

# Where are We Headed with PFAS Remediation Standards in New York?

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Between February 2019 until the present, the New York State Department of Environmental Conservation (“NYSDEC”) issued four guidance documents on the special sampling protocols environmental consultants and laboratories must follow in order to obtain emerging contaminants data for 21 PFAS compounds and 1,4-dioxane, with each new guidance document updating the last version. Just when geology has been recognized as a profession in New York pursuant to Education Law Article 145 §7204-a, emerging contaminants sampling not only creates an entirely new pathway of liability for consultants and their clients, with guidance documents and protocols changing every few months, but also which requires geologists and qualified environmental professionals to wear a cotton linen wardrobe washed more than 5 times to remove PFAS containing Scotch Guard coating (which are still likely washed in PFAS containing laundry detergent products). Despite the volatility of the agency’s continual changing policies, NYSDEC would not take “no” for an answer when remedial parties asked why they were being required to sample for compounds that not only have no cleanup standards, but which are still prevalent on our clothes, in our daily household soaps and coated on our pots and pans. This article will summarize the ever-changing policies surrounding emerging contaminant sampling, and then explore where and when NYSDEC and New York State Department of Health (“NYSDOH”) plan to develop cleanup standards and require remediation of emerging contaminants.

## How did we get here?

In 2009, the United States Environmental Protection Agency (“EPA”) issued Provisional Health Advisories (“Provisional Health Advisories”) “to assess potential risk from exposure to [PFOS and PFOA] through drinking water,” setting provisional health advisory levels of 200 parts per trillion (“ppt”) for PFOS and 400 ppt for PFOA (“Provisional Levels”), but no sampling was required until 2012.<sup>1</sup>

Shortly after drinking water sampling commenced, the significance of these compounds in drinking water above these initial Provisional Levels became apparent. The initial New York PFAS case was in Hoosick Falls, New York, where PFOA contaminated the town’s water supply. Next, was the City of Newburgh’s water supply. Newburgh proactively sampled its own drinking water, found levels under the Provisional Levels, but then later after May 19, 2016, when EPA lowered these Levels, and issued a lifetime health advisory of 70 ppt for long-term exposure to PFOA and PFOS in drinking water, overnight Newburgh’s drinking water supply became contaminated since it contained levels above 70 ppt. High levels of PFAS compounds were then found in its Washington Lake reservoir caused by discharges of fire-fighting foam into the watershed that leads directly into the reservoir from the Stewart Air National Guard Base and

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<sup>1</sup> See 2009 United States EPA Provisional Health Advisories for Perfluorooctanoic Acid (PFOA) and Perfluorooctane retrieved from <https://www.epa.gov/sites/production/files/2015-09/documents/pfoa-pfos-provisional.pdf> (last visited July 22, 2019).

Stewart International Airport owned by the State. The City of Newburgh remains unable to use its reservoir and has been pulled into the nationwide Multidistrict Litigation *IN RE: AQUEOUS FILM-FORMING FOAMS PRODUCTS LIABILITY LITIGATION*, MDL No. 2873, being handled by the Charleston South Carolina District Court, despite having distinct remediation claims from all of the other plaintiffs who are only suing PFAS manufacturers for products liability.

Around this same time in late 2016, NYSDEC also lost the completely unrelated *FMC Corp. vs. NYSDEC* case, 143 A.D.3d 112840 N.Y.S.3d 220 (3<sup>rd</sup> Dept. October 2016), in which case the Third Department Appellate Division essentially ruled that NYSDEC did not have authority to take over a cleanup of an off-site school property since FMC still had an interim status permit, and was entitled to a hearing on NYSDEC's selected remedy. After losing this case, NYSDEC was on a mission for more power as the emerging contaminant crisis commenced.

### **Clean Water Infrastructure Act – April 2017**

The Hoosick Falls and Newburgh cases, coupled with the loss of the *FMC* case, prompted the NYSDEC to encourage the New York State legislature to very rapidly adopt into law the Clean Water Infrastructure Act ("CWIA") in mid-April 2017, after little to no debate. Just slightly before the passage of this new Law, on March 3, 2017, NYSDEC filed a Notice of Adoption for amendments to 6 NYCRR Part 597, Hazardous Substances Identification, Release Prohibition, and Release Reporting which finalized the:

- (1) addition of perfluorooctanoic acid (PFOA-acid, Chemical Abstracts Service (CAS) No. 335-67-1), ammonium perfluorooctanoate (PFOA-salt, CAS No. 3825-26-1), perfluorooctane sulfonic acid (PFOS-acid, CAS No. 1763-23-1), and perfluorooctane sulfonate (PFOS-salt, CAS No. 2795-39-3) to the list of hazardous substances at 6 NYCRR § 597.3; and
- (2) prohibited the use of firefighting foam that may contain PFOA-acid, PFOA-salt, PFOS-acid or PFOS-salt for training but continuing to allow foams containing these substances to fight fires.

NYSDEC brilliantly orchestrated the adoption of this new Law by first using an unknown source of funding to investigate a large number of water supply system throughout the state (largely upstate and on Long Island in Republican Districts) and then promising funding to fix the new problem.

Many new sections of law were created by the CWIA, including: New York Environmental Conservation Law ("ECL") §§ 3–0315 (funds a GIS data system); §§ 15–3301-3305 (Source Water Protection Projects provisions, which provide NYSDEC with new Land Acquisition powers); §§ 27–1201-1211 (Mitigation and remediation of certain solid waste sites and drinking water contamination provisions); New York Public Health Law § 1112 (Emerging Contaminant Monitoring); §1113 (Drinking Water Quality Council); §1114 (Lead Service Line Replacement Grant program), § 1285–s (Intermunicipal water infrastructure grants program), § 1285–t (Water infrastructure emergency financial assistance), § 1285–u (Septic system replacement fund); New York State Finance law § 97–b (Creation of a hazardous waste remedial revolving loan fund); and New York Soil & Water Conservation District Law § 11–b (enables costs to be incurred for various projects and conservation easements).

The CWIA was adopted in three parts:

- Part M Emerging Contaminant Monitoring - Public Health Law § 1112
- Part R Drinking Water Quality Council - Public Health Law § 1113

- Part T Clean Water Infrastructure Act - which included all of the other provisions of law listed above.

The CWIA created a fund of \$2.5 billion aimed at:

- Helping municipalities upgrade their drinking and wastewater treatment facilities,
- Helping homeowners improve their septic systems and
- Enabling land trusts to purchase watersheds, remediate solid waste sites, mitigate drinking water contamination and help farmers comply with Department regulations.

**A. Part M Emerging Contaminant Monitoring - Public Health Law § 1112**

This Section of the CWIA defines “Emerging contaminants” as “any physical, chemical, microbiological or radiological substance listed as an emerging contaminant pursuant subdivision 3”.<sup>2</sup>

Subdivision 3 says that the Commissioner of Health shall promulgate regulations to identify and list substances as an “emerging contaminant” that meet the following criteria:

- are not subject to any other substance-specific drinking water regulation of the Department that establishes a maximum contaminant level, maximum residual disinfectant level, or action level;
- are known or anticipated to occur in public water systems; and
- because of their quantity, concentration, or physical, chemical or infectious characteristics, may cause physical injury or illness, or otherwise pose a potential hazard to human health when present in drinking water.

Obviously, this is a very broad definition, which can greatly expand over time since there are thousands of PFAS compounds.

**B. Part R Drinking Water Quality Council - Public Health Law § 1113**

The Drinking Water Quality Council, which includes 12 members, is tasked in this section of the CWIA with developing a list of emerging contaminants for the NYSDOH to consider, develop well testing material for private homes, and work with other state agencies to oversee the pursuit of parties responsible for the contamination. The 12 members consist of:

- DOH Commissioner Health or designee (Chair)
- DEC Commissioner designee;
- DEC designee with expertise in water resources;
- DOH designee with expertise in drinking water;
- 4 Governor appointed designees who represents water purveyors, expertise in toxicology/health risk assessment; microbiology; and environmental engineering; and
- 4 Senate and Assembly designees 2 who represents water purveyors, and 2 with expertise in toxicology/health risk assessment.

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<sup>2</sup> NYSDEC’s website defines Per- and Polyfluoroalkyl Substances (PFAS) as “a group of chemicals used to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water. Fluoropolymer coatings are blends of resins and lubricants used in products such as water-repellent clothing, furniture, adhesives, paint and varnish, food packaging, heat-resistant non-stick cooking surfaces and insulation of electrical wires.” Chemicals in this group include perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). <https://www.dec.ny.gov/chemical/108831.html>

On December 18, 2018, the Council adopted “the nation’s most protective maximum contaminant levels<sup>3</sup>” (MCLs) for PFOA, PFOS and 1,4-dioxane. Specifically, the Council recommended MCLs of 10 parts per trillion (ppt) for PFOA, 10 ppt for PFOS, and an MCL of 1 part per billion (ppb) for 1,4-dioxane. [https://www.health.ny.gov/press/releases/2018/2018-1218\\_drinking\\_water\\_quality\\_council\\_recommendations.htm](https://www.health.ny.gov/press/releases/2018/2018-1218_drinking_water_quality_council_recommendations.htm)

### **C. PART T Clean Water Infrastructure Act**

The final part of the CWIA has two new ECL titles:

- ECL Article 15 Title 33 – This new section of law authorizes NYSDEC to provide state assistance to municipalities, not-for-profit corporations and soil and water conservation districts to undertake land acquisition projects for source water protection. However, it is important to note state assistance may not be provided to fund any land acquisition project which is undertaken by eminent domain unless such process is undertaken with a willing seller. The Department is supposed to give priority to projects which protect or recharge drinking water sources and watersheds, including riparian buffers and wetlands, and shall promote an equitable regional distribution of funds by evaluating the project's contribution to the protection of drinking water supplies; the presence of a water assessment/protection plan or other similar plan; and financial need or hardship.
- ECL Article 27 Title 12 – This new section of law in ECL §§ 27–1201-1211, called “Mitigation and remediation of certain solid waste sites and drinking water contamination”, is most significant new section of law for environmental practitioners because it essentially provides NYSDEC with new, extremely broad “Superfund” powers while providing site owners with extremely limited to no due process rights.

Title 12 includes new definitions for contaminant, and contamination, drinking water contamination site, mitigation, solid waste site and solid waste management facility:

- "Contaminant" means emerging contaminants pursuant to section eleven hundred twelve of the public health law, and, for solid waste sites, shall include parameters identified in regulations required to be tested by landfills to ensure the protection of groundwater quality.
- "Contamination" or "contaminated" means the presence of a contaminant in any environmental media, including soil, surface water, or groundwater, sufficient to cause or substantially contribute to an exceedance of standards, criteria, and guidance values established by the Department or drinking water standards, including maximum contaminant levels, notification levels, maximum residual disinfectant levels or action levels established by the Department of Health.
- "Drinking water contamination site" means any area or site that is causing or substantially contributing to the contamination of one or more public drinking water supplies.
- "Mitigation" means the investigation, sampling, management, or treatment of a solid waste site or drinking water contamination site required to ensure the availability of safe drinking water, including public water systems and individual onsite water supply systems necessary to meet

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<sup>3</sup> These were the most stringent levels until California just recently reduced their “notification” levels to 5.1 parts per trillion (ppt) for PFOA and 6.5 ppt for PFOS. <https://www.nrdc.org/experts/anna-reade/california-pfas-missing-forest-through-trees>. “Green” States like New York and California seem to be in competition to have the lowest emerging contaminant numbers without much thought as to the cost and other ramifications of remediating these “forever” chemicals while they remain prevalent in many daily household and industrial products.

standards, criteria, and guidance values established by the Department or drinking water standards, including maximum contaminant levels, notification levels, maximum residual disinfectant levels, or action levels established by the Department of Health that can be successfully carried out with available, implementable and cost-effective technology. "Mitigation" activities include but are not limited to the installation of drinking water treatment systems, the provision of alternative water supplies, or repair of a landfill cap. "Mitigation" does not mean remediation.

- "Solid waste site" means a site where (a) the Department has a reasonable basis to suspect that the illegal disposal of solid waste occurred or, (b) a court of competent jurisdiction has determined that an illegal disposal of solid waste occurred, or (c) the Department knows or has a reasonable basis to suspect that an inactive solid waste management facility, which does not have a current monitoring program, is impacting or contaminating one or more drinking water supplies. Solid waste site shall not include a site which is currently subject to investigation or remediation pursuant to title thirteen or fourteen of this article or any site which completed such programs and was either delisted by or received a certificate of completion from the Department.

ECL § 27-1203, entitled "Mitigation and remediation of solid waste sites", authorizes NYSDEC to conduct preliminary investigations to determine if a solid waste site is causing or substantially contributing to imminent or documented drinking water source contamination. Where the DEC has determined through a preliminary investigation conducted that a solid waste site is causing or substantially contributing to contamination of a public drinking water supply, the NYSDEC may mitigate and remediate a solid waste site or area which is necessary to ensure that drinking water meets applicable standards. To conduct mitigation and remediation of solid waste site, NYSDEC shall have the following authorization:

- The DEC shall have the authority to enter all solid waste sites for the purpose of preliminary investigation, mitigation and remediation;
- Where the Department has determined through a preliminary investigation that a solid waste site is causing or substantially contributing to contamination of a public drinking water supply:
  - The owner or operator of a solid waste site shall cooperate with any and all remedial measures deemed necessary;
  - Remedial measures shall be conducted in conjunction with the Department of Health;
  - The remedial goal is to ensure that drinking water meets applicable standards, including maximum contaminant levels, notification levels, maximum residual disinfectant levels, or action levels established by the Department of Health; and
  - If the DEC or the Department of Health determines that a solid waste site poses a significant threat to the public health or environment due to hazardous waste, the Department shall refer the site to the Superfund Program.

ECL §27-1205, entitled "Mitigation of Contaminants in Drinking Water", the NYSDEC and NYSDOH may undertake all reasonable and necessary additional mitigation measures to ensure that drinking water meets applicable standards, including maximum contaminant levels, notification levels, maximum residual disinfectant levels, or action levels established by NYSDOH. Wherever the NYSDOH Commissioner has required a public water system to take action to reduce exposure to an emerging contaminant or emerging contaminants and has determined that the concentration of the emerging contaminant constitutes an actual or potential threat to public health based on the best available scientific information pursuant to Public Health Law §1112, NYSDEC and NYSDOH shall have the following authorization:

**To undertake the development and implementation of all necessary and reasonable mitigation and remediation measures of drinking water contamination, as approved by the Department of Health, to address emerging contaminants in public water supplies.**

At first blush, the focus of these new provisions appears to be clearly on sites contaminated with emerging contaminants impacting drinking water supplies. However, NYSDEC has already started to require investigation and remediation at brownfield sites that are clearly not impacting drinking water supplies in urban areas.

The additional concern with this new ECL title is the lack of due process. Only a 2 or 10-day notice and opportunity for hearing is provided. NYSDEC may enter any drinking water contamination site and areas near such site to undertake all reasonable and necessary mitigation and remediation for such site, provided:

- Written notice was sent to the owners or occupants of such site or nearby areas of the intended entry and work at least 10 days prior to such initial entry unless such owners and occupants consent to an earlier date; but
- If DEC has “substantial evidence” that such drinking water contamination site is causing or substantially contributing to the contamination of drinking water, 2 days' written notice shall be sufficient.

The DEC Commissioner may order, after notice and opportunity for a hearing, the owner and/or operator and/or any person responsible for such contamination to:

- undertake all reasonable and necessary mitigation and remediation, as approved by DOH, to ensure that drinking water meets applicable standards, including maximum contaminant levels, notification levels, maximum residual disinfectant levels, or action levels established by DOH, and
- employ feasible measures that can be successfully carried out with available, implementable and cost-effective technology, subject to DEC and DOH approval of the Department, and
- to implement such program within reasonable time limits specified in the order.

While a very short opportunity for a hearing is provided, NYSDEC staff have upfront subpoena powers, which allows immediate access to all records and witness testimony:

- DEC can enter all properties served by the public water system, any individual onsite water supply systems impacted by the contamination, and any land and any surface or underground water sources impacted by the contamination.
- DEC shall have access to copy all books, papers, documents and records pertinent to an ongoing investigation of drinking water contamination.
- Staff can sign and issue subpoenas in the name of the Department requiring the production of books, papers, documents and other records and may take testimony by depositions under oath of any person relating to the ongoing investigation of a drinking water contamination identified in this title.

The polluter ultimately pays the bill once NYSDEC gathers substantial evidence that the drinking water contamination site is causing or substantially contributing to drinking water contamination. NYSDEC can charge the drinking water response account, and then recover the money from any responsible person in any action or proceeding brought pursuant to the state finance law, this title, other state or federal statute, or common law if the person so authorized in writing is an employee, agent, consultant, or contractor of a responsible person acting at the direction of the Department. In exchange for needed

water infrastructure project dollars throughout the State, municipalities may find themselves paying more than they receive when the initial CWIA grant money runs out, after being named responsible parties in PFAS or 1,4-dioxane Superfund cases.

### **Emerging Contaminant Due Diligence**

At the January 2019 EELS Section Annual Bar Association conference, three consultants debated how they are handling PFAS environmental due diligence in New York considering that sampling is being required by NYSDEC at all remedial sites for 21 PFAS compounds (even though only 2 have been deemed hazardous substances), while ASTM protocols still do not required emerging contaminants to be considered since 1,4-dioxane and PFAS substances are not yet deemed hazardous substances under the federal CERCLA statute. As a result, the current ASTM due diligence guidelines do not yet officially require emerging contaminants to be considered during a due diligence evaluation of a site.

However, attorneys are beginning to recommend analysis to evaluate this business risk (particularly at a site which had a fire or involved the use or manufacturing of PFAS substances) to preserve the *Bona Fide* Prospective Purchaser or Innocent Purchaser Defenses. Recall the *Bona Fide* Prospective Purchaser Defense in Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) §§101(40) & 107(r) allows purchasers after January 11, 2002 to avoid liability for contaminated property provided the prospective purchaser:

- Conducts an “all appropriate inquiries” within 6 months prior to acquisition (i.e. perform Phase I Due Diligence Investigation pursuant to ASTM Standard E1527-13, or the regulatory standard at 40 C.F.R. Part 312)
- The Phase I states disposal of hazardous substances occurred prior to acquisition and establishes no potentially responsible party (PRP) affiliation with the prospective purchaser; and
- The purchaser satisfies any ongoing obligations and cooperates with any government response actions.

Therefore, it is in the best interest of the purchaser of a site for their consultant to cover this business risk. Who pays for the remediation, if a Phase I and II are performed, data is generated, and then remediation is required if the party qualifies as a bona fide prospective purchaser? The answer to this question and many others remains unclear.

### **Emerging Contaminant Guidance Documents**

While there were apparently several one-page emerging contaminant guidance documents dating back to as early as June 2016, the first guidance document to be widely distributed since sampling was being required at all remedial sites was the one-page February 2019 Laboratory Guidance for Analysis of Per- and Polyfluoroalkyl Substances (PFAS). The Division of Environmental Remediation (DER) created the guidance for laboratories submitting PFAS data to DER, and if they could not comply, they were required to contact Dana Maikels at [dana.maikels@dec.ny.gov](mailto:dana.maikels@dec.ny.gov). The third paragraph of the document contained an admission that “a quantitative standard does not exist for branched isomers of PFOA...”. Labs subsequently confirmed that there is an ELAP Certified Methodology for sampling PFOA and PFOS in groundwater (even though it is only a *modified* EPA Test Method 537), but admitted certified methodologies are lacking for the numerous other PFAS substances in active daily use in average household consumer and industrial products. In addition, labs indicated that they had to purchase expensive new sampling equipment because potential PFAS containing materials, previously believed to be inert, were incorporated into their sampling equipment and had to be removed. Finally, they added

that consultants could easily cause sample contamination if they did not follow elaborate new sampling protocols, which included wearing clothes washed many times to avoid contamination from water and stain resistant PFAS containing coatings typically present on most textiles.

Next came the March 2019 “Sampling for 1,4-Dioxane and Per- and Polyfluoroalkyl Substances (PFAS) Under DEC’s Part 375 Remedial Programs” guidance, which required sampling for PFAS compounds in “all media” other than soil vapor including “soil, groundwater, surface water, and sediment”. In addition, this guidance stated that “the number of samples required for emerging contaminant analyses is to be the same number of samples where ‘full TAL/TCL sampling’ would typically be required in an investigation or remedial action compliance program” and “sampling of all media for ECs is required at all sites coming into or already in an investigative phase of any DER program”. Nowhere in either of these guidance documents is there any mention that the site has to be suspected of contaminating a drinking water source or supply.

This guidance document, which was slightly updated in June 2019 to include special testing for the import or reuse of soil, is disconcerting on many levels. First, it is a guidance document, which is not vetted through any public process. Second, this guidance completely contradicted an earlier April 2018 guidance, which stated that:

Until an SCO is established for PFAS, soil samples do not need to be analyzed for PFAS unless groundwater contamination is detected. Separate guidance will be developed to address sites where emerging contaminants are found in the groundwater.

Next, neither the March 2019 or June 2019 guidance documents provide any real explanation why soil now has to be sampled before SCOs are established and before certified methodologies even exist for sampling PFAS in soil.

DER-10 interprets Public Health Law Section 502 and states that “data upon which decisions impacting human health are based must be confirmed by an ELAP-accredited laboratory, accordingly confirmation and documentation samples will require analysis by an ELAP-accredited laboratory.” DER-10 Appendix 2A at 212. Accordingly, DER-10 requires that “final delineation samples,” which determine whether remedial cleanup requirements have been achieved, are performed by an ELAP-accredited laboratory. DER-10 §§ 1.3(b)(3), 2.4(d)(7). Similarly, for initial investigations, the “analysis must be conducted by an [ELAP-accredited laboratory] for the category of parameters analyzed. DER-10 §2.1(a)(5).

DER-10 further interprets Section 502.2 of the Public Health Law to provide that for laboratories to be ELAP-accredited they must meet the ELAP requirements *for that specific analytical method*. [emphasis added]. DER-10 Appendix 2A. Yet the March and June 2019 Guidance documents each admit that “ELAP does not offer certification for PFAS compounds in matrices other than finished drinking water,” but requires that labs analyzing soil and sediment samples hold ELAP drinking water certification for PFOA and PFOS. However, there is no current ELAP certification for PFAS compounds in soil. Therefore, these guidance documents are arguably contrary to the Public Health Law, and DER-10, by requiring PFAS analytical results for soil because there is no ELAP certified method for the soil. It is also arguably unethical for environmental engineers to be relying on this type of data under their own codes of ethics.<sup>4</sup>

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<sup>4</sup> The National Society of Professional Engineers Code of Ethics indicates that Engineers must “[h]old paramount the safety, health, and welfare of the public” and once authorized by their client, disclose data subject to applicable law or as required by the Code pursuant to applicable standards. <https://www.nspe.org/sites/default/files/resources/pdfs/Ethics/CodeofEthics/Code-2007-July.pdf>

Finally, based on the US EPA's February 2019 PFAS Action Plan, the agency was supposed to be developing a certified methodology and "Interim Recommendations for addressing Groundwater Contaminated with PFOA and PFOS to support site-specific cleanup efforts". It is now basically the fall of 2019 and that agency has not developed either the final methodology for sampling or cleanup recommendations. The concern is that US EPA may end up developing a different methodology than what has been used to date, calling all of the existing data into question.

The concern for environmental practitioners as a result of the lack of an ELAP certification for PFAS in soil, and in groundwater for PFAS compounds other than PFOA and PFOS, is that disparate sample results can occur and the data may not be reliable to determine liability.

Next, there is no consideration as to cost or the long-term implication of the data gathering exercise that has just occurred. PFAS samples are very expensive to analyze and if soil contamination is found, landfills do not want to accept PFAS waste because landfills already have significant PFAS contamination. Moreover, since there are no cleanup standards, any amount of PFAS in soil and groundwater will be increasingly problematic for disposal. Labs, Consultants and Remedial Parties are being put in a very difficult position being forced to develop non-verifiable data, upon which remedial and public health decisions will rely, and then may be faced with having to pay for the incineration of PFAS containing soil as hazardous waste even though PFAS is still contained in many every day products:

- Textiles and leather products (Gore-Tex, Polartec, Scotch Guard)
- Fire Fighting Foam
- Metal plating
- Stain-resistant carpet
- Photographic industry
- Photolithography
- Semi-conductors
- Paper packaging (fast food wrappers)
- Non-stick coating additives
- Cleaning products
- Pesticides

### **Where are we going next?**

After the sampling demands imposed by the DEC on remedial sites for the last year and a half, many environmental practitioners are now faced with sites that have some PFOS, PFOA and 1,4-dioxane levels above the new proposed MCLs, and sites that contain one or more of the other 19 PFAS compounds. Practitioners need to know what levels will trigger remediation decisions and what type of remediation technology will be required. To date, there has been no clear response from either NYSDEC or NYSDOH. At the May 2019 Certificate of Completion meeting, after NYSDEC admitted that after its almost two-year long data collection effort, many sites do have low-level, ubiquitous, area-wide PFAS and 1,4-dioxane contamination, the agency punted on questions asked about remedial standards and technologies that will be required. In preparation for this article, high level staff at the NYSDEC were asked the following questions, and their written responses are shown in bold below. However, these responses provided little additional guidance on what levels will trigger remediation and what technologies will be required to perform remedial work:

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The Code of Ethics of the American Society of Civil Engineers (which generally is generally applicable to environmental engineers) and is available at <http://www.asce.org/code-of-ethics/> states: Engineers shall hold paramount the safety, health and welfare of the public and shall strive to comply with the principles of sustainable development in the performance of their professional duties.

On September 22, 2019, the NYSBA Annual Fall Conference will be having a session on PFAS sampling and remediation. It would be good for the environmental law section to hear the latest update from the agency on where we are headed with PFAS and 1,4-dioxane remediation. Have you made any decision yet on when remediation will or will not be required? **PFOA, PFOS, and 1,4-dioxane are ECL § 27-1301(1) hazardous wastes and 6 NYCRR § 375-1.2(g) contaminants. Therefore, they must be addressed in accordance with the requirements for addressing hazardous wastes and contaminants at contaminated sites. This includes compliance with the Environmental Conservation Law, 6 NYCRR Part 375, and DER-10.**

Also for sites getting out of the program this year, are you only going to require monitoring if PFAS or 1,4-dioxane levels are above a certain number? **A site's remedial investigation should be sufficient to determine whether the site is a source of PFOA, PFOS and/or 1,4-dioxane. A site that is a source area must be remediated before getting a Certificate of Completion.**

The following additional questions below were sent after these responses were received, and as of September 18, 2019, the response below in bold was received:

But remediated to what standards?? Also how does anyone remediate PFAS at 100-200 ppt? You are not going to make people put Carbon Treatment systems in for these levels are you? I am trying to get a sense of a number that would trigger remediation, if there is one, because at a PFAS conference back in April, the DOH person indicated that it is going to be a long time before actual numeric cleanup standards can be developed using the technical guidance. I am not sure if that is because PFAS is both a carcinogen and a non-carcinogen.

**If the site is a source of contamination above the HAL or MCL, it needs to be addressed. There are a range of options depending on the proximity to drinking water supplies, site-specific conditions, etc., which should be evaluated in the Feasibility Study or Alternatives Analysis. These include excavation, capping, pump & treat, in-situ carbon and others. Shortly after promulgation of the MCL for PFOA/PFOS, DEC expects to release soil cleanup objectives for the protection of groundwater for these compounds.**

When following up with the high level DOH person with week, who spoke at an April 2019 PFAS conference, his response to the question as to when standards would be developed for just PFOA, PFOS and 1,4-dioxane was "you should talk to the DEC".

Since sampling to date on many urban brownfield sites not impacting drinking water has revealed groundwater exceedances of these substances in the 20 to 200 ppt range, we all really do need to be concerned about where of this is all going, particularly since we each apparently have on average 400 ppt of PFAS in our own bodies. Are we all walking Superfund sites if DEC starts to require remediation at sites that have contamination in this range? Moreover, are we the responsible parties since we have PFAS coatings on our clothes that flake off into our washing machines, which is then discharged into our septic fields? These may sound like crazy questions, but the reality is that we may all be walking PFAS polluters. While traditionally, drinking water quality standards have been used for groundwater remediation standards, regardless of whether the groundwater is used for drinking water or not, the new PFOS and PFOA MCLs are so low, if contaminant levels over the new parts per trillion MCLs will be remediation standards, then it may be that most properties in New York, including residential properties, may need remediation.

NYSDEC's responses above state that if a "site is a source of PFOA, PFOS and/or 1,4-dioxane" ... that site "must be remediated", however, this advice rings hollow when a "source" has not yet been defined. If an urban site has hits of 200 ppt of PFOA or PFOS, and there is also that same level in the street near a sewer next door, is the site the source, the sewer the source, or is this just background contamination? With respect to remediation, Granulated Activated Carbon (GAC) systems can work to remediate PFOS and PFOA when present at high levels, but the systems require frequent filter changeouts to avoid break through, are expensive to install, and it is not yet clear what levels of "clean" can be achieved by these systems, not to mention the costly disposal of the filters many disposal facilities do not want to accept or are still accepting at a premium. However, GAC systems do not work well on the short chain PFAS substances and new resin based remedial technologies are only just "emerging".

NYSDEC and NYSDOH have a difficult decision to make as many sites are trying to exit the Brownfield Cleanup Program in the Generation 2 program by December 2019. Will the agencies do the right thing and let sites finish the program with a monitoring requirement if low levels of emerging contaminants have been identified, which NYSDEC has acknowledged are being found on many brownfield sites, or will they deny issuance of a Certificate of Completion? Many of us will soon find out the answer to that question as the end of the year will be soon upon us.

## **Conclusion**

The article concludes with a reminder to the agencies of the advice in Judge Churlundo's Supreme Court decision in *Destiny v. NYSDEC*, 63 A.D.3d 1568, 879 N.Y.S.2d 865 (4th Dep't 2009), *lv. den'd* 2009 WL 3161769, 2009 N.Y. Slip Op. 07124 (4th Dep't 2009), that guidance should not be used to change or make law. "Clearly, in deciding to adopt the 'guidance factors', the DEC has opted to make itself a fiscal watchdog without legislative authority. Moreover, by adopting the so called 'guidance factors' the DEC has chosen to rewrite the statute that was clearly written by the legislature, the effect of which is to not only dull, but to emasculate the clear intent of the statute, by administrative agency fiat. Such activities cannot - and should not - be condoned."

The Clean Water Infrastructure Act was designed to address drinking water. NYSDEC has already strayed too far from the purpose of this new law by requiring sampling at every remedial site whether there is a potential impact on drinking water or not, only to have data they now do not know what to do with, but which should inform the development of cleanup standards. PFAS remediation should be required on those sites that are directly impacting drinking water resources, while products and our own clothes start to wean away from PFAS containing substances now apparently considered hazardous. Sampling methodologies also need to be clearly validated and verifiable. EPA needs to start to advocate for manufacturers to stop using these substances where they are unnecessary. Until then, requiring developers of contaminated sites to remediate low level emerging contaminant contamination is not only unfair, it will be futile since the sources of contamination are ongoing.

In the interim, it may make sense if data is problematic at a given site, to take multiple rounds of samples and use multiple labs to determine if the first round was accurate. This is a new emerging field of risk with non-industrial products being used in everyday household products causing this new form of contamination that cannot be easily remediated or disposed of. Who could have ever imagined that we could become the source of this new emerging form of ubiquitous contamination simply by washing our clothes and our pots and pans down our drains into our leach fields and sewers? If emerging contaminants have caused area-wide ubiquitous contamination, there needs to be some sound policy making on how to focus on the most impacted sites or this issue can turn our own backyards into contaminated

brownfield real estate. Frankly, focusing resources on how to remediate our own PFAS contaminated bodies should also be more of a priority than remediating low level emerging contaminant subsurface contamination one site at a time.

This issue, like other historic environmental issues, requires a thoughtful policy making process with many stakeholders at the table such as the process that led to the original Brownfield Cleanup Program law. The EELS section of the Bar stands ready to assist the state agencies if they want our assistance.