



## CRWI Update January 31, 2019

### MEMBER COMPANIES

Clean Harbors Environmental Services  
DowDuPont  
Eastman Chemical Company  
Heritage Thermal Services  
INVISTA S.à.r.l.  
3M  
Ross Incineration Services, Inc.  
Veolia ES Technical Services, LLC

### GENERATOR MEMBERS

Eli Lilly and Company  
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### ASSOCIATE MEMBERS

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Alliance Source Testing LLC  
B3 Systems  
Civil & Environmental Consultants, Inc.  
Coterie Environmental, LLC  
Focus Environmental, Inc.  
Franklin Engineering Group, Inc.  
METCO Environmental, Inc.  
Montrose Environmental Group, Inc.  
O'Brien & Gere  
Spectrum Environmental Solutions LLC  
Strata-G, LLC  
SYA/Trinity Consultants  
TestAmerica Laboratories, Inc.  
TRC Environmental Corporation  
Wood, PLC

### INDIVIDUAL MEMBERS

Ronald E. Bastian, PE  
Ronald O. Kagel, PhD

### ACADEMIC MEMBERS

(Includes faculty from:)

Clarkson University  
Colorado School of Mines  
Lamar University  
Louisiana State University  
Mississippi State University  
New Jersey Institute of Technology  
University of California – Berkeley  
University of Dayton  
University of Kentucky  
University of Maryland  
University of Utah

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### PFAS

The interest in actual and potential contamination of groundwater by per- and polyfluoroalkyl substances (PFAS) has increased significantly in the past few years. There are thousands of compounds that fit into the PFAS category. While the toxicity for certain PFASs have been established (although EPA, some states, and the Agency for Toxic Substances and Disease Registry (ASTDR) have not agreed upon a “safe” level of exposure), the toxicity for many is unknown. In some ways, this is similar to the issues associated with the relative toxicity for dioxins/furans and/or PCBs (polychlorinated biphenyls). In an effort to address these issues, attention seems to be focusing on five compounds: perfluorooctanoic acid (PFOA); perfluorooctane sulfonate (PFOS); perfluorononanoic acid (PFNA); perfluorohexane sulfonic acid (PFHxS); and Gen-X, although this varies by location.

Addressing this issue has not been uniform across the states. In a December 5, 2018, petition, the Natural Resources Defense Council asked the Michigan Department of Environmental Quality to set drinking water levels for the five compounds mentioned above. North Carolina is currently working on a consent order with Chemours concerning ground water contamination around their Fayetteville facility. New Hampshire has been dealing with PFAS contamination in the Haven water supply well since 2014. The presumed source of the contamination in this case was the firefighting foam used at the nearby Air Force base (now closed). Other states are considering setting drinking water levels for a subset of these five compounds.

There are three statutes where EPA may be able to address these issues. The first is the Safe Drinking Water Act (SDWA). Here EPA is authorized to set maximum contaminant levels (MCL) for drinking water. However, this process is time consuming and some observers wonder if the Agency can meet the legal thresholds in the Act to set MCLs based on the limited scope of contamination. The Office of Management and Budget (OMB) is currently reviewing draft interim recommendations to

assess groundwater contamination with PFOA and PFOS. This document was submitted on August 31, 2018. It is interesting to note that this document was submitted by the Office of Land and Emergency Management and not the Office of Water (which oversees SDWA regulations). While OMB review typically takes 90 days, there is apparently some disagreement between the Agency, the Department of Defense, and ASTDR over these recommendations. Current ASTDR recommendations are more stringent than the 2016 EPA recommendations of 70 ppt for PFOA and PFOS. In contrast, Canada's drinking water guidance for PFOA and PFOS are 200 and 600 ppt, respectively. The Department of Defense has several contaminated sites where firefighting foams were used. The Safe Drinking Water Act also has emergency authorization to treat "hot spots." This authority has been used in the North Carolina and New Hampshire actions.

The second is to declare these substances as hazardous under CERCLA. While this would provide a mechanism for cleaning up contaminated sites, it would not create an enforceable national standard. As a part of the discussions over Peter Wright's nomination to be the next Assistant Administrator for the Office of Land and Emergency Management, EPA Acting Administrator Wheeler assured Senators the Agency would look into adding PFOA and PFOS to the list of hazardous substances. In addition, three Michigan Congressmen have submitted legislation that would designate all PFASs as hazardous substances under CERCLA.

The third is under TSCA. The majority of data on these compounds has been submitted under TSCA requirements. Michigan has expressed concerns that this data has not undergone the peer review process typically associated with studies in the published literature. But the peer review process can take several years creating another hurdle for a rapid response.

At this time, the Agency is not giving clear direction on how to proceed in preventing contamination or cleaning up existing contamination from these compounds. TSCA does not offer a clear path to cleaning up groundwater contamination but may be able to minimize additional contamination. Adding some or all PFAS to the Superfund list of hazardous substances could be used to establish methods for cleanup but using this statute brings all of the problems associated with Superfund. Developing MCLs under the SDWA would take several years and may not meet the legal threshold required in the statute. The emergency provisions under the SDWA have already been used in North Carolina and New Hampshire. This may end up being the preferred method in the short term. States may not wait on EPA to develop guidelines or requirements. If they act preemptively, it could result in a patchwork quilt of regulations.

### **Government re-opens**

The temporary funding for approximately one third of the federal government ran out on December 21, 2018. At that time approximately 800,000 federal employees were furloughed. This included most of EPA. The impasse was created by Mr. Trump insisting that any funding include approximately \$5 billion for enhanced border security.

The partial shutdown continued until January 25, 2019, when President Trump signed a measure that funded that part of the government until February 15, 2019. This was the longest government shutdown the country has experienced. However, this reprieve may only be temporary. The fundamental questions of how to fund enhanced border security have not been resolved. The Democrats remain strongly opposed to any additional physical barriers while Mr. Trump is strongly supportive of additional physical barriers. The press releases and tweets from both sides seem to be lessening but it is unclear how much progress is being made on developing a compromise to fund these agencies for the rest of the fiscal year. The rhetoric may pick back up as the February 15 date gets closer. It is possible that another shutdown will occur in mid-February if the two sides cannot reach an agreement. But for now, the government is back at work.

### **EPA personnel**

On January 2, 2019, the Senate confirmed Alexandria Dunn to be the Assistant Administrator for the Office of Chemical Safety and Pollution Prevention and William McIntosh to be the Assistant Administrator for the Office of International and Tribal Affairs. However, they did not act on the nomination of Peter Wright to be the next Assistant Administrator for the Office of Land and Emergency Management before adjourning. It was thought that Mr. Wright's nomination was cleared for a voice vote after EPA Acting Administrator Wheeler offered assurances that the Agency would add two per- and polyfluoroalkyl substances to the Superfund hazardous substances list. This deal fell apart when one Senator insisted on a recorded vote. When the 116<sup>th</sup> session was opened on January 3, 2019, Mr. Wright's nomination was returned to the President. On January 16, 2019, President Trump resent Mr. Wright's nomination to the Senate. This restarts the process.

On January 9, 2019, President Trump nominated Andrew Wheeler to be the next EPA Administrator. His confirmation hearing was held on January 16, 2019. He faced a number of questions from Democrats on EPA actions on climate change, the proposed Mercury and Air Toxic Substances rule, the Affordable Clean Energy rule, and the current deregulatory efforts by the agency. Mr. Wheeler is expected to be confirmed but the committee has not scheduled a date for that vote.

### **Enforcement**

There have been a number of articles in the press criticizing the Agency for its reduced enforcement during the first two years of the Trump Administration. The majority has come from environmental groups and the opposition political party. On January 28, 2018, EPA released an annual report ([https://www.epa.gov/sites/production/files/2019-01/documents/epa\\_2018\\_yearinreview\\_0128-4.pdf](https://www.epa.gov/sites/production/files/2019-01/documents/epa_2018_yearinreview_0128-4.pdf)) that outlines their enforcement (as well as other) activities for FY 2018. As one would expect, each side picked out statistics that support their position. EPA pointed to the increases in self-audits (from 1,062 to 1,561), increasing the number of new criminal cases, and increasing the amount of pollutants treated or prevented from being released (808 million pounds in FY 2018 compared to 462 million pounds in FY 2017). The Agency's critics point out that

the level of civil penalties dropped from those in FY 2017 and the number of enforcement actions concluded fell from 1,978 in FY 2017 to 1,818 in FY 2019. Both sets of facts are correct which really points out the difficulty of comparing enforcement over a short period of time. Most enforcement actions take several years from initiation until completion. This combined with episodic large settlements (e.g., the most recent settlement with Chrysler Fiat for \$305 million) makes it difficult to make meaningful year to year comparisons. However, that seldom stops anyone from doing it.

### **OSHA penalty adjustments**

In 2015, Congress passed a law requiring all agencies to annually adjust their penalties based on inflation. On January 23, 2019, the Occupational Safety and Health Administration published their latest adjustment. The adjusted penalties range from \$13,260 (up from \$12,934) for serious violations to \$132,598 (up from \$129,336) for willful violations. Additional information can be found in the *Federal Register* notice.

### **Recycling**

The recycling arena has shifted in the past couple of years. First, China adapted a new program that restricts the amount of food waste and other contaminants allowed in paper, plastics, and other recyclables. As a result, the amounts of recycling materials sent to China have fallen drastically. The Institute of Scrap Recycling estimates that the percentage of recycled plastic shipped to China dropped from 36% in 2017 to 5% in 2018. Second, the environmental groups' efforts to clean up plastics in the ocean seem to have reached a critical mass in that 30 global companies have formed an organization (Alliance to End Plastic Waste) to stop plastic waste from entering the environment. These companies include ExxonMobil, Shell, BASF, Dow, OxyChem, and Proctor & Gamble. The organization has committed \$1 billion, with the goal of \$1.5 billion over the next five years, to this effort. The organization plans to make investments in four areas:

- Infrastructure development to manage waste and recycling;
- Advancing new technologies to ease recycling and recovery of plastics and to create value for post-use products;
- Educating and engaging governments; and
- Cleaning up existing plastic wastes in the environment.

A report released with the announcement of the organization states that more than 90% of the river-borne plastic that ends up in the ocean come from 10 major rivers, eight of which are in Asia and the other two in Africa. It also states that 60% of the plastic waste in the ocean can be sourced from five Asian countries.

But cleaning up these oceanic garbage patches is a little more difficult than envisioned. There are five large ocean whirlpools where plastic tends to accumulate. The one that gets the most attention is the North Pacific Gyre (located between North America and Asia). Researchers from The Ocean Cleanup Project estimate there are over 80,000

metric tons of plastic in the North Pacific Gyre. This sounds like a lot until you add in the fact that this patch covers 1.6 million square kilometers. The concentration of plastic at the center is estimated to be 100 kilograms per square kilometer but going down to 10 kilograms per square kilometer at the edge. An enterprising young Dutchman has developed and received funding for a system he says will clean up these patches. His idea is to develop a 2000 foot long floating plastic pipe that has a 10 foot nylon mesh suspended below it. The concept is very similar to boom systems used to contain oil spills on the ocean. The idea is to tow this device into the area and to let the wind, waves, and water currents corral the plastic in an area where it can be recovered. He states that they hope to deploy 60 of these devices in the next two to three years. During its first test, a 60 foot section of the boom broke away while the device was being deployed. It was recovered and the entire device was returned to port for further development. It is not unusual for new ideas to experience growing pains. The point is that this gentleman has an idea and was able to secure funding to advance it to a test phase. Cleaning up the plastic in these gyres is going to be difficult because it is a long way from anywhere, the waste is not really concentrated in a single area, and the position of the waste is constantly changing. Removing the source (controlling the amounts coming from the rivers) may be a better long term strategy.

### **CRWI meeting**

The next CRWI meeting will be on February 27-28, 2018, in Anahuac, TX. It will feature a tour of Paragon Southwest medical waste combustion units. For additional information, contact CRWI (mel@crwi.org or 703-431-7343).