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Engineers | Environmental Specialists

REGULATORY NEWS

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Perfluorinated Compounds (PFCs): An Emerging Regulatory Issue

Per- and polyfluorinated alkyl substances (collectively known as PFAS) have been used in manufacturing since the 1950s. However, they have recently become more of a concern due to improved analytical methodologies which allow these compounds to be quantified at part-per-trillion (ppt) concentrations. Much of the current regulatory and research efforts have focused on two primary PFAS compounds, PFOS (perfluorooctane sulfonate) and PFOA (perfluorooctanoic acid), but the PFAS family of chemicals consists of thousands of variants. Many of these have very little toxicological information available.

The current MassDEP (and USEPA) drinking water guideline is 70 ppt, which applies to PFOS or PFOA individually, or in sum. MassDEP recently announced that they are considering adding three more compounds to this sum - PFNA (perfluorononanoic acid), PFHxS (perfluorohexane sulfonic acid), and PFHpA (perfluoroheptanoic acid) - for comparison to the 70 ppt guideline. Increasing the number of compounds summed to evaluate total PFAS concentrations against the 70 ppt total PFAS drinking water guideline could potentially increase the number of water supplies (private or public well systems) that have PFAS concentrations in excess of the 70 ppt drinking water guideline.

MassDEP recommends analyzing drinking water samples for 19 compounds reported by EPA Method 537. If MassDEP moves forward with the inclusion of these three additional compounds in the sum for comparison to the 70 ppt guideline, five of the 19 compounds included in the typical Method 537 analyte list will be covered by the guideline. As research into the toxicology of PFAS continues, it is reasonable to expect that additional PFAS compounds will be included in the sum for comparison to the 70 ppt guideline value, or that different guidelines, and eventually standards, will be developed for individual compounds or groups of compounds. Analytical methodologies are also being developed for soil and other solid samples, as well as non-drinking water samples. This will allow federal and state agencies to establish guidelines and standards for other media.

State	Regulation
Vermont	Health Advisory Level for Drinking Water: 20ng/L PFOA
New Hampshire	Ambient Groundwater Quality Standard: 70ng/L PFOA & PFAS individually or combined
Maine	Drinking Water Maximum Exposure Guidelines: 70ng/L for PFOA & PFAS individually or combined
New Jersey	Proposed Drinking Water Maximum Contaminant Level: 14ng/L for PFOA; 13ng/L PFNA
Connecticut	Drinking Water Action Level: 70ng/L sum of PFOA, PFOS, PFNA, PFHxS and PFHpA

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FACILITY EXPANSION TIPS

TIP ONE: Consider Wetlands and their Regulations Early

With the improving economy, many businesses are taking the opportunity to expand their operations or make site improvements. One of the first things that should be reviewed when considering an expansion is the presence of jurisdictional wetlands and watercourses. In the northeast, these areas are regulated on the federal, state, and sometimes the local level.

Direct impacts to wetlands and watercourses are regulated by state and federal agencies under Sections 401 and 404 of the Clean Water Act. Some states or individual municipalities, however, extend regulatory jurisdiction beyond those limits. These are often designated as wetland setbacks, buffer zones or upland review areas. In Massachusetts, land within 200 feet of the boundary of a perennial watercourse is considered a jurisdictional resource area subject to stringent performance standards. New Hampshire has similar provisions under its Shoreland Protection Act for designated rivers and waterbodies.

Working within these jurisdictional resources requires additional permitting, and can often impact project design, stormwater management and the overall cost of a project. Ignoring the regulations can result in violations and enforcement actions. It is not all bad news, though. Many regulatory programs have exemptions or streamlined processes for certain types of projects in certain areas. When considering a new project, consult with a professional familiar with the local, state and Federal regulations first. It may save you money and headaches down the road.

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TIP TWO: Soil Pre-Characterization for Development Projects

An often overlooked but critical component of most site development projects is incorporating soil pre-characterization sampling into the geotechnical programs. The two main reasons soil pre-characterization is not performed upfront during the design phase are: (1) the potential for discovering contamination and associated regulatory implications, and (2) the added sampling costs. While these concerns are valid, the added value of performing a comprehensive geo-environmental sampling far outweighs any potential or perceived downsides for numerous reasons.

Soil Receiving Facilities	Estimates T&D Cost per Ton
<RCS-1/2 ACO Site	$20-$25
MA Unlined Landfill	$40-$45
MA Lined Landfill	$45-$50
Asphalt Batching	$60-$65
Thermal Desorption	$75-$80
Out-of-State Subtitle D Landfill	$95-$100

Soil pre-characterization benefits include reduced risk to property owners in mismanaging soils, preventing the need for large staging areas for stockpiles on your project site. It can also mean better site designs that allow for the re-use of contaminated soils onsite, eliminating the need for multiple mobilization to obtain the necessary data, and ultimately reduced soil transportation and disposal (T&D) costs. As you can see from the table below, the T&D costs can vary greatly depending on the quality of the soil, and the management plan you implement as part of your development project.

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Asset Management for Industrial Wastewater Treatment Systems

Since many industrial wastewater pretreatment systems (IWPS) were installed 20-30 years ago, much of this equipment is now reaching the end of its useful life. Taking a proactive approach and planning for equipment or system replacement, rather than taking a reactive approach to breakdowns and failures, not only increases your chances of maintaining compliance, it also makes good business sense. Reactive replacement leads to unforeseen and unbudgeted expenses that are often costly due to the emergency nature of repairs. On the other hand, developing a prioritized capital improvement plan allows those costs to be budgeted over several years with critical system equipment replacement or repair planned for.

Evaluating each piece of equipment, its condition, and its criticality for effective system operation allows you to prioritize equipment replacement. This helps you avoid costly breakdowns and system downtime which impacts production. In addition to cost and compliance concerns, older equipment may be lacking safety features that could put operators at risk.

Developing a risk-based prioritization matrix helps rank major system components and equipment. It takes into consideration existing condition, likelihood of failure, criticality, and safety with replacement costs provided for each piece of equipment. This exercise often helps identify items that may be relatively inexpensive to replace but have a tremendous impact on system operation; these "low hanging fruit" are critical assets that should rank high and be replaced or closely monitored. Below is an example of a matrix developed to aid in the assessment of existing, aged equipment at one of Tighe & Bond's client facilities.

Evaluation matrices can be tailored to include risk factors that you deem the most impactful (i.e. breakdown, safety, cost, etc.). The matrix can then be used as the foundation of your capital improvement plan and provide justification, as funding and support is sought.

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Unit Operation / Equipment	Condition of Equipment [1]	Likelihood of Failure [2]	Criticality to System Operation [3]	Safety Concern [4]	Overall Rank	Estimated Cost to Replace
Cyanide Destruct Tank	5	5	4	4	18	$50,000 - $70,000
Surge Tank Transfer Pumps	2	4	4	2	12	$5,000 - $10,000
Overflow Pit	5	1	1	4	11	$10,000 - $15,000
Surge Tanks	2	1	4	2	9	$20,000-$30,000
Neutralization Tank	2	1	4	2	9	$50,000 - $70,000
Lamella Clarifier	1	1	4	2	8	$100,000 - $150,000
Sandfilter (Removal)	3	1	1	1	6	$10,000 - $15,000

1 - 1 (like new), 2 (good), 3 (acceptible), 4 (fair), 5 (poor)
2- 1 (Improbable), 2 (Remote), 3 (Probable), 4 (Likely), 5 (Currently failing)
3 - 1 (Negligible), 2 (Marginal), 3 (Necessary), 4 (Critical)
4 - 1 (None), 2 (Slight), 3 (Moderate), 4 (Severe)

CTDEEP: Potential Changes to FOG Requirements - What You Should Know

The Connecticut Department of Public Health (DPH) has proposed revisions to the classifications for various food preparation establishments. As part of the proposed revisions, certain Class 4 establishments will move to Class 3, and some Class 3 establishments will move to Class 2. The total number of facilities impacted by these changes is currently unclear. What is clear is the potential ripple effect on the current Connecticut Department of Energy & Environmental Protection (CT-DEEP) "General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments".

This CT-DEEP permit program was enacted to control the amount of Fats, Oils and Grease (FOG) being sent to sewer collection systems and wastewater treatment facilities. The program language currently includes language referencing only Class 3 and Class 4 food preparation establishments. The CT-DEEP FOG program regulations will therefore need to be updated if the proposed changes are enacted by the DPH. Many local communities also have their own FOG regulations in place as part of their local sewer ordinance. Thus, modifications to local ordinances may also be required.

Concerns have been raised by some communities regarding the enforcement of existing regulations on the new Class 2 facilities prior to action on the part of the CT-DEEP. Local towns should have the right to do so, as the food preparation establishment can be designated as "problematic", but local ordinance changes may be required to clarify this issue. CT-DEEP may be requesting a joint meeting with the DPH and local communities to allow DPH to hear stakeholder concerns about these new classifications. The outcome of this meeting may help CT-DEEP to prioritize changes that may be needed to its FOG program.

The new regulations were proposed to become effective on July 1, 2018. However, there have been some indications that there may be a 6-month delay in this date, which would push out the DPH regulation changes to January 1, 2019. Regardless of the final enactment date, municipalities should keep their eyes/ears open on these regulation changes, and plan for possible modifications to their FOG program over the next year.

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CTDEEP: Changes Underway in several Permitting Programs

The CTDEEP is in the process of enacting and proposing modifications to several existing permitting programs.

One program revision that is likely to impact many municipal WPCAs in Connecticut is the Industrial Pretreatment permit program. CTDEEP is currently the regulating authority for all industrial pretreatment permits in Connecticut. Under the new program, the CTDEEP will continue to regulate Significant Industrial Users (SIUs). However, all remaining industrial permitting categories will be merged into a single permit, the Miscellaneous General Permit.

Miscellaneous General Permit holders will be regulated by the individual WPCA's that have control of the relevant treatment facility. Permit registration will be directly with the WPCA, and monitoring reports for miscellaneous general permit holders will be sent to applicable WPCAs instead of the DEEP. P.E./CHMM signoff will still be required.

The DEEP had originally considered sending this revised permit out for public notice in the Fall of 2017. However, requests have been made for additional time to plan and budget for the needed internal changes. Therefore, the new permit requirements are now expected to take effect in October, 2020. This will allow municipalities two budget cycles to plan/budget for the necessary changes/staff requirements.

Draft public notice for these changes is expected to be issued this spring, followed by a 30 day comment period.

Additional modifications of note include:

- The "Comprehensive General Permit for Discharges to Surface Water and Groundwater (Comprehensive GP)" was issued on December 14, 2017 with an effective date on March 30, 2018. This single permit replaces several older programs into one overall permit. Registrations for authorization under the Comprehensive GP for existing discharges must be submitted by June 28, 2018.
- Industrial Stormwater General Permit has been extended until 9/30/18. The DEEP has been working on revising this permit and will issue a draft of this General Permit for public notice when ready.
- DEEP has also begun working on revisions to the Stormwater and Dewatering Wastewaters from Construction Activities General Permit ("Construction General Permit"). A draft of this General Permit will also be issued for public notice when ready, possibly by the Spring of 2018.

MassDEP: Amendments to Air Quality Regulations

On March 9, 2018 Mass DEP finalized amendments to the Air Quality Regulations 310 CMR 7.00. These amendments are significant, and will have an effect on many facilities and institutions across Massachusetts. The following areas of the Air Quality Regulations have been amended:

1. Permit Plan Approvals
2. Title V Operating Permits
3. Source Registration
4. Engines and Turbines
5. Solvent Metal Degreasing
6. VOC RACT
7. NOx RACT
8. NOx Ozone Season Budget
9. Air Appeals

Overall these amendments will relax the regulatory burdens for some facilities, and increase the burden for others. An example of reduced regulatory burden is that the DEP changed the Source Registration threshold for facility-wide fuel combustion sources from 10MMBTU/HR to 40MMBTU/HR. This will reduce the reporting requirements for nearly 550 education and health care facilities state-wide (including high schools, small colleges, and certain hospitals.)

Another beneficial change is that DEP has aligned the new emergency engine requirements with EPA regulations by allowing unrestricted operation during emergencies. It also deleted the 300 hour per year restriction during those emergencies. The DEP has also included an allowance for 100 hours per year for maintenance and testing, with an allowance of 50 hours per year for non-emergency use.

On the increased regulatory burden front, the DEP is now requiring a 30-day public comment period for non-major Comprehensive Plan Approval applications. The DEP is also requiring that potential emission from insignificant activities be considered in major source applicability determinations, and will no longer consider commercial lab hoods as insignificant activities.

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Update on Massachusetts NPDES Delegation

On March 8, 2017, Governor Baker reintroduced "An Act to Enable the Commonwealth's Administration of the Massachusetts Pollutant Discharge Elimination System" (see House Bill No. 2777). Approximately one year later, the Joint Committee on Environment, Natural Resources and Agriculture voted once again to send this bill to study. In other words, the bill will not be voted on this session.

Many regulated entities, particularly municipalities and the Massachusetts Coalition for Water Resources Stewardship (MCWRS), have been lobbying for the Massachusetts Department of Environmental Protection (MassDEP) to take on all National Pollutant Discharge Elimination System (NPDES) permitting. This was in hopes of reducing the cost of compliance by simplifying requirements and reporting, integrating NPDES requirements with other state environmental initiatives, and considering State-specific social and economic factors.

Currently the United States Environmental Protection Agency (EPA) administers the NPDES program in Massachusetts, New Hampshire, Idaho, and New Mexico—whereas all the other states have already been authorized to administer some or all NPDES programs. However, opposing voices ultimately won the Committee's votes. They cited concerns about the inadequacy and instability of the proposed State funding (which was roughly half of MassDEP's estimated budget) and MassDEP's lack of current capacity to take on the NPDES program with its broad jurisdiction and major water quality implications.

Whether you were for or against the idea of MassDEP "primacy" for NPDES permitting, it is difficult to predict where the grass will be greener in the long-term given the influence of politics on state and federal environmental programs and funding. For those with regulated discharges in Massachusetts, you should plan to continue to work with the EPA for now and the foreseeable future.

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MassDEP: Toxics Use Reduction Reports *Due July 1*

The Toxics Use Reduction Act (TURA) requires that Massachusetts companies using large quantities of specific toxic chemicals evaluate and plan for pollution prevention opportunities, implement them if practical, and annually measure and report the results.

For a complete list of chemicals, visit the MassDEP website at: http://www.mass.gov/eea/docs/dep/toxics/approvals/chemlist.pdf Reports are due (filed online or postmarked), by July 1, 2018.

If you have questions on TUR planning or reporting, please contact:
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EPA's Toxic Release Inventory (TRI) Reporting *Due July 2*

This year, the deadline to submit TRI forms for RY 2017 is July 2, 2018, because July 1 is a Sunday. Filers should be aware of the following recent changes for RY 2017:

- EPA added hexabromocyclododecane (HBCD) category to the TRI chemical list in November 2017. Facilities that meet the reporting thresholds for HBCD should submit reporting forms by July 2, 2018.
- EPA has adopted the 2017 North American Industry Classification System (NAICS) codes and facilities are required to use these codes on their 2017 TRI reporting forms
- Update de minimis levels are in effect for several chemicals beginning with reporting year 2017.

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New eReporting Submission System for EPA Multi-Sector General Permits (MSGP)

Based on an email update sent by the U.S. Environmental Protection Agency on March 20, 2018, the EPA Multi-Sector General Permit (MSGP) eReporting submission system is transitioning to a new system. The transition to the new system will occur on April 1, 2018.

According to the EPA, a few updates to look forward to with the new system include:

- Submissions will be available in real-time via the E-enterprise portal
- Streamlined CDX registration for new permittees
- New user experience with an updated, user-friendly application
- Enhanced security model for accessing and viewing forms in the application
- Existing permittees in the current system do not have to re-register for CDX, and can use their existing log-in credentials

If you need direct assistance with NeT-MSGP, please call the EPA Help Desk at 1-877-227-8965, or email them at NPDESeReporting@epa.gov.

For more information about the MSGP, please contact:
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Understanding OSHA's Subpart D for Walking and Working Surfaces

For the first time in decades, OSHA updated its Walking Working Surfaces (29 CFR 1910 Subpart D) standard in November 2016, which became effective on January 17, 2017. These new rules are the first updates to the standard since OSHA's inception in 1972 and incorporate advances in technology, personal protective equipment, and management techniques as a step toward the most up-to-date safety practices.

While compliance deadlines for many of new requirements have passed, there are several key compliance dates including:

Deadline	Requirement	29 CFR Section
May 17, 2017	Employers must provide fall protection training	1910.30(a) and (b)
Nov 20, 2017	Testing & Certification of anchorages	1910.27(b)(1)
Nov 19, 2018	Equip existing fixed ladders with one of the following solutions: cage, well, ladder safety system, or personal fall arrest system.	1910.28(b)(9)(i)(A)
Nov 19, 2018	Equip new and renovated fixed ladders with a ladder safety system or personal fall arrest system.	1910.28(b)(9)(i)(B)
Nov 18, 2036	Deadline by which all fixed ladders must be equipped with a ladder safety system or personal fall arrest system in place of cages and wells.	1910.28(b)(9)(i)(D)

OSHA updated the Fall Protection (29 CFR 1910.29) standard for general industry to bring it more in line with the construction and agriculture standards. This update offers more flexibility to employers when it comes to protecting workers against falls on the job, which account for 29 fatalities and 5,842 lost-workday injuries every year.

OSHA's regulations for stairways (29 CFR 1910.25) requires employers to provide protection for open sides and edges that are four feet or more above the adjoining surface. In the past, guardrails were the prescribed method of protection, but with the new standard, employers have more options from which to choose: guardrails, personal fall arrest systems, positioning systems, safety nets, and travel restraints. This allows employers more freedom in selecting the type of equipment they want to use on the job.

Regulations covering both portable and fixed ladders (29 CFR 1910.23) were included in the update and beginning November 19, 2018, employers must equip all new or renovated fixed ladder installations with personal fall arrest systems. Employers have until November 18, 2036 to install personal fall arrest systems on existing fixed ladders in lieu of cages and wells.

OSHA's regulations for safety training (29 CFR 1910.30) required employers to train all employees about recognizing fall hazards on or before May 17, 2017. Under this training requirement, employees should also know the right procedures to minimize those hazards, such as moving cords or tools out of the way to avoid a trip hazard, how to install a fall protection system, how to use a fall protection system properly (including hook-up, anchoring, and tie off techniques), and how to inspect and maintain a fall protection system.

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OSHA's Standard for Respirable Crystalline Silica *Effective July 23, 2018*

OSHA's general industry standard for respirable crystalline silica, found in 29 CFR §1910.1053, requires engineering controls to keep workers from breathing silica dust commonly present in soil, sand, granite, abrasives and other construction and industrial materials.

This standard is effective and has compliance dates for general industry operations on June 23, 2018. The revised standards have a new Permissible Exposure Limit (PEL) that is half the current limit for general industry, and approximately five times lower for construction activities. Plus, the new rule requires the development of a formal Exposure Control Plan.

For more information on this new requirement please contact:
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Important Changes to OSHA Injury and Illness Records: *Submittals Due July 1*

Effective January 1, 2017, companies with 250 or more employees that are currently required to keep OSHA injury and illness records - and establishments with 20-249 employees that are classified in certain industries with historically high rates of occupational injuries and illnesses - must begin electronically submitting information from OSHA Forms 300, 300A, and 301. The new reporting requirements are being phased in over 2017 and 2018.

In 2018, covered establishments with 250 or more employees must submit information from all completed 2017 forms (300A, 300, and 301) by July 1, 2018, and covered establishments with 20-249 employees must submit information from their completed 2017 Form 300A by July 1, 2018. Beginning in 2019 and every year thereafter, covered establishments must submit the information by March 2.

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