particulates and other pollutants.

(ENS – 10/5/05)

SUN'S DIRECT ROLE IN GLOBAL WARMING UNDERESTIMATED

Up to 30 percent of global warming measured during the past 20 years may be due to increased solar output, two Duke University physicists report.

Their findings indicate that climate models of global warming need to be corrected for the effects of changes in solar activity, but the scientists stressed that their findings do not argue against the basic theory that significant global warming is occurring because of carbon dioxide and other greenhouse gases.

Nicola Scafetta, an associate research scientist working at Duke's physics department, and Bruce West, a Duke adjunct physics professor, published their findings online last week in the journal "Geophysical Research Letters." West is also chief scientist in the mathematical and information sciences directorate of the Army Research Office in Research Triangle Park.

This study does not discount that human-linked greenhouse gases contribute to global warming, the two scientists stressed. "Those gases would still give a contribution, but not so strong as was thought," Scafetta said.

Scafetta's and West's study follows a Columbia University researcher's report of errors in the interpretation of data on solar brightness collected by sun-observing satellites.

The Duke physicists introduce new statistical methods that they say more accurately describe the atmosphere's delayed response to solar heating. The new methods filter out temperature-changing effects not tied to global warming.

According to Scafetta, records of sunspot activity suggest that solar output has been rising slightly for about 100 years. However, only measurements of what is known as total solar irradiance gathered by satellites orbiting since 1978 are considered scientifically reliable, he said.

But observations over those years were flawed by the space shuttle Challenger disaster, which prevented the launching of a new solar output detecting satellite called ACRIM 2 to replace a previous one called ACRIM 1.

That resulted in a two-year data gap that scientists had to rely on other satellites to try to bridge. "But those data were not as precise as those from ACRIM 1 and ACRIM 2," Scafetta said.

Nevertheless, several research groups used the combined satellite data to conclude that that there was no increased heating from the Sun to contribute to the global surface warming observed between 1980 and 2002, the authors wrote in their paper.

Lacking a standardized, uninterrupted data stream measuring any rising solar influence, those groups concluded that all global temperature increases measured during those years had to be caused by solar heat-trapping greenhouse gases such as carbon dioxide introduced into Earth's atmosphere by human activities, their paper said.

"The problem is that Earth's atmosphere is not in thermodynamic equilibrium with the sun," Scafetta said. "The longer the time period the stronger the effect will be on the atmosphere, because it takes time to adapt."

"We don't know what the Sun will do in the future," Scafetta added. "For now, if our analysis is correct, I think it is important to correct the climate models so that they include reliable sensitivity to solar activity. Once that is done, then it will be possible to better understand what has happened during the past hundred years."

(ENS – 10/6/05)

SECONDHAND SMOKE AT HOME UNDERMINES KIDS' LIFELONG HEALTH

Early life exposure to second-hand smoke can produce lifelong respiratory problems like a dry, hacking cough, new research has confirmed.

Individuals 18 or younger, living with one or more smokers, were more than twice as likely to suffer from chronic dry cough as adults, according to a new study published by researchers at the National Institute of Environmental Health Sciences (NIEHS), a part of the National Institutes of Health, the University of Minnesota, and the National University of Singapore.

This paper, which appears online in the journal "Thorax," is the largest study to date on the effects of childhood exposure to environmental tobacco smoke (ETS) on later respiratory disease, and the first to include data on dietary intake.

The study of 35,000 adult non-smokers in Singapore found that those who lived with a smoker during childhood had more respiratory problems, including chronic cough.

But diet was found to make a difference. Study participants who reported eating more fruit and soy fiber as adults seemed to be protected against some of the negative health effects often associated with early tobacco exposure.

"This research adds to a growing body of evidence that exposure to second-hand smoke early in life has health consequences that can last a lifetime," said Dr. David Schwartz, director of the NIEHS.

"Because we had previously found in this Singaporean population data suggesting that a diet high in fruit and soy fiber may reduce the incidence of chronic respiratory symptoms, we decided to study the impact of fiber on problems associated with early tobacco exposure," said NIEHS researcher Stephanie London, M.D. "We actually found that people who ate even a small amount of fruit fiber had less chronic cough related to environmental tobacco smoke."

Study participants who ate the equivalent of two apples a day had fewer negative health effects than those who did not.

"Fiber may have beneficial effects on the lung," said Dr. London. "However, the possible benefits of fiber should not lessen the importance of reducing exposure to environmental tobacco smoke."

(ENS – 9/6/05)

STRONGER HURRICANES BECOMING MORE NUMEROUS

The number of Category 4 and 5 hurricanes worldwide has nearly doubled over the past 35 years, even though the total number of hurricanes has dropped since the 1990s, according to a study by researchers at the Georgia Institute of Technology and the National Center for Atmospheric Research (NCAR).

The shift occurred as global sea surface temperatures have increased over the same period. The research appeared in the September 16 issue of Science.

Hurricane Katrina reached Category 5 status on August 28 while churning across the Gulf of Mexico before making landfall the next day at Category 4. The result along the Mississippi Gulf Coast was wholesale damage and destruction.

The peak winds of over 100 miles per hour that smashed New Orleans during Hurricane Katrina could have been even worse had the storm made landfall at a different moment in the cycle of its eyewall, the scientists said.

Long-lived, intense hurricanes often go through an eyewall replacement cycle that takes a day or so to complete. The result is collapse of the main eyewall and temporary weakening of the storm. Then an outer eyewall contracts and takes its place, allowing for restrengthening. Katrina appears to have been going through the weaker stage as it approached land.

Peter Webster, professor at Georgia Tech's School of Earth and Atmospheric Sciences, along with NCAR's Greg Holland and Georgia Tech's Judith Curry and Hai-Ru Chang, studied the number, duration, and intensity of hurricanes - also known as typhoons or tropical cyclones - that have occurred worldwide from 1970 to 2004. The study was supported by the National Science Foundation (NSF), NCAR's primary sponsor.

"What we found was rather astonishing," said Webster. "In the 1970s, there was an average of about 10 Category 4 and 5 hurricanes per year globally. Since 1990, the number of Category 4 and 5 hurricanes has almost doubled, averaging 18 per year globally."

Category 4 hurricanes have sustained winds from 131 to 155 miles per hour; Category 5 systems, such as Hurricane Katrina at its peak over the Gulf of Mexico, pack winds of 156 mph or more.

"Category 4 and 5 storms are also making up a larger share of the total number of hurricanes," said Curry, chair of the School of Earth and Atmospheric Sciences at Georgia Tech and coauthor of the study. "Category 4 and 5 hurricanes made up about 20 percent of all hurricanes in the 1970s, but over the last decade they accounted for about 35 percent of these storms."

The largest increases in the number of intense hurricanes occurred in the North Pacific, Southwest Pacific, and the North and South Indian Oceans, with slightly smaller increases in the North Atlantic Ocean.

All this is happening as sea surface temperatures have risen across the globe between one-half and one degree Fahrenheit, depending on the region, for hurricane seasons since the 1970s.

(ENS – 9/19/05)

TECHNOLOGY UPDATES *(Continued)*

DELAWARE EARNS $1.4 MILLION EPA GRANT TO CONTROL STORM WATER

A $1.4 million grant from the U.S. Environmental Protection Agency will be used to help control pollution from storm water runoff throughout the state of Delaware.

The grant, which goes to the Delaware Department of Natural Resources and Environmental Control's nonpoint source program, will be combined with almost $1 million in state and local funds to support storm water projects.

"EPA is pleased to work with Delaware as a partner in supporting innovative approaches to cleaning up waterways that have been impaired by storm water runoff from agricultural, residential, commercial and industrial areas," said Donald Welsh, regional administrator for EPA's mid-Atlantic Region from his office in Philadelphia.

Storm water pollution - sometimes called nonpoint source pollution - is caused by rainfall or melting snow moving over or through the ground and carrying natural or human-made pollutants into lakes, streams, rivers, oceans and other water bodies.

With the newly granted funding, state personnel will work with shoreline property owners to develop erosion-control projects that will help stabilize and protect the Delaware shoreline.

A tree planting program by Delaware's Department of Agriculture Forest Service will be implemented to develop riparian buffers in rural and urban environments throughout the state.

Farmers will be assisted to develop nutrient management plans and applications for dairy manure storage systems, poultry manure storage systems, poultry composters, nutrient management plans, and cover crops to prevent polluted runoff.

Manufactured ponds, filtration systems and piping will be instaffed to better control storm water runoff throughout the Inland Bays Watershed in Sussex County.

Finally, the grant funding will be used to assess and restore a subwatershed in the Hockessin Village area of New Castle County at the headwaters of Mill Creek. This project would rely on the use of best management practices and mitigation.

(ENS – 9/16/05)

INSURANCE COMPANIES STAGGERING UNDER GLOBAL WARMING DAMAGES

As Hurricane Katrina demonstrated, U.S. insurers, government and consumers are at enormous risk of escalating losses from hurricanes and other weather related events, finds a new report by insurance industry experts commissioned by Ceres, a national coalition of institutional investors and environmental organizations.

Rising global temperatures in the coming decades are likely to cause significant increases in severe weather events, such as hurricanes, floods, hailstorms, wildfires, droughts and heat waves, the report warns, cautioning only that no individual hurricane can be attributed to global warming.

"Insurance as we know it is threatened by a perfect storm of rising weather losses, rising global temperatures and more Americans than ever living in harm's way," said Mindy Lubber, president of Ceres, which commissioned the study. "Insurers and regulators have failed to adequately plan for these escalating weather events that scientists predict will intensify in the years ahead due to warming global temperatures."

Unless insurers and their regulators take steps to address escalating climate change impacts, companies, governments and the public will suffer even greater financial losses in the future, the authors warn.

The report, "Availability and Affordability of Insurance Under Climate Change: A Growing Challenge for the U.S.," was written by Dr. Evan Mills, a scientist with the U.S. Department of Energy's Lawrence Berkeley National Laboratory; Richard Roth Jr., former chief property and casualty actuary and assistant commissioner at the California Department of Insurance, who now works with the actuarial consulting firm Bickerstaff, Whatley, Ryan & Burkhalter; and Eugene Lecomte, president emeritus at the Institute for Business and Home Safety in Boston.

Their report documents the steep rise in insured and uninsured losses related to weather in the U.S. and how climate change will likely magnify these losses in the years ahead, whether in homeowner losses due to hurricanes, crop losses due to drought or business interruptions due to lightning strikes.

Over the past 30 years, insured losses from catastrophic weather events with damages amounting to over $1 billion have increased 15-fold, the authors calculate. They point out that these losses have far out-stripped premium increases, inflation and population growth over the same time period.

The number of weather-related events, the variability of total losses, and the economic impacts and demographic drivers are all on the rise, the report documents.

Insured property losses of $45 billion and total property losses of $107 billion globally in 2004 are rising faster than premiums, population or economic growth - globally and in the United States.

Even after correcting for inflation, weather-related catastrophe losses in the U.S. property-casualty sector have grown from a few billion dollars a year in the 1970s to an average of $15 billion a year in the past decade, punctuated by three peaks of over $25 billion a year and a record high in 2004 that included $30 billion in hurricane losses alone. "Hurricane Katrina's impacts could far exceed those losses," the authors state.

These rising losses are having a visible effect on the profitability of U.S. insurers. U.S. catastrophic losses have grown 10 times faster than premiums since 1971, not counting the thousands of small weather events with under $25 million in insured losses that are not considered catastrophic.

The National Association of Insurance Commissioners (NAIC) was scheduled to discuss the implications of climate change on the insurance industry at its fall meeting scheduled for September 10-13 in New Orleans. The meeting was canceled due to Hurricane Katrina, and the climate change discussion was rescheduled for the NAIC's winter meeting in December.

(ENS – 9/13/05)

$53 MILLION PLANNED FOR VERY HIGH EFFICIENCY SOLAR CELLS

To more than double the efficiency of solar cells within the next 50 months, a broad consortium led by the University of Delaware could receive nearly $53 million in funding, with the bulk of the money coming from the Defense Advanced Research Projects Agency (DARPA).

The University's Consortium for Very High Efficiency Solar Cells, which consists of 15 universities, corporations and laboratories, could receive up to $33.6 million from DARPA, if all options are awarded, and another $19.3 million from the University of Delaware (UD) and corporate team members.

Those corporate members may include DuPont, BP Solar, Corning Inc., LightSpin Technologies and Blue Square Energy.

The consortium is led by Allen Barnett, principal investigator and research professor in UD's Department of Electrical and Computer Engineering, and Christiana Honsberg, co-principal investigator and UD associate professor of electrical and computer engineering.

The award is the largest in the history of solar energy research, according to Rhone Resch, president of the Solar Energy Industries Association. "I applaud DARPA for recognizing the tremendous potential of solar energy to provide reliable electricity to our troops in the field and to improve our energy security here at home," Resch said.

The DARPA program calls upon the consortium to develop and produce 1,000 Very High Efficiency Solar Cell (VHESC) prototypes that are affordable and that operate at efficiencies of at least 50 percent. Currently, high-end solar cells operate at a peak efficiency of 24.7 percent, and solar cells off the production line operate at 15 to 20 percent efficiency.

The consortium's goal is to create solar cells that operate at about 54 percent efficiency in the laboratory and 50 percent in production, Barnett said.

To achieve high efficiency in less than five years at low cost, Barnett and Honsberg have proposed using a new very high performance crystalline silicon solar cell platform and then adding multiple innovations. They had been working on very high efficiency solar cells long before learning of the DARPA program.

An important new feature is based on novel approaches to the integration of the optical, interconnect and solar cell design to provide for affordability and also flexibility in the choice of materials and the integration of new technologies as they are developed.

"By integrating the optical design with the solar cell design, we have entered previously unoccupied design space that leads to a new paradigm about how to make solar cells and how to use solar cells, and about what they can do," Barnett said.

(ENS – 11/4/05)

TECHNOLOGY UPDATES *(Continued)*

GLOBAL WARMING STUDY FORECASTS WATER SHORTAGES

A warmer world is virtually certain to be much thirstier, too, according to a new study by West Coast researchers of the impact of global warming on water supplies.

Climate-change experts led by Tim Barnett at the Scripps Institution of Oceanography in La Jolla found that at least one-sixth of the world's population, including much of the industrial world and a quarter of global economic output, appeared vulnerable to water shortages brought about by climate change. Details appeared in the journal Nature on Nov. 17.

Most experts see a clear warming trend over much of the world, although regional effects may vary. All leading computer models of the global climate system indicate that natural variability is not enough to explain the changes being observed, causing most observers to conclude that human activities – notable the emission of carbon and other heat-trapping greenhouse gases – are the culprit.

Earlier work by Barnett and others has documented the regional effect of climate change on California, much of which depends on seasonal snowmelt in the Sierra Nevada to keep water taps flowing and farmlands irrigated.

The latest study was an attempt to expand the regional study to encompass the entire globe, by identifying areas most likely to feel the pinch of declining water supplies because of their reliance on glacial meltwater and snowmelt.

Barnett and his colleagues – Jennifer Adam and Dennis Lettenmaier of the University of Washington – excluded some areas, among them watersheds of the Colorado River in the western United States and the Angara River in Asia, where reservoir-storage capacity was judged large enough to "buffer large seasonal streamflow shifts."

Some heavily populated areas downstream of clearly runoff-dependent regions also were excluded – even though they, too, would most likely suffer – simply because the scientists lacked a reliable data source.

Despite this conservative approach, Barnett said in an interview, he was a bit taken aback by the extent of the world map falling within the climatic red zone of impending water difficulties.

"This shows a rather dramatic region, a surprisingly large part of the Earth where you would expect to have serious water-supply problems in the next several decades," Barnett said.

The warming trend is already showing effects in California's Sierra Nevada snowpack.

Climate models suggest average temperatures in the West will be about 1 to 3 degrees warmer by 2050 than at present. Even though total precipitation is not expected to change by much, because of the higher temperatures more of it will come as rain rather than snow. At the same time, the spring runoff will come about one month earlier in the year.

Bonner Cohen, a senior fellow at the conservative National Center for Public Policy Research in Washington, said it would be only prudent for water planners in the zone Barnett identified to expand their storage capacity – just in case.

"The one word of skepticism I have on these studies is that ultimately we are talking about modeling, and modeling just doesn't have a good track record for predicting the future," he said. "Basing public policy just on climate models can be a very, very risky business. I would be very dubious selecting one study, no matter how well peer-reviewed, predicting the climate 25, 50 or 100 years into the future, when there are so many factors involved in the climate that at this point are so poorly understood."

A separate study in Nature, by P.C.D. "Chris" Miller of the U.S. Geological Survey and colleagues, added some credibility on that score, suggesting that "an ensemble" of 12 computer climate models all pointed in essentially the same troubling direction: less available water for a warming planet.

(By Carl Hall – San Francisco Chronicle/Philadelphia Inquirer – 12/4/05)

EPA AWARDS $517,000 TO PARTNERSHIP FOR THE DELAWARE ESTUARY

The U.S. Environmental Protection Agency has awarded a $516,966 grant to the Partnership for the Delaware Estuary for education, outreach and habitat and water quality improvements.

"This partnership effort exemplifies how government and private organizations can come together to support vibrant programs to protect and enhance the critical Delaware Estuary that provides habitat to numerous wildlife species," said Donald S. Welsh, regional administrator for EPA's mid-Atlantic region.

The funding will support several educational and restoration projects including an annual teachers' workshop, helping to restore and protect 1,200 acres in the Delaware Estuary study area and monitoring water quality.

The Partnership for the Delaware Estuary is a non-profit organization founded in 1996. Its mission is to lead collaborative and creative efforts to protect and enhance the Delaware Estuary and its tributaries.

The Delaware Estuary region is where salt water from the Atlantic Ocean and fresh water from the Delaware River and its tributaries mix. This mixture of water types creates a unique environment that is critical for the survival of many species of fish, birds, and other wildlife. The area provides safe spawning grounds and nurseries for fish and shellfish, ideal resting and refueling places for migratory birds, and habitat for many reptiles, amphibians and mammals.

To find out more about the Delaware Estuary program and the Partnership for the Delaware Estuary go to www.delawareestuary.org or call the Partnership Office at 1-800-445-4935.

(EPA – 11/30/05)

ATMOSPHERIC CARBON DIOXIDE HIGHEST IN 650,000 YEARS

Levels of atmospheric carbon dioxide are the highest they have been in 650,000 years, according to the first in-depth analysis of tiny air bubbles trapped in an ice core from East Antarctica.

In two articles analyzing air from the ice core published in the journal "Science", European researchers have extended the greenhouse gas record back to 650,000 years before the present, adding 210,000 years to previous records.

One study chronicles the stable relationship between climate and the carbon cycle during the Pleistocene era, 390,000 to 650,000 years before the present. The second one documents atmospheric methane and nitrous oxide levels over the same period.

The analysis shows that today's rising atmospheric carbon dioxide concentration, at 380 parts per million by volume, is now 27 percent higher than its highest recorded level during the last 650,000 years, said "Science" author Thomas Stocker of the Physics Institute of the University of Bern, in Bern, Switzerland, who serves as the corresponding author for both papers.

"We have added another piece of information showing that the timescales on which humans have changed the composition of the atmosphere are extremely short compared to the natural time cycles of the climate system," Stocker said.

This 210,000 year extension of atmospheric carbon dioxide and methane records, encompassing two full glacial cycles, should help scientists better understand climate change and the nature of the current warm period on Earth. The record may also aid researchers in reducing uncertainty in predictions of future climate change and help to clarify when humans began significantly changing the balance of greenhouse gases in Earth's atmosphere.

(ENS – 11/25/05)

GUIDEBOOK DETAILS CONTROL OF URBAN RUNOFF POLLUTION

The Environmental Protection Agency has released a guidebook on managing runoff pollution caused by urban activities. National Management Measures to Control Nonpoint Source Pollution from Urban Areas is an information source for states and cities to use in their pollution-management programs for protecting waterways.

Nonpoint source pollution, unlike pollution from industrial and sewage treatment plants, comes from many sources. They include contaminated runoff from paved surfaces, malfunctioning septic systems, pet wastes, over-applled fertilizers and pesticides, improperly disposed household chemicals, and motor-vehicle fluids.

"Our guidance is a textbook and toolkit for cooperative conservation and sustainable management of urban and suburban runoff," said Benjamin H. Grumbles, assistant administrator for water. "Stormwater pollution can harm surface and groundwater, but this guidebook identifies effective ways to reduce pollution and increase low impact development."

Twelve management measures have been included in the guidebook. Such measures can help establish performance goals for storm water control programs. They are also useful in determining what to do to minimize other negative factors associated with urban runoff.

The management measures provide details about setting up a framework to manage urban pollution, including storm water management. The guidebook is free and available at: http://www.epa.gov/nps/urbanmm/. More information about nonpoint source pollution and urban runoff is at: http://www.epa.gov/nps.

(EPA – 12/8/05)

FEDERAL REGULATORY UPDATES

CHESAPEAKE BAY CLEANUP STALLS FOR LACK OF FUNDING

The federal program charged with directing the massive effort to clean up the Chesapeake Bay does not have a "comprehensive, coordinated implementation strategy" for restoring the nation's largest estuary, according to a new report from the U.S. Government Accountability Office (GAO).

The report, released in November, found bureaucratic failings with the Chesapeake Bay Program are "undermining the success of the restoration effort and potentially eroding public confidence and continued support."

The harsh criticism comes on the heels of further evidence that the health of the Chesapeake Bay continues to decline, despite more than three decades of restoration efforts.

The Chesapeake Bay Program is the engine behind the federal and state effort to clean up the Bay, which suffers from massive, unnatural influxes of nitrogen and phosphorous – largely from sewage wastewater, agricultural and urban runoff, and air pollution.

Formed in 1983 by Maryland, Virginia, Pennsylvania, the District of Columbia and the U.S. Environmental Protection Agency, the program is responsible for measuring the restoration effort and providing information to guide management and policy decisions.

It now includes Delaware, New York and West Virginia, as well as 12 federal agencies and a commission representing the watershed states' legislatures.

In 2000, these parties agreed to a detailed plan – known as Chesapeake 2000 - to cut the Bay's pollution in half by 2010.

The program lacks integrated approaches to measure success and has presented a murky picture of the cleanup effort that overstates progress, according to the GAO.

The report concludes that the program currently "cannot effectively present a clear and credible picture of what the restoration effort has achieved, what strategies will further Chesapeake 2000's restoration goals, and how limited resources should be channeled to develop and implement the most effective strategies."

It calls on the partners in the program to develop a coordinated implementation strategy and ensure limited resources are used to develop and implement "effective and realistic work plans."

The report touches on what many believe is the major reason the restoration effort is failing - lack of funding.

Some $6 billion has been spent since 1995, according to the GAO, but "estimates for the amount of funding needed to restore the bay far surpass these figures."

The report cites a 2003 Chesapeake Bay Commission report program that estimated the restoration effort faces a $13 billion funding gap to achieve the goals outlined in Chesapeake 2000.

The GAO report was requested by U.S. Senators Barbara Mikulski and Paul Sarbanes, both Maryland Democrats, and Virginia Republican John Warner.

The GAO report comes in the wake of the Chesapeake Bay Foundation's (CBF) annual report card that again warns the Bay is an ecosystem in peril.

"Today, more than halfway to the 2010 target date, instead of seeing significantly improved water quality we have a Bay that is dangerously out of balance and in critical condition," said William Baker, president of the conservation group.

The CBF report, released Monday, grades the health of the Bay a "D," with a health index rating of 27 - a long way from the organization's goal of reaching 40 by 2010.

The benchmark of 100 reflects the Chesapeake as described in the early 1600s, when clean water revealed meadows of underwater grasses, vast oyster reefs and abundant fish.

The goal of 40 is roughly in line with the benchmarks set out by Chesapeake 2000.

The report notes that this year's health index of 27 is unchanged for the third year in a row and has declined since 2000, when regional leaders reaffirmed support for cleaning up the Bay.

"The pace of improvement is glacial," the report said, "… and has stalled."

The foundation finds that thousands of miles of rivers and streams in the Bay's watershed are still impaired by pollution, in particular nitrogen and phosphorous.

These pollutants feed massive algae blooms that kill fish and Bay grasses, which provide vital habitat for the Bay's famous blue crabs.

Despite the gloomy news, the foundation says the fate of the Bay has not been sealed.

"Science has determined that successful, large-scale restoration of the Bay and its rivers is possible, but only if plans are funded, implemented and enforced," Baker said. "Our elected officials must act boldly, and they must act now. Band-aids will not stop the bleeding."

(By J.R. Pegg, ENS – 9/18/05)

EPA AGREES TO UPGRADE DRINKING WATER QUALITY RULES

Public health advocates reached an agreement with the Environmental Protection Agency (EPA) that ends years of delay in establishing safeguards against germs, parasites and toxic chemicals in drinking water across the country.

As a result of the agreement, filed in U.S. District Court in Washington, DC, the EPA will adopt three new rules for municipal water systems by next year, ensuring cleaner drinking water for all communities.

"Today's settlement requires EPA to strengthen health protections for the tap water that tens of millions of Americans drink and shower in every day," said Erik Olson, a senior attorney at the Natural Resources Defense Council (NRDC).

The agreement requires the EPA to adopt three new rules.

First, the agency must adopt, by December 15, a new rule requiring treatment and monitoring for suppliers drawing from surface waters. This is to prevent cryptosporidium and other parasites from contaminating tap water.

According to the Centers for Disease Control and Prevention, cryptosporidium is one of the most common causes of waterborne disease in the United States.

Second, the EPA agreed to adopt a rule limiting the acceptable level of toxins created by the drinking water disinfection process itself. Disinfection is necessary to remove bacteria and pathogens from water supplies, but without proper precautions it leaves behind byproducts that can cause cancer, and, potentially, miscarriages and birth defects.

Finally, EPA agreed to publish a rule no later than August 2006 requiring systems using groundwater to disinfect it when necessary.

After several serious outbreaks of waterborne diseases in U.S. cities, Congress amended the Safe Drinking Water Act in 1996 to, as EPA has stated, "provide strengthened protections to ensure that American families have clean, safe tap water."

The amendments required the agency to adopt regulations to reduce microbial pathogens within a specific time frame, but the deadline for a number of the final regulations has come and gone. The final rule for treating surface water sources was supposed to have been completed by 2000.

The EPA estimates its surface water treatment rule alone would prevent more than a million illnesses and as many as 141 deaths annually. The agency estimates its rule for toxic disinfection byproducts would prevent hundreds from dying from bladder cancer, would reduce the incidence of other cancers, and could cut the number of miscarriages from 4,700 to 1,100 a year.

(ENS – 9/21/05)

EPA PROPOSES TO HALVE TOXICS RELEASE INVENTORY REPORTING

The U.S. Environmental Protection Agency (EPA) is proposing new rules to expand the use of a shortened reporting form and to halve the frequency of reporting for facilities that must contribute information about their emissions to the public Toxics Release Inventory (TRI).

One proposed rule would allow about one in every three facilities that must contribute information about their emissions to the Toxics Release Inventory to use (Form A certification statement) rather than a longer form.

The proposal is expected to save 165,000 hours per year, while still ensuring full Form R (long form) reporting on over 99 percent of toxic releases and other waste management activities, the agency says.

The proposal provides new incentives to facilities to emit less in order to be able to use the shorter form, the EPA says.

This proposed action comes after evaluation by the agency, its stakeholders and reporting facilities to address concerns expressed by emitters about TRI reporting burden.

"Since TRI began in 1986, EPA has learned a great deal about the power that public informa-

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FEDERAL REGULATORY UPDATES *(CONTINUED)*

tion has to influence corporate behavior and empower communities, and we also have found new ways to use technology to reduce costs for everyone involved, improve data quality and speed the release of the information collected," said Kimberly Nelson, assistant administrator for the Office of Environmental Information and chief information officer for the EPA.

The proposed rule is part of an on-going effort to streamline TRI reporting. The EPA issued a final rule in July that revised the TRI reporting forms to eliminate information not used, and to make use of data already available in existing EPA information systems.

In addition, the EPA is notifying Congress of its plans to initiate a rulemaking that will require emitting facilities to report only once every two years, rather than once each year, as they are now required to do.

"Not only would alternate year reporting result in significant burden reduction for covered facilities, citizens would benefit from the redirection of federal and state taxpayer dollars to improve the quality, clarity, usefulness and accessibility of TRI information products and services," the EPA said.

Program savings during the non-reporting years would be reinvested to improve the TRI-Made Easy software, further reducing the burden on reporters. In addition, the EPA says it would conduct more analysis of the TRI data, making it more useful to citizens and communities.

Finally, the agency says it would invest in greater electronic reporting, including an Internet based TRI-Made Easy for all reporting companies.

"Electronic reporting to EPA enables us to provide even greater taxpayer savings as processing time diminishes," the agency said.

As the agency begins collecting information that will aid an analysis of the alternate year approach, we stand ready to consider all viewpoints on the issues and plan to convene meetings with TRI stakeholders to invite their views. Any changes that EPA may propose as a result of this notice will be done as part of a full notice and public comment rulemaking process.

Additional information, a copy of the proposal and notification to Congress will be available to the public at: http://www.epa.gov/tri/tridata/modrule/phase2.

(ENS – 9/22/05)

REMEDIATION GETS SMALL PERCENT OF BROWNFIELDS GRANT SPENDING

Remediation activities conducted at brownfield sites funded by the Economic Development Administration (EDA) appeared to be "incidental to the purpose of the overall project" and were supported by only 1.4 percent of the funding awarded to the projects, Congressional investigators said in a report issued in October.

In a report to Congressional committees, the Government Accountability Office (GAO), the investigative branch of Congress, said the remediation activates that were conducted most often consisted of the removal and disposal of materials containing asbestos, underground storage tanks, or lead-based paint.

Instead, EDA grants to brownfield sites most often funded infrastructure improvements, such as upgrades to water and sewer lines, construction of streets and curbs, or installation of signage and lighting.

The Economic Development Administration (EDA) Reauthorization Act of 2004 included a requirement that the GAO evaluate the agency's grants for the economic development of brownfield sites.

More than 450,000 brownfield sites - properties where redevelopment or reuse may be complicated by real or perceived environmental contamination - are scattered across the United States.

The GAO estimates that remediation activities were conducted at just 54 percent of EDA funded brownfield sites from fiscal year 1998 through 2004.

"Overall, we estimate that EDA used $4.8 million or about 1.4 percent of its grant funds to pay for remediation activities at 28 percent of the brownfield sites during this period," the GAO says.

Grantees, former property owners, or other agencies generally were responsible for most environmental remediation costs at these sites.

Data were not available on the reported economic development impact for most of the grants that GAO reviewed. Where data were available, the reported economic development data "varied significantly" when compared with initial project estimates for some grants.

"In some instances, permanent jobs or private sector investment estimates for proposed projects did not appear to be verified," the GAO reports. EDA regional environmental officers prepare environmental assessments to document a project's compliance with federal environmental requirements.

In three of six EDA regional offices, the GAO investigators noted that the regional environmental officer routinely recommended various types of special conditions be added to grant awards concerning the remediation of hazardous substances that provide more specific assurance on a project's compliance with environmental standards.

The GAO recommends that the Secretary of Commerce require all EDA regional offices to use special conditions concerning the remediation of hazardous substances and also ensure that EDA staff verify the estimated jobs and private-sector investment for proposed projects.

In commenting on a draft of this report, the Department of Commerce agreed with the report's findings and provided technical comments on the recommendations.

(ENS – 9/27/05)

MARYLAND WATER STANDARDS OK'D, TRIGGERING CHESAPEAKE CLEANUP

The U.S. Environmental Protection Agency (EPA) has approved new water quality standards for Maryland, setting in motion an interstate effort to control nutrients by regulating nitrogen and phosphorus pollution from wastewater treatment plants in the Chesapeake Bay watershed.

"Maryland's new water quality standards are a pivotal piece in our multi-state effort to increase nutrient controls across the Chesapeake Bay watershed," said Benjamin Grumbles, assistant administrator for EPA's Office of Water.

"Taking actions like these in collaboration with our Bay partners will help to provide the highest levels of protection and restoration for the nation's largest and most biologically diverse estuary."

EPA announced an unprecedented agreement with six states and the District of Columbia on December 29, 2004 to begin a coordinated permitting approach that will set permit limits on nutrients being discharged from more than 400 treatment facilities throughout the 64,000 square-mile watershed.

The permit limits are expected to annually reduce the discharge of 25 million pounds of nitrogen and 1.2 million pounds of phosphorus. The Maryland water quality standards trigger full implementation of the permitting agreement.

"Maryland's new state-of-the-art Enhanced Nutrient Removal based loading limits are consistent with the requirements of the Clean Water Act and will ensure that Maryland can achieve and maintain its nutrient reduction goals for the Chesapeake Bay and its tributaries," said Kendl Philbrick, secretary of the Maryland Department of Environment.

"Maryland's water quality standards are vital in our effort to preserve and restore the Chesapeake Bay and its irreplaceable cultural, economic and recreational resources. They are the basis of our water pollution control efforts and improve our ability to effectively regulate water quality in a scientifically sound manner."

For years, permits have required nutrient removal to achieve localized water quality standards. However, the lack of science-based and achievable water quality standards for the Chesapeake Bay has made it difficult for the states and EPA to regulate nutrient reductions needed to protect the Bay. The EPA has been working with states for several years to develop a basin-wide strategy for these nutrient permit limits.

The new strategy covers the entire watershed and describes how states and the EPA plan to develop permit limits based on the living resource needs of the Bay. States participating in the strategy include Maryland, Virginia, Delaware, Pennsylvania, New York and West Virginia and the District of Columbia.

The Chesapeake watershed already has about 100 municipal and six industrial facilities treating wastewater with nutrient removal technology to remove excess nitrogen and phosphorus. No other watershed in the country has more treatment facilities using this technology.
More information on Maryland's water quality standards can be viewed online at:
http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/wqstandards/index.asp.

(ENS – 9/6/05)

FEDERAL REGULATORY UPDATES *(CONTINUED)*

CONGRESS MOVES TO ALLOW EMINENT DOMAIN 'TAKINGS' FOR BROWNFIELDS

House and Senate lawmakers are moving to exempt Brownfield sites from pending legislation that would limit state and local governments' ability to take private property by eminent domain. Congress is pushing the legislation following the recent Supreme Court ruling upholding the governmental entities' eminent domain authority for economic development projects.

The House in November passed a bill, H.R. 4128, which would curb local governments' ability to exercise their eminent domain authority, but would allow state and local officials to invoke this constitutional authority in order to acquire and redevelop Brownfield sites. The move puts the House in line with the Senate, which recently approved a similar plan to exempt local governments that assert eminent domain over Brownfields sites from limits on federal redevelopment funds.

The exemptions are significant because they could help local governments take approximately one million contaminated sites across the country for redevelopment purposes.

The congressional push stems from the Supreme Court's 5-4 decision in Kelo v. City of New London, which upheld the city's constitutional right to assert eminent domain to acquire private property in the interests of economic development.

Conservatives, who are concerned about property rights, and liberals, who fear localities' broad eminent domain authority will unfairly impact the poor and minorities, have joined forces in Congress to limit state and local governments' ability to assert eminent domain.

But lobbyists representing state and local officials, who strongly object to federal limits to their eminent domain authority, say local officials need this authority to redevelop contaminated waste sites, which are often abandoned or held by private owners who are concerned about liability resulting from the pollution.

"The use of eminent domain is absolutely critical to a successful Brownfields program," a source representing local officials says.

While congressional efforts to limit eminent domain authority enjoy strong backing, acquiring Brownfield sites by exercising eminent domain appears to be one of the few exemptions that Congress is willing to provide to state and local governments.

The House Nov. 3 agreed by voice to attach an amendment offered by Rep. Gary Miller (R-CA) to exempt Brownfield sites from the bill's limits on assertion of eminent domain. "Owners of Brownfield sites are frequently unwilling to sell them for fear of cleanup and cost of contamination they find," Miller argued on the House floor. "Eminent domain can often help break through legal and procedural barriers to the sale of land."

Miller's amendment defines Brownfields sites as those that are specified under the Small Business Liability Relief & Brownfield Revitalization Act of 2001, which defines them as sites with real or perceived threats.

The House action comes on the heels of the Senate's adoption of an amendment by Sen. Kit Bond (R-MO) to the Department of Housing & Urban Development (HUD) spending bill, which would prohibit the use of funds for local government eminent domain activities. The Bond measure, which was adopted by voice vote in October, exempted Brownfield sites from the requirements.

Because of the overwhelming support in the House, observers say the Bond measure is likely to survive in the HUD spending bill, which could be enacted before Congress adjourns for the year, possibly as soon as the end of this month.

(Superfund Report – 11/21/05)

EPA RECEIVES MIXED REVIEWS FOR AAI DUE DILIGENCE RULE

EPA is receiving mixed reviews on its recently unveiled rule that outlines the steps prospective landowners must conduct in order to protect themselves from Superfund liability when redeveloping contaminated sites.

While EPA's all appropriate inquiry (AAI) rule satisfied one of the major concerns voiced by stakeholders – the qualifications for site investigators – other sources say there are still major issues with the rule.

At issue are the 2002 Brownfields amendments to federal Superfund law that required EPA to implement standards for conducting AAI, which describes the level of due diligence prospective purchasers of contaminated sites must conduct in order to secure exemptions from Superfund's stringent liability scheme. The rule will go into effect on November 1, 2006.

The rule requires such steps as interviews with past and present owners, operators and occupants of a given site; review of historical sources, such as aerial photographs and land use records; searches for environmental cleanup liens; and visual "walk-through" inspections.

One industry lawyer says one shortcoming in the rule is that it does not does not shield a prospective buyer from many other liabilities. "The bottom line is that I don't think AAI gives you a whole lot of protection," the source says. "You may have a defense under federal law, but not under state laws." The exemptions also do not apply to Resource Conservation & Recovery Act (RCRA) sites or other federal environmental laws, industry points out.

The lawyer also says the rule does not address toxic substances such as petroleum. "If there was petroleum on your property, you wouldn't be liable under Superfund …but the AAI defense doesn't do any good because you could be sued under RCRA," the source says.

A redevelopment source says the petroleum exclusion is not covered in the AAI rule, but says that it is due to a "structural flaw" in the Brownfields law, and therefore is Congress' fault. "Petroleum is a missing component of the law," says the source, who hopes the law will be revised.

Further, the industry lawyer says the rule requirements could boost the cost of real estate transactions and says the AAI requirements in general are overly burdensome. "A lot of steps have to be gone through in order to take advantage of AAI in the first place," says the source.

Another problem stemming from the rule is related to "data gaps," which must be filled in order for a site report to be complete. Data gaps consist of any area in a report where information is missing, such as interviews with previous site owners. Attempting to fill these gaps could extend the time period for the site assessments, potentially complicating the process for land developers, says one lawyer.

While the requirements based on criteria set forth by Congress. "There was a 10-point criteria given by Congress, which must be addressed by EPA," the source explains. And as for the rule's requirement for interviewing neighbors as well as past owners, "that's certainly something that Congress seemed to hint toward," the source says.

However, another developer is praising EPA for changing the final definition of an "environmental professional" – a site assessor – which the Agency was required by statute to define. After EPA's proposed rule was published in the Federal Register in August 2004, the Agency received more comments on the qualifications for environmental professionals than any other aspect of the rule. The concern stemmed from the fact that the proposal required a bachelor's degree, which many stakeholders said would disqualify site assessors with multiple years of field experience.

The final rule broadens the criteria to be an eligible site investigator by requiring either a state or tribal license or certification; a bachelor's degree in science or engineering and five years of field experience; or 10 years of full-time field experience. "It will allow more people to qualify … therefore the unit of cost (for environmental professionals) will go down," says the redevelopment source.

(Superfund Report – 9/21/05)

ASBESTOS AIR STANDARDS TO BE TIGHTENED

Standards for asbestos in air are proposed to be tightened by The Mine Safety and Health Administration, for those with potential occupational exposure to asbestos, working in surface mines or deep mines. Although not widely known in the Surface Mining industry, asbestos exposure has become an important issue, and EPA and other regulatory agencies are currently reexamining what types of materials are and are not considered "asbestos".

There are certain formations in Pennsylvania which yield asbestiform materials. Geologically, such materials are typically found in serpentinite formations. As crushing of rock from such formations can result in dust which would potentially be regulated, it is recommended that Pennsylvania surface mine owners and operators check to see if they mine any rocks which come from serpentinite formations.

The issue of what materials are and are not of

FEDERAL REGULATORY UPDATES *(CONTINUED)*

concern in that they may contain asbestos is subject to change in the next several months or years. Vermiculite, not previously considered to be an asbestos containing material, has been found to be of concern as it is recently come to be considered by regulatory agencies as an asbestos containing material.

Although regulated "asbestos fibers" were previously defined by size and fiber type, what is and what is not considered asbestos is subject to in-depth regulatory review at the current time, and, asbestos soil cleanup standards are being reviewed by federal regulatory agencies as well. Examples of Pennsylvania counties containing serpentinite formations in Pennsylvania are Berks County and Montgomery County, among others.

The actual change in the regulation reduces the asbestos content allowed in the air for workers in surface or deep mines to the similar occupational air concentrations in building indoor air for asbestos abatement workers and building occupants.

For more information see the Federal Register dated July 29, 2005.

(Reprinted from the 'PACA Scoop")

EPA PRESERVES PROGRAM TO MINIMIZE EMISSIONS OF NITROGEN OXIDES

Following an evaluation of the current program to minimize the impact of nitrogen oxides (NOx) emissions and prevent significant declines in air quality, EPA has found that the program is working and that no change is necessary.

The program, known as Prevention of Significant Deterioration (PSD), addresses the need to allow growth while maintaining air quality in areas that are already clean. Presently, the national ambient air quality standards for nitrogen dioxide (NO2) are being attained throughout the U.S.

"Significant deterioration" is defined as the maximum allowable pollutant concentration increase – also known as an "increment" – above an existing baseline concentration for an area. An increment is established for areas (e.g., counties) that states designate as attaining national air quality standard. Emissions increases that cause the increment to be exceeded for a given pollutant are not permitted.

While the final rule does not modify the existing increment system for NO2, it does recognize that states may continue to choose an alternative approach. The state must demonstrate that an alternative program satisfies Clean Air Act requirements and prevents significant deterioration from emissions of nitrogen oxides (NOx).

In February 2005, EPA proposed to allow states that choose to implement a federally administered cap and trade program for sources of NOx – such as the Clean Air Interstate Rule – to rely on those emissions reductions to prevent significant deterioration of NOx air quality. EPA is not taking final action on that proposal in this rule.

Interested parties can download the final rule from EPA's web site at http://www.epa.gov/nsr .

(EPA – 9/29/05)

SECOND CIRCUIT RULING ALLOWS ALTERNATIVE SUPERFUND COST RECOVERY

A federal appellate court earlier this month became the nation's first to approve the use of Superfund section 107 as a means for a liable party to recover voluntary cleanup costs in light of the Supreme Court's landmark Aviall decision, which limited use of what was the standard Superfund cost recovery provision.

Industry attorneys are hailing the 2nd Circuit Court of Appeals' decision as an important breakthrough, since most appellate courts had previously ruled that section 107 could only be used by the government or by innocent parties who had been held liable for cleanup costs. While numerous Superfund attorneys had cited section 107 suits as a possible means of recovering cleanup costs in light of the limitations Aviall imposed on use of the other provision, section 113(f)(1), most speculated that appellate courts would be unlikely to reject previous precedent restricting 107's use to the government and innocent landowners.

One industry attorney also says the decision embodies "the easiest judicial fix to the problem" created when Aviall limited the use of Superfund's other main cost recovery provision.

In the Sept. 9 decision in Consolidated Edison Co. v. UGI Utilities, the court says, "We hold that section 107(a) permits a party that has not been sued or made to participate in an administrative proceeding but that, if sued, would be held liable under section 107(a) to recover necessary response costs incurred voluntarily, not under a court or administrative order or judgment. " The decision is available on InsideEPA.com. See page 2 for details.

Since the Supreme Court's Aviall ruling, which said companies could not use section 113(f)(1) to recover cleanup costs unless they were first sued by the government, industry has been asking courts to revisit prior precedent on section 107, and a number of federal district courts have approved using the provision given the high court's limitation on section 113 at sites where potentially responsible parties (PRPs) voluntarily clean up contamination. Industry and EPA have raised concerns that Aviall would discourage PRPs from voluntarily cleaning up contaminated sites, which both have credited with speeding cleanups and reducing litigation and transaction costs.

Section 107(a) says parties are liable for Superfund remedial and removal costs incurred by the government and for "any other necessary costs of response incurred by any other person" who complies with Superfund cleanup requirements, but does not directly authorize cost recovery lawsuits. Courts have granted an implied right of contribution under the section. Section 113(f) (1) says liable parties can sue one another for cleanup costs "during or following any civil action."

The 2nd Circuit's decision represents the first appellate ruling to explicitly endorse section 107 given the Aviall limitations, and distinguishes the use of section 107 in Consolidated Edison from the circuit's prior ruling rejecting 107 use for liable parties, in Bedford Affiliates v. Sills. It also comes after a May ruling in the same circuit in Syms v. Olin Corp. that invited a lower court to reconsider the jurisdiction's limitations on 107 use for liable parties because Aviall had restricted their ability to pursue voluntary cleanups.

The ruling will also prevent decisions like the U.S. District Court for the Southern District of New York's earlier this year in Elementis Chemicals v. TH Agriculture, where the court would not approve a section 107 claim because the 2nd Circuit at that time had not overruled its own precedent in Bedford Affiliates.

And the decision may foreshadow another fight at the Supreme Court level over the availability of section 107 in light of Aviall if other appellate circuits are unwilling to revisit precedent on the section's use, forcing the high court to resolve whether PRPs can use the provision to recover cleanup costs when they voluntarily remediate contamination.

(Superfund Report – 9/26/05)

EPA PLANS FURTHER VAPOR INTRUSION REVISIONS AMID NEW CRITICISM

EPA plans to convene a public meeting in the spring to discuss revisions to its controversial vapor intrusion guidance, following criticism from agency scientists and others that the implementation of the risk assessment tool the guide is based upon may lead to uncertainties of the human health risks posed by the chemical vapors.

The planned meeting comes as EPA scientists are raising new concerns over the guide, which estimates human health risks posed by indoor chemical vapors from soil and groundwater.

Henry Schuver of EPA's Office of Solid Waste told attendees of a recent redevelopment conference in Cambridge, MA, that a peer-review of EPA's spreadsheets used to plug data into the risk tool will be held in San Diego on March 6, 2006, where a "revised Web model and users guide" will be discussed.

Vapor intrusion results when harmful chemicals release into the air from polluted land or groundwater under buildings. EPA and a handful of states – including New York, Minnesota, New Jersey, and California – have developed draft guidance for determining the risks of vapor intrusion.

Industry has raised questions about whether EPA has the authority to regulate indoor air. A draft guidance for detecting vapor intrusion released in November 2002 has been strongly criticized by industry as overly conservative, and the agency has struggled with the scope of the guidelines and whether to consider the future use of contaminated properties when deciding cleanup requirements, among other issues. A revised guidance is expected by the end of the year, which will likely include advice for detecting future contamination from vapor intrusion.

Now, scientists from EPA's National Exposure Research Laboratory (NERL) are raising concerns that the Johnson-Ettinger model used for screening decisions – which is the basis for EPA's spreadsheets – does not take into account

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some uncertainties of the risks posed by vapor intrusion. Because the data submitted, entered in the model does not necessarily take into account site-specific details, such as indoor air concentrations, the scientists argue that developers and others are not given an accurate portrayal of the potential risks.

The NERL report, Uncertainty and the Johnson-Ettinger Model for Vapor Intrusion Calculations, which EPA posted on its Web site earlier this month, recommends that developers and others use software that provides an "automated uncertainty analysis." "By performing an uncertainty analysis, as presented here, a range of potential outputs is revealed to the decision maker," the document says. "An informed choice can then be made concerning the risks simulated by the model."

But Robert Ettinger, co-designer of the Johnson-Ettinger model, defended the risk assessment tool during the redevelopment conference, saying it was the spreadsheet portion added to the model by EPA that was causing confusion and prompting criticism. "It is the risk assessment results, not the Johnson-Ettinger model" that is the issue, Ettinger said Oct. 19. "There have been concerns raised by a variety of people … not necessarily because of the model, but because of the application or the interpretation. It's an issue of understanding all inputs required for the use of the method."

Lisa Voyce, an environmental scientist at the New Jersey Highlands Council, a governor-appointed panel charged with implementing the state's regional land-use plan, acknowledge there are problems with the Johnson-Ettinger model, but agreed that improper implementation was generating concerns. "There are problems with the way people utilize the Johnson and Ettinger model … often because people who shouldn't be doing models are doing it," she said at the conference.

While Ettinger acknowledged that some people are not comfortable with using models in general, he said that models can be useful for assessing what the potential impact could be for a particular site. "There is a place for the use of models and the need to take it on a case-by-case basis," he said.

(Superfund Report – 10/24/05)

EPA PROPOSES FINE PARTICLE STANDARDS

As part of the nationwide effort to improve air quality, EPA is proposing the steps state, local and tribal governments can take to reduce fine particle pollution (PM2.5) in areas that do not meet EPA's health-based standards.

"In our steady march toward cleaner air, EPA continues to provide communities with the tools to address their air quality needs," EPA Administrator Stephen L. Johnson said. "New clean air rules will reduce pollution from power plants, industrial facilities, and on- and off-road vehicles and equipment. As these rules take effect over the next decade, EPA projects that air quality will improve across the country, helping to ensure that all Americans can work, exercise, and play in cleaner, healthier air.

The proposed rule, known as the PM2.5 Implementation Rule, describes the planning framework and requirements for state, local, and tribal governments to consider when developing their plan to reduce air pollution to meet the PM2.5 standards. Areas meeting the standard must show how they will ensure that PM2.5 levels remain below the standards.

Reducing fine particle pollution is a critical element of the Administration's comprehensive national clean air strategy and will result in deep and sustained reductions in air pollution. The strategy includes EPA's recent Clean Diesel Program to reduce pollution from highway, nonroad and stationary diesel engines, the Clean Air Interstate Rule to reduce pollution from power plants in the eastern United States, and the Clean Air Visibility Rule

PM2.5 – approximately 1/30th the size of an average human hair – has been associated with a variety of serious health problems including cardiovascular disease, chronic bronchitis, and asthma attacks.

EPA issued the PM2.5 standards in 1997 and designated areas as attainment or nonattainment with the standard in December 2004. Nonattainment areas must meet the standards by 2010.

It is estimated that meeting these standards will prevent at least 15,000 premature deaths; 75,000 cases of chronic bronchitis; 10,000 hospital admissions for respiratory and cardiovascular disease; hundreds of thousands of occurrences of aggravated asthma; and 3.1 million days when people miss work because they are suffering from symptoms related to particle pollution exposure.

For more information, visit:
http://www.epa.gov/pmdesignations.

(EPA – 9/9/05)

NATIONAL EMISSION STANDARDS FINALIZED FOR HAZARDOUS WASTE COMBUSTORS

On Sept. 16, EPA announced it is issuing final emission standards for hazardous waste combustors that seeks to remove mercury, lead, particulate matter, arsenic and other hazardous pollutants from the environment. The National Emission Standards for Hazardous Air Pollutants reduce emissions from incinerators, lightweight aggregate kilns, boilers and process heaters, and hydrochloric acid production furnaces, known collectively as hazardous waste combustors. EPA estimates that 145 facilities operating 265 existing hazardous waste burning devices will be affected by this rule, which requires them to use the maximum achievable pollution control technology (MACT).

EPA's technology-based standards will reduce emissions of hazardous pollutants including lead, mercury, particulate matter, arsenic, dioxin and furans, and hydrogen chloride and chlorine gas. EPA believes that better control of air pollutants will result in fewer cases of chronic bronchitis, reduced hospitalization for severe respiratory conditions and cardiovascular problems in adults and children, and fewer cancer cases. The rule protects vulnerable populations living near hazardous waste burning facilities from the effects of hazardous air pollutants.

This rule becomes effective 670 days after publication in the Federal Register. For more information on this final rule, visit
http://www.epa.gov/epaoswer/hazwaste/combust/finalmact/index.htm

MICHIGAN GROUP EYES SUIT AFTER EPA REJECTS BID TO BAN AUTO LEAD WEIGHTS

A Michigan environmental group is threatening to sue EPA after the agency rejected the group's petition to ban lead wheel-balancing weights in automobiles, saying the advocates had failed to provide sufficient data to support their claim that the weights create an environmental risk.

A state source says EPA'a denial could also propel efforts to pass stalled legislation in Michigan and other states, as well as help make the case for federal legislation.

The group's effort comes as several large automobile manufacturers, including Ford and General Motors, are already in the process of converting to alternative materials because European and Japanese regulators are moving toward requiring less-toxic alternatives.

However, domestic tire and lead industries, whose members would face increased costs if they were forced to use alternative materials, are opposing the effort, arguing that there is insufficient data to justify a ban and do not believe reliable, cost-effective alternatives exist.

The Ecology Center, based in Ann Arbor, MI, argued to EPA in a petition earlier this year that lead wheel weights break down on roads causing air, soil and storm water contamination. The group called on EPA to exercise its authority under the Toxic Substances Control Act (TSCA) to ban lead weights, noting that manufacturers have a slew of less toxic alternatives available.

The group's petition drew backing from steel recyclers, who argue that without a ban, scrap processors have very little incentive to remove the lead weights from cars before shredding because the lead is of little commercial value and not worth the time needed to remove the weights. However, removing the weights would limit emissions and hazardous waste releases from steel mills where scrap automobiles are processed.

However, EPA said in a response letter that there wasn't enough data to make such a claim. "EPA finds that there are insufficient data available … The petition contains very limited, uncertain evidence on the potential environmental releases from lead wheel balancing weights to the air, surface water, ground water and soil (particularly regarding potential releases in the proximity of roadways and potential releases to particularly sensitive environments or human ecological populations)," the letter states.

EPA listed numerous areas where additional data was needed in order to determine whether lead weights create an unreasonable human health or environmental risk. Gaps the agency says should be filled include: the number of sites and workers involved in the manufacture, use,

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recycling and disposal of the weights and any associated exposures, the contribution of lead from weights deposited on roads that enter environmental pathways, and the percentage of deposited lead that enters each pathway to determine which pathways are of concern.

The Tire Industry Association (TIA), an international group representing tire manufacturers and retailers, also says there is not enough evidence to support a lead weight ban. "TIA has met with EPA numerous times on this issue and has yet to see any facts that would necessitate a ban on lead wheel weights. TIA believes any ban should be based on sound science," the group stated in a July 5 letter to EPA.

(Superfund Report – 9/12/05)

SAB REVIEW OF ARSENIC STUDY MAY FORCE CHANGES TO EPA STANDARDS

EPA science advisers are questioning data the agency relied on when developing the risk assessment supporting its strict drinking water standard for arsenic due to take effect next year – which could undermine the drinking water regulations, product safety requirements and cleanup targets at hazardous waste sites.

The development could also boost arguments by a slew of industry sectors – including mining, pesticide, wood treatment and others – that there are "safe" levels of arsenic exposure that warrant relaxed cancer estimates.

Following recommendations from industry officials during an Aug. 11 teleconference, a panel of EPA's Science Advisory Board (SAB) agreed to accept suggestions from the panelists on how to integrate additional studies on arsenic risks into EPA's assessments.

Industry representatives argues that the panel should reconsider a question in the charge for the SAB's evaluation related to the water office decision to base its arsenic cancer estimates on data from Taiwan, given the slew of other epidemiological studies available. An industry source says EPA needs to consider the weight of evidence as a whole, including studies from Argentina and Finland, which do not demonstrate the same level of risk as the Taiwanese studies.

Another industry source says the Taiwanese data are "really flawed and not very representative' given differences in nutritional status and water intake between the U.S. population and Southwest Taiwan, where diets are typically based on rice and sweet potatoes.

In this case, the SAB panel is charged with advising EPA on reconciling an Office of Water (OW) assessment of inorganic arsenic used to back the agency's drinking water standard with a competing assessment of organic arsenic conducted by the office of the Pesticide Programs (OPP), which it developed to evaluate several herbicides and defoliants the pesticide industry is seeking to register.

But EPA's effort has been hampered by OW's stricter cancer estimates for the metal compared with OPP's recommendation that a "safe" level of exposure exists for the contaminant, agency and industry sources say. According to one industry source, OW may increase the cancer risk estimates three- to five-fold based on preliminary conclusions. EPA water and waste sources fear that if two risk assessments are approved by the SAB, then the need for compliance with the drinking water standards and cleanup levels.

EPA officials are defending the Taiwanese data, saying a 2001 National Academy of Sciences study on the drinking water standard said the data remain the most suitable for risk assessment of inorganic arsenic. The sources say the data have been continually updated and have a number of strengths, such as the range of health effects that medical personnel carefully measured.

An EPA source is also downplaying any changes to the SAB charge, saying, "questions regarding the mechanism of action for inorganic arsenic are covered in the charge despite what the public commentors said." The source concedes, however, that "thee has clearly been a lot of debate about whether [OW and OPP] should take different approaches and what the scientific justification" for that may be.

Industry sources say they would welcome a broader SAB scope, noting that EPA is pursuing a risk assessment for children's arsenic exposure on decks and playsets that is exposing them to unwarranted legal claims. "The plaintiff's bar has recommended that the industry pay for dismantling all structures, pay for the coating of all existing structures and for lifetime medical monitoring of the exposed population" based on EPA's work.

An industry source says EPA is attempting to "close the book" on arsenic prematurely because of the upcoming deadlines for water regulations, which could be questioned if the agency adopts separate risk assessments for the metal.

(Superfund Report – 8/29/05)

FOUNDRY HAZARDOUS WASTE RULING

On October 12, 2005, EPA Administrative Law Judge William Moran entered an Interim Order dismissing a 13-count RCRA enforcement case filed by EPA-Region III against a Pennsylvania gray iron foundry, in a dispute centered upon "baghouse dust" generated by the foundry cupola operation. The baghouse dust had tested hazardous for lead and cadmium using the TCLP test, but the Judge found after testimony that the baghouse dust was "fly ash waste" or "flue gas emission control waste" generated primarily from the combustion of the coke, a fossil fuel. As a result, the Judge ruled that the baghouse dust was exempt from hazardous waste regulation under RCRA Subtitle C until such time as EPA submits a report to Congress justifying RCRA regulation of the material and promulgates regulations to do so. Because EPA had not done so, the Judge ruled that EPA was without authority to pursue the foundry under Subtitle C hazardous waste regulations. This is the second time EPA has pushed this issue of the RCRA status of foundry fly ash to a decision before its administrative law judges and the second time the Agency's position was rejected. A nearly identical decision was entered in 1993 in *In re Wheland Foundry, Inc.*, a case involving another gray iron foundry in Tennessee. The *Wheland Foundry* decision was vacated as part of a settlement EPA reached with the foundry operator shortly after the decision was issued.

RULE EASES ULTRA-LOW SULFUR DIESEL TRANSITION

To facilitate the transition to ultra-low sulfur diesel fuel (ULSD), EPA is providing a 45-day extension for terminals and retail outlets to comply with the 15 ppm standard, moving the retail compliance date to Oct. 15. During this extended transition period, diesel fuel meeting a 22 ppm level can be marketed as ULSD at the pump. The agency does not expect to adjust the schedule again.

This 45-day extension does not affect the start date for refineries to be producing ULSD fuel. The reason for the extension is that some in the fuel distribution industry had indicated that on the current schedule, ULSD may not be available at a small number of retail outlets. The impacts of the recent Gulf Coast hurricanes are not a factor in today's action.

The revised transition dates will cause some manufacturers of diesel engines and vehicles to delay their introduction of the 2007 models that must use ULSD exclusively. However, because these changes will help ensure the universal availability of ULSD, the engine and vehicle industry has indicated that these limited changes are acceptable. Today's direct final rule helps ensure that the full environmental benefits of this historic Clean Diesel program will be achieved. More information is available at:
http://www.epa.gov/otaq/regs/fuels/diesel/diesel.htm#dfr-concurrent

EPA ADOPTS AMENDENTS TO AIRCRAFT ENGINE EMISSION STANDARDS

EPA is amending its existing emission standards for nitrogen oxides (NOx) for new commercial aircraft engines. Nearly all aircraft engines previously certified or in production already meet or exceed the new, more stringent standards, which will apply to engines used on commercial aircraft for small regional jets, single-aisle aircraft, twin-aisle aircraft, and 747s and larger aircraft. General aviation and military aircraft using commercial aircraft engines subject to this rule will also contribute to NOx emission reductions. Today's action will bring the United States aircraft standards into alignment with international standards, which became effective in 2004. The rulemaking and related documents are available at:
http://www.epa.gov/otaq/aviation.htm

MINOR CHANGES MADE TO EPA FUEL ADDITIVE PROGRAM

The gasoline deposit control program, established in July 1996 to ensure U.S. gasoline supplies contain detergent-like additives to reduce tailpipe emissions, has been amended to improve compliance and maintain the environmental ben-

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efits of the program. The minor revisions include clarification of maximum concentration levels of fuel deposit control additives and changes to reporting requirements. As a result of this program, vehicle emissions of carbon monoxide, hydrocarbons, and nitrogen oxides have been reduced by more than 595,000 tons annually. For more information, visit:
http://epa.gov/otaq/additive.htm

EPA FINALIZES RULE TO HELP STATES REDUCE OZONE POLLUTION TO MEET STRONGER FEDERAL STANDARDS

As part of the nationwide effort to improve air quality, EPA issued rules and guidance to state, local and tribal governments on how to develop plans to reduce ozone pollution in areas that do not meet EPA's health-based standards.

The Phase 2 Ozone Implementation Rule outlines emissions control and planning requirements for states to address as they develop their plans showing how they will reduce ozone pollution to meet the 8-hour ozone standard.

The reduction of ozone pollution is an important element of EPA's national clean air strategy. The strategy includes EPA's recent Clean Diesel program to reduce pollution from highway, nonroad and stationary diesel engines, the Clean Air interstate Rule to reduce pollution from power plants in the eastern United States, and the Clean Air Visibility Rule that cuts emissions to protect visibility in national parks, wildlife refuges, and wilderness areas.

The Phase 2 Rule requires states to demonstrate through modeling that nonattainment areas will attain the 8-hour standard as expeditiously as practicable. These demonstrations must include data on reasonably available control measures and reasonably available control technologies. The rule also outlines new source review requirements for areas not meeting the 8-hour standard.

The Phase 2 Rule also includes a requirement that certain areas now using cleaner-burning reformulated gasoline (RFG) must continue to use RFG until they meet the 8-hour standard and are designated as attainment. In addition, areas that were previously reclassified as "severe" for the 1-hour standard, and did not attain the 1-hour standard before it was revoked, must continue to use reformulated gas at least until they attain the 8-horu standard.

For more information on this action, visit: http://www.epa.gov/ozonedesignations

ENERGY LAW MAY LIMIT EPA ABILITY TO FUND STATE STORAGE TANK CLEANUPS

The recently signed energy law may prevent EPA from distributing federal cleanup funds to states that fail to meet the law's stringent new provisions for leaking underground storage tanks (UST) because the majority of states cannot comply with the requirements, state and EPA waste officials say.

Cliff Rothstein, director of EPA's UST program, said Oct. 27 in Bethesda, MD, at the Association of State & Territorial Solid Waste Management Officials (ASTSWMO) annual meeting that the UST office is consulting with agency lawyers to determine how much "flexibility" the agency has in distributing funds to state tank programs.

It is unclear whether the law – signed by President Bush in August – requires states to meet all the new requirements to receive any federal funding, Rothenstein said. He said by late November the UST office and state waste officials are hoping to resolve questions about the legal interpretation of the UST provisions in the act, and possibly begin developing a legislative strategy with EPA's congressional affairs office to change the law if necessary. ASTSWMO sources say as few as two states will be able to meet the new requirements.

The Energy Policy Act of 2005 requires states for the first time to conduct routine inspections of tanks every three years, and for EPA to publish guidelines that specify training requirements for those with responsibility for inspecting tanks for proper maintenance and leaks. In the past, tanks were inspected on average every four to 10 years, and both state government and industry sources expect states will have to hire and train new inspectors to meet the requirements. The provisions are among the first changes to the UST rules since 1988.

Provisions in the act also make it unlawful by August 2007 to deliver, deposit into, or accept a regulated substance into a UST at a facility that has been identified as ineligible for fuel delivery or deposit. EPA is required to determine which tanks are ineligible for this acceptance of a regulated substance.

Additionally, states must now choose between secondary containment requirements or financial responsibility measures, which can force manufacturers and tank installers to provide evidence that they can help pay corrective action costs directly related to a faulty tank part or installation. Prior to the energy law's enactment, 22 states had implemented their own laws on secondary containment to limit leaks, which EPA had the authority to require but never mandated, sources say.

UST funding has been a major concern for state and local government in recent years, with Congress appropriating limited funds from what is authorized annually, sources say. The energy law authorizes $200 million each year through fiscal year 2009 from a UST fund created by a tax on industry and currently exceeds $2 billion. However, lawmakers in recent years have been resistant to provide more than $70 million annually.

But industry and local government organizations appear united in their push to increase spending levels, as a diverse group of interests are beginning lobbying efforts to ensure Congress increases funding for state programs. Sources say that without increased funding, the provisions could create an unfunded mandate for states.

EPA sources also say that without technical changes to the energy act and the new transportation act – which the president also signed into law in august – funding for state UST programs will be further complicated in the coming years. The energy act only allows use of the UST funds for previous regulations, while the transportation law calls for funds collected under the industry tax to be added to the EPA general fund instead of the UST trust fund, EPA sources say. The agency's congressional affairs office will likely have to address the issue through the House and Senate tax committees, the sources say.

(Superfund Report – 11/7/05)

EPA PROPOSES TO HARMONIZE NEW SOURCE REVIEW WITH EXISTING CLEAN AIR PROGRAMS

EPA is proposing a draft rule to ensure the New Source Review (NSR) program is more compatible with current air pollution control programs that protect public health and the environment. Through the clean Air Interstate Rule, the Clean Air Visibility Rule and the acid Rain program, EPA has set a permanent cap on power plant emissions. The proposal provides the nationally consistent regulatory framework to assure NSR complements the programs that achieve these significant emissions reductions.

"We are committed to results and making sure we achieve 70 percent emissions reductions from power plants," said EPA Administrator Stephen L. Johnson. "This rule will provide facilities clearer and simpler rules for operating safely, efficiently and affordably. We'll see deeper, faster, and more efficient emissions reductions."

The proposed rule would establish a uniform emissions test for existing power plants nationwide by adopting the test used under the Clean Air Act's New Source performance Standards (NSPS). A uniform nation-wide emissions test for the NSR program provides regulatory clarity and certainty needed to aid the sooth and effective implementation of these programs.

As a result of a U.S. Fourth Circuit Court of Appeals decision, an NSPS-style emissions test currently applies for the NSR program in five states. This proposed rule addresses the court decision by ensuring that the NSR program is implemented consistently across the country.

Under the amended rules currently in place and under this proposal, new enforcement cases will be pursued if power plants increase capacity and trigger NSR. This proposal eliminates the disincentives and significant barriers to beneficial projects created under the old NSR rule. These proposed changes will increase power plant efficiency, reliability and availability of electricity for consumers and businesses to improve plant safety.

EPA is also proposing two other options for the new emissions test for consideration. In addition to the existing NSPS test, which compares the maximum hourly emissions achievable before and after a physical or operational change, the agency is proposing a second option that would adjust the NSPS test to compare maximum hourly emissions achieved after the change to those that actually had been achieved before the change.

The third option is an NSR emissions test based on the mass of emission per unit of energy output instead of hourly emissions. The propos-

FEDERAL REGULATORY UPDATES *(CONTINUED)*

al also solicits public comments on revising the NSPS emissions increase test using options two or three.

An Air emissions test is used to determine if a physical or operational change at a power plant will lead to emissions increases that could potentially require a facility to install pollution controls. The proposed rule applies only to existing electric generating units. New electric generating units will continue to be subject to current NSR preconstruction review requirements.

EPA will accept comment on this proposal for 60 days following publication in the Federal Register. For more information on this proposed rule, visit: http://www.epa.gov/nsr and this article by Associated Press writer John Heilprin.

(Env. Tip of the Week – 10/17/05)

SOLID WASTE INCINERATOR STANDARDS TO REDUCE 1,900 TONS OF AIR POLLUTION ANNUALLY

EPA is requiring new performance standards to reduce emissions of air pollutants from the last remaining category of waste incinerators requiring Clean Air Act regulation. The category is called "other solid waste incinerators" (OSWI). OSWI consist of very small municipal waste combustion units and institutional waste incineration units. The final performance standards will provide important improvements in protecting human health and the environment by reducing approximately 1,900 tons per year of air pollution from the estimated 248 incinerators estimated to be subject to the new standards.

Very small municipal waste combustion units are incinerators that burn less than 35 tons per day of municipal solid waste collected from residential, commercial, institutional, and industrial sources. Institutional waste incineration units are incinerators located at institutions – such as public or private schools, churches or civic organization – that burn solid waste generated on site. EPA has already issued regulations to control emissions from large municipal waste combustors (greater than 250 tons per day capacity); small municipal waste combustors (250 – 35 tons per day capacity); medical waste incinerators; and commercial and industrial solid waste incinerators.

These final standards will establish emission limits for the following nine air pollutants from these incinerators: particulate matter, sulfur dioxide, hydrogen chloride, nitrogen oxides, carbon monoxide, lead, cadmium, mercury and dioxins/furans. For additional information on this rule visit:
http://www.epa.gov/ttn/oarpg/t3/fact_sheets/32435oswi_fs.html

(EPA – 12/1/05)

EPA VEHICLE DIAGNOSTIC SYSTEMS REQUIREMENTS AND EVAPORATIVE EMISSIONS RULES UPDATED AND CLARIFIED

EPA finalized a pair of rules designed to clarify and update its existing vehicle On-Board Diagnostic (OBD) program and amend provisions of its evaporative emission regulations. The OBD clarifications will allow manufacturers of passenger vehicles, trucks and heavy-duty engines to choose one OBD system to satisfy federal and California state requirements. OBD systems detect excess emissions and potential vehicle repair needs and provide drivers with an early warning light when these situations arise.

In a separate rulemaking, EPA finalized amendments to provisions of its evaporative emissions regulations. EPA's evaporative emissions regulations detail the testing process motor vehicle manufacturers must follow to obtain emissions certification as required in the Clean Air Act. An evaporative emissions test detects the amount of hydrocarbon pollution that results when liquid fuel molecules evaporate and escape into the atmosphere. The final amendments will streamline the evaporative emissions test procedures for cars, trucks, pickups, minivans, SUVs, and larger trucks up to 14,000 pounds, and will harmonize EPA and California's evaporative emissions test procedures. In addition, the amendments will allow vehicle manufacturers and EPA to use more advanced testing equipment to test four-wheel and all-wheel drive vehicles. Finally, the action revises Vehicle Emission Control Information label requirements so that label information is up to date and more useful to all interested parties, such as EPA manufacturers and repair technicians.

For more information on EPA's OBD program, visit http://www.epa.gov/obd/regtech/light.htm For more information on EPA's evaporative emissions program, visit:
http://www.epa.gov/otaq/regs./ld-hwy/evap/

(EPA – 12/2/05)

EPA AMENDS OIL SPILL RULE

The Environmental Protection Agency proposed modifications and compliance extensions for the oil Spill Prevention, Control and Countermeasure (SPCC) rule.

EPA is proposing to streamline requirements for qualified facilities, qualified oil-filled operational equipment, and airport mobile refuelers. The proposal also offers a separate extension of the compliance date for farms and the removal of certain SPCC requirements for animal fats and vegetable oils.

In order to allow facilities that may be affected by the final rule the necessary time to apply the provisions, EPA is also proposing to extend the compliance deadline by which all facilities must prepare or amend and implement their SPCC Plan to Oct. 31, 2007. The agency also wants to provide members of the regulated community with sufficient time to understand the full impact offered in today's proposal in light of the information contained in the forthcoming "SPCC" Guidance for Regional Inspectors" document. Finally, the effects of the recent hurricanes on many industry sectors could have adversely impacted their ability to meet the upcoming compliance dates if no extension is provided.

The SPCC rule applies to non-transportation-related facilities that meet an oil storage capacity threshold and that could reasonably be expected to discharge oil into navigable U.S. waters. SPCC regulations require each owner or operator of such a facility to have a SPCC plan, certified by a professional engineer. The plan must address the facility's design, operation and maintenance procedures for preventing discharges as well as countermeasures to mitigate effects in case of discharge.

For more information on Spill Prevention, Control and Countermeasure Plans, go to:
http://www.epa.gov/oilspill/index.htm

(EPA – 12/2/05)

EPA RELEASES PLAN TO TEST ALTERNATIVE METHOD TO REMOVE ASBESTOS

EPA is submitting a draft Quality Assurance Project Plan for external review for the Alternative Asbestos Control Method demonstration project. An alternative method for removing asbestos from older buildings during demolition will be evaluated and compared to removal techniques previously authorized by National Emissions Standards for Hazardous Air Pollutants (NESHAP). If successful, the newer method could allow the safe demolition of many abandoned buildings around the nation that present serious risks to nearby residents. Using the Alternative Asbestos Control Method, these former contaminated areas would then be available for redevelopment, creating jobs and tax revenues for communities.

The newer method will be tested in spring 2006 at a remote location for Fort Chaffee, Ark., chosen to assure no public exposure. Buildings on the east side have a clearance of approximately 1,000 feet from the nearest occupied site, and far greater in all other directions. The demonstration will include extensive environmental monitoring, that allows for a representative of the city, state health department, or EPA to stop work if conditions so merit.

The Alternative Asbestos Control Method first removes the most friable (easily crushed to a powder) asbestos-containing materials before demolition, but leaves some asbestos containing materials (primarily wall systems) in place. Then the demolition proceeds using water containing agents similar to detergents to increase the water's ability to penetrate dust layers and surfaces, trap asbestos fibers and minimize their potential release to air.

The project is a joint effort of the Fort Chaffee Redevelopment Authority, the Arkansas Department of Environmental Quality, the U.S. Department of Energy, and EPA. Public involvement is an important component for project success, and there will be opportunities for stakeholder input throughout the work.

Today starts the 30-day public comment period. All comments received will be provided to the external peer review panel for consideration. Additional information on the research project is available at:
http://www.epa.gov/region6/6xa/asbestos.htm.

The draft plan is available through the federal government's electronic public docket and comment system at: http://www.regulations.gov and can be located by searching for the docket number: EPA-HQ-ORD-2005-0028.

FEDERAL REGULATORY UPDATES *(CONTINUED)*

(EPA – 12/8/05)

EPA RELEASES SPCC GUIDANCE DEADLINE EXTENSIONS

Facilities now have until Oct. 31, 2007, to revise their SPCC plans, based on Dec. 2, 2005 amendments to the SPCC rules proposed by the U.S. Environmental Protection Agency (EPA).

Changes will also streamline requirements for qualified facilities, qualified oil-filled operational equipment and airport mobile refuelers; compliance dates for farms will be lengthened.

The proposed deadline extensions will give facilities time to address the revisions. EPA also released a document called "SPCC Guidance for Regional Inspectors," also on Dec. 2, 2005.

(EPA – 12/4/05)

EPA PROPOSING TO REDUCE AIR TOXICS RISKS FROM DRY CLEANERS

Based on recent analyses of health risks, the Environmental Proection Agency (EPA) is proposing a rule to reduce emissions of perchloroethylene (perc) from dry cleaners.

The proposal includes the following requirements:

Large Industrial and Commercial Dry Cleaners: There are 15 large dry cleaners in the United States. These dry cleaners are covered by EPA's 1993 maximum achievable control technology standards. The proposed amendments would reduce risks by up to 90 percent by requiring that these dry cleaners meet equipment standards and conduct enhanced leak detection and repair on a monthly basis.

Freestanding Small Dry Cleaners: Freestanding small dry cleaners are the type of dry cleaner you might see in a strip shopping center or as a stand-alone building. Estimated risk to most people living near these dry cleaners generally is below 10 in 1 million. The proposed amendments would reduce these risks by about 20 percent by requiring that the approximately 27,000 freestanding dry cleaners meet equipment standards and conduct enhanced leak detection and repair. In addition, all existing small dry cleaners would have to eliminate machines that require clothing to be transferred from one machine to another for drying.

Small Dry Cleaners In Apartment Buildings: About 1,300 small dry cleaners using perc are located on the ground floor of residential buildings. Like freestanding small dry cleaners, these "co-residential" cleaners are covered by standards issued in 1993. Because apartments in these buildings are located very close to these dry cleaners, residents' exposure and their estimated cancer risks can be much higher than for typical area source dry cleaners. Based on the data evaluated for this proposal, estimated maximum cancer risks for people living in some of these buildings might be in excess of 100 in 1 million. EPA is proposing two options for addressing co-residential dry cleaners. Under a risk-based option, no new perc machines could be installed at these facilities. Dry cleaners eventually would have to phase out existing perc equipment as it wears out, eliminating risk from these facilities in about 15 years. Under a technology-based option, EPA would issue requirements based on the New York State Department of Environmental Conservation's dry cleaning regulations. These requirements would include equipment to recover perc solvent from vapors and trap perc emissions from dry cleaning equipment. For both options, EPA is requesting additional information to help reduce risks more quickly.

The proposed rule would not affect dry cleaners that do not use perc, or those that send clothes offsite to be cleaned.

EPA will accept public comments on this proposal for 60 days after it is published in the Federal Register. For more information on the proposed rule and instructions on submitting comments, http://www.epa.gov/air/drycleaningrule.

STUDY TIED POLLUTANT TO CANCER; THEN CONSULTANTS GOT HOLD OF IT – 'CLARIFICATION' OF CHINESE STUDY ABSOLVED CHROMIUM-6; DID ANOTHER REALLY WRITE IT?

40 years ago, a doctor named Zhang JianDong was banished to the country side of northeastern China. He arrived to a public-health emergency.

A giant smelter was spilling large amounts of chromium waste into the groundwater. Well water was turning yellow. People were developing mouth sores, nausea and diarrhea. Dr. Zhang spent the next two decades treating and studying the residents of five villages with chromium-polluted water.

In 1987, he published a study saying they were dying of cancer at higher rates than people nearby. In America, federal scientists translated it into English, and regulatory agencies began citing it as evidence that a form of the metal called chromium-6 might cause cancer if ingested.

Then in 1997, Dr. Zhang, in retirement, appeared to retract his life's work. A "clarification and further analysis" published under his name in a U.S. medical journal said there was no cancer link to chromium in the villages after all.

Yet Dr. Zhang didn't write the clarification, judging by voluminous testimony and exhibits in a lawsuit in a California state court. The court papers indicate that the second study was conceived, drafted, edited and submitted to medical journals by science consultants at ChemRisk, working for the lawsuit's defendant, a utility company being sued for alleged chromium pollution. The second study didn't deny that the polluted area had a higher rate of cancer deaths. But it said factors other than chromium were the likely cause. This was a statement that Dr. Zhang, now dead, had explicitly disputed in a letter to the consultants. Yet he and a Chinese colleague appeared, to anyone reading the report, to be its authors. The litigation consultants didn't disclose their role to the journal that published it.

For years, scientists thought chromium-6 in drinking water might, at some level of exposure, pose a cancer risk. Now many scientists think the metal doesn't pose this risk, and the 1997 Zhang report is a factor behind their view. Regulators in California, after investigating the second Zhang report, have concluded it is dubious. They have reverted to the original dark view of chromium-6 and are moving to propose a strict limit on it in groundwater.

ChemRisk consultants pursued the second round of Chinese research with the clear aim of rebutting California plaintiffs' arguments, court documents show. Once that second report was issued, it took on a life of its own in regulatory assessments of the chemical.

Chromium, is part of stainless steel and has been used in countless products under the name chrome. Hundreds of U.S. industrial sites are tainted with chromium-6, also called hexavalent chromium.

ChemRisk was founded 18 years ago by a toxicologist, Dennis Paustenbach, who has consulted for dozens of companies. His firm was paid more than $7 million for help, in saving firms hundreds of millions of dollars in chromium site cleanup costs. Dr. Paustenbach has testified.

Dr. Zhang's 1987 study focused on five villages downstream of the JinZhou Ferroalloy Co. smelter. Village wells were polluted with chromium. His study said the contaminated area had a higher death rate from all cancers, but especially stomach and lung, than the surrounding region.

ChemRisk scientists sought to determine whether individual villages' levels of chromium exposure correlated with their death rates. The idea was that if chromium was really the culprit, then the death rate ought to be highest in the villages with the most exposure to chromium.

Dr. Zhang's data weren't good enough to determine individual villages' exposures to chromium, so ChemRisk looked at villages' distances from the pollution source. They concluded that cancer death rates weren't always higher the closer the village was to the pollution source, so they doubted that chromium was to blame for the five village area's overall higher cancer death rate.

Dr. Zhang had told ChemRisk that he never tried to assert a link [between smelter and receptor by distance]. He told the firm he didn't accept its conclusion that "lifestyle of the residents and other environmental factors unrelated to chromium contamination" might explain the overall higher death rate for the contaminated area. Dr. Zhang instructed ChemRisk to replace that assertion with a vaguer one mentioning several possible variables, as well as the need for more research.

Instead, the second report strongly linked the higher cancer mortality to lifestyle and other non-chromium factors. Instead of saying these might be the cause, the published report called them the "likely" cause. The published report then further stated that the higher rate of cancer death in the five villages was "not a result of the contaminated water." Key statements on these findings were not in the draft that was translated into Chinese for Dr. Zhang to read. In depositions, former ChemRisk scientists acknowledged they might not have translated the final article into Chinese.

Ore-processing plants in northern New Jersey once produced millions of tons of chromium waste that was used as landfill throughout Hudson and Essex counties near New York City. ChemRisk's Dr. Paustenbach has been instrumental over the years in persuading New Jersey regulators to ease cleanup standards for the metal. An article he co-wrote was cited in a recent New Jersey report that concluded it still wasn't know whether chromium-6 is carcinogenic when ingested. One of Paustenbach's arguments: was that Dr. Zhang's "follow-up study" didn't find a cancer link.

New Jersey's chief risk analyst, Alan Stern, says he's aware Dr. Zhang published an earlier study tying chromium in water to cancer deaths – the study that California regulators now believe is accurate. But, he says, "we haven't read it because it's in Chinese." California officials are considering lowering the groundwater standard from 50 to 3 or 6 ppb.

(Excerpts of Article – By Peter Waldman, Wall Street Journal – 12/23/05)

FEDERAL REGISTER NOTICES

http://www.epagov/homepage/fedrgstr

Environmental Protection Agency Mine Safety and Health Administration (MSHA): Diesel Particulate Matter Exposure of Underground Metal and Nonmetal Mines; Proposed Rule. *(Federal Register - 9/7/05)*

Environmental Protection Agency Hazardous Waste Management System; Standardized Permit for RCRA Hazardous Waste Management Facilities; Final Rule. *(Federal Register - 9/8/05)*

Environmental Protection Agency Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units. Final Rule; amendments. *(Federal Register - 9/22/05)*

Environmental Protection Agency Revision of Wastewater Treatment Exemptions for Hazardous Waste Mixtures ("Headworks Exemptions"); Final Rule. *(Federal Register - 10/4/05)*

Environmental Protection Agency Administrative Reporting Exemption for Certain Air Releases of NOX (NO and NO2); Proposed Rule. *(Federal Register - 10/4/05)*

Environmental Protection Agency Toxics Release Inventory Burden Reduction; Proposed Rule. *(Federal Register - 10/4/05)*

Environmental Protection Agency Control of Emissions of Hazardous Air Pollutants From Mobile Sources: Default Baseline Revision; Final Rule. *(Federal Register -10/6/05)*

Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors (Phase I Final Replacement Standards and Phase II); Final Rule. *(Federal Register - 10/12/05)*

Environmental Protection Agency Cross-Media Electronic Reporting; Final Rule. EPA is establishing the framework by which it will accept electronic reports from regulated entities in satisfaction of certain document submission requirements in EPA's regulations. *(Federal Register - 10/13/05)*

Environmental Protection Agency Streamlining the General Pretreatment Regulations for Existing and New Sources of Pollution; Final Rule. Availability of and Procedures for Removal Credits; Proposed Rule. *(Federal Register - 10/14/05)*

Environmental Protection Agency Prevention of Significant Deterioration, Non-attainment New Source Review, and New Source Performance Standards: Emissions Test for Electric Generating Units. Proposed Rule *(Federal Register - 10/20/05)*

Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers. Proposed action; request for public comment *(Federal Register - 10/24/05)*

Environmental Protection Agency Approval and Promulgation of Air Quality Implementation Plans; Pennsylvania; VOC and NOX FACT Determination for Two Individual Sources. Proposed Rule. *(Federal Register - 10/26/05)*

Environmental Protection Agency Revision of December 2000 Regulatory Finding on the Emissions of Hazardous Air Pollutants From Electric Utility Steam Generating Units; Standards of Performance; Proposed Rules. Notice of reconsideration of final rule; request for public comment; notice of public hearing. *(Federal Register – 10/28/05)*

Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. Proposed Rule; notice of reconsideration of final rule; proposed amendments *(Federal Register – 10/31/05)*

Environmental Protection Agency Proposed Rule To Implement the Fine Particle National Ambient Air Quality Standards; Proposed Rule. *(Federal Register – 11/1/05)*

Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants for Primary Aluminum Reduction Plants. Final Rule; amendments. *(Federal Register – 11/2/05)*

Environmental Protection Agency Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions; Final Rule. *(Federal Register – 11/9/05)*

Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline); Proposed Rule. *(Federal Register – 11/14/05)*

Environmental Protection Agency Revisions to the Requirements on Variability in the Composition of Additives Certified Under the Gasoline Deposit Control Program; Final Rule. *(Federal Register – 11/14/05)*

Environmental Protection Agency Control of Air Pollution From Aircraft and Aircraft Engines; Emission Standards and Test Procedures. Final Rule *(Federal Register – 11/17/05)*

Environmental Protection Agency Control of Air Pollution From New Motor Vehicles; Revisions to Motor Vehicle Diesel Fuel Sulfur Transition Provisions; and Technical Amendments to the Highway Diesel, Non-road Diesel, and Tier 2 Gasoline Programs. Proposed Rule. *(Federal Register – 11/22/05)*

Environmental Protection Agency Prevention of Significant Deterioration (PSD) and Non-attainment New Source Review (NSR), and New Source Performance Standards (NSPS): Emission Test for Electric Generating Units. *(Federal Register – 11/22/05)*

Environmental Protection Agency Final Rule To Implement the 8-Hour Ozone National Ambient Air Quality Standards; Final Rule. *(Federal Register – 11/29/05)*

Environmental Protection Agency Approval and Promulgation of Implementation Plans; New Jersey Architectural Coatings Rule; Final Rule. *(Federal Register – 11/30/05)*

Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry; Proposed Rule *(Federal Register – 12/2/05)*

Environmental Protection Agency Control of Air Pollution From New Motor Vehicles and New Motor Vehicle Engines: Technical Amendments to Evaporate Emissions Regulations, Dynamometer Regulations, and Vehicle Labeling. Notice of proposed rulemaking. *(Federal Register – 12/8/05)*

NJ REGULATORY UPDATES

NJDEP REGULATION PROPOSED PENALTIES FOR CLEANUP PROJECTS

NJDEP has proposed regulations which would cause those performing remediation work at UST, ISRA, and Administrative Consent Order sites to be subject to penalties for violations which have been previously over looked, to now be enforced. Regulations were proposed in the New Jersey Register last August 15th, and they can be found on the DEP website; http://www.nj.gov/dep/rules/notices/081505b.htm.

Although the initial burden of the regulations will fall on environmental consultants and remediators, the real impact of the regulations will be felt by municipalities, counties, corporations and private developers since those parties are ultimately responsible for the legal consequences of compliance and certification of work submitted to the New Jersey Department of Environmental Protection (NJDEP). In a concession to facilitate Brownfield site redevelopment, DEP has indicated that there will be no penalties for voluntary cleanups (VCs) conducted under a Memorandum of Agreement. However, DEP is indicating they will terminate MOA's if there is not good progress at VC sites.

We at RT believe that limiting the scope of potential penalties to ISRA, UST, and ACO cases poses a number of problems:

• It creates a double standard, which is hard for the regulated community to understand.

• All too frequently, current DEP reviews of submitted materials run a year or more, when field work on many projects are long finished. Efforts would be better spent restoring credibility by conducting timely reviews and reaching out positively to the regulated community, and not assessing penalties for minor issues.

• DEP, frequently, changes its emphasis on what is considered important, and, although routine updates to Tech Rule training are conducted, training is not comprehensive and there is not enough outreach as compared to surrounding states.

We recommend that Assistant Commissioner Seebode and Brownfields Coordinator Ken Kloo of DEP phase in potential penalties only after DEP gets caught up on its past due reviews, so that a level playing field is established, or, it could be agreed that there should be no penalties for minor issues if DEP's review letter is received more than 120 days from submittal to DEP. If this is not done, the reality is that sites with ACO, UST, and ISRA case histories, which encompass a large percentage of the most challenging Brownfields sites, will lose an important redevelopment incentive – the ability of a prospective purchaser to begin with a "clean slate".

Currently, a "clean slate", is not always possible in New Jersey, because of overdue regulatory reviews, and an inability to implement VCP/MOA cleanups at sites with UST, ACO and/or ISRA issues and a general inability to determine what DEP believes is required to be investigated and remediated at a site at a time of a planned real estate transaction. Surrounding states do give innocent prospective purchasers a "clean slate", and RT recommends that this aspect of New Jersey environmental regulation, be further examined before proposals for investigation and remediation penalties go forward. DEP should not be "de facto" penalizing parties or companies who long ago ceased operations in NJ by subsequently making Brownfields redevelopment more difficult.

We think that facilitating proper cleanup, under the Technical Rules for Site Remediation, by facilitating innocent purchaser redevelopment is far more important than delayed and more costly redevelopment where DEP refuses to let a site go into the Voluntary Cleanup Program necessitating an untimely "looking over the shoulder" approach as a site goes through redevelopment and remediation just because the site had historical ISRA, UST, or ACO issues.

The VOC process needs to stay fluid and flexible. New Jersey's current approach to only allow "permissive" voluntary cleanup remediation collides head on with New Jerseys current "anti-sprawl" initiatives, and makes the worst Brownfields sites ineligible for true innocent purchaser remediation. We at RT hope this issue will be further examined.

(Article Excerpts from Cooper Levenson Environmental Alert).

BUSES, TRUCKS MUST REDUCE DIESEL POLLUTION

A diesel engine emission reduction plan signed into law in September could have New Jerseyans breathing easier in the years to come. Voters approved a constitutional amendment in November to put the program into effect.

The plan, which backers called most comprehensive in the nation, is geared to cut air pollution and health risks by placing tighter controls on diesel emissions from public and privately owned transit buses and garbage trucks over the next 10 years.

"It's proven that diesel emissions are harmful not only to people with respiratory problems but to everyone," said Marjorie Bromberg, acting chief executive officer of the state chapter of the American Lung Association.

"You can see it, you can taste it. It hits you right in the face. You get behind an old school bus and you know it," said Jeff Tittel, executive director of the state's Sierra Club. "We have more roads per square mile and more vehicles per square mile than any other state in the nation, so we feel a bigger impact from buses and diesel pollution than virtually anyone else because we're so densely populated.

The Clean Air Task Force, an advisory body to the state Department of Environmental Protection, found in its annual report, released July 13, that air pollution continues to be worse in the state's minority and low income communities, often located in urban centers with more vehicle traffic and factory smokestacks.

"The asthma rate among children has increased 160 percent over the last 20 years, with urban asthma rates even higher," said DEP Commissioner Bradley M. Campbell.

(Gloucester County Times – 9/8/05)

EPA AND VINELAND TEAM UP TO REDUCE POLLUTION FROM 143 SCHOOL BUSES

The U.S. Environmental Protection Agency (EPA) and Vineland School District in New Jersey announced the completion of a project under the Clean School Bus USA program to reduce emissions from 143 school buses. The completed grant project of tailpipe emission upgrades and anti-idling techniques will improve air quality for Vineland's 10,600 students. EPA provided a $180,000 grant to Vineland schools for this project in 2004. This completion announcement highlights Children's Health Month, which is celebrated in October.

"Diesel retrofit programs like Clean School Bus USA help clean the air and protect our kids," said Alan J. Steinberg, EPA Regional Administrator. "The Vineland Board of Education has set a wonderful example for other New Jersey school districts as the first district to volunteer to reduce tailpipe emissions."

Vineland installed pollution controls on 91 of the district's 143 buses and has instituted an anti-idling policy for all district buses. The pollution controls, called diesel oxidation catalysts and crank case filters, reduce harmful pollutants such as fine particles, hydrocarbons and carbon monoxide. Most school buses in the country are powered by large diesel engines that are not required to meet stricter pollution controls. Diesel emissions are proven to harm air quality and often lead to harm air quality and often lead to increased asthma rates and respiratory problems, particularly for children.

Across the nation, school districts like Vineland's are realizing the environmental and health benefits of diesel upgrades. In Vineland's case, its engine improvements alone (not including anti-idling techniques) will reduce emissions of fine particles by at least 30 percent; hydrocarbons by at least 50 percent and carbon monoxide by at least 20 percent.

The district also installed idling monitoring technologies in 20 buses in its fleet that allow supervisors to observe and improve fleet driving patterns.

Schools throughout New Jersey can take Vineland's example and apply it to their districts. EPA estimates that the simple technique of idling reduction in New Jersey schools could remove 4,000 pounds of nitrogen oxides, 2,400 pounds of carbon monoxide, 600 pounds of hydrocarbons and 240 pounds of fine particles from the air each year. The anti-idling policy is economical in addition to being good for the environment. The district projects a fuel savings of 6,000 gallons per year by instituting the no idling policy and using the vehicle data monitors.

Pollution control requirements for all diesel-powered vehicles continue to get tighter. By 2007, all diesel engines manufactured for buses and trucks will be 95% cleaner than those of most buses on the road today.

EPA's Clean School Bus USA program gives grants and technical assistance to fleet owners so that they can reduce the exposure to diesel fumes of the 25 million children who ride school buses, and reduce the amount of air pollution these buses create. To find out more about the benefits

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of diesel vehicle upgrades, visit: www.epa.gov/cleanschoolbus.

(EPA – 10/31/05)

STATE HIGH COURT TO HEAR APPEAL OF GROUNDWATER CLEANUP STANDARDS

The Supreme Court of New Jersey recently agreed to hear industry's long-standing challenge to the cleanup standards for groundwater adopted by the New Jersey Department of Environmental Protection (DEP). Early in 2005, the Appellate Division of the Superior Court upheld DEP's 2003 promulgation of cleanup standards that apply strict, numeric drinking water standards to the remediation of all contaminated sites, including where groundwater is neither currently nor planned to be used for potable purposes.

The origin of the appeal is the investigation conducted pursuant to the Industrial Site Recovery Act (ISRA) of the former Federal Pacific Electric Company (FPE) plant. This "Brownfield" is located in a highly industrialized area of Newark and is covered by manufacturing buildings and parking lots. No on is exposed to historic contamination discovered in the ground, no one drinks or uses the groundwater and no "receptors" are affected by the groundwater contaminant plume.

During its ISRA investigation, FPE developed cleanup standards for groundwater based on these site-specific factors, and on a risk assessment prepared pursuant to federal Environmental Protection Agency (EPA) guidance.

For many years, DEP informally used as cleanup standards the drinking water standards developed in the 1980s by the New Jersey Drinking Water Quality Institute. DEP rejected FPE's site-specific standards that varied from the GWQS and, in 2000, the Appellate Division determined in response to FPE's challenge to the agency's rejection that the agency's use of the GWQS as cleanup standards violated the State Administrative Procedure Act (Federal Pac. Elec. Co. v. N.J. Dep't of Envtl.).

In response, DEP adopted in 2003 the very same GWQS as cleanup standards, notwithstanding the hundreds of public comments advocating use of risk-based standards. FPE, joined by the New Jersey Chamber of Commerce, argued in the Appellate Division that use of the GWQS as cleanup standards is contrary to the Brownfields and Contaminated Site Remediation Act because the FWQS does not take into account site specific factors and risk or the scientific principles required by the Act. Industry, professional and environmental groups filed "friend of the court" briefs on both sides of the issue.

The Appellate Division found that the challengers advanced "plausible arguments." Yet, in light of DEP's environmental expertise and the technical subject matter, the Court upheld the validity of the cleanup standards in deference to the agency. FPE and the Chamber of Commerce believe that the decision gives undue deference to DEP, lacks critical analysis of the Brownfields Act and is the result of other legal errors. The Supreme Court could hear the appeal before the end of the year.

Industry has long argued that DEP should allow use of site-specific, risk based cleanup standards for ground water. Despite advances in remediation technology, achieving drinking water standards remains extremely expensive because of the difficulty in removing the "last molecule" of contamination. Use of site-specific, risk-based cleanup standards is a scientifically sound and cost-effective method of ground water remediation that, properly performed, protects public health and the environment.

The EPA and other industrial states, such as Illinois and Massachusetts, recognize use of risk-based standards as an appropriate approach to clean up and redevelop contaminated sites. Of special significance to our own densely populated state, use of site-specific standards also is consistent with 'smart growth" – "greenfields" can be spared if brownfields located near existing infrastructure are cleaned up and redeveloped.

Despite the specific requirements of the Brownfields Act and the benefits of risk-based standards, DEP rejects this approach I favor of strict, numeric drinking water standards applied at virtually every site. This practice needlessly discourages cleanup and redevelopment of brownfields in New Jersey, particularly in those areas were no one drinks, or in the future will drink, the ground water. In the upcoming appeal, the Supreme Court of New Jersey will have the opportunity to consider this important public issue. A successful challenge to DEP's ground water cleanup standards could have a profound affect on the cleanup and redevelopment of contaminated sites across the state.

(Commerce – 9/05)

NJDEP PROPOSES MORE RESTRICTIONS ON WASTEWATER AND SEPTIC SYSTEMS

The New Jersey Department of Environmental Protection published in October 17 two proposals to amend 10 of the state's 12 Areawide Water Quality Management Plans, effective immediately. These amendments revoke sewer service area designations in certain areas and change how septic systems are classified. These changes are considered part of the state's "anti-sprawl" regulatory initiatives.

Revoked Sewer Service Areas are now reconsidered as septic areas with less than 2,000 gallons per day of discharge. Under the septic system proposal, the discharge flow is calculated on a project-wide basis. Using the NJDEP's established residence design flow of 350 gallons per day, a project of 6 or more homes exceeds the 2,000 gallons per day threshold; thus, WQMP amendments are required before NJDEP permits are issued.

The NJDEP is proposing to withdraw "sewer service area" designations in areas located in State Planning Areas 3, 4 and 5 that do not have a current adopted WMP. The withdrawal would be effective regardless of available capacity at the treatment plant and irrespective of local zoning. The withdrawal does not apply in areas that have sewers installed and the wastewater generating structures are connected to the collection and treatment system.

The withdrawn sewer service areas are to be re-designated as "Service Areas for Wastewater Facilities with Planning Flows or Less than 2,000 Gallons Per Day Which Discharge to Ground Water." These areas are now to be serviced by a treatment system that discharges to groundwater, such as a septic system.

Exceptions allowed include (it is not clear if one or all or some combination of the following are required):

• Infill development in limited circumstances;

• Projects with valid Treatment Works Approvals as of the date of the adoption of the proposal;

• Projects with a site specific WQMP amendment/revision after January 11, 2000.

• Projects that prior to the adoption of the amendment received both local site plan approval or subdivision approval or a municipal construction permit, and a NJDEP Land Use Regulation Program permit, or NPDES permit for discharge to ground water if required;

• Certain Affordable Housing developments

NJDEP will consider amendments to WQMP to extend public sewers into the withdrawn areas in certain limited applications:

• Public purpose projects (public schools, hospital, police or fire infrastructure);

• Certain Affordable Housing projects;

• Projects needed to protect public health and safety (such as falling septics)

Certain pending WQMP amendment applications will be allowed to move forward, including:

• Specific WQMP amendments filed as of October 17, 2005, provided the application is not disapproved or returned;

• WQMP revision applications pending as of October 17, 2005 that address th4e application requirements and include a demonstration that no significant individual or cumulative impact will occur to environmentally sensitive areas or other natural resources due to the revision.

Areas that are now "Service Areas for Wastewater Facilities with Planning Flows of Less Than 2,000 Gallons Per Day Which Discharge to Groundwater" will also be impacted because NJDEP is re-defining how a project meets or exceeds the 2,000 gallons per day threshold.

Presently, the determination is made based on the individual discharge volume regardless of the number of dischargers in the project. In this proposal, the wastewater flow will be calculated on a project wide basis – therefore, if there are 10 houses on septic, the flow from all 10 is added to determine if the project exceeds the 2,000 gallon threshold. If the project exceeds the threshold, the project is inconsistent and will need an amendment or revision to eh WQMP before any NJDEP permits are issued.

Exceptions to the septic rules are:

• Projects with valid DEP approvals issued as of the date of the adoption of the proposal for construction of 50 or more realty improvements

• Projects that prior to the adoption of the proposal have received both a local site plan approval or subdivision approval or a municipal construction permit and a Land Use Regulation Permit, if one is required. This exemption lasts only until one of these approvals expires.

The Highlands Preservation Area and 12 wastewater quality/water management planning districts would be exempt from these proposals.

(Marathon – 11/05)

NJ REGULATORY UPDATES *(Continued)*

NEW JERSEY WORKERS INCLUDED IN TOXIC RELEASE INSPECTIONS

The state of New Jersey has become the first state in the nation to include workers in inspections at industrial sites. The inspections are intended to help identify environmental health and public safety hazards and potential sources of toxic releases that include, but are not limited to, hazards resulting from an intentional terrorist attack.

The inspections will take place at the 101 facilities in the state covered by New Jersey's Toxic Catastrophe Prevention Act (TCPA), which requires them to implement risk management programs. These companies include water treatment plants, chemical manufacturers, food manufacturers and processors, pharmaceutical companies, refineries and warehouses.

Acting Governor Richard Codey said the move will provide greater protection for residents living near the industrial sites. "Greater participation by workers to identify and resolve potential threats involving the use of hazardous chemicals in the industrial process will make neighborhoods safer and is good business policy," he said. "We will work with New Jersey businesses to ensure this initiative improves risk prevention plans for each facility."

Department of Environmental Protection (DEP) Commissioner Bradley Campbell signed an administrative order that establishes procedures for employees and their representatives to participate in inspections, investigations or audits of facilities regulated by the law and its associated rules and regulations.

"New Jersey's newly adopted worker participation standard is a first-in-the-nation for the inspection of facilities that handle extraordinary hazardous substances," said Campbell. "Workers know their own facilities, and can help us strengthen protection of communities from the risk of catastrophic accidents."

In 2003, the DEP added reactive chemicals to the list of extraordinarily hazardous substances that trigger risk management planning requirements of TCPA. These chemicals can explode when accidentally exposed to air or water, or when they are improperly mixed with certain other chemicals. The force of the explosion can kill or permanently disable people outside the facility.

"We applaud DEP for making New Jersey the first state in the nation to take this important step to protect workers, communities and the environment," said Rick Engler, director of the New Jersey Work Environment Council, a coalition of 70 labor unions and environmental organizations.

"Workers are uniquely positioned to point out chemical hazards to DEP inspectors. Nobody knows the workplace better than the men and women who work there every day," Engler said.

The DEP also works with the Domestic Security Preparedness Task Force to oversee companies' implementation of best management practices at their facilities to reduce the risk of a terrorist attack.

TCPA rules require that all regulated facilities evaluate state of the art technologies every five years to reduce the risk of an accident and implement this technology "if cost effective," the DEP said.

The state of the art standard also applies for new processes when a company expands or changes operations.

(ENS – 9/26/05)

NEW JERSEY LAUNCHES SMART GROWTH OMBUDSMAN'S WEBSITE

New Jersey has opened a Smart Growth Ombudsman's website designed to inform the public about the state's smart growth policy and Ombudsman Patrick Gillespie.

"Smart growth in New Jersey is a multi-faceted term," said Gillespie. "The goal of this policy is to alleviate development pressure on New Jersey's environmentally sensitive lands by encouraging development in areas of the state that have the capacity to absorb growth."

The position of Smart Growth Ombudsman was created as part of the Smart Growth Act, which became law in 2004. The Ombudsman coordinates the smart growth efforts of all state executive departments and in particular the Departments of Environmental Protection, Transportation and Community Affairs to ensure the principles and goals outlined under the Smart Growth Act are met.

"Smart growth improves quality of life in New Jersey," said Acting Governor Richard Codey. "Through this website, the public will learn more about smart growth and why well-planned, well-managed growth is so important."

The term smart growth is used to describe well-planned, targeted growth that adds new homes and creates new jobs, while preserving open space, farmland, and environmental resources.

The Director of the Office of Smart Growth serves as Executive Director and Secretary of the State Planning Commission, whose 17 members represent state government, local government and the public.

"My office is one of the important links in achieving smart growth. This website will serve to inform the public not only about the role of the Ombudsman, but also about other efforts the state has undertaken to implement smart growth policy," Gillespie said.

The Smart Growth Ombudsman's Website is online at: http://www.nj.gov/smartgrowth.

(ENS – 10/10/05)

STORM WATER IMPROVEMENTS TO BENEFIT NEW JERSEY'S LARGEST LAKE

New Jersey's largest inland body of water, Lake Hopatcong has been selected to receive a $745,000 grant as part of the U.S. Environmental Protection Agency's (EPA) Targeted Watersheds Grants program.

Announcing the grant at his office in New York, EPA Region 2 Administrator Alan Steinberg said the money will be used to improve water quality in Lake Hopatcong and its watershed by reducing phosphorus that goes into the watershed from storm water and septic systems.

The grant will fund improvements to storm water systems, installation of innovative techniques to inactivate phosphorus, expanded public outreach and education campaigns, and a demonstration project for alternative wastewater treatment. Reducing phosphorus and effectively treating wastewater are essential for lake restoration, Steinberg said.

"Lake Hopatcong has enormous environmental and economic importance, and we are delighted to fund Lake Hopatcong Commission's efforts to implement an approved phosphorus Total Maximum Daily Load, or TMDL.

The grant will fund proposed projects that address storm water contributions through the installation of storm sewer retrofits and best management practices, apply measures to inactive phosphorus, and demonstrate an alternative wastewater treatment system. The project will focus on quantifying the phosphorus removal to evaluate what works best.

Created in 2001, the Lake Hopatcong Commission, made up of representatives from state, county and local governments as well as local stakeholders, collaborates to monitor, protect and restore the lake and provide educational outreach on lake restoration efforts.

As the state's appointed steward for Lake Hopatcong, the commission oversees and safeguards the natural, scenic and recreational resources of the lake.

(ENS – 11/25/05)

ON 2,200 ACRES NEW JERSEY CHOOSES CONSERVATION OVER DEVELOPMENT

New Jersey has announced the conservation of a 2,200 acre parcel in Estell Manor City in Atlantic County.

Department of Environmental Protection (DEP) Commissioner Bradley Campbell said the DEP's Fish and Wildlife branch will manage the land as part of the Peaslee Wildlife Management Area. The land will be open to the public for hiking, bird watching and other types of outdoor recreation.

"Estell Manor was pleased to work with the state Green Acres Program to save this land from the development of 300 new homes which would have tremendous impacts on our rural life," said Estell Manor City Council President Creed Pogue.

"This acquisition is just one example of how we're protecting environmentally sensitive areas and open space throughout the state," said Acting Governor Richard Codey. "By preserving these 2,200 acres of land, we are providing New Jersey residents with more opportunities for bird watching and hiking in Atlantic County."

The site has pine-oak forest interspersed with wooded wetlands. Atlantic white cedar swamps, pitch-pine lowlands and red maple swamps add to the diversity of the site and provide habitat for a variety of wildlife species including yellow-throated warblers, mink, beaver, white-tailed deer and butterflies.

The DEP Green Acres Program purchased the unimproved land for $2,435,000 from Crown Financial Corporation.

(ENS – 11/29/05)

NEW JERSEY FIRST TO REQUIRE ANTI-TERRORIST SECURITY AT CHEMICAL PLANTS

New Jersey is the first state in the nation to

NJ REGULATORY UPDATES *(Continued)*

require enforceable plant security practices for its chemical facilities to provide the public and workers greater protection from potential terrorist acts.

The new requirements continue facility-by-facility security assessments to evaluate potential security threats and vulnerabilities and likely consequences of a chemical release.

"Certain New Jersey industries are more vulnerable to domestic threats," said Acting Governor Richard Codey, a Democrat. "We must explore any measure – including the possibility of using inherently safer technology – to better protect us from uncertainty. We will work with New Jersey businesses to ensure that this initiative improves security and emergency response plans at each chemical facility."

Of the 140 facilities that must comply with the standards, 43 are subject to the state's Toxic Catastrophe Prevention Act (TCPA) program.

As part of the new requirements, these 43 chemical facilities must analyze and report the feasibility of reducing the amount of material that potentially may be released; substitution less hazardous materials;' using materials in the least hazardous process conditions or form; and, designing equipment and processes to minimize the potential for equipment failure and human error.

In 2003, the New Jersey Domestic Security Preparedness Task Force approved best security practices built on the security code of the American Chemistry Council's responsible care program and the American Petroleum Institute's security guidelines.

The best practices were developed by the task force and its Infrastructure Advisory Committee, which includes representatives of the state's chemical and petroleum industry. Many New Jersey facilities have voluntarily begun to implement these practices. The best practices for chemical facilities are now mandatory.

Best practices included provisions for the facilities to prepare an emergency incident prevention, preparedness and response plan and outline the status of implementing other security practices.

The state standards also now require worker participation in the development of the security assessments and prevention and response plans at each facility.

Under the new requirements, chemical facilities have 120 days to develop an assessment of facility vulnerabilities and hazards that might be exploited by potential terrorists. The assessments must include a critical review of security systems and access to the facility grounds including the regular testing and maintenance of security systems.

Existing or needed security measures outside the perimeter of the facility must be reviewed as well as storage and processing of potentially hazardous materials, employee and contractor background checks and other personnel security measures; and finally, information and cyber security.

(ENS – 12/5/05)

TWO MAJOR OIL COMPANIES SETTLE NEW JERSEY GROUNDWATER DAMAGE CLAIMS

The state of New Jersey has concluded separate agreements with Chevron U.S.A. Inc. and ConocoPhillips Company to preserve four land parcels covering nearly 450 acres in Morris and Sussex counties as compensation to the public for groundwater pollution at several hundred gas stations and oil processing facilities.''

At 2000 sites, Chevron's liability covered 282 acres of injury to groundwater. Chevron also had partial liability at several other sites involving groundwater contamination.

Chevron will be donating a 200 acre property in Hackettstown to DEP and will be funding the purchase of a 165 acre property in Franklin Township through the Green Acres program.

The Hackettstown property is in the Highlands and adjacent to Allamuchy and Stephens state parks. The land, which contains forested wetlands, grasslands and streams, contains the highest groundwater recharge rates in the state.

Chevron also will restore and deed restrict 11 acres of sale marsh along Woodbridge Creek in Perth Amboy, as well as pay the department's assessment costs.

ConocoPhillips' liability at 43 sites statewide involves contaminating 73.6 acres of groundwater. ConocoPhillips will fund the purchase of two properties that total 73 acres through Green Acres program in Sparta and Vernon townships in Sussex County. Both properties have high ground water recharge value.

ConocoPhillips also will pay DEP's assessment costs for this settlement.

DEP is working with the two companies to remediate discharges of hazardous substances to groundwater at their sites throughout the state that were impacted by various underground storage tank and fuel processing activities.

The proposed natural resource damage settlements with Chevron and ConocoPhillips appeared in the December 19, 2005 issue of the "New Jersey Register."

(ENS – 12/5/05)

PADEP PROPOSES NUTRIENT TRADING PROGRAM

Following the lead of the United States Environmental Protection Agency (USEPA), the Pennsylvania Department of Environmental Protection (PADEP) is proposing a Nutrient Trading Program to help address runoff of nutrients and nitrogen in stormwater runoff, from point or non-point source discharge locations. While at first blush, the Program appears to be positive in that it uses "economic market incentives", one proposed program commenter, the Pennsylvania Chamber of Business and Industry, has expressed serious concerns at the regulatory approach.

Nutrient trading programs based on the federal regulatory model work this way:

• Where there are exceedences of water quality standards, point source discharges are put on the hook to essentially meet in-stream or water body water quality criteria.

• The point source discharger may elect to upgrade their treatment facility, attempt to treat or "manage at the source" stormwater which discharges through combined sewer outfalls or storm drains, or,

• enlist the assistance of the agricultural community, usually farmers, to improve farm practices to reduce stormwater induced runoff nutrient stream loading.

While the Program appears laudable, and nutrient discharges to rivers, bays, and lakes need to be reduced, the concerns of regulated community, appear very real, as follows:

• Horticultural and agricultural properties are currently regulated or potentially regulated by an unwieldy patch work of agencies including farm bureaus, conservation districts, NRCS and/or NPDES Non-point Source Regulatory Programs.

• Farmers and horticultural operators tend to operate season to season, based on market need and they frequently change crops and management practices.

• According to county and state officials we have talked to in Pennsylvania and New Jersey, regulatory resources are inadequate to take on the additional burden of regulating agricultural and horticultural properties, so there is no reasonable expectation of enforcement.

In addition, credibility of environmental agencies is already being lost as agricultural and horticultural property owners and operators, who attempt to improve their operations, by placing crushed stone roads and/or parking lots to facilitate access to fields or proper loading of product are suddenly being classified as a "major developments", necessitating extensive and time consuming permitting, all too frequently, involving Soil Erosion and Sediment Control Plans, and stream encroachment and wetlands permits. To further confuse matters, "right to farm" statutes, are not integrated with the confusing patchwork of environmental laws, and regulatory officials have informed RT that they frequently cannot tell what "is and is not regulated".

Against this backdrop, with growing regulatory mistrust in the horticultural and agricultural community, long term prospects for proper nutrient management, appear dim. In a recent Water Environmental Management Federation Conference in

(continued on next page)

PADEP PROPOSES NUTRIENT TRADING PROGRAM *(continued from page 22)*

Washington, DC, Gary Brown, RT's President, attended an all day session on nutrient management trading, and he urged a senior EPA official to reach out directly to the agricultural communities and state agricultural boards in each state, so as to create a realistic outreach program, which would include nutrient management, which will actually work long term.

It is our observation at RT that most environmental regulatory programs being proposed for farms make use of copy cat "trial and error" regulatory approaches, which are likely to fail, when applied to the horticultural and agricultural community. The reason for this is very simple – many farms change products in response to market conditions, so management practices which need to be implemented require no more than 30 to 45 day approval times, not confusing lengthy permitting, and not runoff criteria copied from stormwater runoff programs designed to manage runoff from impervious surfaces, shopping centers, and developments.

The obvious concern is that failure to properly understand the regulated community – agricultural and horticultural operation owners and operators – will cause less progress to made than anticipated, and, a new bureaucracy will be created, which based on current information, is not properly funded.

RT has experience on a number of horticultural and agricultural stormwater improvement projects, and we find that most facility operators in this class will gladly conform with and implement reasonable practices to protect rivers, lakes, streams, and bays from nutrient and sediment runoff, but they will resist spending large sums of money to obtain multiple permits, particularly when environmental officials cannot directly tell them what permits they do and do not need, and, what Best Management Practices they do and do not need to implement.

The bottom line is – to avoid losing credibility with the horticultural and agricultural regulated community with a poorly fit regulatory program, and more realistic regulatory programs, properly funded and enforced, have to be developed for this regulated community sector, without further delay. Creation of a "market based" system without having a credible program behind it is not likely to meet regulatory objectives either short-term or long term. NJDEP is rewriting its wetlands/stream encroachment agricultural exemptions; PADEP should take another look at its program as well.

PENNSYLVANIA BULLETIN NOTICES

BUREAU OF WATER STANDARDS AND FACILITY REGULATION:
Laboratory Reporting Instructions for Disinfectants, Disinfection Byproducts and Precursors. Effective Date: Upon notice of final publication in the PA Bulletin.
The purpose of this document is to establish uniform instructions and protocol for implementing the drinking water reporting requirements for disinfectant residual, chlorite, bromate, bromide, total trihalomethanes, haloacetic acids, UV254, dissolved organic carbon, specific ultraviolet absorbance, total organic carbon and alkalinity.
Draft – 11/19/05

POLICY OFFICE:
Policy for Consideration of Comprehensive Plans and Zoning Ordinances in DEP Review of Grants and Funding for Facilities and Infrastructure. Anticipated Effective Date: Upon publication of notice as final in the *Pennsylvania Bulletin*.
The purpose of this guidance is to provide direction to DEP staff for the implementation of Acts 67 and 68 of 2000 in the administration of current DEP grants and funding decisions to avoid or minimize conflicts with local land use decisions. This guidance addresses how DEP will consider comprehensive plans and generally consistent zoning ordinances when reviewing grant applications for facilities or infrastructure development.
Draft – 11/12/05

PERMIT COORDINATION POLICY:
Effective Date: Upon publication of notice as final in the Pennsylvania Bulletin.
The Department of Environmental Protection (DEP) will coordinate the review of multiple permits for proposed projects to ensure efficient use of its resources, thorough environmental review, and consistent Department action on proposed projects before the commencement of operations, construction or other activities that require DEP permits or approvals.
Draft – 10/22/05

WATER PLANNING OFFICE:
Nutrient and Sediment Reduction Credit Trading Interim Final Policy and Guidelines. Effective Date: October 1, 2005 (Interim Final).
Interim Final – 10/1/05

BUREAU OF AIR QUALITY:
Applicability Determination for Continuous Source Monitoring Manual Revision No. 8. Effective Date: Upon publication of notice as final in the Pennsylvania Bulletin.
This document establishes the applicability of requirements specified in Revision No. 8 of the Continuous Source Monitoring Manual (Manual) (274-0300-001).
Draft – 10/1/05

BUREAU OF WATER STANDARDS AND FACILITY REGULATION:
Modified Minor Permit Amendment for Repainting the Interior of a Potable Water Storage Tank. Effective Date: Upon publication of notice as final in the Pennsylvania Bulletin.
Draft – 9/24/05

BUREAU OF AIR QUALITY:
Continuous Source Monitoring Manual. Effective Date: Upon publication of notice as final in the *Pennsylvania Bulletin*. This manual contains design specifications, performance specifications, performance test procedures, data storage and reporting requirements, quality assurance criteria, and administrative procedures for obtaining Department approval of continuous source emission monitoring systems or other monitoring systems required pursuant to the Pennsylvania Department of Environmental Protection Rules and Regulations.
Draft – 9/10/05

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