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PROPOSED NEW DOT RULES FOR THE SAFE TRANSPORTATION OF CRUDE OIL, FLAMMABLE MATERIALS

In July, the US Department of Transportation released the details of its comprehensive rulemaking proposal to improve the safe transportation of large quantities of flammable materials by rail—particularly crude oil and ethanol—in the form of a Notice of Proposed Rulemaking (NPRM) and a companion Advanced Notice of Proposed Rulemaking (ANPRM).

The NPRM proposes enhanced tank car standards, a classification and testing program for mined gases and liquids and new operational requirements for high-hazard flammable trains (HHFT) that include braking controls and speed restrictions. Specifically, within two years, it proposes the phase out of the use of older DOT 111 tank cars for the shipment of packing group I flammable liquids, including most Bakken crude oil, unless the tank cars are retrofitted to comply with new tank car design standards. The ANPRM seeks further information on expanding comprehensive oil spill response planning requirements for shipments of flammable materials. Both the NPRM and ANPRM will be open until September for public comment. Given the urgency of the safety issues addressed in these proposals, PHMSA did not intend to extend the comment period as of late July.

PHMSA concurrently published an ANPRM on oil spill response plans, specifically current thresholds and their applicability to rail, in part in response to an NTSB recommendation issued in January 2014.

In addition to issuing the NPRM and ANPRM, PHMSA concurrently released a report summarizing the analysis of Bakken crude oil data gathered by PHMSA and FRA between August 2013 and May 2014.

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SUSQUEHANNA MINING SOLUTIONS — ATTENTION TO PENNSYLVANIA'S LARGEST ACID DRAINAGE OUTFALLS

A company called Susquehanna Mining Solutions is eyeing the Old Forge bore hole and the Duryea Outfall in northeastern Pennsylvania, as the two outfalls are among the top acid mine discharges from the Lackawanna Valley, as of 1985. 59,000 gallons per minute of acid mine drainage, flows into the Susquehanna River system from these locations. Mine drainage outfalls were created from efforts to control and manage water levels in the mines, and mine drainage outfalls are known to exist throughout the Lackawanna and Wyoming Valleys.

After the Knox Mine disaster in the 1950s, the original mine water control systems were systematically abandoned. The Knox disaster involved a situation where mining was done too close to the river bottom, and many lives were lost when the river broke through into the deep mines, creating a more costly deep mine program going forward, as more water had to be controlled, making the coal product more costly.

The Duryea and Old Forge Outfalls combined are believed to be the largest point source of pollution in the Chesapeake Bay Watershed. Visual iron oxide deposits can be seen along six miles of the Lackawanna and Susquehanna Rivers, which starts near the confluence of the Lackawanna River and the Susquehanna River. Much attention has been given to acid mine drainage, and mine drainage discharges range from alkaline water containing iron to heavily polluted acid discharges containing iron, aluminum, manganese and sulfates. The discharges can kill off aquatic insect communities essential to fish life, and also can kill young fish; many adult fish that cannot escape poor water quality in discharge areas.

Passive treatment systems including constructed wetlands and limestone beds, have been used in the past to address acid mine drainage, along with active treatment systems. However, the size and the scale of the outfalls involved here, make solutions difficult. New solutions involving collecting the iron and manganese has been the subject of a study by Kings College and

PENNSYLVANIA'S ACID MINE DRAINAGE CHALLENGE

- 2500 Miles of Impaired Streams
- One of Our Country's Worst Environmental Legacy Problems
- Largest PA Non-point Pollution Source
- One-third of US Waters Impacted are in PA
- A century of Coal Extraction

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SUSQUEHANNA MINING SOLUTIONS — ATTENTION TO PENNSYLVANIA'S LARGEST ACID DRAINAGE OUTFALLS *(continued from page 1)*

Ben Franklin Technology Partners. It has found that iron can be sorted in a new SMS system, and the separated iron is predominantly a nano-sized particle. The iron has a purity that exceeds 90%. This could mean that the iron collected in the proposed system, could be valuable.

Site plans have already been prepared, for one of the sites, and the cost for a system at the Old Forge Outfall would be $47 million. It is anticipated that the collection of the iron, could cover operational costs. This provides a reasonable return on an investment, so long as capital costs can be funded.

SMS proposes to use patented technology, and if capital funding can be raised, the ongoing operations would also be privately owned, and, there would be no requests for waivers of taxes. There would also be significant job creation, and 90 acres of Brownfields Redevelopment, would be part of the project.

Acid mine drainage is considered one of Pennsylvania's most difficult, widespread and costly environmental problems to address, and the RT Review will keep you informed, as we hope that Susquehanna Mining Solutions LLC's proposal to address one of Pennsylvania's largest AMD problems, at the Lackawanna and Susquehanna River, can be implemented.

For more information, Google: "Susquehanna Mining Solutions".

PROPOSED NEW DOT RULES FOR THE SAFE TRANSPORTATION OF CRUDE OIL, FLAMMABLE MATERIALS *(continued from page 1)*

The data show that crude oil from the Bakken region in North Dakota tends to be more volatile and flammable than other crude oils. Collected as part of Operation Classification, a joint PHMSA and Federal Railroad Administration (FRA) effort, the data were initially gathered to verify that crude oil was being properly classified in accordance with federal regulations, and evolved to include more robust testing to better understand the characteristics of the product.

The safety risk presented by transporting Bakken crude oil by rail is magnified both by an increasing volume of Bakken being shipped by throughout the US and the large distances over which the product is shipped. In 2008, 9,500 rail-carloads of crude moved through the US compared to last year, when there were 415,000 rail-carloads. Moreover, on average Bakken crude oil shipments travel over 1,000 miles from point of origin to refineries on the coasts.

PHMSA and FRA plan to continue the sampling and analysis activities of Operation Safe Delivery through the summer and fall of 2014, working with the regulated community to ensure the safe transportation of crude oil across the nation.

Patti Goldman, an attorney for EarthJustice issued the following statement regarding DOT's proposal. "The Department of Transportation projections show extreme, unacceptable risk posed by an outdated and accident-prone type of rail car, the DOT-111. The Department's proposal delays reducing this risk by keeping these outdated, accident prone cars on the rails for at least 3–6 more years. "It is estimated that 25 million Americans live in the dangerous blast zone along the nation's rail lines. Last year alone, there were more accidents than in the total from the 37 years previous. We clearly can't afford to accept this delay."

(Environmental Resource Center – 7/28/14)

NEW BOOK – "PHARMACEUTICAL ACCUMULATION IN THE ENVIRONMENT, PREVENTION, CONTROL, HEALTH EFFECTS AND ENVIRONMENTAL IMPACT"

Walter Goldstein, PhD, PE, a well-respected Environmental Scientist has published a new book, as indicated above. The issue of pharmaceutical accumulation in the environment is one of importance, and Mr. Goldstein addresses the portending problem in a manner that stresses economic optimization and protecting parties, while seeking to better the environment. For RT colleagues, a promotion code is available – AQN70. You can access the book description by clicking on the icon on the web site www.goldconsul.com, or clicking on the following link: http://www.crcpress.com/product/isbn/9781466517455.

RT STAFF AND PROJECT NEWS

RT has expanded its Pittsburgh area office, located in Washington, Pennsylvania, one of the key areas of Marcellus Shale production. Chris Blosenski and Karlie Hoy are working on environmental permitting projects for natural gas gathering lines located near Waynesburg. Clean natural gas continues to be one of Pennsylvania's contributions to our environment and is helping to produce cleaner emissions at rmany types of industrial facilities and power plants. Chris is a California University of PA graduate, and Karlie is a Penn State graduate. We welcome both new employees to our firm.

Chris Ward, LSRP, is working on a number of service station sites, where cleanups by others are taking longer than originally anticipated, after tanks were closed back the 1990s. Membrane Interface Probe work is helping to determine where hot spots are, so sites can be closed out with minimal further delay.

Gary Brown, P.E., is preparing for a number of Fall seminar presentations, including one on New Jersey Stormwater Management/Stormwater Pollution Prevention Plans, three others in Pennsylvania on Brownfields sites, and a third related to Toxic Release Inventory requirements, which apply throughout the United States.

Walter Hungarter, P.E. and Craig Herr, P.G., are working on an Act 2 dry cleaner release site at a location to the west of Philadelphia, scheduled for commercial redevelopment in the near future.

Tony Alessandrini continues to work on asbestos abatement projects, including those at residential properties, and, several ones at sites where mold and asbestos issues both have to be addressed, prior to re-occupancy of buildings, which were disused, during the nation's economic downturn.

Brett Rentzheimer has joined RT's King of Prussia Office. Brett is a Moravian College graduate. He has already completed a number of assignments related to groundwater monitoring, and, has inspected remediation sites in New Jersey, where impacted soils are being managed, and in some instances, capped.

Suzanne McCormick, a new RT New Jersey professional has completed a number of Environmental Site Assessment assignments, including those related to former service station sites, including one with adjacent dry cleaner site issues. Suzanne is a University of Delaware graduate.

Justin Lauterbach, Q.E.P. is completing a number of assignments at Act 2 sites near Pittsburgh, including one at a former service station location, where tanks were historically not properly closed. Other assignments involve new retail donut facility sites, being built in a number of site redevelopment locations in the greater Pittsburgh area.

Fall is shaping up to be a busy period at RT, and, we appreciate the opportunities that our clients bring to us, so that we can help make their businesses successful. We welcome new clients and promise prompt and focused service to meet your needs.

Gary R. Brown, P.E., President

RT ENERGY SERVICES

APPLICABILITY OF HAZARDOUS MATERIALS REGULATION TO THE TRANSPORTATION OF NATURALLY OCCURRING RADIOACTIVE MATERIAL FROM OIL AND GAS EXPLORATION

The US Department of Transportation Pipeline and Hazardous Materials Safety Administration recently issued an opinion on the transportation of certain types of naturally occurring radioactive material, thought to be transportable as "natural material," from oil and gas exploration and development.

The Administration decided that fracking water is not a natural material, nor is radionuclide-containing solidified sludge from a fracking water collection pit or radionuclide-containing filter cake from treatment and recycling of the fracking water a natural material. Thus, this material is not exempt from certain types of regulation.

The material is no longer considered a "natural material" because of the industrial processing, meaning the process of fracking, and separating water and wastewater.

OHIO INCLUDES SEISMIC RISKS IN FRACKING PERMITS

Ohio has added permit terms for hydraulic fracturing in areas of known earthquake activity.

The Ohio Department of Natural Resources (ODNR) is adding drilling permit conditions for wells located near faults or areas linked to previous seismic activity.

ODNR is requiring operators fracking within three miles of a known fault with a magnitude of greater than 2.0 to install sensitive seismic monitoring equipment and suspend fracking in the event that the monitors detect seimiscity at levels exceeding 1.0 in magnitude.

(April/2014)

RT ENERGY SERVICES

LEAD BASED PAINT

EPA published a Federal Register notice, to seek comment on whether renovation and repair activities in public and commercial building cause a problem with lead paint, under the Toxic Substance Control Act. EPA is considering a different approach from its 2008 Lead Renovation, Repair, and Painting Rule, for residential and child-occupied facilities. The 2008 Rule for residence and child care facilities allowed EPA to determine that lead paint activities cause a hazard that was to be regulated, but in public and commercial buildings more adults are exposed, so EPA is now working to get together data on effects to adults.

We will keep you up to date in the RT Review as this goes forward.

RT'S 24-HOUR URGENT HOTLINE
(800) 725-0593

FEDERAL REGULATORY UPDATES

EPA UPDATES WATER QUALITY CRITERIA FOR 94 POLLUTANTS

EPA recently updated water quality criteria for 94 pollutants, to reflect the latest scientific information, and EPA policies. Pollutants which are frequently the subject of regulation, and which are included in the Rulemaking include benzene, chlorobenzene, bis(2) ethyl hexyl phthalate, vinyl chloride, and DDT/DDD/DDE.

Go to http://water.epa.gov/scitech/swguidance/standards/criteria/current/hhdraft.cfm URL to find more information on the current new water quality criteria for each pollutant.

EPA TO EXPAND RCRA CATEGORICAL NON-FUEL WASTE LIST

EPA is proposing to amend the Non-Hazardous Secondary Materials (NHSM) rule under the Resource Conservation and Recovery Act (RCRA). The NHSM rule established standards and procedures for identifying whether non-hazardous secondary materials are solid wastes when used as fuels or ingredients in combustion units. In a February 7, 2013 rule, EPA listed particular non-hazardous secondary materials as "categorical non-waste fuels" provided certain conditions are met. EPA also indicated that it would consider adding additional non- hazardous secondary materials to the categorical listings. This action proposes to add three materials to the list of categorical non- waste fuels: Construction and demolition (C&D) wood processed from C&D debris according to best management practices; Paper recycling residuals, including old corrugated cardboard (OCC) rejects, generated from the recycling of recovered paper and paperboard products and burned on-site by paper recycling mills whose boilers are designed to burn solid fuel; and Creosote treated railroad ties that are processed and combusted in units designed to burn both biomass and fuel oil.

The proposal was published in the April 14 edition of the Federal Register.

(Environmental Resource Center – 4-21-14)

EPA/LOWE'S LEAD PAINT RULE SETTLEMENT

EPA reached an agreement with Lowe's to help the agency enforce its lead renovation, repair and painting (LRRP) rule with contractors the company hires.

In a proposed consent decree (http://www.justice.gov/iso/opa/resources/38120144171447499804.pdf) published in April, Lowes is to "implement a comprehensive, corporate-wide compliance program at its over 1,700 stores nationwide to ensure that the contractors it hires to perform work minimize lead dust from home renovation activities." Lowe's has also agreed to pay a $500,000 fine.

D.C. CIRCUIT DISALLOWS AFFIRMATIVE DEFENSE EPA AIR RULES REVISIONS EXPECTED

The U.S. Court of Appeals for the District of Columbia Circuit has disallowed EPA's use of a novel "affirmative defense" in a cement air toxics rule that exempted emissions spikes due to equipment malfunctions from Clean Air Act penalties.

In a unanimous April 18 ruling in Natural Resources Defense Council (NRDC) v. EPA appears to create a divergence of opinion on whether EPA has power to allow affirmative defenses against certain citizen suits. http://www.cadc.uscourts.gov/internet/opinions.nsf/ACAE17D2A8131EDF85257CBE004DD976/$file/10-1371-1488926.pdf

The court found that EPA exceeded its statutory authority.

(April/2014)

SUPREME COURT REINSTATES EPA'S CROSS-STATE AIR POLLUTION RULE

In April, the Supreme Court reinstated EPA's Cross-State Air Pollution Rule (CSAPR), a cap-and-trade program to cut emissions of sulfur dioxide and nitrogen oxides. The Court found that EPA acted within its authority as to how it created the trading program.

The ruling reverses an August 2012 ruling from the U.S. Court of Appeals for the District of Columbia Circuit which vacated the rule. That court found the agency exceeded its authority in how it imposed the program by imposing Federal Implementation Plans rather than allowing states to submit compliance plans.

(April/2014)

EPA TO EVALUATE WATER SUPPLY ALGAL BLOOM TOXINS

EPA expects to issue health advisories on two types of algal blooms: microcystin-LR and cylindrospermopsin. This may also include an assessment of toxins from algal blooms in a review required under the Safe Drinking Water Act, known as the Unregulated Contaminant Monitoring Rule (UCMR).

(April/2014)

COAL MINE METHANE – INFORMATION GATHERING

The Bureau of Land Management (BLM) is gathering information on whether it should establish a program for facilitating capture, use or destruction of methane from coalbed methane (CBM) and other operations on federal lands.

(*April/2014*)

NEW CHROMIUM 6 ASSESSMENT BY EPA

EPA is further assessing the human health risks of hexavalent chromium (Cr6).

FEDERAL UPDATES

EPA's Integrated Risk Information System (IRIS) program released preliminary scoping documents (Unable to get URL) for public comment.

The assessment planned will consider risks from both inhalation and ingestion.

(*April/2014*)

EPA PROPOSES TO EXPAND LIST OF "NON-WASTE" FUELS

EPA proposes to add three materials to the list of categorical non-waste fuels:

Construction and demolition (C&D) wood processed from C&D debris according to best management practices; paper recycling residuals, including old corrugated cardboard (OCC) rejects, generated from the recycling of recovered paper and paperboard products and burned on-site by paper recycling mills whose boilers are designed to burn solid fuel; and creosote treated railroad ties that are processed and combusted in units designed to burn both biomass and fuel oil. Comments were due to the Agency in June.

EPA REVISES CRT REUSE AND DISPOSAL REGULATIONS

EPA is revising certain export provisions of the cathode ray tube (CRT) final rule published on July 28, 2006. The revisions will allow the Agency to better track exports of CRTs for reuse and recycling in order to ensure safe management of these materials.

The final rule affects only the export provisions of the CRT rule and does not affect any regulations applicable to the domestic management of used CRTs. The rule also does not affect unused CRTs. In the rule, EPA is 1) adding a definition of "CRT exporter" to the regulations; 2) requiring annual reports from exporters of used CRTs exported for recycling; 3) revising the notification that must be submitted when used CRTs are exported for recycling; 4) revising the notification that must be submitted when used CRTs are exported for reuse; and 5) requiring that normal business records maintained by exporters of used CRTs for reuse be translated into English upon request.

(Environmental Resource Center – 6/30/14)

EPA PROPOSES NESHAP REVISIONS FOR OFF-SITE WASTE AND RECOVERY FACILITIES

In the July 2 Federal Register, EPA proposed amendments to the national emission standards

FEDERAL REGULATORY UPDATES *(Continued)*

for hazardous air pollutants (NESHAP) for off-site waste and recovery operations (OSWRO) to address the results of the residual risk and technology review (RTR) conducted under the Clean Air Act (CAA). In light of EPA's residual risk and technology review, the Agency is proposing to amend the requirements for leak detection and repair and the requirements for certain tanks. In addition, the EPA is proposing amendments to revise regulatory provisions pertaining to emissions during periods of startup, shutdown and malfunction; add requirements for electronic reporting of performance test results; revise the routine maintenance provisions; clarify provisions pertaining to open-ended valves and lines; add monitoring requirements for pressure relief devices; clarify provisions for some performance test methods and procedures; and make several minor clarifications and corrections.

(Environmental Resource Center – 7/7/14)

NEW RULES FOR LITHIUM BATTERY SHIPMENTS

The DOT has issued a new final rule designed to enhance the safe shipment of lithium cells and batteries. These changes, some of which focus specifically on shipments by air, will better ensure that lithium cells and batteries are able to withstand normal transportation conditions and are packaged to reduce the possibility of damage that could lead to an unsafe situation.

"Safety is our number one priority, and this rule provides an additional layer of protection to the shipment of lithium batteries, which we all depend on daily to power our phones and our laptops," said Transportation Secretary Anthony Foxx. "Today's standards are part of our ongoing work to improve safety for all travelers, including those who travel with or ship lithium batteries."

The Department's Pipeline and Hazardous Materials Safety Administration (PHMSA) developed this rule in close coordination with the Federal Aviation Administration (FAA). Voluntary compliance is encouraged upon publication of the final rule; however mandatory compliance is effective six months after publication.

The rule will also provide a greater level of consistency with international standards, including the International Civil Aviation Organization's (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by air.

"Our continuing efforts to harmonize US Hazardous Materials Regulations with international standards improve consistency in procedures and terminology when shipping lithium batteries around the globe," noted PHMSA Administrator Cynthia L. Quarterman.

The final rule will:

• Enhance packaging and hazard communication requirements for lithium batteries transported by air

• Replace equivalent lithium content with Watt-hours for lithium ion cells and batteries

• Adopt separate shipping descriptions for lithium metal batteries and lithium ion batteries

• Revise provisions for the transport of small and medium lithium cells and batteries including cells and batteries packed with, or contained in, equipment

• Eliminate the exceptions for small cells and batteries in air transportation, except with respect to extremely small cells packed with or contained in equipment

• Revise the requirements for the transport of lithium batteries for disposal or recycling

• Harmonize the provisions for the transport of low production and prototype lithium cells and batteries with the ICAO Technical Instructions and the International Maritime Dangerous Goods Code

• Adopt new provisions for the transport of damaged, defective, and recalled lithium batteries

If you ship batteries by ground or air, you must comply with the latest DOT and IATA/ICAO regulations that specify how the batteries must be packaged, marked, labeled, and transported. The rules apply not only to batteries, but also to equipment or vehicles that contain batteries as well as batteries packed along with equipment. Virtually all types of batteries are regulated, including lithium, lead-acid, nickel cadmium, and metal hydride alkaline. According to 49 CFR 172.704, all personnel involved in the classification, packaging, marking, labeling, or shipment of batteries must receive initial and recurrent transportation training.

(Environmental Resource Center – 8/4/14)

EPA PROPOSES SOME HFCS AND HCFCS AS UNACCEPTABLE FOR USE IN AEROSOLS AND REFRIGERATION EQUIPMENT

The EPA is proposing to prohibit the use of certain chemicals that significantly contribute to climate change where safer, more climate-friendly alternatives exist. This is the agency's second action aimed at reducing emissions of hydrofluorocarbons (HFCs), a class of potent greenhouse gases (GHGs), under President Obama's Climate Action Plan.

This action is estimated to reduce GHSs by up to 42 million metric tons of carbon dioxide equivalent by 2020, equal to the carbon dioxide emissions from the annual electricity use of more than five million homes.

Under the authority of the Clean Air Act, EPA's Significant New Alternatives Policy (SNAP) Program evaluates substitute chemicals and technologies that are safe for the ozone layer. The proposed action would change the status of certain high-global warming potential (GWP) HFCs that were previously listed as acceptable under the SNAP Program to be unacceptable in specific end-uses based on information showing that other alternatives are available for the same uses that pose lower risk overall to human health or the climate.

The HFCs and HFC-containing blends affected by the proposal are used in aerosols, motor vehicle air conditioning, retail food refrigeration and vending machines, and foam blowing.

The proposal complements an earlier action EPA proposed to expand the list of climate-friendly alternatives for refrigeration and air conditioning under its SNAP Program. The agency received input from industry, environmental groups, and others through workshops and meetings over the past year on this proposal.

EPA will accept comment on the proposal for 60 days after publication in the Federal Register. A fact sheet is available at: http://www.epa.gov/ozone/downloads/SAN_5750_SNAP_Status_Change_Rule-Fact_Sheet_070714.pdf.

(Environmental Resource Center – 7/14/14)

404 DREDGE AND FILL PERMITS – QUESTIONS ON JURISDICTIONAL WETLANDS

As previously reported in an RT Email Blast, there are questions related to how EPA and the Corps of Engineers will work with the states, and what types of waters/wetlands states may assume 404 Permitting authority over.

Although comments were just received on a new proposed Rule in early July, EPA has already agreed that it already needs to clarify how states will deal with the "Waters of the US Rule". Clean Water Act jurisdiction rulemaking is now apparently going to be a time consuming and resource intensive process.

Some states are in the process of seeking Clean Water Act 404 authority, but other states are having trouble with the issue of "connectivity", an important issue that RT pointed out is best not left to "desktop" studies. We submitted a comment letter to the federal government on this. There is no doubt that "property rights" issues will arise in some cases.

We continue to believe that this is an important issue, and, will keep you informed as rulemaking goes forth.

\- Gary Brown, P.E.

TECHNOLOGY UPDATES

DATA SHOW AUTOMAKERS ON TRACK TO MEET GREENHOUSE GAS STANDARDS

The EPA has released a Manufacturers Performance Report that assesses the automobile industry's progress toward meeting greenhouse gas (GHG) emissions standards for cars and light trucks in the 2012 model year—the first year of this fourteen year program. The report reveals that consumers bought cleaner vehicles in the first year of the program than the 2012 GHG standard required, and that automakers are off to a good start in meeting program requirements.

The data show that in model year 2012, the industry reduced tailpipe carbon dioxide emissions, and also used the optional flexibilities built into the standards. Those flexibilities include emissions credits for improvements in air conditioning systems, and a system that allows transfer of emissions credits from year to year, and among manufacturers. These flexibilities allow greater emissions reductions, lower compliance costs, and more consumer choice, all while providing manufacturers with options on how and when to make reductions. Due to the program's multi-year structure, EPA will not make formal compliance determinations for the 2012 model year until 2015. EPA will be closely tracking progress towards compliance, and intends to issue annual Manufacturers Performance Reports on the program.

The trend towards more efficient, cleaner cars and trucks continued in model year 2012. According to EPA's most recent Fuel Economy Trends Report, fuel economy improved by 1.2 mpg in 2012 compared to 2011, the second biggest improvement in the last 30 years. Further, in 2013 there were twice as many sport utility vehicle models that achieved at least 25 miles per gallon (mpg), and seven times as many car models that achieved 40 mpg or more, compared to just five years ago.

The GHG emission standards are projected to cut 6 billion metric tons of GHG over the lifetimes of vehicles sold in model years 2012-2025—more than the total amount of carbon dioxide emitted by the US in 2012. The standards are also projected to save consumers who purchase a new model year 2025 vehicle more than $8,000 in fuel costs over that vehicle's lifetime.

(Environmental Resource Center – 4/28/14)

ELECTRONIC WASTE

E-waste is still the fastest growing municipal waste stream in America, according to the EPA.

Only 12.5% of e-waste is currently recycled. A large number of what is labeled as "e-waste" is actually not waste at all, but rather whole electronic equipment or parts that are readily marketable for reuse or can be recycled for materials recovery. It takes 539 lbs of fossil fuel, 48 lbs of chemicals, and 1.5 tons of water to manufacture one computer and monitor. E-waste represents 2% of America's trash in landfills, but it equals 70% of overall toxic waste.

The extreme amount of lead in electronics alone causes damage in the central and peripheral nervous systems, the blood and the kidneys.

Federal Legislative Mandates for Electronics Recovery: At present, there is no Federal mandate to recycle e-waste. There have been numerous attempts to develop a Federal law. However, to date, there is no consensus on a Federal approach.

EPA encourages reuse and recycling of used electronics, including those that test hazardous. To facilitate more reuse and recycling of these products, EPA has less stringent management requirements for products bound for reuse and recycling. Specifics follow: Resale or Donation: Computer monitors and televisions sent for continued use (ie. resale or donation) are not considered hazardous wastes.

State regulatory requirements for e-waste can be more stringent than the Federal requirements, and vary from state to state.

Many states are developing Universal Waste exemptions for CRT which also streamline management of CRTs bound for recycling. If you are planning on disposing used CRTs (or other electronics that test hazardous under state or Federal law), check relevant state requirements, which might be different from federal regulatory requirements.

Courtesy of CycleChem, Inc. - http://www.cyclechem.com.

TECHNOLOGY UPDATES

NIEHS RESEARCHERS SHOW LOW DOSES OF ARSENIC CAUSE CANCER IN MALE MICE

By Robin Mackar

Michael Waalkes, Ph.D., knows how to end his career on a high note. Waalkes was head of National Toxicology Program (NTP) Laboratory until his retirement in June, after 31 years of federal service. He and his colleagues in NTP published a paper: www.ncbi.nlm.nih.gov/pubmed/25005685) July 9 in the journal Archives of Toxicology with far-reaching impact, showing that mice exposed to low doses of inorganic arsenic in drinking water, similar to what some people might consume, developed lung cancer.

Abstract

In mice, inorganic arsenic in the drinking water in the parts per million range via the dam during in utero life or with whole-life exposure is a multi-site carcinogen in the offspring. However, human arsenic exposure is typically in the parts per billion (ppb) range. Thus, we studied "whole-life" inorganic arsenic carcinogenesis in mice at levels more relevant to humans. Breeder male and female CD1 mice were exposed to 0, 50, 500 or 5,000 ppb arsenic (as sodium arsenite) in the drinking water for 3 weeks prior to breeding, during pregnancy and lactation, and after weaning (at week 3) groups of male and female offspring (initial n = 40) were exposed for up to 2 years. Tumors were assessed in these offspring. Arsenic exposure had no effect on pregnant dam weights or water consumption, litter size, offspring birthweight or weight at weaning compared to control. In male offspring mice, arsenic exposure increased ($p < 0.05$) bronchiolo-alveolar tumor (adenoma or carcinoma) incidence at 50-ppb group (51 %) and 500-ppb group (54 %), but not at 5,000-ppb group (28 %) compared to control (22 %). These arsenic-induced bronchiolo-alveolar tumors included increased ($p < 0.05$) carcinoma at 50-ppb group (27 %) compared to controls (8 %). An

TECHNOLOGY UPDATES *(Continued)*

increase ($p < 0.05$) in lung adenoma (25 %) in the 50-ppb group compared to control (11 %) occurred in female offspring. Thus, in CD1 mice whole-life arsenic exposure induced lung tumors at human-relevant doses (i.e., 50 and 500 ppb).

Arch Toxicol. 2014 Aug;88(8):1619-29. doi: 10.1007/s00204-014-1305-8. Epub 2014 Jul 9.
PMID: 25005685 [PubMed - in process]
Waalkes MP1, Qu W, Tokar EJ, Kissling GE, Dixon D.

TESTS FIND CONSUMER PRODUCTS TAINTED WITH PCBS

Washington state tests of 68 consumer products confirmed that polychlorinated biphenyls (PCBs) are present in commonly used items. Forty-nine, or 72%, of the products contained at least one of four PCB types.

Washington Governor Inslee's Clean Water Initiative to update water quality standards and reduce toxic threats includes PCBs as a key chemical of concern. The Washington Department of Ecology has drafted a chemical action plan identifying PCB sources in the state and recommending ways to reduce exposures. The plan is open for public comment August 6 to October 6, 2014.

Items tested in the study include paper products, paints and colorants, caulking, printer ink, and some product packaging. Full details—including a complete product listing—are available in a report on Ecology's website. The study focused on four PCB types that previous studies have linked to pigments and dyes. A future report will include results for all 209 PCB types.

Ecology ran the tests to gauge PCB levels in consumer products and potential releases of this toxic class of long-lasting chemicals to Washington's environment.

"Although PCBs were banned for most uses in 1979, they are often inadvertently produced at lower—but still problematic—levels during manufacturing processes," said Alex Stone, lead chemist on the project. "Concentrations in each product are low. However, the large number of products that contain PCBs add up to significant releases to the environment."

PCBs have toxic effects to the immune, reproductive, nervous, and hormone-regulation systems in humans and other living things. PCBs also cause cancer in animals and are considered likely to cause cancer in humans.

PCB contamination is widespread throughout Washington and found in almost every waterbody in the state. Contamination levels are high enough to require cleanup plans in several areas, including the Lower Duwamish Waterway, Spokane River, Wenatchee River, and Lake Washington. Ecology also found elevated PCB levels in the Puget Sound basin and estimated releases as part of the Puget Sound Toxics Assessment.

Ecology has begun a second round of testing for PCBs in consumer products with a focus on yellow, green, and blue paints and colorants, colored clothing, cosmetics, soaps, office products, and products used by children, such as fingerpaints and comic books. Some of this testing will help state agencies comply with a new law requiring agencies to only buy PCB-free products.

(Environmental Resource Center (8/11/14)

TERRE BIO RETENTION GARDEN AND BIOMIX ASORB

Gene LaManna, key principal of Terre Hill Stormwater Systems, recently announced a new product – Garden With BioMix Osorb. This is a product for building tree filters, which can be a key part of urban stormwater management systems.

Tree filters in the urban environment can help trees grow stronger, and can help facilitate infiltration, in most instances, better than natural conditions. Off the shelf designs and products for precast tree filters, can also speed up construction. You can reach Gene LaManna at: glamanna@terrehill.com.

CLEAN AGE OIL REMEDIATION TREATMENT ANNOUNCED

A new type of remediation treatment is available using zeolite. Zeolite is considered to be a loose flowing granular material which can stabilize and convert certain types of chemicals, to a non-toxic form. The process makes use of trapping metal cations by ion exchange, and the exchange is considered very rapid as metals are distributed through the zeolite crystal.

Another type of mechanism using Zeolite is operative from molecular species such as benzene, toluene and xylenes. These chemicals can be absorbed into the internal pores of the zeolite for small molecules, and the pores of silica gel for large complex molecules.

For more information, contact Joe Sverapa, of Daleco Resources Corporation at 551-265-5013.

OHIO EPA UPDATES NFA REVIEW PROCESS FOR CERTIFIED PROFESSIONAL SITES

The Ohio EPA has recently updated its review process for volunteers completing remedial action at contaminated Ohio sites. Ohio EPA realizes that NFA letters submitted by Certified Professionals (CPs) may contain deficiencies when submitted. Unlike other states Ohio EPA tends to work closely with volunteers and CPs who are directly involved in the process of getting sites cleaned up, and get concurrence that the No Further Action Letters issued cover all key environmental issues at each site.

For more information on the Ohio Voluntary Action Program, go to : http://epa.ohio.gov/derr/volunt/volunt.aspx. Gary Brown, RT's President is an Ohio CP.

NJ UPDATES

NJ LAW BLOG . . . A GREAT PLACE TO BROWSE!

Recent Features:

• Supreme Court Clarifies Timing of Spill Act Claims
by Paul H. Schneider

• Failure To Record A Wetlands Conversation Restriction Comes Back To Haunt Years Later
by Paul H. Schneider

• Permit Transfer Approval – Don't Close Without It!
by Steven M. Dalton

• COAH Releases Its Long-Awaited Regulations

by Donna McBarron

Go to http://www.njenvironmentlaw.com to read more!

ALTERNATIVE TESTING FOR WATER CONTAMINANTS APPROVED BY EPA

Under the Safe Drinking Water Act (SDWA), the EPA has approved 21 alternative testing methods for analyzing drinking water samples. This will allow public water systems, agencies, and laboratories to have more time to access measurement techniques and more choices in testing methods, which will also reduce the amount of monitoring costs.

According to the notice, these alternative testing processes are as effective as one or more of the methods already in use and "shall be treated as an alternative for public water systems to the quality control and testing procedures listed in the regulation."

In regards to choosing which test to use, the "EPA is providing public water systems required to test water samples with a choice of using either a test procedure already established in the existing regulations or an alternative test procedure that has been approved in this action or in prior expedited approval actions."

By approving the alternative test methods, the EPA also determines the regulations for each test procedure for compliance. This would include regulations for industries, municipalities, and state, local, and tribal governments.

For more information please contact Lawrence W. Bily at 610-265-150 extension 236 or by email at lbily@rtenv.com.

SETTING PRIORITIES

Larry Bily

Sometimes we seem overwhelmed when we have many tasks to complete and are not sure which one to start first. I learned about this method of setting priorities at a seminar on time management. First, list all of your projects or tasks (five for this example). Next, compare A to B and place a check next to the one that has the higher priority. Then compare A to C, A to D, and A to E, placing a check next to the higher priority task. After comparing all of the A's, then compare B to C, B to D, and B to E, then C to D and C to E, finally D to E. Your result may look something like this.

TASK A	√ √	2
TASK B		0
TASK C	√ √ √	3
TASK D	√ √ √ √	4
TASK E	√	1

It is now obvious that D has the highest priority, followed by C, A, E and B. If there is a tie, it can be broken by which had the higher head to head comparison or which has the closer due date.

ACTIVE VS. PASSIVE TREATMENT – WESTERN PA

Two Western Pennsylvania projects illustrate different approaches to treating acid or alkaline mine drainage.

A donation of 30 acres by the Latrobe Foundation and a $500,000 Growing Greener grant from the state allowed the Loyalhanna Watershed Association to build the Upper Latrobe AMD Treatment System. Which uses three ponds and a constructed wetland to passively treat 500 gallons per minute of alkaline mine drainage.

The advantage of passive treatment systems is that they are relatively inexpensive to build and require little maintenance.

Rosebud Mining Co. is taking another approach: A $15 million active treatment system that will handle a 3,000 gallon-per-minute acid mine draining flow in St. Michael, Cambria County. Active systems rely on aeration units and chemical treatments. The Kittanning-based company plans to draw down water in an adjacent mine so it can extract coal in it during the next 40 years.

The company estimates the project will remove about 40 percent of the acid mine drainage polluting the Little Conemaugh River.

(Brian Bowling – TribLIVE News – 1-19-13)

WASTE CLASSIFICATION RULE

The classification of materials burned as "fuel" is the subject of much attention from US industry.

EPA is in a position where they have to defend rulemaking completed by the Agency which determined what material burned in a combustion unit is or is not a "waste", subject to incinerator emission controls. Alternatively, materials can be considered "fuels" subject to considerably less stringent boiler requirements.

The legal case involved actually is four consolidated cases, being considered by the US Court of Appeals for the District of Columbia Circuit. A number of EPA rules governing waste combustion units, were challenged. The waste classification regulation is under the Resource Conservation and Recovery Act.

In addition to rejecting industry's claims, EPA also rejects environmentalists' arguments which basically state that all materials combusted should be considered solid waste.

EPA believes that its actions are reasonable use of discretion, but the Court will decide. RT will continue to follow this court case, until a conclusion is reached.

NAPL – REMEDIATION IN MASSACHUSETTS

Under the Massachusetts Contingency Plan, Licensed Site Professionals complete cleanups similar to the way that LSRPs do in New Jersey. Massachusetts DEP recently clarified that a petroleum sheen on groundwater is not considered NAPL.

Massachusetts guidance also indicates that NAPL has to be present at a thickness of greater than or equal to 1/2 inch in the subsurface, to be of concern. Mass DEP also indicated that the 1/2 inch threshold applies to DNAPL as well.

(LSP Association – 8/7/14)

ELECTRONIC MANIFEST - REGULATION - FINALIZED

EPA finalized a regulation for hazardous waste transportation, which will allow electronic manifests to be used as an alternative to paper manifests for tracking hazardous waste shipments.

An electronic manifest system is expected to be in effect by late 2015.

FEDERAL REGISTER NOTICES

http://www.federalregister.gov

Notice: Proposed Information Collection Request; Comment Request; Emissions Certification and Compliance Requirements for Nonroad Compression-Ignition Engines and On-Highway Heavy Duty Engines
(Federal Register – 4/18/14)

Rule: Approval and Promulgation of Air Quality Implementation Plans: Pennsylvania; Regional Haze State Implementation Plan
(Federal Register – 4/30/14)

Rule: Approval and Promulgation of Air Quality Implementation Plans; Pennsylvania; Determination of Attainment of the 2006 24-Hour Fine Particulate Matter Standard for the Pittsburgh-Beaver Valley Nonattainment Area
(Federal Register – 5/2/14)

Rule: New Source Performance Standards Review Nitric Acid Plants
(Federal Register – 5/6/14)

Proposed Rule: Performance Specification 18-Specifications and Test Procedures for Gaseous HCl Continuous Emission Monitoring Systems at Stationary Sources
(Federal Register – 5/14/14)

Rule: Quality Assurance Requirements for Continuous Opacity Monitoring Systems at Stationary Sources
(Federal Register – 5/16/14)

Proposed Rule: Hydraulic Fracturing Chemicals and Mixtures
(Federal Register – 5/19/14)

Notice: Privacy Act; Notification of a New System of Records Notice for the Engine and Vehicle Exemptions System (EV-ES)
(Federal Register – 5/23/14)

Proposed Rule: Approval and Promulgation of Air Quality Implementation Plans; Delaware; Amendments to Delaware's Ambient Air Quality Standards
(Federal Register – 6/17/14)

Proposed Rule: Amendment to Standards and Practices for All Appropriate Inquiries
(Federal Register – 6/17/14)

Direct Final Rule: Approval and Promulgation of Air Quality Implementation Plans; Pennsylvania; Portable Fuel Container Amendment to Pennsylvania State Implementation Plan
(Federal Register – 6/17/14)

Notice of Availability: Release of Integrated Review Plan for the Primary National Ambient Air Quality Standards for Oxides of Nitrogen
(Federal Register – 6/30/14)

Proposed Rule: Petroleum Refinery Sector Risk and Technology Review and New Source Performance Standards
(Federal Register – 6/30/14)

Notice: Agency Information Collection Activities; Proposed Collection; Comment Request; Reporting and Recordkeeping Requirements for Importation of Nonroad Engines and Recreational Vehicles
(Federal Register – 7/1/14)

Proposed Rule: National Emission Standards for Hazardous Air Pollutants: Off-Site Waste and Recovery Operations
(Federal Register – 7/2/14)

Proposed Rule: Notice of Additional Public Hearings: Carbon Pollution Emission Guidelines for Existing Stationary Sources and Standards for Modified and Reconstructed Stationary Sources: EGUs
(Federal Register – 7/3/14)

Proposed Rule: Standards of Performance for Grain Elevators
(Federal Register – 7/9/14)

Final Rule: Approval and Promulgation of Air Quality Implementation Plans; Pennsylvania; Control of Commercial Fuel Oil Sulfur Limits for Combustion Units
(Federal Register – 7/10/14)

Notice: Agency Information Collection Activities; Proposed Collection; Comment Request; National Pollutant Discharge Elimination System (NPDES) Permits for Point Source Discharges From the Application of Pesticides to Waters of the United States
(Federal Register – 7/16/14)

Proposed Rule: Standards of Performance for Municipal Solid Waste Landfills
(Federal Register – 7/17/14)

FEDERAL REGISTER NOTICES

http://www.federalregister.gov

Proposed Rule: Oil and Natural Gas Sector: Reconsideration of Additional Provisions of New Source Performance Standards
(Federal Register – 7/17/14)

Proposed Rule; Extension of Comment Period: Revisions to National Emission Standards for Radon Emissions From Operation Mill Tallings
(Federal Register – 7/21/14)

Final Rule: National Emission Standards for Hazardous Air Pollutants Residual Risk and Technology Review for Flexible Polyurethane Foam Production
(Federal Register – 8/15/14)

Notice of Final Decision on Reconsideration: NESHAP for Reciprocating Internal Combustion Engines; NSPS for Stationary Internal Combustion Engines
(Federal Register – 8/15/14)

Final Rule: National Pollution Discharge Elimination System (NPDES): Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting
(Federal Register – 8/19/14)

Notice of Designation of a New Reference Method for Monitoring Ambient Air Quality: Designation of One New Reference Method for PM
(Federal Register – 8/20/14)

PENNSYLVANIA BULLETIN NOTICES

DEP Published Notice of its Final Policy for Consideration of Community Environmental Projects
April 19, 2014

DEP Published Notice of the Final Assessment and Listing Methodology for Determining When Waters are Impaired
April 19, 2014

Final DEP Policy to the Consideration of Community Environmental Projects in Conjunction with Assessment of Civil Penalty
April 21, 2014

DEP Published Notice of the Final Assessment and Listing Methodology for Determining when Waters are Impaired Under Sections 303(d) and 305(d) of the Federal Clean Water Act
April 21, 2014

DRAFT: Civil Penalty Assessment Information Hearing Procedure for the Office of Oil and Gas Management
April 28, 2014

DEP Published Notice of Revisions to Residual Waste General Permit WMGR081 relating to Electronic Waste Processing.
May 12, 2014

DEP Published Notice of Availability of NPDES General Permit for Discharges from Small Flow Treatment Facilities (PAG-04)
May 12, 2014

DEP Published Notice of the Proposed 2014-15 Ambient Air Monitoring Network Plan for Comment
May 12, 2014

Draft: Title: Blaster's License Suspension and Revocation Procedure
May 12, 2014

DEP Published Notice of Availability of the NPDES General Permit for Wet Weather Overflow Discharges from Combined Sewer Systems
May 19, 2014

DEP Provided Notice of Changes to Technical Guidance as a Result of a Reorganization of the Department's Mining Programs and a Name Change to the Bureau of Mining
July 7, 2014

DEP Published Notice of Reclamation Bond Credit Program Bond Amounts Remaining as Incentives for Remining
July 14, 2014

DEP Published Notice of Proposed Attainment Demonstration for the Lower Beaver Valley Nonattainment Area for Lead
July 28, 2014

Rescission: Standards and Guidelines for Identifying, Tracking and Resolving Violations for Operators of Municipal Separate Storm Sewer Systems (MS4s)
August 11, 2014

Department of Environmental Protection Published Notice of the Rescission of Technical Guidance on Resolving Violations related to MS4 Stormwater Management Systems and Guidance on NPDES and MS4 Permitting Requirements
August 11, 2014

DRAFT: Training Provider Manual for the Pennsylvania Water and Wastewater System Operator Training Program
August 28, 2014

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