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## CONFUSED BY THE CHANGES TO THE BROWNFIELDS DUE DILIGENCE STANDARD?

EPA has announced that it will withdraw its direct final rule published in the Federal Register on August 15, which updated brownfields due diligence requirements, and will issue a new final rule. The August due diligence rule had been criticized because it allowed use of an outdated ASTM standard for "all appropriate inquiry" (AAI) when acquiring brownfield sites, as well as the updated ASTM standard. It was asserted that allowance of two different standards would create regulatory confusion on the level of due diligence required. EPA had been expected to state that ASTM's latest version of the AAI standard, E 1527-13, met the process requirements for AAI when acquiring potentially contaminated property. However, the August rule stated that although E 1527-13 is equivalent to the AAI rule, use of that standard was not required, and the earlier version of the standard, E 1527-05, scheduled to expire at the end of this year.

The significant changes from the older standard, E 1527-05, to the new standard, E 1527-13, include:

- Revision to the definition of Recognized Environmental Condition (REC); and the additions of two specific categories to address releases that occurred previously at the site. These two categories are Controlled Recognized Environmental Condition (CREC) and Historical Recognized Environmental Condition (HREC).
- Evaluate the potential for vapor migration to impact the site.
- Regulatory File Review – If the target property or adjoining property is identified in government records search, pertinent regulatory files and/or records associated with the listing should be reviewed at the discretion of the environmental professional.

The August rule stated that the earlier version of the standard, E 1527-05, could continue to be used. The stated reason for withdrawing the August rule is that EPA has received adverse comments on it. The strongest criticism was from those who say continued use of both standards would be very confusing for those in the industry.

A new rule is expected to be issued in early 2014 but it is unlikely the EPA will make major changes to the rule. The EPA is expected to clarify that the newer ASTM standard is the best industry practice. It has been said that the EPA is likely the clarification will occur in the rule's preamble rather than in the body of the rule.

*RT is closely following the changes to the brownfields due diligence standard and will continue keep our clients informed of the latest Due Diligence approaches.*

Jeff Humpton (11/25/13)

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## RECLAMATION FILL GUIDANCE APPROVAL – KEY BENEFITS FOR PENNSYLVANIANS STATEWIDE!

At RT Review **press time**, minor revisions were being made to facilitate use of the recently issued Reclamation Fill Guidance published in the *Pennsylvania Bulletin* in November. When the Management of Fill (also known as Clean Fill Guidance Document) was finalized in 2004, RT's President, Gary Brown, worked closely with DEP Secretary Katie McGinty, to make sure that excavated materials crossing property lines, meet appropriate standards, prior to placement on another property. This is considered important because of the long-term use of coal in Pennsylvania, where emissions could have impacted surface soils. Like many other northeastern states, there is also "historic fill" containing coal ash which is present along rivers and streams, which, if moved, unintentionally, can contaminate the receiving property.

At the time that the Management of Fill Policy was issued in 2004, the Pennsylvania Department of Environmental Protection (DEP) did not want the Management of Fill Guidance Document to be used for materials being placed in "Waters of the Commonwealth." That included surface mines, where after mining is completed, and dewatering pumps are turned off, that material would effectively be in the recovered groundwater table. The **Pennsylvania Aggregates and Concrete Association**, has worked tirelessly over a long period with the Pennsylvania DEP, to come up with a "workable" document, as many materials routinely produced during construction and excavation projects, do qualify as "clean". Unfortunately, there are many competing DEP regulatory programs, which define "how clean is clean," so the effort took a substantial period of time.

Many surface mine facilities have been receiving Reclamation Fill under individual permits, but the permit limits were not based on sound science, and individual approvals were needed from DEP in most instances. This was an unworkable program, as many "clean" materials would simply be taken elsewhere, although they were considered

valuable reclamation materials by surface mine operators.

Many surface mines in Pennsylvania have been operating for a long number of years, and materials are simply not available to "reclaim" the surface mine to original contours. Further, all surface mines are not amenable to reclamation, by leaving a water-filled quarry. There are a number of technical reasons for this, including not having adequate shorelines or having "high walls" which may collapse.

Compounding the issue, as noted by John Stefanko, DEP's well respected Deputy Secretary for Mineral Resources, is presence of a large number of abandoned mines in the Commonwealth which, present a very real problem, long term. In many years, there are deaths associated with attempting to swim in very cold water in abandoned quarries, people fall in, or high walls sometimes fail. The use of a Reclamation Fill Guidance, is expected to now be addressed for use at abandoned mines. A standard Guidance makes it easier to identify what materials are and are not acceptable, meaning more clean reclamation materials will become available for surface mine reclamation.

The 2004 Management of Fill Guidance was considered a pioneering document in determining what materials are and are not clean, and the Reclamation Fill Guidance document is also pioneering, and can now be applied to operating surface mines. Gary Brown, RT's President, was invited to speak in Minnesota on how PA's program works. The next step, applying the Guidance to abandoned mines, signals the probability of significant long-term environmental progress by DEP, the contractors who haul materials, and land owners, who have few or no resources to properly close abandoned surface mines.

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## RT STAFF AND PROJECT NEWS

At *RT Review* **press time**, a significant number of projects were being undertaken by RT, in our Southwest PA Region Pittsburgh office. Permits were being issued for General Beneficial Use purposes for slag, produced at a major facility in Aliquippa. In addition, announcements were being made about new European processes being implemented, to maximize metal recovery. The operations, being approved by the Pittsburgh office of PADEP, will be pioneering for use at active and abandoned steel sites, in the United States. The same site is now confirmed to be going through the Act 2 of 1995 Brownfields Land Recycling process, to help facilitate redevelopment of the site, which has, on site, one of the largest Beneficial Use operations involving slag, in the world. Justin Lauterbach, QEP, Chrissie Lee, and Joshua Hagadorn, P.E., are the key RT team members on this important project.

Chris Ward and Glenn Graham, P.G., in RT's New Jersey office, were undertaking a series of studies at former gasoline service stations and dry cleaner sites, using innovative Membrane Interface Probes, to determine where residual contamination is present at individual sites, to determine whether or not further remediation is needed. This work is part of the Licensed Site Remediation Professional process involving determining whether monitored natural attenuation is an effective remedy and/or whether there are remaining source areas of concern. Membrane Interface Probe technology is very precise, in determining where contamination is, and, helping the Licensed Site Remediation Professional support Response Action Outcome opinions.

Craig Herr, P.G. and Tony Alessandrini were hard at work on a

northeast Philadelphia medical center project, where historic underground storage tanks are being investigated and releases addressed, and, asbestos investigation and abatement is being undertaken, to facilitate reuse of portions of a large building, no longer being used for patient hospital bed purposes. Work is being fast tracked, for renovations near term and occupancy by next year.

Adam Messner and Joshua Hagadorn, P.E. were working on a mold abatement project, in the King of Prussia, Pennsylvania area. A water intrusion event, had not originally been understood to involve mold, and complicated scheduling was necessary due to the uses of impacted laboratory facilities, so as to minimize facility operations interruptions. Work is being completed under the direction of Gary R. Brown, CMC.

Walter Hungarter, P.E. and RT are the recipient of the prestigious Montgomery Award, awarded for the Ambler Boiler House redevelopment project. The Ambler Boiler House project is now expanding to adjacent property redevelopment, as a former asbestos manufacturing site is being addressed comprehensively, under Pennsylvania's Award Winning Act 2 of 1995 Land Recycling Program. Gary Brown, P.E. was invited to narrate a video segment on the project, to be presented at Pennsylvania's Annual Brownfields Conference.

RT appreciates the opportunity to be of continued service to our clients, with personal service and attention to detail, our focus since the inception of our firm in 1988. We look forward to the opportunity to be of service to each of our clients in 2014 and beyond.

-Gary R. Brown

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## RECLAMATION FILL GUIDANCE APPROVAL – KEY BENEFITS FOR PENNSYLVANIANS STATEWIDE! *(continued from page 1)*

Long term, finalization of the Reclamation Fill Guidance is good for Pennsylvanians.

For more information on the Reclamation Fill Guidance Document, and its use at surface mines, contact Gary Brown at RT Environmental Services at 610-804-8657 or by email at [gbrown@rtenv.com](mailto:gbrown@rtenv.com).

RT salutes the Pennsylvania Aggregates and Concrete Association, for its tireless efforts in seeing to it that a workable Guidance Document is now available. Training sessions will be held in the coming months on the use of the new Guidance Document, both at large and small surface mines, statewide. For information on these training sessions, important to the Surface Mine Industry, call the PA Aggregates

and Concrete Association at 717-234-2603, or visit PACA's website at [www.pacaweb.org](http://www.pacaweb.org).

Time and again, use of workable environmental regulatory programs, can address environmental issues, and in this case, help current and former surface mine owners achieve important short and long term environmental objectives. While surface mine operators have long sought clean materials for reclamation purposes, very large volumes of materials have gone elsewhere, because of non-uniform policies, and untimely approvals. The new Reclamation Fill Guidance, solves those issues.

- Gary R. Brown, P.E.

### RECENT COURT DECISIONS

**Water Act Permits for Farms' "Tile Drains";** Pacific Coast Federation of Fisherman's Associations, et al. v Glaser, Et al.; Judge found that Congress intended its point source exemption to extend to the "tile drain" system at issue in the suit.

**Coal Ash Waste Rule;** Judge Reggie Walton of the U.S. District Court for the District of Columbia issued a memorandum requiring EPA to "advise" the court by Dec 29 of its plan to complete its review of the Coal Ash Rule.

**Agricultural Stormwater Exception;** Lois Alt, et al. v. EPA; Litter and manure which is washed by precipitation is an agricultural stormwater discharge and not a point source discharge.

**Wetlands Mitigation;** Koontz v. St. Johns River Water management District; Permit denials can amount to a constitutional taking. Prior Case: Nollan v. California Coastal Commission and Dolan v. City of Tigard.

**Wastewater "Blending" Ruling;** A three-judge panel held that a collection of EPA letters and memos, including correspondence amounted to a substantive change in the agency's policy on "blending" without notice and comment. Iowa League of Cities v. EPA en banc review.

**EPA Response to Michigan Wetlands Law;** EPA may challenge Michigan's wetlands program, which changes EPA's CWA Section 404 provisions. Michigan and New Jersey are currently the only states that have assumed authority for the 404 program, other states, including Ohio, Oregon, Virginia and Alaska are investigating the process.

**Stormwater Permit Challenge;** Buckley Air Force Base Municipal Separate Storm Sewer System a Challenge filed with Environmental Appeals Board seeking to define the Clean Water Act's statutory mandate for municipal separate storm sewer system agencies to reduce pollutant discharges to the "maximum extent practicable" – a crucial standard for stormwater regulation that has long been left unclear.

### NOVEMBER CLIMATE TALKS OUTCOME

Annual U.N. climate talks in November ended with a modest set of decisions meant to pave the way for a new pact to fight global warming.

More than 190 countries agreed in Warsaw to start preparing "contributions" for the new deal, which is supposed to be adopted in 2015

The fast-growing economies say they are still developing countries and shouldn't have to take on as strict commitments to cut carbon emissions as industrialized nations.

"In the nick of time, negotiators in Warsaw delivered just enough to keep things moving." Said Jennifer Morgan of the World Resources Institute, an environmental think tank.

The United States and other rich countries resisted demands to put down firm commitments on how they plan to fulfill a pledge to scale up climate financing to developing countries to \$100 billion by 2020.

That money is meant to help developing countries transition to cleaner energy sources and adapt to shifts in climate that can affect agriculture, human health and economies in general.

Historically, most emissions have come from the industrialized nations, but the developing world is catching up fast, driven by rapid growth in major countries including India, Brazil and China – the world's top carbon polluter.

Though China has invested heavily in renewable sources, it was reluctant to promise emissions cuts internationally because it still almost 70 percent of its energy from coal, which produces the highest emissions of all fuels.

The conference also advanced a program to reduce deforestation and established a "loss and damage" mechanism to help island states and other vulnerable countries under threat from rising seas, extreme weather and other climate impacts.

*(By Karl Ritter, Associated Press – Star Ledger – 11/24/13)*

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## FEDERAL REGULATORY UPDATES

### FMCSA ROLLS OUT UNIFIED REGISTRATION SYSTEM

The FMCSA amended its regulations to require interstate motor carriers, freight forwarders, brokers, intermodal equipment providers (IEPs), hazardous materials safety permit (HMSP) applicants, and cargo tank facilities under FMCSA jurisdiction to submit required registration and biennial update information to the Agency via a new electronic on-line Unified Registration System (URS). FMCSA establishes fees for the registration system, discloses the cumulative information to be collected in the URS, and provides a centralized cross-reference to existing safety and commercial regulations necessary for compliance with the registration requirements.

The final rule implements statutory provisions in the ICC Termination Act of 1995 (ICCTA) and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, 2005 (SAFETEA-LU). The URS will streamline the registration process and serve as a clearinghouse and depository of information on, and identification of, motor carriers, brokers, freight forwarders, IEPs, HMSP applicants, and cargo tank facilities required to register with FMCSA.

*(Environmental Resource Center 8/26/13)*

### EPA REQUIRES NEW PESTICIDE LABELS TO PROTECT BEES AND OTHER POLLINATORS

EPA has developed new pesticide labels that prohibit use of some neonicotinoid pesticide products where bees are present.

"Multiple factors play a role in bee colony declines, including pesticides. The Environmental Protection Agency is taking action to protect bees from pesticide exposure and these label changes will further our efforts," said Jim Jones, assistant administrator for the Office of Chemical Safety and Pollution Prevention.

The new labels will have a bee advisory box and icon with information on routes of exposure and spray drift precautions. The announcement affects products containing the neonicotinoids imidacloprid, dinotefuran, clothianidin, and thiamethoxam. The EPA will work with pesticide manufacturers to change labels so that they will meet the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) safety standard.

In May, the US Department of Agriculture (USDA) and EPA released a comprehensive scientific report on honey bee health, showing scientific consensus that there are a complex set of stressors associated with honey bee declines, including loss of habitat, parasites and disease, genetics, poor nutrition, and pesticide exposure.

The agency continues to work with beekeepers, growers, pesticide applicators, pesticide and seed companies, and federal and state agencies to reduce pesticide drift dust and advance best management practices. The EPA recently released new enforcement guidance to federal, state, and tribal enforcement officials to enhance investigations of beekill incidents.

*(Environmental Resource Center – 8/19/13)*

### EPA WEB TOOL EXPANDS ACCESS TO SCIENTIFIC, REGULATORY INFORMATION ON CHEMICALS

EPA has launched a web-based tool, called ChemView (<http://java.epa.gov/chemview>), to significantly improve access to chemical specific regulatory information developed by EPA and data submitted under the Toxic Substances Control Act (TSCA).

"This online tool will improve access to chemical health and safety information, increase public dialogue and awareness, and help viewers choose safer ingredients used in everyday products," said James Jones, assistant administrator for the Office of Chemical Safety and Pollution Prevention. "The tool will make chemical information more readily available for chemical decision-makers and consumers."

The ChemView web tool displays key health and safety data in an online format that allows comparison of chemicals by use and by health or environmental effects. The search tool combines available TSCA information and provides streamlined access to EPA assessments, hazard characterizations, and information on safer chemical ingredients. Additionally, the new web tool allows searches by chemical name or Chemical Abstracts Service (CAS) number, use, hazard effect, or regulatory action. It has the flexibility to create tailored views of the information on individual chemicals or compare multiple chemicals sorted by use, hazard effect, or other criteria. The new portal will also link to information on manufacturing, processing, use, and release data reported under the Chemical Data Reporting Rule, and the Toxics Release Inventory.

*(Environmental Tip of the Week – 9/16/13)*

### KEY EPA REPORT ON WETLANDS AND STREAM CONNECTIVITY

The U.S. Environmental Protection Agency's Science Advisory Board has just released for public comment a draft scientific report, "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence." EPA/600/R-11/098B.

The draft report analyzes more than a thousand peer-reviewed pieces of scientific literature about how smaller, isolated water bodies are connected to larger ones. The EPA indicates that this report "represents the state-of-the-science on the connectivity and isolation of waters in the United States."

According to EPA, the draft report makes three main conclusions:

- Streams, regardless of their size or how frequently they flow, are connected to and have important effects on downstream waters.
- Wetlands and open-waters in floodplains of streams and rivers and in riparian areas are integrated with streams and rivers.
- There is insufficient information to generalize about wetlands and open-waters located outside of riparian areas and floodplains and their connectivity to downstream waters.

The Agency is seeking comments on the literature summarized in the report, and its conclu-

### FEDERAL UPDATES

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sions. The Agency's stated purpose is that the final version of this report will serve as a basis for a joint EPA and U.S. Army Corps of Engineers rulemaking to clarify their jurisdiction in Clean Water Act permitting.

According to the Agency's blog, a draft of the new proposed rule was sent on September 17, 2013, to the Office of Management and Budget for interagency review. The Agency asserts that the draft proposed rule is "necessary to reduce costs and minimize delays in the permit process and protect waters that are vital to public health, the environment and economy." "The proposed joint rule will provide greater consistency, certainty, and predictability nationwide by providing clarity for determining where the Clean Water Act applies and where it does not."

The regulated community — industry, municipalities, developers, builders, and a host of others — should watch and monitor this rulemaking effort very closely. The resulting rules may add innumerable "water bodies" to the list of "waters of the United States," and make Clean Water Act permitting an even more onerous and costly proposition.

*(EPA 9/13/13)*

### EPA GUIDE ADDRESSES RUNOFF AT BROWNFIELD SITES

The Environmental Protection Agency released guidance Sept. 25 to inform urban planners, engineers and developers how they can use bioswales, rain gardens and porous pavements to capture stormwater runoff at brownfield sites without mobilizing pollutants in the soil and contaminating groundwater.

The guidance, "Implementing Stormwater Infiltration Practices at Vacant Parcels and Brownfield Sites," addresses six key questions to determine whether infiltration—which allows accumulated stormwater runoff to percolate into the subsoil-or other management approaches are appropriate for a specific brownfield property. The guidance, prepared by the EPA Office of Water and the Office of Solid Waste and Emergency Response, said stormwater management planning should be done alongside site investigation, state approvals, selection of cleanup approaches and design and engineering of site improvements.

The guidance is available at [http://water.epa.gov/infrastructure/greeninfrastructure/upload/brownfield\\_infiltration\\_decision\\_tool.pdf](http://water.epa.gov/infrastructure/greeninfrastructure/upload/brownfield_infiltration_decision_tool.pdf)

*(EPA – September 2013)*

### NATIONAL RESEARCH COUNSEL CRITIQUES IRIS ASSESSMENT OF INORGANIC ARSENIC

In a recently issued report, the National Academy of Sciences, provided a critique on EPA's Integrated Risk Information System (IRIS),

## FEDERAL REGULATORY UPDATES (Continued)

Toxicological Assessment of Arsenic. Arsenic is a naturally occurring element, and occurs in different forms – broadly classed into inorganic or organic arsenic. There was a Congressional Mandate for an independent review of the IRIS Assessment of Inorganic Arsenic, and, National Research Counsel provided guidance and recommendations to EPA for improving steps of the Toxicological Assessment of Inorganic Arsenic, including:

**A. Hazard Identification.** A broad literature search and screening process will be used by EPA to identify health effects that have been studied in relation to inorganic arsenic, and a preliminary draft of these efforts was provided to the committee. For the purposes of its review, the committee conducted a preliminary survey of the literature and identified categories of health outcomes that, in the end, overlapped with those identified by EPA. As a starting point, the committee attempted to prioritize these health end points on the basis of the perceived strength of evidence and the importance to public health (see Box 2). Chapter 4 provides some guidance on end point specific issues EPA should consider as it conducts a more comprehensive and systematic evaluation of the literature.

**B. Evidence Evaluation and Systematic Reviews.** EPA has indicated that systematic review will be used to support toxicologic assessment of inorganic arsenic. To perform such reviews, the committee recommends searching for studies on specific outcomes (See Box 2). That meet the following criteria: individual measures of arsenic exposure, measurement of arsenic that precedes the outcome, and low to moderate exposure to inorganic arsenic (less than 100 ug/L in drinking water). It will also be important to organize the data from the individual studies into evidence tables. The example tables provided by EPA in its draft plans appear to capture the salient categories information with respect to epidemiologic data. Meta-analysis should also be considered for priority end points if there are three or more peer reviewed studies on the outcome of interest. For dose-response meta-analysis, studies will need to have characterized three or more exposure levels. Chapter 3 provides general guidance for performing systematic reviews and meta-analyses, as well as for developing evidence tables on animal and in vitro data to inform causality determinations and mode-of-action analyses in the low exposure range.

**C. Assessment of Causality.** EPA's draft plans provide a casual determination framework that describes how it will categorize the evidence on different end points into five possible categories. The committee support this five-category approach, and recommends that judgments are characterized with respect to the modified Bradford Hill criteria for causality. The assessment of causality will help EPA prioritize end points for subsequent analysis of mode of action and dose response.

**D. Mode-of-Action Analyses.** The committee supports EPA's plans to conduct mode-of-action analyses for end points it classifies as having a causal or likely to be causal relationship with

arsenic. Consideration might also be given to performing mod-of-action analyses for end points with suggestive evidence for the purpose of determining whether there is sufficient evidence to support a stronger causal association and, if so, informing dose-response analyses. Guidance on performing mode of action analyses is presented in Chapter 6.

**E. Susceptible Subpopulations.** The committee's survey of the literature has identified several factors that could contribute to susceptibility to arsenic. Chapter 5 outlines the importance of considering these factors when interpreting the epidemiologic evidence. Although it is unclear that any of these factors can be evaluated quantitatively in the assessment, their existence is an important consideration when evaluating population risk.

**F. Dose-Response Analysis.** Epidemiologic data are expected to serve as the basis for the doseresponse analyses performed for most end points. As outlined in Chapter 7, efforts should be directed at performing dose-response analyses in the range of epidemiologic observations. For some end points it may be possible to perform dose-response meta-analyses. Should the data in the range of observation be inadequate for developing risk estimates that meet EPA's needs, mode-of-action data should be used to the extent possible to extrapolate below the observed range. The committee concurs with EPA's draft plan that even if a mode of action cannot be determined with reasonable certainty, dose-response analyses should be performed on health end points deemed to have a causal or likely causal relationship with arsenic. In the absence of mode-of-action data, alternative statistical approaches, described in Chapter 7 in the full Report, are recommended.

*EPA is trying to address arsenic risk, but did not include evaluation of exposure by inhalation or dermal pathways, and is also grappling with cancer and non-cancer risks for arsenic. There is a perception, that health assessment needs cannot fully be met by the current work, and NAS provides an alternative option relating to evaluating dose-response relationship and the range of epidemiologic observation, for a given health end-point by using, if feasible, multiple reasonably fitted models and then extrapolating it most over a short distance below that range by using the modeled curve shape approaching the low range of observations. A copy of the report can be accessed at:*

*[http://www.nap.edu/openbook.php?record\\_id=18594](http://www.nap.edu/openbook.php?record_id=18594)*

### EPA REVISES GREENHOUSE GAS REPORTING FOR ELECTRONICS MANUFACTURERS

EPA is amending the calculation and monitoring methodologies for electronics manufacturers covered by the Greenhouse Gas Reporting Rule. These changes, which were published in the November 13 Federal Register and become effective on January 1, 2014, include revising certain calculation methods and adding a new method, amending data reporting requirements, and

clarifying terms and definitions.

The EPA is also making confidentiality determinations for new and revised data elements pertaining to electronics manufacturing. This rule also finalizes amendments to the general provisions of the Greenhouse Gas Reporting Rule to remove entries for data elements that are being moved from reporting to recordkeeping.

*(Environmental Resource Center – 11/18/13)*

### WASTE INDUSTRY SEEKS TO EXEMPT LANDFILL GAS FROM GREENHOUSE GAS REQUIREMENTS

An August 28 letter to EPA Administrator Gina McCarthy, from the United States Solid Waste Industry, requests EPA to consider a “categorical exclusion” from Clean Air Act Permits, and it is requested that EPA's Science Advisory Board study the issue. The Industry believes that EPA's indecision on Rulemaking is causing problems, and, EPA should take into account that landfill biogas should be qualified to generate Renewable Identification Numbers (RINs), and that there are “no land use related greenhouse gas emissions” associated with landfill gas production.

### ETHANOL “BLEND WALL” CONSIDERED TO BE TOO HIGH BY REFINERS

The EPA said in mid-November, that they are considering easing an annual requirement for the content of ethanol in gasoline, agreeing that the levels mandated in 2007, are difficult, if not impossible to meet.

The EPA said it was trying to fix a problem known as the blend wall, which occurs when the annual requirement mandated by Congress exceeds the amount of ethanol that can be mixed into conventional blends of gasoline. If the EPA had stuck to Congress's original target, refiners said they would have to hit the blend wall in 2014 for the first time.

*(Wall Street Journal – 11-16-2013)*

### CO2 EMISSIONS DECLINING IN THE UNITED STATES

On October 21st, an Energy Information Administration report found that CO2 reductions are declining in the United States, and now are 12% below the 2007 peak. Energy related CO2 emissions have declined in 5 of the last 7 years. Originally, declines were attributed to the economic recession. Vehicle miles traveled did not increase when comparing 2011 and 2012. The substitution of natural gas for coal for electricity generation is reported to account for a significant portion of the lower CO2 emissions.

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## RT'S HOT NJ PROJECTS

- Clifton, Passaic County – Former Heat Treating Site – LSRP Services and Partnership with EPA Region 2 to facilitate remediation and redevelopment.
- Child Care Facilities – Response Action Outcome Statements (RAOs) in Monmouth County (2) and Camden County.
- RAOs for petroleum distribution facility in Bridgeton, Cumberland County.
- Remedial Investigation and Morris Canal AOC Remediation in Morris County.
- Remedial Action Completion in Salem County – at glass production plant.
- Innovative Membrane Interface Probe Investigation at dry cleaner site in Camden County and at former service station site in Vineland, Cumberland County.
- Soil Gas Investigation projects in Passaic, Camden and Burlington Counties.
- Industrial Site Recovery Act projects in Warren County, Middlesex County and Camden County (2).
- Mold Investigation / Remediation projects in Burlington County and Camden County.  
Contact Glenn Graham, P.G. at RT's New Jersey office by phone at 856-467-2276 x 122 or by email at ggraham@rtenv.com for more information.

## REAL ESTATE MARKET SHIFT – BACK TO INDUSTRIAL

A fundamental shift appears to be taking place, and the market appears to be refocusing on industrial space, instead of the focus in recent years of redeveloping industrial space to office space. Liberty Property, for example, according to a recent Philadelphia Inquirer article, plans to sell about 6 to 7 million square feet of office space, as space for file cabinets, libraries, and server rooms is simply no longer needed, given the emergence of the internet and “cloud” approaches to even email service.

With Pennsylvania's long term lower energy costs, facilitated by Marcellus Shale gas production, refocus on industrial space is important. According to William P. Hankowsky, President of Liberty Property “Industrial Space is ...” “a whole phenomenon that requires industrial buildings that have a lot more parking, that run three shifts, run seasonally, just operate in a way that's different than a rack building serving a network of stores.” “And that's a systemic change in

that those buildings are needed and necessary.” For Liberty Property, then: “We see a world where there is enhanced demand for industrial product.”

The future of industrial space in Pennsylvania, although not likely to go back to where it once was, will very likely see renewed interest, because of the fundamentals, that Liberty Property has focused on.

RT has long experience with redeveloping industrial properties, going back 18 years, even before the start of Pennsylvania's Award Winning Act 2 Land Recycling Program, began in 1995, as the most innovative redevelopment program in the nation. For more information on RT's experience in redeveloping industrial properties please contact Justin R. Lauterbach by phone at 724-288-4895 or by email at jlauterbach@rtenv.com; or Gary R. Brown 610-265-1510 ext. 234 or by email at gbrown@rtenv.com.

*(Excerpts from Inquirer Article by Chris Hepp, 10/27/2013)*

## U.S. MAY EMIT MORE METHANE THAN WAS THOUGHT

The United States may be emitting 50 percent more methane, a potent greenhouse gas, than the federal government had previously estimated, according to a new study in the Proceedings of the National Academy of Sciences.

Though carbon dioxide from the combustion of fossil fuels is the main driver of climate change, and less methane than carbon is emitted overall, methane is an even more powerful heat-trapping gas than carbon.

In April, the Environmental Protection Agency said that better pollution control by the oil and gas industry had resulted in an average annual decrease of 41.6 million metric tons of methane from 1990 to 2010. That was roughly 20 percent lower than earlier estimates by the agency.

The EPA's findings bolstered supporters of the domestic oil and gas boom, who contended that fossil fuels could be extracted without methane leaks and flaring worsening greenhouse gas emissions. But the report from an international team of researchers tells a different story.

The study was conducted by Scot M. Miller, a doctoral student in Earth and planetary sciences at Harvard University, and researchers from seven other institutions. The team took a different approach from the EPA's to measuring methane. It analyzed almost 5,000 air samples collected in 2007 and 2008 from tall towers around the country and more than 7,700 samples gathered over the same period by research aircraft operated by federal agencies.

Researchers found that methane from Texas, Oklahoma and Kansas

was 2.7 times higher than previously recorded, driven mainly by oil and gas development. Those three states alone account for nearly one-quarter of U.S. methane emissions and almost 4 percent of the country's overall output of greenhouse gasses, according to the study.

The researchers also found that methane emissions from livestock are twice as high as earlier measurements.

“These results cast doubt on the U.S. EPA's recent decision to down-scale its estimate of national natural gas emissions by 25-30 percent,” the study concluded.

The PNAS study is certain to roil the debate about the feasibility of agriculture, industry and regulators' current approach to reducing methane emissions. EPA spokeswoman Alisha Johnson said the agency was reviewing the new study and welcomed the information.

Methane emissions in the United States, dropped slightly from 2011 to 2012, according to federal data.

*(By Neela Banerjee, Philadelphia Inquirer – 12-1-13)*

*In PA, the Marcellus Shale gas industry has already been doing its part to reduce the shale gas related greenhouse gas footprint. A Wilkes University technical paper in 2011 focused on best practices to reduce emissions from drilling and production. The industry has implemented best practices at many sites already and now, at some sites, the natural gas being extracted powers exploration and production equipment right at the well site! Pennsylvania benefits when forward thinking technology is implemented in our gas fields.*

*Justin Lauterbach, Q.E.P.*

## TECHNOLOGY UPDATES

### EVIDENCE OF HUMAN-CAUSED CLIMATE CHANGE IN EXTREME WEATHER AND CLIMATE EVENTS

Human influences are having an impact on some extreme weather and climate events, according to the report “Explaining Extreme Events of 2012 from a Climate Perspective” released recently by the Bulletin of the American Meteorological Society. Overall, 18 different research teams from around the world contributed to the peer-reviewed report that examined the causes of 12 extreme events that occurred on five continents and in the Arctic during 2012. Scientists from NOAA served as three of the four lead editors on the report.

The report shows that the effects of natural weather and climate fluctuations played a key role in the intensity and evolution of the 2012 extreme events. However, in some events, the analyses revealed compelling evidence that human-caused climate change, through the emission of heat-trapping gases, also contributed to the extreme event.

“This report adds to a growing ability of climate science to untangle the complexities of understanding natural and human-induced factors contributing to specific extreme weather and climate events,” said Thomas R. Karl, L.H.D, director of NOAA’s National Climatic Data Center (NCDC). “Nonetheless, determining the causes of extreme events remains challenging.”

In addition to investigating the causes of these extreme events, the multiple analyses of four of the events—the warm temperatures in the US, the record-low levels of Arctic sea ice, and the heavy rain in both northern Europe and eastern Australia—allowed the scientists to compare and contrast the strengths and weaknesses of their various methods of analysis. Despite their different strategies, there was considerable agreement between the assessments of the same events.

Thomas Peterson, Ph.D., principal scientist at NOAA’s NCDC and one of the lead editors on the report, said, “Scientists around the world assessed a wide variety of potential contributing factors to these major extreme events that, in many cases, had large impacts on society. Understanding the range of influences on extreme events helps us to better understand how and why extremes are changing.”

Key findings include:

#### *Heat Wave and Drought in the US*

- Human-induced climate change had little impact on the lack of precipitation in the central US in 2012.

- The 2012 spring and summer heat waves in the US can be mainly explained by natural atmospheric dynamics, however, human-induced climate change was found to be a factor in the magnitude of warmth and was found to have affected the likelihood of such heat waves. For example:

- o High temperatures, such as those experienced in the US in 2012 are now likely to occur four times as frequently due to human-induced climate change.

- o Approximately 35% of the extreme warmth experienced in the eastern US between March and May 2012 can be attributed to human-induced climate change.

#### *Hurricane Sandy Inundation Probability*

- The record-setting impacts of Sandy were largely attributable to the massive storm surge and resulting inundation from the onshore-directed storm path coincident with high tide. However, climate-change related increases in sea level have nearly doubled today’s annual probability of a Sandy-level flood recurrence as compared to 1950. Ongoing natural and human-induced forcing of sea level ensures that Sandy-level inundation events will occur more frequently in the future from storms with less intensity and lower storm surge than Sandy.

#### *Arctic Sea Ice*

- The extremely low Arctic sea ice extent in summer 2012 resulted primarily from the melting of younger, thin ice from a warmed atmosphere and ocean. This event cannot be explained by natural variability alone. Summer Arctic sea ice extent will continue to decrease in the future, and is expected to be largely absent by mid-century.

#### *Global Rainfall Events*

- The unusually high amount of summer rainfall in the United Kingdom in 2012 was largely the result of natural variability. However, there is evidence that rainfall totals are influenced by increases in sea surface temperature and atmospheric moisture which may be linked to human influences on climate.

- The magnitude of the extreme rainfall experienced over southeastern Australia between October 2011 and March 2012 was mainly associated with La Niña conditions. However, the likelihood of above-average precipitation during March was found to have increased by 5%–15% because of human influences on the climate.

- Extreme rainfall events such as the December 2011 two-day rainfall in Golden Bay, New Zealand, are more likely to occur due to a 1%–5% increase in available moisture resulting from increased levels of greenhouse gases (GHGs) in the atmosphere.

- The July 2012 extreme rainfall events in North China and southwestern Japan were mainly due to natural variability.

The report was edited by Peterson, along with Martin P. Hoerling of NOAA’s Earth System Research Laboratory, Peter A. Stott of the UK Met Office Hadley Centre, and Stephanie C. Herring of NCDC, and was written by 78 scientists from 11 countries.

(*Environmental Resource Center – 9/9/13*)

### EPA RELEASES NEW CLIMATE CHANGE VIDEO SERIES

EPA recently released a new series of short public service videos on climate change. The videos cover a range of topics related to climate change, including its causes and impacts, actions Americans can take to reduce

#### TECHNOLOGY UPDATES

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their impact, and the benefits to the economy of addressing climate change. The new video series supports the President’s Climate Action Plan by encouraging American families to reduce the amount of energy they consume, cutting down on their utility bills and protecting people’s health.

On June 25th, President Obama announced his Climate Action Plan to cut carbon pollution and prepare the US for the impacts of climate change. A warming climate can adversely impact water supplies, agriculture, power and transportation systems, as well as the health and safety of Americans and the nation’s economy. These videos show that there are simple things that all Americans can do to help.

<http://www.youtube.com/playlist?list=PLBhfkujujnoRAGtFtLreccWdfpxBIspCGv>

(*Environmental Resource Center – 9/2/13*)

### WHAT IS “COMMON WATERS”?

Common Waters, a partnership of organizations in the Delaware Basin, has been working to develop a source water protection fund for the Delaware called the Common Waters Fund. The Delaware Basin includes four states, 38 counties, and hundreds of municipalities. The river serves 16.2 million people for drinking water alone, 5% of the US population, and contributes an estimated \$25 billion each year to the region’s economy (Kauffman 2011). Waters flowing from reservoirs and the remainder of the watershed provide electricity (via cooling water for natural gas, coal and nuclear facilities) and drinking water (delivered by more than 100 purveyors) for 8 million people living within the basin and 8 million in New York City.

The Common Waters Fund is investigating the ways in which utilities and other major downstream water users can invest in source protection upstream in a large river basin such as the Delaware. Most operational water funds, like in Denver, Raleigh, or New York City, are sustained by rate surcharges that directly pass the cost of headwater investments onto downstream customers; in these cases they all also depend on reservoirs for their water supply. In the Delaware, there are no urgent water quality issues or looming regulations to make the case for proactive source protection clear (or mandatory). In addition, the wide range of water users and other stakeholders – who withdraw at different points along the mainstem – each have a different stake in the quality and flows of the river. Because user fees for source protection are still a very remote possibility in the Delaware Basin, the Fund is working with water users and the scientific community to develop more compelling data to support proactive investments to maintain existing forests. The Fund is also learning more about different sectors’ and stakeholders’

**TECHNOLOGY UPDATES (Continued)**

concerns about future operational risks and about their interest in philanthropic engagement beyond their local community to find the best way to engage each water user in a source protection fund.

In a basin of this size, and complexity, the same institutional challenges with managing point and nonpoint source pollution under laws like the Clean Water Act are factors affecting protection of green infrastructure. It requires concerted and coordinated actions. The same will be true for many of the highly populated basins throughout the country. The Common Waters Fund is one of several initiatives to take on this challenge to help unify land protection priorities and encourage investments from parties who will share the benefits of headwater forest protection.

*(By Will Price, Director, Conservation Programs at the Pinchot Institute in Princeton, NJ, and Stephanie P. Dalke, Project Director at the Pinchot Institute in Washington, DC – Pinchot Letter – Fall 2013)*

## **OUTDOOR AIR POLLUTION CLASSIFIED BY IARC AS A CARCINOGEN**

The International Agency for Research on Cancer (IARC), announced on October 17 that it has classified outdoor air pollution as carcinogenic to humans. After thoroughly reviewing the latest available scientific literature, the world's leading experts convened by the IARC Monographs Program concluded that there is sufficient evidence that exposure to outdoor air pollution causes lung cancer. They also noted a positive association with an increased risk of bladder cancer. Outdoor air pollution was ranked Group 1, the agency's most dangerous rating. IARC classifies chemicals using a rating scheme ranging from Group 1 (carcinogenic to humans) to Group 4 (not carcinogenic to humans).

Particulate matter, a major component of outdoor air pollution, was evaluated separately and was also classified as carcinogenic to humans. The IARC evaluation showed an increasing risk of lung cancer with increasing levels of exposure to particulate matter and air pollution. Although the composition of air pollution and levels of exposure can vary dramatically between locations, the conclusions of the Working Group apply to all regions of the world.

Air pollution is already known to increase risks for a wide range of diseases, such as respiratory and heart diseases. Studies indicate that in recent years exposure levels have increased significantly in some parts of the world, particularly in rapidly industrializing countries with large populations. The most recent data indicate that in 2010, 223,000 deaths from lung cancer worldwide resulted from air pollution.

The IARC Monographs Program provides an authoritative source of scientific evidence on cancer-causing substances and exposures.

In the past, the Program evaluated many individual chemicals and specific mixtures that occur in outdoor air pollution. These included diesel engine exhaust, solvents, metals, and dusts. But this is the first time that experts have classified outdoor air pollution as a cause of cancer.

"Our task was to evaluate the air everyone breathes rather than focus on specific air pollutants," explains Dr Dana Loomis, Deputy Head of the Monographs Section. "The results from the reviewed studies point in the same direction: the risk of developing lung cancer is significantly increased in people exposed to air pollution."

Volume 109 of the IARC Monographs is based on the independent review of more than 1000 scientific papers from studies on five continents. The reviewed studies analyze the carcinogenicity of various pollutants present in outdoor air pollution, especially particulate matter and transportation-related pollution. The evaluation is driven by findings from large epidemiologic studies that included millions of people living in Europe, North and South America, and Asia.

*(Environmental Resource Center – 10/21/13)*

## **SYMPTOMS OF PARKINSON'S DISEASE LINKED TO MOLD**

Scientists at Rutgers and Emory universities have discovered that a compound often emitted by mold may be linked to symptoms of Parkinson's disease.

Arati Inamdar and Joan Bennett, researchers in the School of Environmental and Biological Sciences at Rutgers, used fruit flies to establish the connection between the compound – popularly known as mushroom alcohol – and the malfunction of two genes involved in the packaging and transport of dopamine, the chemical released by nerve cells to send messages to other nerve cells in the brain.

The findings were published online in November in the Proceedings of the National Academy of Sciences.

"Parkinson's has been linked to exposure to environmental toxins, but the toxins were man-made chemicals," Inamdar said. "In this paper, we show that biologic compounds have the potential to damage dopamine and cause Parkinson's symptoms."

For co-author Bennett, the research was more than academic. Bennett was working at Tulane University in New Orleans when Hurricane Katrina struck the Gulf Coast in 2005. Her flooded house became infested with molds, which she collected in samples, wearing a mask, gloves and protective gear.

"I felt horrible – headaches, dizziness, nausea," said Bennett, now a professor of plant pathology and biology at Rutgers. "I knew something about 'sick building syndrome' but until then I didn't believe in it. I didn't think it would be possible to breathe in enough mold spores to get sick." That is when she formed her hypothesis that volatiles might be involved.

Inamdar, who uses fruit flies in her research,

and Bennett began their study shortly after Bennett arrived at Rutgers. Bennett wanted to understand the connection between molds and symptoms like those she had experienced following Katrina.

The scientists discovered that the volatile organic compound 1-octen-3-ol, otherwise known as mushroom alcohol, can cause movement disorders in flies, similar to those observed in the presence of pesticides, such as paraquat and rotenone. Further, they discovered that it attacked two genes that deal with dopamine, degenerating the neurons and causing the Parkinson's-like symptoms.

Studies indicate that Parkinson's disease – a progressive disease of the nervous system marked by tremor, muscular rigidity and slow, imprecise movement -- is increasing in rural areas, where it's usually attributed to pesticide exposure. But rural environments also have a lot of mold and mushroom exposure.

"Our work suggests that 1-octen-3-ol might also be connected to the disease, particularly for people with a genetic susceptibility to it," Inamdar said. "We've given the epidemiologists some new avenues to explore."

The study was funded by Rutgers and the National Institutes of Health.

*(Rutgers Today – 11/10/13)*

## **NOVEL URBAN FLOOD STUDY MAY HELP EPA ASSESS STORMWATER RULE'S BENEFITS**

A group has studied claims data from multiple databases relating to property damage from flooding in Cook County, Illinois, which includes Chicago and its suburbs. The data suggests that there is no correlation between the number of claims made and whether the claims area was located in a floodplain, suggesting that flooding is as likely to occur from poor stormwater management as it is from being located in a flood prone location. Flooding often occurs from upstream developments causing adverse downstream impacts due to improper stormwater management.

This study further exemplifies the need for urgency in finalizing the EPA stormwater rule that would regulate stormwater runoff from development and redevelopment projects through the Federal National Pollution Discharge Elimination System (NPDES) permitting process. Particularly, this rule could assist downstream homeowner's from flooding resulting from upstream development sites, by requiring stricter stormwater retention limits from new development sites, but also by requiring stormwater retention from already developed sites undergoing redevelopment.

We at RT Environmental Services, Inc. (RT) are able to assist homeowner's and businesses with stormwater flooding problems. We can develop stormwater best management practices to control stormwater run-on from upstream sources coming onto your property to safely convey stormwater through your property and downstream, without also causing flooding to your downstream neighbor. We also work as



## TECHNOLOGY UPDATES *(Continued)*

experts with attorneys, to develop reports that can be furnished to upstream homeowner's or developers that are the source of the flooding, which can be used to file a stormwater case in Federal, State or Local court, when amenable resolutions cannot be made without legal intervention.

*For more information on the proposed stormwater rule, the NPDES permit process, or to assist you with your flooding problems, please contact Joshua D. Hagadorn, P.E. at (610) 265-1510 extension 211 or [jhagadorn@rtenv.com](mailto:jhagadorn@rtenv.com).*

### **EPA SEES STORMWATER RULE BOOSTING GREEN INFRASTRUCTURE**

The EPA is proposing a new stormwater rule that would regulate stormwater runoff from development and redevelopment projects

through the Federal National Pollution Discharge Elimination System (NPDES) permitting process. This rule could require already developed sites undergoing redevelopment to implement stormwater retention facilities and new development sites could have even stricter stormwater retention limits.

These forthcoming changes in stormwater management paired with an increase in the number of "Green Building" projects using such criteria as the Leadership in Energy and Environmental Design standard developed by the U.S. Green Building Council, as well as a technological shift away from large stormwater retention basins at development sites, is causing an increase in the number of projects using "Green Infrastructure" to meet the stormwater retention requirements from development sites, including - underground retention systems, vegetated stormwater control facilities, con-

structed wetlands and rain gardens as well as using more pervious infrastructure.

*We at RT Environmental Services, Inc. (RT) are able to design and partner with these leaders in innovative stormwater technologies to help you with your development and redevelopment projects. We are familiar with the NPDES permitting process and can design a system that meets your specific needs. For more information on the proposed stormwater rule, the NPDES permit process, or to assist you with your development or "Green Building" project, please contact Joshua D. Hagadorn, P.E., LEED Green Associate at 610-265-1510 extension 211 or [jhagadorn@rtenv.com](mailto:jhagadorn@rtenv.com).*

## RT'S MISSION STATEMENT

Our mission is to help our clients solve their environmental problems and to help them build environmental management facilities which will work effectively and efficiently. The following principals will guide all of our work for each client:

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When an environmental problem is suspected or only partially identified, we will do our best to confirm the extent of the problem as efficiently as possible, using the most appropriate investigative techniques.

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When the extent of the problem is evident, we will seek to identify the best workable solutions as early as possible.

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When we design remedial measures and new environmental management facilities, these projects will be environmentally protective and will work efficiently with the client's operation over the long term. Our projects will incorporate the most appropriate, proven and workable technology.

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When we implement or oversee construction or remediation, we will judiciously uphold all environmental and quality standards, including all special provisions for the project. We will manage the projects as if it were our own by fully protecting the client's financial interest and keeping all key project principals fully informed of progress.

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We will always seek the most appropriate project-specific professional and technological resource mix, on an ongoing basis. We will engage the proper technical disciplines for each assignment, and will never attempt to learn other technical areas of expertise at our client's expense.

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We will always seek a high level of quality in our work. If a quality problem is found after the fact, we will determine its significance and resolution as if it were a current problem. We will be honest and fair in our dealings with everyone.

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The principals in the Mission Statement guide us in our day-to-day work, they help assure that we meet every client's needs because every client is important to us.

**PENNSYLVANIA BULLETIN NOTICES**

Draft Guidance: DEP ID: 393-3130-108. Title: New Source Sampling Requirements for Surface Water Sources.	September 16, 2013
Environmental Quality Board – Approved a final regulation increasing Air Quality Title V emission fees from \$57.50 per ton of emissions to \$85 per ton. The change is estimated to initially generate about \$5.1 million more in revenue to the Department of Environmental Protection to administer the Title V program.	September 23, 2013
Draft Guidance: DEP ID: 394-2125-001. Title: Aquifer Testing Guide and for Public Water Systems.	September 23, 2013
Final Guidance: DEP ID: 800-5000-001. Addressing Spills and Releases at Oil & Gas Well Sites or Access Roads	September 23, 2013
Oil and Gas Surface Regulations – Pennsylvania's Environmental Quality Board (EQB) proposed new regulations regarding surface activities related to oil and gas well development. These proposed regulations will set new requirements related to oil and gas operations to ensure increased protection of public health, safety and the environment.	September, 2013
Draft Guidance: DEP ID: 263-0900-011. Title: Storage Tank Modification and Maintenance Issues.	September 30, 2013
Regulations, Technical Guidance & Permits: The DEP Board of Coal Mine Safety formally proposed regulation changes for comment involving high-voltage continuous mining machines.	October 7, 2013
Technical Guidance and Permits: The Department of Environmental Protection public hearing and opportunity to comment on the Reading Fine Particulate Air Quality Implementation Plan.	October 14, 2013
Technical Guidance and Permits: DEP published notice extending General Permit WMGR081 relating to processing and beneficial use equipment.	October 28, 2013
Final Guidance: DEP ID: 262-4500-606. Title: Applicable or Relevant and Appropriate Requirements (ARARs) for Cleanup Response and Remedial Actions in Pennsylvania.	October 28, 2013
Supplemental Comment Period Final: DEP ID: 021-2100-001. Title: Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee.	October 28, 2013
Draft Guidance: DEP ID: 012-4180-001. Title: Policy for the Consideration of Community Environmental Projects (CEP) in Conjunction with Assessment of Civil Penalty.	October 28, 2013
Regulations, Technical Guidance & Permits: The Department of Environmental Protection is seeking public comment on proposed fine particulate nonattainment area designations including areas the Greater Philadelphia Area (which includes Chester, Delaware and Philadelphia Counties), Northampton County Area, Lancaster County Area, Cambria County Area, The Greater Pittsburgh Area (which includes Allegheny and Westmoreland Counties) and the Liberty/Clairton Area.	November 4, 2013
Technical Guidance & Permits: The Department of Environmental Protection published notice of final technical guidance on a training manual for onlot sewage systems and the certification program under the State Board for Certification of Water and Wastewater Systems Operators as well as draft guidance for comment on the use of reclamation fill at active noncoal mining sites.	November 4, 2013
Technical Guidance & Permits: DEP also published notice of a propose interbasin trading request under the Nutrient Credit Trading Program, notice of proposed reissuance of General Permit BWEW-GP-8 relating to temporary road crossings and 401 water quality certification, notice of a draft NPDES General Permit for wet weather overflow discharges from combined sewer systems.	November 4, 2013
DEP – Under the Solid Waste Management Act (35 P.S. §§ 6018.101 – 6018.1003), the Municipal Waste Planning, Recycling and Waste Reduction Act (53 P.S. §§ 4000.101—4000.1904) and residual waste regulations, a General Permit authorizing Research and Development of the Beneficial Uses of Municipal and residual Waste General Permit Number WMGR097 authorizes research and development activities to demonstrate the beneficial use of residual and/or municipal waste.	November 25, 2013
Pennsylvania Public Utility Commission – Amended Act 129 Demand Response Study that includes a Preliminary Wholesale and Price Suppression and Prospective TRC Analysis for the Act 129 Energy Efficiency and Conservation (EE&C) Program	November 27, 2013

**TAKE A**

**LOOK AT US NOW:**

- Professional Engineers
- Professional Geologists
- Qualified Environmental Professionals
- Certified Microbial Consultants
- Asbestos Inspector

**FEDERAL REGISTER NOTICES**

<http://www.epagov/homepage/fedrgstr>

**Environmental Protection Agency;** Proposed Rule – National Emissions Standards for Hazardous Air Pollutants residual Risk and Technology Review for Flexible Polyurethane Foam Production  
*(Federal Register – 11/4/2013)*

**Environmental Protection Agency;** Final Rule – Greenhouse Gas Reporting Program: Final Amendments and Confidentiality Determinations for Electronics Manufacturing.  
*(Federal Register – 11/13/2013)*

**Department of Housing and Urban Renewal;** Final Rule – Floodplain Management and Protection of Wetlands.  
*(Federal Register – 11/15/2013)*

**Department of the Interior;** Proposed Rule – Endangered and Threatened Wildlife and Plants; Review of Native Species that are Candidates for Listing as Endangered or Threatened; Annual Notice of Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions  
*(Federal Register – 11/22/2013)*

**Environmental Protection Agency;** Proposed Rule – 2014 Standards for Renewable Fuel Standard Program  
*(Federal Register – 11/29/2013)*

**Environmental Protection Agency;** Final Rule – 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determination for New or Substantially Revised Data Elements  
*(Federal Register – 11/29/2013)*

**SCOPE OF SERVICES**

**Environmental Assessments & Investigation**

- Phase I/II Site Assessments
- Soil and Groundwater Investigation
- Remediation Services
- Wetland Delineation & Mitigation

**Brownfields Redevelopment Services**

- Voluntary Cleanup Program Assistance
- PA Act 2, NJ ISRA, EPA Superfund
- Remedial Investigations
- Design and Construction
- Storage Tank Removals

**Marcellus Shale Services**

- ESCGP's & Individual Permits
- Pre-drill Surveys/Stray Gas Investigations
- Impoundment Design & Implementation
- Gathering and Transmission Line Routing Reviews

**Environmental Engineering**

- Stormwater Management
- Landfill Design and Closure
- Water and Wastewater Engineering
- Soil and Erosion Control Plans
- Litigation Support/Expert Testimony
- SPCC/Contingency Plan Updates
- Reclamation & Stormwater Management Services
- Infrastructure Permitting & Grant Assistance

**Indoor Air Quality**

- Asbestos Surveys, Management, and Abatement
- Lead Based Paint Management
- Mold Surveys and Remediation



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