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VIA ELECTRONIC MAIL
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Re: Comments of the PFAS Regulatory Coalition on Wisconsin DNR's Draft Emergency Rule WA-06-20(E): Management of Firefighting Foam That Contains PFAS

Dear Ms. Strom Hiorns:

The PFAS Regulatory Coalition (Coalition) appreciates the opportunity to file comments regarding the Wisconsin Department of Natural Resources' (DNR) Draft Emergency Rule WA-06-20(E): Management of Firefighting Foam That Contains PFAS.

I. The Coalition's Interest

The Coalition is a group of industrial companies, municipal entities, agricultural parties, and trade associations that are directly affected by the State's development of policies and regulations related to per- and polyfluoroalkyl substances (PFAS). Coalition membership includes entities in the automobile, coke and coal chemicals, iron and steel, municipal, paper, petroleum, and other sectors. None of the Coalition members manufacture PFAS compounds. Coalition members, for purposes of these comments, include: Airports Council International – North America; American Coke and Coal Chemicals Institute; American Forest and Paper Association; American Fuel & Petrochemical Manufacturers; American Iron and Steel Institute; American Petroleum Institute; Barr Engineering; Brown & Caldwell; Gary Sanitary District (IN); Illinois Association of Wastewater Agencies; Lowell, MA; Pueblo, CO; Tempe, AZ; Toyota; Trihydro; and Yucaipa Valley Water District (CA).

Coalition members support the DNR's efforts to identify potential sources of individual PFAS and regulate those that pose risks to human health and the environment. In DNR's pursuit of such regulations, the Coalition urges State regulators to ensure that

the final standards are scientifically-supported, cost-effective, achievable, and enable the regulated community to effectively respond to emergencies.

II. Draft Rulemaking

2019 Wisconsin Act 101—which prohibits the use of firefighting foam that contains PFAS unless the use is part of an emergency firefighting operation, fire prevention operation, or testing purpose—requires DNR to promulgate rules to administer the Act by September 1, 2020. Accordingly, on June 24, 2020, DNR issued draft Emergency Rule WA-06-20(E) for public comment (Draft Rule). The Draft Rule would prohibit the use and discharge of Class B firefighting foam that contains intentionally added PFAS except in compliance with the containment, treatment, and disposal or storage measures described in the rule. It also includes proposed notification and recordkeeping requirements and rules regarding lab analyses.

III. PFAS Regulatory Coalition Comments

The Coalition recognizes DNR's responsibility to protect Wisconsin residents from health impacts of PFAS, while also recognizing the reality of historic widespread use of aqueous film forming foam (AFFF) containing PFAS. As the rulemaking acknowledges, commercial airports must use AFFF with PFAS in accordance with the Federal Aviation Administration (FAA) requirements and other industry and national association standards. Other sources historically have used AFFF with PFAS because it provides the most reliable prevention and protection to the public from petroleum and other liquid-based fires. Coalition members have a responsibility to protect their communities, employees, and assets from catastrophic fires. Coalition members continue to search for alternatives, but, today, AFFF containing PFAS is the only effective alternative for safely and efficiently responding to large petroleum-based fires.

A. Federal Action on PFAS

As the Draft Rule's statement of scope acknowledges, the FAA Reauthorization Act of 2018, enacted on October 5, 2018, states that no later than three years after the date of enactment, the FAA shall no longer require the use of fluorinated chemicals (found in PFAS) to meet the performance standards accepted under federal regulations. The FAA has built a testing facility in Atlantic City, New Jersey and is currently testing alternative AFFF formulations. FAA has not stated whether or not it will meet the October 5, 2021, deadline imposed by Congress. As such, commercial airports and other operations subject to FAA or federal mandates may not be able to make the switch to non-PFAS AFFF by that date. Therefore, DNR's regulations should allow for extended use of AFFF with PFAS beyond that date and until approved foams are available that provide comparable public safety protections.

Additionally, the Draft Rule acknowledges that the federal National Defense Authorization Act of 2020 (NDAA 2020) included several PFAS-related provisions. The

Act specifies in section 323 that PFAS-containing firefighting foam may only be released for purposes of an emergency response. A non-emergency release of PFAS foam may be made for the purposes of testing of equipment or training of personnel, if complete containment, capture, and proper disposal mechanisms are in place to ensure none of the foam is released into the environment. NDAA 2020 also requires the military to develop a fluorine-free foam specification by January 31, 2023, and sets a deadline for banning its use of PFAS-containing foam on military bases. Further, it establishes guidelines for the proper disposal of firefighting foam at military sites and directs the military to develop guidance to address these issues.

Insofar as disposal, all incineration of firefighting foam containing PFAS chemicals must be conducted at a temperature range adequate to break down PFAS chemicals, while also ensuring the maximum degree of reduction in emission of PFAS chemicals, and must be conducted in accordance with the Clean Air Act at a facility permitted to receive the waste. NDAA 2020 also requires the United States Environmental Protection Agency (EPA) to publish interim guidance on the destruction and disposal of PFAS substances and materials, which is scheduled to be completed before the end of 2020.

The Draft Rule's statement of scope also explains that the State's definitions of "environmental pollution" and "discharge" of a "hazardous substance" are not the same as the definition of a hazardous substance in the federal Superfund law and the laws of some other states. It states that "[w]hen discharged to the environment in Wisconsin, certain PFAS meet the definitions of a hazardous substance and/or environmental pollution under state statutes (s. 292.01, Stats.)."

The Coalition is unaware of any formal State action designating any PFAS compounds as either listed or characteristic "hazardous waste" under Wisconsin law. The Draft Rule, however, requires disposal of AFFF at a "licensed solid or hazardous waste disposal facility," suggesting that the State has designated certain PFAS compounds as hazardous waste. If the State has not formally designated PFAS, or any individual PFAS compounds, as hazardous waste, the Coalition requests that the State remove from the Draft Rule all references to disposal at a hazardous waste disposal facility. If the State has designated certain PFAS compounds as hazardous waste, the Coalition requests that the Final Rule clarify which specific PFAS compounds are considered to be "hazardous wastes" under Wisconsin law and which methods and data were used to support any such designations. While the Coalition understands that DNR has taken the position in this emergency rule that, "[w]hen discharged to the environment in Wisconsin, certain PFAS meet the definitions of a hazardous substance and/or environmental pollution under state statutes," the DNR does not specify which PFAS compounds constitute "hazardous substances." Further, even if compounds may be hazardous substances under state law, they are not necessarily hazardous wastes and should not be treated as such.

Overall, the Coalition appreciates DNR's recognition that administrative and legislative action is being taken at the federal level to address PFAS threats to the general public, and urges the DNR to ensure that its rulemakings conform with and support those

national developments. A patchwork of 50 different state solutions is unworkable and contrary to how the United States has previously addressed similar emerging-contaminant issues. The variations in testing, disposal, and lab analysis currently being developed or under consideration across the country create unnecessary confusion and complexity for the public and the regulated community.

B. Specificity in the Type and Quantity of Regulated PFAS

Generally, future PFAS regulations must clearly specify the individual PFAS compounds that the State seeks to regulate. Given the wide variations in possible human toxicities, environmental threats, and other characteristics exhibited by different PFAS chemicals, it is scientifically unsound to group all PFAS together for purposes of risk assessment or to assume that exposures to mixtures of PFAS necessarily bioaccumulate in one's body in interchangeable 1:1 ratios. From a toxicological perspective, regulatory agencies must have adequate science for determining health-based values before promulgating individual-compound standards, limits, and related regulations. The most prevalent and available science regarding the incidence and potential health effects of PFAS is based on perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS).

Accordingly, the Coalition seeks clarification regarding whether the Draft Rule would apply to individual PFAS compounds or to all of the thousands of PFAS compounds. The Coalition recommends that the Draft Rule incorporate reference to the specific PFAS compounds for which DNR has adequate science to justify regulation of such individual compounds. Regulation of individual PFAS substances should reflect peer-reviewed science regarding the physical, chemical, and toxicological properties of each compound. In fact, the Draft Rule should apply only to those specific PFAS compounds used in AFFF and specifically included in the manufacturers' Safety Data Sheets (SDS). Whether an AFFF formulation has had PFAS "intentionally added" can be determined by looking at the manufacturers' SDS, and no further investigation is warranted.

C. Limits of Available Validated Test Methods for PFAS

The State should regulate only those PFAS compounds for which there are EPA-validated analytical test methods; currently, there are no such methods for measuring PFAS concentrations in AFFF that is sprayed in testing or emergency situations. The Draft Rule would require that any foam produced during testing be disposed of appropriately or be treated to reduce PFAS concentrations, using EPA's CWA 1600 series methods, to non-detect levels at the testing laboratory's method detection limits before flushing, draining, or otherwise discharging the foam into a storm or sanitary sewer. EPA, however, has not finalized the Clean Water Act (CWA) 1600-series analytical method, and the method is not expexted to be finalized until 2021. Accordingly, even if this Draft Rule becomes effective, regulated entities will be unable to comply with the rule until the CWA 1600-series analytical method becomes effective sometime in 2021.

Consequently, the proposed "non-detect" standard is unachievable with current laboratory capabilities because no certified laboratories exist to perform the required testing. Moreoever, DNR has not advanced any justification for reaching non-detect levels, and available science regarding toxicity does not warrant the imposition of non-detect levels. In the alternative, the Draft Rule should allow regulated entities to submit other new and existing analytical methods as alternatives, in order to promote flexibility and practicability to accommodate the constantly and rapidly evolving field of PFAS analytical methodology.

D. Limits on PFAS Testing Capabilities and Reliability of Laboratories

The Draft Rule also requires that treatment meet the "non-detect levels at the testing laboratory's method detection limit." Also, it requires laboratories to "attempt to achieve lowest practical method detection limits." The Draft Rule's reference to the concepts of method detection limits (MDL) and practical method detection limit, or practical quantitation limit (PQL), suggests that those limits are interchangeable, but they are not. The MDL is a statistically-derived number that represents the lowest detectable value that a compound can be identified, but not quantified, and is typically not verified for its accuracy in the laboratory. The PQL is the lowest detectable value that a compound accurately can be identified and quantified, and it is typically verified for accuracy. Therefore, the PQL as it is defined should be the value to which laboratories report for PFAS. In addition, with complex or interfering matrices, such as concentrate or spent firefighting foams, even PQL's are often unobtainable in practice. Accordingly, the Draft Rule should recognize the differences between the MDL and the PQL and specify the use of the PQL as the most accurate detection limit.

Additionally, DNR should consider the capabilities and reliability of laboratories that test for PFAS. DNR's rulemaking should account for the limited number of reliable and experienced testing laboratories in the region. The Coalition recommends, for example, that in regions where testing capacity is limited, the Final Rule provide for a delayed effective date or phased implementation that allows for laboratories to develop the expertise necessary to reliably accommodate the increased testing that the Draft Rule will require.

Additionally, there is limited capacity to perform all of the analytical laboratory work and limited reliability on any given sample result due to potential lab error, cross contamination, or other factors that could impact results at the very low levels being considered. These levels are continuously pushing the technical capability of the analytical methods, and the closer the equipment gets to its technical limit, the increased chance of errors. There is little doubt that the closer the State sets a limit or standard to the detection limit, the less reliable the analytical sampling and related lab results become.

For example, several Coalition members who have sent split samples to multiple labs report received highly variable results. Such anecdotal evidence demonstrates the potential difficulty and unreliability of performing testing at limits that approach the

detection limit. Considering that the State can potentially impose fines, costly corrective action, or other penalties for failing to meet regulatory limits, the regulated community must have the ability to accurately measure PFAS to demonstrate compliance.

E. Limits of Treatment and Disposal

Treatment technologies for PFAS are still being developed and reviewed for efficacy, and there is limited capacity for the disposal of byproducts from newly-developed technologies. For example, the Draft Rule requires the use of granular activated carbon (GAC), but the technology is still being developed as a potential response measure, and its efficacy is unclear. Scientific evidence shows that GAC may not be effective in treating short-chain PFAS and may have a limited break-through lifespan. Additionally, the Draft Rule's GAC treatment requires a minimum empty bed contact time of 10 minutes, with the GAC media replaced at a minimum frequency of once per treatment of each 10,000 bed volumes. The Coalition seeks clarification regarding the basis for the minimum contact time and replacement frequency, and urges DNR to consider the availability of safe disposal options for the byproducts of GAC treatment, like spent carbon, used to treat PFAS in AFFF.

Further, the Coalition requests that DNR provide justification for its best available technology (BAT) determination. Pursuant to CWA Section 304(b), BAT should be technically feasible and economically achievable. The Draft Rule's mandates for BAT, such as the minimum contact time and replacement frequency discussed above, are overly-prescriptive and onerous. The CWA and related state statutes authorize administering agencies to mandate the use of a particular technology, but mandating certain design configurations and operating requirements exceeds the State's authority to impose technology-based controls.

Moreover, there are additional, developing technologies that may prove effective in treating PFAS in AFFF. For example, ion exchange treatment has been evaluated for use in treating PFAS in AFFF. Further, regulated entities may be able combine certain treatment methods to achieve greater reductions. Accordingly, the Final Rule should provide for greater flexibility in treatment methods and expressly authorize combinations of treatments. In a related example, the Draft Rule provides no technical justification for its side-stream management requirement. The State has authority to require appropriate treatment or disposal of side streams at the point of discharge, but it does not have authority to prescribe how a regulated entity manages a side stream within a treatment system.

The Draft Rule also requires regulated entities to "utilize technologies to contain to the extent possible air emissions" from AFFF during testing and to "eliminate" air emissions where achievable during incineration or thermal destruction. Considering how poorly understood passive PFAS air emissions are, the Draft Rule's mandates regarding air emissions are too vague for regulated entities to demonstrate compliance. For example, DNR should define what constitutes containment of air emissions "to the extent possible."

Additionally, the Draft Rule should define what constitutes "elimination" of air emissions from incineration of PFAS.

Furthermore, the Draft Rule does not provide any valid method for testing PFAS air emissions, as no such validated test method exists, and it does not specify any particular technology for the control of PFAS air emissions. The Draft Rule's vague language with respect to air emissions makes it impossible for the regulated community to comply with its air emission requirements. Accordingly, the Coalition urges DNR to clarify or remove all requirements related to air emissions.

Finally, the Draft Rule contains a mandate that regulated entities "shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of this state." DNR should clearly define the actions that fulfill this mandate. Furthermore, the Final Rule should expressly provide that compliance with its requirements constitutes fulfillment of this mandate. If there are other actions that regulated entities must take to fulfill this mandate, DNR should incorporate those actions directly into the Final Rule. Failure to clarify this mandate will result in significant, but unnecessary, regulatory uncertainty and increased liability for the regulated community.

F. Additional Considerations

Regarding the Draft Rule's storage and containment requirements, the additional monthly inspection program on storage containers is an undue burden on regulated entities. The Coalition urges DNR to rely on quarterly inspections, which align with some inspections already being conducted under stormwater pollution prevention plans.

Additionally, disposal of containers within three months of expiration of the foam is arbitrary, unnecessary to protect human health and the environment, and inconsistent with industry practice. Current industry practice is to test the foam for degradation, and dispose of the foam only as the foam loses effectiveness. The Coalition requests that the Final Rule allow regulated entities to continue testing and disposing of foam based on the foam's effectiveness rather than based on the arbitrary time-period prescribed in the Draft Rule.

Regarding the costs of this Draft Rule, the Coalition urges DNR to recognize that the many regulated industries (including, for example, the aviation industry) have been particularly damaged by the COVID-19 pandemic and resulting economic crisis. No one can predict when the economy will return to pre-pandemic levels. Accordingly, operational funds will be limited, and many regulated entities will be challenged to absorb the additional costs associated with this Draft Rule. The Coalition requests that DNR include implementation deadlines of at least two years to allow for these additional costs, particularly related to storage and containment, to be included in future budgets.

V. Conclusion

Finally, the Coalition notes that the value of the public comment process comes from diverse interests being provided sufficient time to understand what the State is proposing and then having time to consider all of the alternatives and options to recommend improvements, ask questions, identify problems, and organize appropriate comments. Here, it is hard to defend a public comment process on such a significant rulemaking when the regulated parties are provided only one week to review and develop comments. The Coalition's members were able to provide valuable input in this very short comment period because the Draft Rule raises significant issues that will impact them and other regulated parties, but the State should not presume such a process will allow us to identify and opine on every issue. Accordingly, the Coalition requests further opportunity to comment on a revised draft or to further discuss these comments as appropriate to ensure that final standards are scientifically-defensible and not unduly burdensome in today's economy. Please feel free to call or e-mail if you have any questions, or if you would like any additional information concerning the issues raised in these comments.

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