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Feds ramp up the action on chemical facility safety

OSHA, EPA work to modernize PSM, RMP

In June, a working group of federal agencies headed by the Department of Homeland Security, OSHA, and EPA, reported on actions the agencies had taken over the past year and planned to take concerning chemical facility security.



The working group was established in August 2013 by Executive Order 13650, “Improving Chemical Facility Safety and Security,” as part of an overall effort to address chemical safety and prevent catastrophic events such as the chemical explosion in West, Texas, in April 2013.

On June 9, OSHA head Dr. David Michaels blogged about the actions the group has taken. These include:

- Developing an online training module on the key requirements under the Emergency Planning and Community Right-to-Know Act;
- Initiating a multi-organization working group to identify a list of government approved training courses for first responders and emergency planners;
- Institutionalizing a federal working group to improve communication and coordination between agencies;
- Establishing regional working groups in all 10 federal regions;
- Incorporating chemical facility safety and security data into EPA’s Facility Registry Service;

See **Agencies issue guidance, alerts on chemical safety**, p. 2

EPA wants to fly the carbon-friendly skies

EPA is proposing to find under the Clean Air Act (CAA) that greenhouse gas (GHG) emissions from commercial aircraft contribute to the pollution that causes climate change.



The action is in response to a 2007 petition requesting the agency make an endangerment finding for aircraft GHGs and regulate these emissions. And a 2012 Court ruling required EPA to make a final determination on whether aircraft emissions “cause or contribute to air pollution which may

EPA ends three years of silence, finalizes UST rules
EPA’s updated underground storage tanks (UST) regulations are final. Turn to page 14 for the latest information.

See **Court tells EPA to make a determination about aircraft pollution**, p. 3

Agencies issue guidance, alerts on chemical safety, Continued from p. 1

- Reissuing the advisory “Chemical Advisory: Safe Storage, Handling, and Management of Ammonium Nitrate” to incorporate stakeholder comments and concerns and the latest practices in ammonium nitrate safety; and
- Launching actions to modernize OSHA’s Process Safety Management standard and EPA’s Risk Management Program.

OSHA revises PSM policy

A June 8 OSHA memo to regional administrators updates the agency’s enforcement policy on the concentration of a chemical that must be present in a process for determining whether the chemical is at or above the threshold quantity listed in Appendix A of the Process Safety Management (PSM) standard at 29 CFR §1910.119.

OSHA will now use a “one percent test” similar to how EPA enforces the Risk Management Program (RMP) under the Clean Air Act Amendments. Now, for OSHA’s PSM, to determine whether a process involves a chemical at or above the specified threshold quantities, you must calculate:

- The total weight of any chemical in the process at a concentration that meets or exceeds the concentration listed for that chemical in Appendix A.



- When no concentration is specified in Appendix A, the total weight of the chemical in the process at a concentration of one percent or greater. However, you do not need to include the weight of such chemicals in any portion of the process in which the partial pressure of the chemical in the vapor space under handling or storage conditions is less than 10 millimeters of mercury (mm Hg). You should document this partial pressure determination.
- With a mixture, only count the weight of the chemical itself, exclusive of any solvent, solution, or carrier.

The prior OSHA policy, which is no longer valid, used maximum commercial grade or pure (chemical) grade as a determining factor for coverage. OSHA said this policy did not adequately account for the potential of some chemicals listed in Appendix A without specified concentrations to retain their hazardous characteristics even at relatively low concentrations. EPA had concluded years ago that even one-percent solutions of regulated substances may “reasonably be anticipated” to cause effects of concern in an accidental release.

New guidance on good engineering practices

In a separate PSM memorandum, OSHA also provided guidance on the standard’s recognized and generally accepted good engineering practices (RAGAGEP) requirements, including how to interpret “shall” and “should” language in published codes, standards, published technical reports, recommended practices or similar documents, and on the use of internal employer documents as RAGAGEP.

If your facility is covered under PSM, you should review the document in light of OSHA’s current RAGAGEP.

OSHA and EPA issue joint Chemical Safety Alert

OSHA and EPA collaborated on a *Chemical Safety Alert on Safer Technology and Alternatives*. The Alert is intended to introduce safety technology concepts and general approaches and establish the risk management framework for an upcoming guidance document, which will provide practical details and examples.

Both agencies say that they will not specify technology, design, or process section for chemical facility owners or operators. Instead, the Alert explains the concepts and principles, and gives brief examples of the integration of safer technologies into facility risk management activities.

“Safer technology and alternatives,” according to the Alert, means the integration of a variety of risk reduction or risk management strategies that work toward making a facility and its chemical processes as safe as possible. These strategies are applied over the whole of a chemical’s lifecycle: from initial process and facility design, through initial startup, to ongoing operations. These strategies usually include:

- Systematic hazard identification using process hazards analysis (PHA) tools;
- Using Inherently Safer Technology (IST) and/or Inherently Safer Design (ISD); and
- Understanding and implementing the Hierarchy of Controls;

To read the Alert, go to 1.usa.gov/1K6nMlp.

Court tells EPA to make a determination about aircraft pollution, Continued from p. 1

reasonably be anticipated to endanger public health or welfare.”

At the same time, the agency is releasing information about the international process already underway by the International Civil Aviation Organization (ICAO) for developing carbon dioxide (CO₂) standards for aircraft and EPA’s participation in that process. EPA is now seeking public input on its next steps.

For the past five years, the ICAO has been working to develop international CO₂ emissions standards for aircraft. EPA and the Federal Aviation Administration, representing the U.S., are participating in ICAO’s process to ensure the country has a voice in any decisions. The

ICAO standards are expected to be adopted in early 2016.

According to EPA, U.S. aircraft emit roughly 11 percent of GHG emissions from the U.S. transportation sector, and 29 percent of GHG emissions from all aircraft globally.

EPA says the body of science on human-induced climate change has only strengthened since 2009, when it issued the endangerment finding for cars and light trucks.

EPA is not looking to regulate emissions from small piston-engine planes (the type of plane often used for recreational purposes), or for military aircraft.



At press time, the White House Budget Office had completed its review of the proposed rule, but it had not yet appeared in the *Federal Register*. Once the proposed rule is published, it will be open for a 60-day public comment period.

For more information on the proposed rulemaking, visit epa.gov/otaq/aviation.htm.



EPA, DOT propose more cuts to GHGs for heavy-duty trucks



On June 19, EPA and the National Highway Traffic Safety Administration (NHTSA) jointly proposed the next round of greenhouse gas (GHG) emissions and fuel efficiency standards for medium- and heavy-duty vehicles. “Phase 2” of the program significantly reduces the amount of carbon these vehicles will be allowed to emit. The Phase 2 standards build off of the platform of the 2014-2018 fuel efficiency and GHG standards.

Medium- and heavy-duty trucks make up only about five percent of the vehicles on U.S. roads, but they

account for nearly 20 percent of GHG emissions and oil use.

According to EPA, the proposed standards will lower emissions of carbon dioxide (CO₂) by approximately 1 billion metric tons, cut fuel costs by \$170 billion, and reduce oil consumption by up to 1.8 billion barrels over the lifetime of the vehicles sold under the program.

The Agency claims these reductions are equal to the GHG emissions associated with energy use by all U.S. residences in one year. Further, the total oil savings would add up to more than a year’s worth of U.S. oil imports from the Middle East.

If EPA and the NHTSA are correct, the proposed standards would “deliver favorable payback periods for truck owners.” The buyer of a new long-haul truck in 2027 is projected to recoup the investment in fuel-efficient technology in less than two years through fuel savings.

Model years 2021-2027

The proposed rule would cover model years 2021-2027 and apply to semi-trucks, large pickup trucks and vans, and all types and sizes of buses and work trucks.

Proposed rule includes trailers

For the first time, the agencies are also proposing efficiency and GHG standards for trailers.

EPA’s trailer standards, which will exclude certain categories such as mobile homes, would begin to take effect in model year 2018, while NHTSA’s standards would take effect in 2021.

EPA and NHTSA hope to finalize the standards in 2016.

Public comments will be accepted for 60 days after the proposal is published in the *Federal Register*.

Read the pre-publication version of the proposal at 1.usa.gov/1LgmEMK.





Manufacturers reach out to the President on ozone standards

National clean air standards for ground-level ozone are on track to be finalized in November. But before that happens, the National Association of Manufacturers (NAM), along with several other pro-business groups, asked President Obama to reject EPA's proposed levels, and keep the current standard in place.

In 2011, President Obama ordered EPA to withdraw the then-pending ozone rule, saying it would adversely affect the ongoing economic recovery.

NAM told the President, "The concerns you identified in 2011 still

very much persist for our organizations today and we fear that the costs, delays and barriers to growth associated with a new ozone rule will have a severely negative impact on the U.S. economy, our international competitiveness, and jobs."

Further, according to NAM, the existing 2008 ground-level ozone standard has yet to be fully implemented.

Last December, EPA proposed to strengthen both the primary ozone standard (to protect public health) and the secondary standard (to protect public welfare). Both standards would be 8-hour standards set to a range of 65 to 70 parts per



billion (ppb), with the door left often to the possibility of 60 ppb in the future. The current standard is 75 ppb.

Read the letter at bit.ly/1Ix4u48.



Iowa lawmakers ask EPA for a hearing on renewable fuel levels

Legislators from the state of Iowa wrote to EPA head Gina McCarthy asking for a public hearing in their state on the proposed Renewable Fuel Standard (RFS) Renewable Volume Obligations (RVOs). EPA published the proposed renewable fuel standards in the June 10 *Federal Register*.

In 2013, according to the lawmakers, Iowa produced approximately



3.8 billion gallons of ethanol and 230 million gallons of biodiesel. In addition, the state recently built two new cellulosic ethanol facilities, with another one coming into production later this year.

In Iowa, EPA's delay in issuing RFS volume requirements, and its decision to deviate from the levels set by Congress, "has created uncertainty for the biofuels

industry and hampered investment." Further, the levels EPA has proposed are not good news in the state. As the legislators put it, "... The proposed RVOs will negatively impact the agricultural and biofuels industries, consumer choice at the pump, and future investments in 2nd generation renewable fuels and infrastructure."

The letter is available at 1.usa.gov/1HgVMdL.

EPA held a public hearing on the RFS program on June 25 in Kansas City, Kansas. For more information, go to 1.usa.gov/1Ie6H8R.



Study links lead pipes to violent crime

A Harvard University study released in May researched the relationship between water systems that use lead or iron service pipes and a rise in city-level homicide rates. Authors James Feigenbaum and Christopher Muller looked at the effect of American cities' use of lead pipes

on homicides between 1921 and 1936. According to the study, the use of lead pipes increased homicide rates by 25 percent.

Read more at bit.ly/1IwNNpI.





Senators pen letter opposing methane limits

On June 11, Senator Jim Inhofe (R-OK), chairman of the Senate Environment and Public Works Committee, along with several other Senators, sent a letter to President Obama opposing new federal regulations for methane emissions from oil and natural gas drilling operations.

The Senators claim that mandatory reductions in methane emissions are “unnecessary and will be less effective than a voluntary, coopera-

tive effort.” In the letter, the Senators refer to an earlier EPA report showing a decline in methane emissions. They say, “The success of the oil and natural gas industry in reducing methane emissions is well-documented. In its most recent greenhouse gas emissions inventory, EPA reported that, between 2011 and 2013, methane emissions declined by 12 percent; for hydraulically fractured wells, emissions dropped by 73 percent.

Estimates from academic and industry sources have reached similar conclusions.”

Read the letter here: 1.usa.gov/1J0tK5O



Equip flammable storage tanks with overflow protection: CSB

In June, the US Chemical Safety Board (CSB) reported on its investigation into a massive explosion at an oil refinery and oil depot near San Juan, Puerto Rico, which occurred

in 2009. The Board published a draft report with proposed recommendations for addressing regulatory gaps in safety oversight of petroleum storage facilities by OSHA and EPA.

At the same time, the CSB released an excerpt of an upcoming video entitled, “Filling Blind.” The safety video reenacts the explosion and the events that led up to it.

The draft report recommends that EPA adopt new

regulations for facilities to require that flammable storage tanks are equipped with automatic overflow protection systems, and to require regular testing and inspection as well as risk assessments. The Board is also making similar recommendations to OSHA, the American Petroleum Institute, and two key fire code organizations. The recommendations would affect EPA’s Risk Management Program; Spill Prevention, Control, and Countermeasure (SPCC) rules; and/or OSHA’s Flammable and Combustible Liquids standard.

Read CSB’s draft report at 1.usa.gov/1J2PNZt.



EPA gives growers a little more time to use methyl bromide

In ozone layer news, EPA proposed new critical use exemptions from the phaseout of methyl bromide, a fumigant used mostly by California strawberry and tomato growers. The Clean Air Act and the Montreal Protocol on Substances that Deplete the Ozone Layer phased out methyl bromide on Jan. 1, 2005, apart from allowable exemptions. Critical use exemptions may be available in cases where no techni-

cally or economically feasible alternative exists.

The proposed 2016 exemption would apply to California strawberries and dry-cured country ham. And EPA would allow the production and import of 141 metric tons of methyl bromide for these critical uses.



Find out more by using Docket ID No. EPA-HQ-OAR-2013-0369 at www.regulations.gov.



Changes in injection well practices may prevent earthquakes

A study released in the journal *Science* on June 19 shows that there may be hope for reducing or eliminating the number of earthquakes induced by wastewater injection.

According to the U.S. Geological Survey (USGS), the number of earthquakes occurring in the cen-

tral and eastern part of the country increased dramatically since 2008. In fact, the years between 1973 and 2008 experienced an average of 21 earthquakes with a magnitude three or larger (M3+). However, by 2009-2013, that rate jumped to an average of 99 M3+ earthquakes per year. In 2014 alone, there were 659 M3+ earthquakes.

Many studies had pointed to wastewater injection practices as the culprit behind the uptick in tremblers. Wastewater injection means the practice of placing produced waters, or wastewaters from oil and gas drilling operations, deep underground for waste disposal.

The new study, lead by M. Weingarten, S. Ge, *et al.*, found that the increase in earthquakes is directly associated with only high-rate injection wells (wells that inject more than 300,000 barrels per month). The study did not find an association between a well's cumulative injected volume, monthly wellhead pressure, depth, and proximity to crystalline basement, and earthquakes.

The authors say that managing injection rates may “be a useful tool to minimize the likelihood of induced earthquakes.”

Locate the study abstract at sciencemag.org/content/348/6241/1336.abstract.



Guides dig into vapor intrusion prevention, management, mitigation

On June 11, the U.S. Environmental Protection Agency (EPA) released two technical guides to support assessment and mitigation activities at sites where vapor intrusion is a concern.

The *Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* applies to all sites being evaluated under federal land cleanup statutes for brownfield grantees. A companion document, the *Technical Guide for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites* addresses any sites where vapor intrusion related to petroleum contamination from underground storage tanks is a potential concern.

Both guides are applicable to residential and non-residential settings and present recommendations for identifying, evaluating, and managing vapor intrusion. The recommendations include flex-

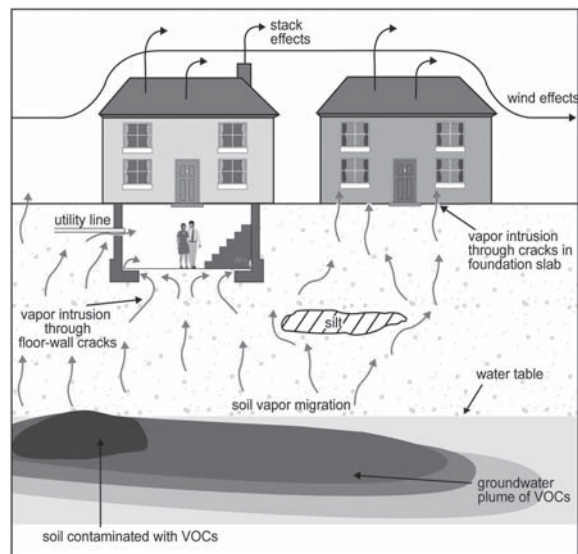
ible technical approaches that take site-specific conditions and circumstances into account.

Vapor intrusion refers to the migration of hazardous vapors from contaminated subsurface sources, such as groundwater, through soil into overlying buildings and structures. Exposure to these vapors by building occupants can potentially pose both acute and chronic health risks. Vapor intrusion is a potential concern at any building — existing or planned — located near soil or groundwater contaminated with vapor-forming toxic chemicals.

According to EPA, exposures to vapor intrusion usually can be prevented or reduced through relatively simple actions such as changing building pressure and ventila-

tion. In most cases, costs associated with addressing vapor intrusion can be very manageable, resulting in long-term benefits including improved public health and less costly response actions, especially when actions are undertaken early.

To access the documents and more information on vapor intrusion, see epa.gov/oswer/vaporintrusion.





Fracking study points to vulnerabilities, but few actual problems

EPA released its much-anticipated draft assessment on the potential impacts of hydraulic fracturing activities on drinking water resources in the U.S. The assessment, begun in 2011, set out to understand the relationship between hydraulic fracturing and drinking water resources.

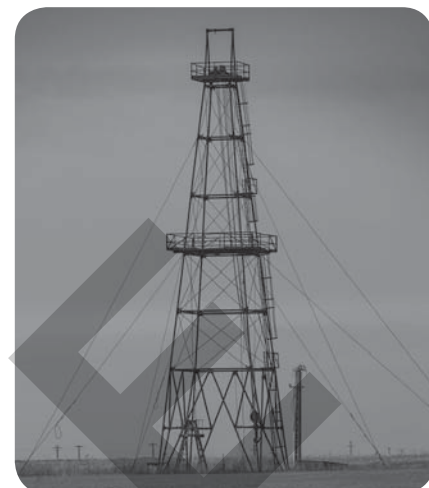
Hydraulic fracturing describes the process of injecting water and a proppant, usually sand, along with chemicals at high pressure to “fracture” shale or other nonporous rock to allow oil and natural gas to flow back to the well.

The draft assessment report reveals potential vulnerabilities in the water lifecycle that could impact drinking water. However, most hydraulic fracturing activities in the U.S. are carried out in a way that have not led to widespread, systemic impacts on drinking water resources. The assessment follows the water used for hydraulic fracturing from water acquisition, chemical mixing at the well pad site, well injection of fracking fluids, the collection of hydraulic fracturing wastewater (including flowback and produced water), and wastewater treatment and disposal.

EPA’s review of data sources available to the agency found specific instances where well integrity and waste water management related to hydraulic fracturing activities impacted drinking water resources, but they were small compared to the large number of hydraulically fractured wells across the country. The report provides information about potential vulnerabilities, some of which are not unique to hydraulic fracturing, to drinking water resources, but was not designed to be a list of documented impacts.

These vulnerabilities to drinking water resources include:

- Water withdrawals in areas with low water availability;
- Hydraulic fracturing conducted directly into formations containing drinking water resources;
- Inadequately cased or cemented wells resulting in below ground migration of gases and liquids;
- Inadequately treated wastewater discharged into drinking water resources; and
- Spills of hydraulic fluids and hydraulic fracturing wastewater, including flowback and produced water.



EPA also released nine peer-reviewed scientific reports. These reports were a part of the agency’s overall hydraulic fracturing drinking water study and contributed to the findings outlined in the draft assessment. Over 20 peer-reviewed articles or reports were published as part of the study.

The study will be finalized after review by the Science Advisory Board (SAB) and public review and comment. EPA will hold public teleconferences on September 30, October 1, and October 19. A face-to-face meeting will take place on October 28. See the June 5 *Federal Register* notice for more information: 1.usa.gov/1LpP5cj.



Bee aware – EPA works to protect pollinators

Adding to its “swarm” of pollinator protection actions, EPA proposed a plan to prohibit the use of all highly toxic pesticides when crops are in bloom and bees are present under contract for pollinator services. The Agency explains that farmers

routinely contract with honey bee keepers to bring in bees to pollinate their crops that require



insect pollination. Because bees are typically present when the crops are in bloom, pesticide spraying at this time can significantly affect the health of the bees.

In addition, EPA recommends that states and tribes develop pollinator protection plans and best management practices.

Find out more by typing in docket ID No. EPA-HQ-OPP-2014-0818 at www.regulations.gov.



Power plants face tougher water discharge limits

In June, Environmental groups such as Earthjustice, the Sierra Club, and Physicians for Social Responsibility published a study titled “Selling our health down the river,” which argued EPA has been underestimating the effectiveness of its pretreatment programs for heavy metals from power plants.

The groups want EPA to choose the strongest possible protections against water toxics for power plants, which, they claim, would eliminate almost all heavy metal pollution from the industry.

But, even without the study, tougher water discharge limits may be just around the corner for electric power plants. EPA’s final rule for “Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category” is still on the schedule for September (although as of press time, it had not yet reached the White House Budget Office for approval).

Effluent limitations guidelines (ELGs)

EPA says power plant discharges can have major impacts on water quality, including reducing the number of living aquatic animals and plants, contaminating drinking water sources, and contaminating fish.

In 2013, the Agency proposed new effluent limitations guidelines (ELGs) and standards for the steam electric power generating point source category.

These requirements would be incorporated into National Pollutant Discharge Elimination System (NPDES) discharge permits issued by EPA and the states and through the national pretreatment program.

The steam electric ELGs and standards will apply to steam electric power plants using nuclear or fossil fuels, such as coal, oil, and natural gas. There are approximately 1200 nuclear and fossil fuel steam electric power plants in the U.S. Nearly 500 of these power plants are coal-fired.

Current regulations “have not kept pace”

According to EPA, a 2009 study showed that the current regulations (last updated in 1982) do not adequately address the pollutants being discharged and have not kept pace

with changes that have occurred in the electric power industry over the past three decades.

Pollutants of concern, those that will probably be addressed with tighter controls, are:

- Mercury
- Arsenic
- Selenium
- Other metals
- Nutrients
- Total dissolved solids

Other power plant waste streams

The rulemaking may also address discharges associated with coal ash waste and flue gas desulfurization air pollution controls, as well as other power plant waste streams.

Watch JJKeller.com for updates.



Region 1 (New England) — ME moves to make rail cars safer

Maine is one of many states working to make oil transportation by rail safer for its citizens. The Department of Environmental Protection proposed a rule to establish minimum inspection, reporting, and preparedness requirements for all operators of rail tank cars transporting or storing oil in ME. In addition, the rule sets requirements for the remediation of any oil discharges from rail tank cars and calls for the submission of federal response plans to the Department.

Region 2 — (NJ / NY) — NY prepares for sea-level rise

The New York State Department of Environmental Conservation (DEC) held meetings to allow the public to comment on sea-level rise projections. Governor Cuomo's 2014 Community Risk and Resiliency Act requires the DEC to adopt a regulation establishing official state sea-level rise projections by January 2016.

Region 3 (Mid-Atlantic) — MD shop fails to identify hazwaste

The owner and operator of a Maryland sheet metal and machine shop will pay a \$100,000 penalty for failing to make required hazardous waste determinations and comply with hazardous waste management regulations such as failing to conduct weekly container storage area inspections, train personnel, prepare and maintain training records, and prepare and maintain the required contingency plan.

Region 4 (Southeast) — KY river off list of impaired waters

The Kentucky Division of Water recently removed the western Ohio River from its list of impaired waters. New methods of mercury testing showed that mercury levels in

fish indicate the river is meeting the water quality standard for mercury in fish tissue. (bit.ly/1IzgPVM)

Region 5 (Great Lakes) — Pipeline company to restore MI river

Under a proposed settlement, a national pipeline owner/operator will restore the Michigan environment damaged by a 2010 pipeline rupture and subsequent oil spill. Several pipeline affiliates will complete numerous natural resource restoration projects along the Kalamazoo River and pay an additional \$4 million for other restoration projects.

Region 6 (South Central) — NM plant ordered to cut emissions

In a settlement with EPA and the U.S. Department of Justice, several New Mexico- and Arizona-based utility companies will install pollution control technology to reduce air pollution from the Four Corners Power Plant located on the Navajo Nation near Shiprock, NM. The settlement requires an estimated \$160 million in upgrades to the plant's sulfur dioxide and nitrogen oxide pollution controls. They must also spend \$6.7 million on three health and environmental mitigation projects and pay a \$1.5 million civil penalty.

Region 7 (Midwest) — NE sponsors tire recycling projects

The Nebraska Department of Environmental Quality announced the state is awarding over \$2 million for tire recycling and cleanup projects across the state. The program will be funded by a \$1 fee on new tires purchased in NE. Grants will support local efforts to clean up tire piles and conduct community scrap tire collections. In addition, grants will partially reimburse individuals for rubber mulch and other new products derived from scrap tires. (1.usa.gov/1GICRac)



Region 8 (Mnts and Plains) — ND reveals storage vessel policy

The North Dakota Department of Health Division of Air Quality released a policy memo on storage vessels at oil and gas non-production sites. The policy applies to new and existing storage vessels at non-production facilities. The deadline for complying with the new policy is Jan. 1, 2016, for existing facilities subject to the requirements in the memo. (bit.ly/1e43Kvn)

Region 9 (Pacific SW) — NV air plans partially approved

EPA proposed to partially approve and partially disapprove the Nevada State Implementation Plan (SIP) for the implementation, maintenance, and enforcement of the 2008 ozone, 2010 nitrogen dioxide, and 2010 sulfur dioxide national ambient air quality standards (NAAQS). In addition, EPA wants to reclassify certain regions of the state for SO₂ emergency episode planning. (1.usa.gov/1e4411r)

Region 10 (Pacific NW) — WA streamlines regs for water reuse

In an effort to prepare for future droughts, The Washington Department of Ecology drafted a rule to encourage local jurisdictions to reuse or reclaim water. The water rule would establish new regulations for all reclaimed water projects. Components of the draft rule include a single permit for the production, distribution, and use of reclaimed water; definitions of reclaimed water; a process to define and resolve water rights issues; and requirements for currently operating reclaimed water facilities to comply with the new regulations.

Best practices address human error in loading/unloading cargo tank motor vehicles

The DOT's Pipeline and Hazardous Materials Safety Administration (PHMSA) released a best practices guide on cargo tank motor vehicle loading and unloading operations. The guide is intended to aid hazmat employers in addressing human error in loading and unloading operations. Human error, according to PHMSA, is a major contributing factor for incidents occurring during these operations. Some of these incidents include:

- Failing to attend or monitor loading and unloading operations;
- Leaving a valve in the wrong position either before, during, or after loading/unloading operations;
- Improperly connecting transfer equipment;
- Overfilling cargo tanks or receiving tanks; and
- Using defective or deteriorated devices and equipment.

Recommended best practices

The guidance contains the following best practices:

Training

Hazmat employees must be trained to understand and must be qualified to perform their duties safely and in compliance with the Hazardous Materials Regulations (HMR). PHMSA recommends evaluating employees' understanding of safe loading/unloading procedures at least once a year. More frequent and routine practice and evaluation of operating procedures should include observation and feedback by a qualified supervisor on the employee's performance.

At a minimum, training should include provisions to:

- Identify employees and covered duties, i.e., employees subject to training due to performance of a covered function under the HMR;
- Observe and evaluate covered employees' performance of duties;
- Provide feedback regarding performance of duties;
- Establish a performance improvement plan for employees failing to perform up to standard; and
- Initiate enhanced training if employees are no longer qualified to safely perform covered duties, or if performance of duties contributed to an unintentional release of hazmat.

PHMSA also recommends that employers include in the required training record of employees specifics on enhanced training needed, as well as noting when employees safely and successfully perform loading, unloading, or transloading operations. Employers should only use employees who have demonstrated that they can correctly and safely perform these functions.

Risk assessment of operation

PHMSA recommends that persons who load, unload, or provide transfer equipment to load/unload hazmat to/from CTMVs should perform an analysis of operations; otherwise, review past analyses to evaluate hazards with loading/unloading operations, which should include:

- Clearly marking loading/unloading activities for



which facility personnel or the operator of a CTMV is responsible.

- Assessing current procedures used to ensure the safety of loading/unloading operations and identifying areas where procedures could be improved. Analysis should be tailored to the complexity of the process and the materials involved in the operation, including—
 - The characteristics and hazards of materials to be loaded/unloaded;
 - Measures necessary to ensure safe handling of the material, such as temperature or pressure controls; and
 - Conditions that could affect the safety of the loading/unloading operation, including access control, lighting, ignition sources, and physical obstructions.
- Ensuring these operations analyses are kept with the operating procedures.

For more best practices, including implementing operating procedures, type in 1.usa.gov/1HhocV3.



What does EPA mean by “legitimate recycling”?

EPA’s Jan. 13, 2015, revised Definition of Solid Waste rule became effective on July 13 of this year. The rule was designed to clarify provisions in the hazardous waste regulations that allow certain listed wastes to be excluded from the definition of solid wastes when they are legitimately recycled — and to provide additional protections to the public from certain third-party recycling activities that EPA deemed to be risky.

While the Agency has repeatedly said that it did not intend for the new rule to create additional burdens for recycling activity that is already occurring, there are a few new requirements that generators must now meet in order to comply with the rule.

For instance, while EPA still allows the “generator-controlled recycling exclusion,” meaning hazardous secondary materials that are reclaimed by the generator (or through certain tolling agreements) are not considered to be solid wastes, the rule adds the following requirements:

- New codified definition of “contained,”
- New recordkeeping requirements for same-company or toll manufacturing reclamation,
- New notification requirements,
- New documentation requirements to prove “legitimate recycling,” and
- New emergency preparedness and response conditions. (Note that large quantity generators are already required to meet these provisions. With the new rule, any waste generator that wants to use these exclusions must develop and implement emergency response procedures.)

As for the definitions of “legitimate recycling,” EPA changed the definition in order to address the problem of “sham recycling,” or fake recycling. To be considered legitimate, recycling must meet four factors identified at 40 CFR 260.43, which are:

Factor 1: Legitimate recycling must involve a hazardous secondary material that provides a useful contribution to the recycling process or to a product or intermediate of the recycling process.

Factor 2: The recycling process must produce a valuable product or intermediate.

Factor 3: The generator and the recycler must manage the hazardous secondary material as a valuable commodity when it is under their control.

Factor 4: The product of the recycling process must be comparable to a legitimate product or intermediate.

The new rule runs to 108 pages in the *Federal Register*. As with any



large and complicated rule change, there is a period of adjustment as the regulated community works to comply with the new requirements. EPA is working to answer the many questions that have arisen in the months since the rule was published. However, many questions remain about how this rule will be enforced.

The Agency published a Frequently Asked Questions document at the end of March, which may answer at least a few of these concerns. For instance, the document explains the “remanufacturing exclusion,” as “an exclusion for certain higher-value solvents transferred from one manufacturer to another for the purpose of extending the useful life of the solvent by remanufacturing the spent solvent back into the commercial grade solvent.”

Find more answers at 1.usa.gov/1ITgHTH.



Don't miss stormwater permitting deadlines! Some are as early as September 2

In June, EPA issued its long-awaited Multi-Sector General Permit (MSGP) for industrial stormwater discharges for all EPA Regions except Region 4. Effective June 4, the 2015 MSGP replaces the 2008 MSGP, which had expired in 2013. EPA allowed industrial dischargers that had been covered under the 2008 permit to maintain coverage under the terms and conditions of

the old permit until the new permit was approved. EPA is issuing the MSGP for five years.

See the July 2015 edition of the *Environmental Alert* for more information on where the permit applies and what has changed since the 2008 permit was issued.

To be covered under the 2015 MSGP, operators of industrial activities must submit a complete

What You Can Do

and accurate Notice of Intent (NOI) by the applicable deadline in the table below. The NOI certifies to EPA that the facility is eligible for coverage and provides information on its industrial activities and discharges. Submit NOIs using EPA's NeT-MSGP reporting tool. Find it at StormwaterFactSheetOandG.

2015 permit NOI submittal deadlines

Operator Category	NOI Submission Deadline	Discharge Authorization Date
Operators of industrial activities authorized for coverage under the 2008 MSGP.	No later than Sept. 2, 2015, unless EPA notifies you that your deadline is extended.	30 days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization has been denied or delayed. <i>Note:</i> You must review and update your Stormwater Pollution Prevention Plans to ensure the permit's requirements are addressed before submitting your NOI. Provided you submit your NOI in accordance with the deadline, your authorization under the 2008 MSGP is <i>automatically continued</i> until you have been granted coverage under this permit or an alternative permit, or coverage is otherwise terminated.
Operators of industrial activities that commenced discharging between Sept. 30, 2013, and Sept. 2, 2015, and have been operating consistent with EPA's no action assurance for the NPDES Stormwater MSGP for Industrial Activities.	As soon as possible, but no later than Sept. 2, 2015, unless EPA notifies you that your deadline is extended.	30 days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization has been denied or delayed.
Operators of industrial activities that commence discharging after Sept. 2, 2015, or operators seeking coverage for dischargers previously covered under an individual permit or an alternative general permit.	A minimum of 30 days prior to commencing discharge in accordance with the terms of the 2015 MSGP.	30 days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization has been denied or delayed.
New operators of existing industrial activities with discharges previously authorized under the 2015 MSGP.	A minimum of 30 days prior to the date of transfer of control to the new operator.	30 days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization has been denied or delayed.
Other eligible operators – operators of industrial activities that began discharging prior to Sept. 2, 2015, but not covered under the 2008 MSGP or another NPDES permit and not operating consistent with EPA's no action assurance for the NPDES Stormwater MSGP for Industrial Activities.	Immediately, to minimize the time discharges from the facility will continue to be unauthorized.	30 days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization has been denied or delayed.

Note: Operators of industrial facilities in the State of Idaho (except Indian country), on Spokane Tribe of Indian lands, and federal operators of industrial facilities in the State of Washington, are not yet eligible for coverage under the MSGP because certifications required by Section 401 of the Clean Water Act were not received in time. Once permit coverage is available in these areas, the following NOI deadlines will apply:

- For operators of industrial activities that were authorized for coverage under the 2008 MSGP: no later than 90 days after the date of permit issuance in these areas.
- For operators of industrial activities that commence discharging on or after Sept. 30, 2013, and prior to 90 days after the date of permit issuance in these areas: as soon as possible, but no later than 90 days after permit issuance.
- For operators of industrial activities that commence discharging 90 days after permit issuance in these areas: A minimum of 30 days prior to commencing discharge in accordance with the terms of the 2015 MSGP.

Then and now: How the new Clean Water Rule really applies to different waters

Now that EPA’s Clean Water Rule to clarify the definition of “Waters of the United States” (WOTUS) has been finalized, questions still remain about exactly which waters are covered by the rule. In fact, the Senate has introduced a bill (S. 1140) that would “scale back” the

rule to “keep the focus of the Clean Water Act about protecting navigable water from pollution, preserve our clean water, and prevent EPA from using the WOTUS rule as a tool to control land or isolated water.” That said, EPA recently released a fact sheet explaining the



differences between the historic application of the Clean Water Act and how the new final rule will be applied.

Subject	Old Rule	Proposed Rule	Final Rule
Navigable waters	Jurisdictional	Same	Same
Interstate waters	Jurisdictional	Same	Same
Territorial waters	Jurisdictional	Same	Same
Impoundments	Jurisdictional	Same	Same
Tributaries to the traditionally navigable waters	Did not define tributary	Defined tributary for the first time as water features with bed, banks, and ordinary high water mark, and flow downstream	Same as proposal except wetlands and open waters without beds, banks, and high water marks will be evaluated for adjacency.
Adjacent wetlands/ waters	Included wetlands adjacent to traditional navigable waters, interstate waters, the territorial seas, impoundments, or tributaries.	Included all waters adjacent to jurisdictional waters, including waters in riparian areas or floodplains, or with surface or shallow subsurface connection to jurisdictional waters.	Includes waters adjacent to jurisdictional waters within a minimum of 100 feet and within the 100-year floodplain to a maximum of 1,500 feet of the ordinary high water mark.
Isolated or “other” waters	Included all other waters the use, degradation or destruction of which could affect interstate or foreign commerce.	Included “other waters” where there was a significant nexus to traditionally navigable water, interstate water, or territorial sea.	Includes specific waters that are similarly situated: Prairie potholes, Carolina & Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands when they have a significant nexus. Includes waters with a significant nexus within the 100-year floodplain of a traditional navigable water, interstate water, or the territorial seas, as well as waters with a significant nexus within 4,000 feet of jurisdictional waters.
Exclusions to the definition of “Waters of the U.S.”	Excluded waste treatment systems and prior converted cropland.	Categorically excluded those in old rule and added two types of ditches, groundwater, gullies, rills, and non-wetland swales.	Includes proposed rule exclusions, expands exclusion for ditches, and also excludes constructed components for municipal sewer and water delivery/reuse and erosional features.

The long wait is over — EPA finalizes UST rules

EPA has been working to revise the 1988-era Underground Storage Tanks regulations since 2007. The Agency published the proposed rule in 2012, and since that time, has been considering information and input received from stakeholders in developing the final rule. However, the agency wasn't free to discuss the rule or answer questions about it.

In an email to EPA employees announcing the new rule, Carolyn Hoskinson, Director of EPA's Office of Underground Storage Tanks, explained, "Because of the rules and regulations that govern the process for federal regulation development, after the close of the comment period on April 6, 2012, we entered a long period of time when EPA was forbidden from talking to our stakeholders about what changes we were making from proposal to final as a result of all the helpful input and additional information that so many of you shared with us. This was a very awkward and uncomfortable time for us in EPA's UST program where we, from the beginning of time, have always placed a high value on collaboration, communication, and transparency.

Rule applies to USTs storing petroleum

A UST is one or more tanks and any underground piping connected to the tanks that have at least 10 percent of their combined volume underground. The federal UST regulation applies only to USTs storing petroleum, petroleum blended with biofuels, and certain other hazardous substances.

Hundreds of thousands of these types of USTs are located at facilities across the country. The rule will have particular impact on retail facilities such as gas stations.

States and territories primarily implement the UST program. Most states already have some or most of these new requirements in place, especially because federal funding for many state UST programs is tied to operator training and secondary containment requirements. However, some states will need to meet more protective standards.

The revised requirements include:

- Adding secondary containment requirements for new and replaced tanks and piping;
- Adding operator training requirements;



- Adding periodic operation and maintenance requirements for UST systems;
- Removing past deferrals for emergency generator tanks, airport hydrant systems, and field-constructed tanks;
- Adding new release prevention and detection technologies;
- Updating codes of practice; and
- Updating state program approval requirements to incorporate these new changes.

EPA updated its UST webpage (epa.gov/oust/fedlaws/revregs.html) with new guidance materials, including a comparison of the 1988 UST regulation to the final 2015 regulation. The page also provides a link to a document titled, "Musts for USTs," which is full of helpful information on how to comply with the new rule. The following table comes from that document and explains what must be reported, how to report, and if any deadlines apply.

When this happens:	You must report this:	By this time:
After you install a UST	You must complete and submit a notification form available from your implementing agency. This form provides information about your UST, including a certification of correct installation. You should have already used this form to identify your existing USTs. If you have not done that yet, do so now.	Within 30 days after you install a UST
After you acquire a UST. Such as by purchasing a gas station	You must complete a notification of ownership change form (available from your implementing agency)	Within 30 days after you acquire a UST (beginning on [effective date])
Before storing certain biofuels or other substances identified by your implementing agency	You must notify your implementing agency	At least 30 days before storing certain biofuels or other substances identified by your implementing agency (beginning on [effective date])
When you suspect a release	You must report suspected releases to your implementing agency	Within 24 hour (or another period specified by your implementing agency)
When you confirm a release	You must report follow-up actions you plan or have taken to correct the damage caused by your UST.	Within 20 days (or another period specified by your implementing agency)
Before you permanently close your UST	You must notify your implementing agency	At least 30 days before you permanently close your UST

Make training the fixative for using solvents

Solvents are liquid substances that are capable of dissolving or diluting oils, greases, and other substances. A wide variety of solvents are used across many industries, but they are most often used in:

- Dry cleaning
- Printing
- Silk-screening
- Furniture refinishing
- Plastics manufacturing
- Electronics
- Fiberglass production
- Manufacturing or construction (cleaning tools)
- Painting and spray painting
- Cleaning metal or plastic parts

Training overview

Before employees work with a solvent, they must understand its particular hazards and what precautions they must take to protect themselves from those hazards. OSHA's Hazard Communication Standard at 29 CFR 1910.1200 requires employers to train employees on:

- How to know when the chemical is present or may have been released, including the monitoring methods used in the workplace and the appearance, smells, etc., of the chemicals present
- The physical, health, and other hazards of the chemical;
- Measures employees can take to protect themselves from these

hazards, including site-specific procedures and work-practices, emergency procedures, and required personal protective equipment; and

- The details of the HazCom program developed by the employer, including an explanation of the labeling system, the safety data sheet, and how employees can find and use the appropriate information.

Flammable and combustible

Most solvents are volatile, meaning they are easily vaporized, and flammable (there are exceptions, of course). A solvent with a flashpoint of 100°F or less is "flammable." These solvents catch fire easily.

A solvent with a flashpoint of more than 100°F is "combustible," and does not catch fire as easily.

It's important to know the lower and upper flammable limits for the solvents you work with. These percentages can be found on the solvent's safety data sheet. Solvent vapors will not burn or explode when they are outside of these limits.

Examples of extremely flammable solvents include:

- Toluene
- Xylene
- Turpentine
- Gasoline and
- MEK



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Train employees to use flammable solvents safety by:

- Only using approved containers for flammable liquid storage.
- Keeping solvents away from open flames, sparks, or other sources of ignition.
- Guarding and bonding metal containers when transferring solvents. This prevents static electricity sparks.

Permissible exposure limits

You should know if the solvent you are using has an OSHA Permissible Exposure Limit (PEL). PELs are limits set on the allowable amounts of chemical in the air that employees may be exposed to. PELs are based on an average 8-hour exposure. You can find the PELs in Subpart Z to Part 1910.



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Employee handout: Stay safe when working with solvents

A solvent is a chemical substance that is used to dissolve other substances. Solvents are used for a variety of activities and are found at most workplaces.

Before you begin work with solvents, your employer will train you on:

- The hazards of the solvents you will use on the job,
- How to recognize the solvent or a spill,
- Health hazards,
- Precautions,
- Emergency procedures,
- How to read the Safety Data Sheet (SDS)
- Where to find the SDS
- Who to go to with questions

Health effects

While less hazardous water-based solvents are becoming more popular, many solvents still pose a threat to short-term and long-term health. Some short-term health effects include:

- Eye irritation
- Skin irritation (dermatitis)
- Lung irritation
- Headache
- Sleepiness
- Nausea
- Light-headedness or dizziness
- Impaired coordination
- Loss of consciousness or death from exposure to high concentrations of certain solvent vapors

Long-term effects of exposure to solvents may include dermatitis or internal damage to the body.



Skin and solvents

Because solvents dissolve oils, the skin, with its natural oils, can be particularly vulnerable to exposure to solvents. Many people experience severe skin allergies when exposed to solvents.

Regular direct contact with solvents, such as immersing the hands in solvents, or using bare hands to clean with solvents, can result in dermatitis, characterized by itchy, red skin along with a rash that may burn or sting; dry, cracked, or scaly skin; swelling, burning or tenderness; or blisters that may drain or crust over.

Protection: Always wear gloves and other protective clothing when working with solvents. Only chemical resistant gloves provide protection against solvents. (Cotton gloves will only soak up the solvent and hold it against your skin. Latex gloves may become soft or permeable when exposed to solvents.)

Eyes and solvents

Solvent splashes into the eyes can damage the eyes. Note that where employees may be exposed to corrosive materials, OSHA's §1910.151(c) requires that "suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use." This means you must have access to emergency eyewashes and showers if the solvent has corrosive properties.

Solvent vapors can also irritate the eyes and many solvents can be absorbed into the body through the eyes.

Protection: Always wear eye protection such as goggles with

splash guards or face shields when working with solvents. Do not wear contacts when working with solvents.

Lungs and solvents

Inhaling solvent vapors is the most common route of exposure. Some solvents are extremely toxic and can cause health problems when inhaled in small amounts. However, even with solvents that have low toxicity levels, exposure to extremely high levels can be an emergency situation.

Protection: Ensure proper ventilation in areas where solvents are being used. This may include opening a window or a door or installing a wall or roof fan to circulate fresh air. In some situations, however, local exhaust ventilation will be needed, such as in a confined space or when using highly toxic solvents.

Respirators

Respirators provide protection against solvent vapors, but they are the last line of defense after proper ventilation and other engineering and administrative controls. It's important to choose the correct respirator for the job. (Paper masks provide no protection against solvent vapors.)

The four types of respirators that provide protection against solvent vapors include:

1. Air-purifying half-face respirators,
2. Air-purifying full-face respirators,
3. Powered air purifying respirators (PAPR), and
4. Air-line respirators.

Before you can use a respirator at work, your employer must make sure it fits properly and that you are trained to use it correctly.

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