



The PFAS Regulatory Coalition
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VIA ELECTRONIC SUBMISSION

Ms. Sophie Greene
Minnesota Pollution Control Agency
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Re: Comments of the PFAS Regulatory Coalition on the Minnesota Pollution Control Agency's Draft PFAS Monitoring Plan

Dear Ms. Greene:

The PFAS Regulatory Coalition (Coalition) appreciates the opportunity to file comments regarding the Minnesota Pollution Control Agency's (MPCA or the Agency) Draft PFAS Monitoring Plan (Draft Plan). The Draft Plan sets forth "a path forward for PFAS monitoring at solid waste, wastewater, and stormwater facilities, hazardous waste landfills, facilities with air emissions, and sites in the Brownfield or Superfund programs." MPCA is accepting comments on the Draft Plan until January 21, 2022.

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 development of policies and regulation 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 manufactures 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 and Petrochemical Manufacturers; American Iron and Steel Institute; Barr Engineering; Brown & Caldwell; Freeport-McMoRan Inc.; Gary Sanitary District (IN); HDR; Illinois Association of Wastewater Agencies; Lowell, MA; Pueblo, CO; Trihydro, and Yucaipa Valley Water District (CA).

Coalition member entities or their members own and operate facilities located in states throughout the country, including in Minnesota. The requirements outlined in the Draft Plan will directly affect members with facilities or operations in Minnesota, and members in other states could be affected as well, if Minnesota's PFAS policies are

considered as precedents to inform other states' PFAS policies and rulemakings. The Coalition, therefore, has a direct interest in the Draft Plan.

II. PFAS Regulatory Coalition Comments

The Coalition commends MPCA's careful consideration of PFAS monitoring challenges and its initiative in developing a plan to conduct comprehensive monitoring. Nonetheless, the Coalition has overarching concerns with the Draft Plan that apply across all environmental programs addressed in the appendices, as well some individual concerns specific to the appendices, set forth below.

A. General Comments on the Draft Plan

The following comments and requests for clarification address larger concepts related to PFAS management that the Coalition asks MPCA to consider, generally, in developing a new Draft Plan. Many of these concepts apply specifically to aspects of the appendices as well.

1. MPCA Should Apply Standard Risk-Based Decision-Making Practices in Revising the Draft Plan

In general, data quality objectives for the Draft Plan need to be better articulated and more clearly linked to applicable evaluation criteria for the protection of human and ecological health. In several instances, the Draft Plan suggests that management actions will be based solely on the detection of PFAS in samples obtained from monitoring efforts, rather than a particular risk-based analysis. For example, in reference to influent monitoring in the proposed Wastewater Program Plan, the Draft Plan states, "[w]here PFAS are detected [in influent], during the second half of the year, actions will be taken to reduce or eliminate potential PFAS sources or activities."¹ This implies that any detection of PFAS is unacceptable without regard to actual exposures and risks to humans or ecological resources. Such an approach contradicts a holistic risk-based consideration of sample data, as well as the important process of comparing monitoring results to existing Minnesota Department of Health (MDH) and MPCA risk-based criteria. Use of risk-based criteria is typical for contaminant monitoring programs involving the assessment and management of environmental chemicals in Minnesota.

Additionally, the Draft Plan's reliance on detection of PFAS (in samples at a facility or associated with a point-source discharge) as a management trigger must also account for the complexities associated with understanding how PFAS acts in the environment and any related ecological or human health risks. For example, making needed reductions in PFAS sources to a wastewater treatment facility is a reasonable goal, but the Draft Plan should acknowledge that management actions should be clearly linked to risk-based goals associated with the receiving water body. Critically, such a goal-making process should

¹ Draft Plan at 10. Further discussion of the Wastewater Program Plan is in section III.B below.

recognize the complexity of reducing the risk from multiple PFAS sources to a receiving water body. Focusing only on the management of point source discharges without addressing their relative contribution to the potential impairment could frustrate MPCA in achieving its goals in managing PFAS risks in water bodies, especially if non-point or other diffuse sources represent a significant PFAS contribution to a water body.

Overall, the Draft Plan needs to include an emphasis on and acknowledgment of the standard risk-based approaches that are the foundation of the paradigm for the assessment and management of environmental chemicals in Minnesota. Minnesota's PFAS Blueprint (2021) notes the importance of understanding and quantifying PFAS risks to human health and ecosystems, and reflects a risk-focused PFAS framework. The Draft Plan's "manage if detected" approach does not serve this important purpose. Instead, MPCA should incorporate the risk-based framework into the Draft Plan, and develop specific, science-based action triggers within that context.

2. The Draft Plan Should Address the Complexity of Managing PFAS Risks in Water Bodies Affected by Multiple Types of PFAS Sources

MPCA should acknowledge in the Draft Plan that PFAS in fish may be accumulating from multiple sources, rather than only point-source effluent discharges, because these are not the only sources of PFAS that impact water quality and drive risk-based concerns. Fish are exposed to PFAS from multiple sources in aquatic ecosystems. As a result, reductions in concentrations of PFAS in surface water or PFAS loadings to surface water may not result in corresponding reductions of PFAS concentrations in fish tissue. It is important for MPCA to acknowledge that a holistic approach is needed, one that is likely to include a monitoring and management program that extends beyond a simple "end of the pipe" permitting focus, and considers the need to control different sources based on their contributions.

3. The Draft Plan Should Consider Ambient Levels of PFAS in the Environment

Because of the widespread use of PFAS, the environmental mobility of PFAS, and the availability of trace analytical chemistry techniques, we know that PFAS are ubiquitous in the environment and detectable in a wide variety of environmental samples, including samples obtained from locations with no clear direct sources of PFAS. The Draft Plan discusses the need to include quality assurance and quality control samples to "...bolster the interpretability of [the] data,"² however, there is no mention of the need to incorporate background sampling to quantify ambient concentrations of PFAS that may be completely unassociated with a particular facility, point source discharge, or non-point source discharge.

² Draft Plan at 13.

The Draft Plan should acknowledge that ambient or background sampling may be a crucial component of some monitoring plans. Furthermore, MPCA should note that such plans and their associated decision-making steps should incorporate the consideration of ambient PFAS levels that are beyond the ability of any one facility or process to control. To inform this process, MPCA should consider undertaking a statewide background sampling program (using, as mentioned elsewhere in these comments, sampling and analytical methodologies that have been validated and approved).

4. MPCA Should Incorporate a Risk Communication Process into the Draft Plan

It is important for MPCA to communicate whether and how the data gathered through the implementation of the Draft Plan will be shared with affected facilities and the public. As stated by the Interstate Technology and Regulatory Council (ITRC): “The ability to communicate potential risks to human health and the environment is a vital skill to facilitate community participation and decision-making. Risk communication can be particularly challenging when dealing with science that is rapidly evolving, as is the case with PFAS. Communicators must grapple with competing interpretations of uncertain science and risk management strategies, while earning community trust and promoting meaningful engagement.”³ In some of the program areas, the Draft Plan addresses how the data could be used and communicated, but more detail is needed.⁴ The Coalition encourages an approach that provides transparency and communicates the data in appropriate context using risk communication tools. MPCA should explain how and when it will make the information available, and should set clear expectations concerning when, where, and how the data will be released.

5. The Draft Plan Should Describe the Process MPCA Will Use to Evaluate the Data

One of the Draft Plan’s stated goals is to “[i]dentify areas of particular concern (due to PFAS concentrations or routes of exposure) that need quick action.”⁵ However, the Draft Plan does not provide details as to how MPCA will make that identification. The Coalition recognizes that MPCA does already have some PFAS standards, criteria, and guidelines, so MPCA should outline the process through which the data it collects will be evaluated relative to those levels. Also, MPCA should explain any analysis or comparisons that it plans to undertake with the data. Understanding how MPCA will evaluate the data

³ ITRC, PFAS Fact Sheet 14 Risk Communication, *available at* <https://pfas-1.itrcweb.org/14-risk-communication/> (last accessed Jan. 8, 2022).

⁴ *See, e.g.*, discussion of how MPCA will use wastewater data: “MPCA will use these data and existing research to help regulated parties and the public interpret the results of PFAS monitoring. This support for municipalities could include communications plans that contextualize the results using simple metrics and visuals.” Draft Plan at 13.

⁵ Draft Plan at 1.

it collects will help to ensure that appropriate data are collected in the first instance to support that evaluation.

Additionally, the Draft Plan's "Wastewater Program Plan" states that the initial monitoring will be used to identify future phases of sampling.⁶ It would be beneficial if MPCA outlined the process it will use to evaluate the data to determine what potential future phases of sampling may be required. We understand that MPCA's ultimate objective is not merely collecting data, so it is critical that MPCA provide more information in the Draft Plan regarding how data will be reviewed and used to drive future decisions.

6. The Draft Plan Should Explain How MPCA Selects Facilities to Sample in Each Program

As recognized in the Draft Plan, some facilities could be subject to more than one Program Plan: "If facilities have multiple permits and could fall under multiple monitoring plans (i.e., air, industrial stormwater, wastewater), MPCA will determine the media with the highest potential for PFAS release and include the facility in the relevant program's monitoring plan."⁷ The Coalition requests that MPCA clarify how it will determine which facilities may be asked to sample under which programs.⁸ There may already be data (e.g., from the Toxics Release Reporting and the Unregulated Contaminant Monitoring Rule (UCMR) program) that could help inform this decision-making process. Moreover, facilities that do not use products containing PFAS, or that have no reasonable likelihood of contributing to PFAS discharges or emissions, should be considered for removal from future monitoring regimens.

7. The Draft Plan Should Specify the Specific PFAS Compounds for Which MPCA Will Collect Data

Generally, any future PFAS requirements must clearly specify the individual PFAS compounds that a state seeks to regulate. Given the wide variations in 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 humans in interchangeable 1:1 ratios. From a toxicological perspective, regulatory agencies must gather adequate data on individual PFAS compounds in order to make meaningful assessments regarding risks. If these data will inform future health-based values, MPCA must collect data regarding the physical, chemical, and toxicological properties of individual PFAS compounds.

⁶ Draft Plan at 13.

⁷ Draft Plan at 11.

⁸ In this regard, also, MPCA statement that "NAICS codes will be used to identify facilities of concern" is too broad, and places burdens on facilities that are not sources of PFAS. MPCA should produce a draft list (site-specific and media-specific) of facilities that will be sampled, and allow for public comment.

8. MPCA Should Identify the Validated Test Methods to be Used in Each Program

Ensuring clarity and consistency regarding sampling and analytical methods is critical to MPCA's efforts to collect meaningful data. There is significant variability between existing analytical methods, new/different methods are currently under development, and the utility of some analytical methods (e.g., Total Oxidizable Precursor Assay) is still evolving. The Coalition strongly recommends that MPCA require monitoring only for PFAS compounds for which there is a validated analytical test method. U.S. EPA's first validated test methods for PFAS, Methods 537 and 537.1, apply only to drinking water. Method 537.1 only measures 18 PFAS compounds and Method 533 can measure an additional 11 "short-chain" PFAS compounds. The entire scope of U.S. EPA's approved test methods can measure no more than 29 different PFAS compounds, and laboratories would need to use both methods to obtain results from all 29 compounds.

MPCA should use the identified analytical method, coupled with risk-based decision making, to identify the specific PFAS compounds on which it will collect data. There can be a tendency to treat analytical results, once obtained, as being comparable regardless of the specific method that generates those results and the specific analytes included. It is vital, in the implementation of the Plan, that there is clarity and consistency in the sampling and analytical methods used and how the resulting data will be reviewed and communicated. The Coalition's comments on analytical methods specific to the Air and Wastewater Program Plans are included in comment sections below.

9. MPCA Should Allow an Official Comment Period on its New Draft PFAS Analytical and Sampling Guidance Documents

MPCA released the "Guidance for per- and polyfluoroalkyl substances: Analytical (p-eao2-28)" and the "Guidance for per- and polyfluoroalkyl substances (PFAS): Sampling (p-eao2-27)" on January 6, 2022.⁹ It is critical that stakeholders have the opportunity to review and provide comments on this guidance, and that these new documents are finalized before the Draft Plan is finalized and implemented. The Coalition recommends that MPCA provide a comment period on these guidance documents, make any changes necessary to the Draft Plan, and then provide for additional review and comment on the revised Draft Plan.

10. MPCA Should Consider Laboratory Capacity and Reliability

The Coalition is concerned that existing laboratories lack the availability and capacity to accommodate the significant increase in the number of analyses that will need to occur in the implementation of the Draft Plan. As noted in the comment above regarding analytical methods, PFAS laboratory analysis is a dynamic and evolving industry. It is

⁹ See MPCA Quality System, <https://www.pca.state.mn.us/data/mpca-quality-system> (last accessed January 10, 2022).

important not only to have clarity and consistency with the analytical method being used, but also to have competent, approved laboratories to conduct the difficult analyses and generate reliable data. In its December 9, 2021 webinar, MPCA estimated that there were seven laboratories in the state that could conduct reliable PFAS analyses, and that MPCA hoped there would be more laboratories brought on-line to respond to the increased demand for PFAS analyses. Relying on new and inexperienced labs could jeopardize the integrity of results generated by such laboratories. The Coalition recommends that MPCA provide flexibility regarding monitoring deadlines if experienced, competent, approved laboratories experience backups and delays in conducting appropriate analyses.

11. Flexibility Will be Needed as to Monitoring Subsequent to Source Reduction and Product Substitution Efforts

In the appendices describing the various individual Program Plans, the Draft Plan takes a general approach for conducting monitoring and, if necessary, implementing source reduction or product substitution, and then conducting additional monitoring to confirm that any concerns have been resolved. The Coalition believes that MPCA's approach is unduly simplistic and is insufficient to address the challenges associated with source reduction and product substitution. Moreover, we believe that until appropriate monitoring has been done, any discussion of requiring source reduction or product substitution is premature.¹⁰ Source reduction and product substitution strategies and treatment technologies are still very much under development.¹¹ MPCA should provide appropriate guidance and recognize that it will have to address many situations on a case-by-case basis. MPCA should not establish rigid or inflexible deadlines or mandatory sampling frequencies within the Program Plans.

B. Specific Comments on Appendix A – Air Program Plan

1. Duplicative Reporting Should Be Eliminated

The proposed emissions inventory reporting requirements of the Air Program Monitoring Plan are duplicative of federal EPCRA Toxic Release Inventory (TRI) reporting requirements, raising questions about the justification for MPCA's requirement. The TRI program requires subject sources to provide annual reports quantifying their releases of listed toxics – including air emissions. This program has required reporting as to 172 PFAS compounds since Reporting Year 2020 (due by July 1, 2021). The federal program has further expanded to include an additional three PFAS compounds for Reporting Year 2021. The TRI program is well known to the regulated community, including with respect to reporting obligations, exemptions, application, and guidance.

¹⁰ We are also not clear on the agency's legal authority to institute any requirements for source reduction or product substitution. If MPCA believes that it has such authority, the legal basis should be stated.

¹¹ See Interim Guidance on Destroying and Disposing of Certain PFAS and PFAS-Containing Materials That Are Not Consumer Products, EPA, December 2020.

MPCA should explain the basis for any duplicative reporting requirement with respect to a subset of TRI compounds (the 50 from OTM-45 versus the 175 from the TRI) and regulated facilities where the vast majority of these facilities already are subject to TRI reporting requirements based on the NAICS codes identified in Appendix F.

Additionally, the fact that facilities subject to multiple Monitoring Plan Appendices will have their obligations “scoped in for the program plan associated with the media that is likely to be the most significant vector of PFAS release to the environment” raises questions about the need for MPCA’s proposed emissions inventory reporting requirement. Finally, the nearly ubiquitous nature of PFAS compounds suggests that baseline emissions inventory data should be collected from sources in addition to those included in Appendix F. The Draft Plan does not explain why emissions by facilities that are not included in Appendix F are excluded from reporting.

2. MPCA Should Address Concerns Regarding the Validity of Air Samples by Non-TRI Facilities

The proposed emissions inventory creates unique concerns about the validity of the information gathered. As noted above, the majority of NAICS codes in Appendix F already are subject to federal TRI reporting obligations. MPCA’s proposal to add facilities not otherwise subject to TRI reporting is problematic. The Draft Plan proposes four methods for monitoring PFAS emissions, in the following hierarchy: (A) continuous emission monitoring (CEM); (B) stack testing; (C) material balance or MPCA-approved emission factor; or (D) the less-favored MPCA-approved facility proposal. As the Draft Plan acknowledges, there are no PFAS CEMs, and under the Draft Plan very few sources will be conducting PFAS stack testing. Accordingly, the non-TRI facilities will be forced to employ MPCA’s least-favored methodologies, which likely will result in a range of reported emissions that have questionable reliability. The Draft Plan also does not cross-reference any TRI guidance regarding quantification of air emissions for PFAS compounds. Utilizing existing TRI reports or focusing MPCA’s analysis on air emissions data already required to be collected as part of the TRI program would minimize potential problems and improper conclusions that might be drawn from disparate, inconsistent (and therefore unhelpful) PFAS monitoring data.

3. MPCA Should Address Issues Concerning Disclosure of Stack Test Results

The proposed stack testing requirement is silent regarding the potential liabilities that reporting sources may face in the rapidly-developing PFAS regulatory and litigation landscape. The Draft Plan requires facilities to use U.S. EPA’s Other Test Method-45 (OTM-45) test method for sources subject to the stack testing requirements.¹² This test

¹² As noted above with respect to other actions expected of regulated parties, the Coalition is not clear as to the legal authority of MPCA to mandate stack testing. If the agency believes that it has this authority, its legal basis should be spelled out in the Plan.

method was recently issued (January 2021), but is not an approved U.S. EPA test method, which undermines the Draft Plan's reliance on the method. U.S. EPA generally does not use such methods for compliance purposes because they are not considered to be fully vetted. In addition, although the Draft Plan is not clear on this point, it is reasonable to assume that the OTM-45 stack tests results submitted to MPCA will be made publicly available. Recent case law suggests that potential plaintiffs could use such information to pursue nuisance litigation or seek other legal damages from emitters. Therefore, if MPCA mandates use of the OTM-45 test method (after approval of the method), it should consider methods to protect stack testing results from public disclosure, or at the very least, only release results anonymously.

Relatedly, the Coalition urges MPCA to consider the authority under which it might require the proposed stack tests to be conducted. There is opportunity to submit "blind" or confidential test results to the agency, but that opportunity may not be available if sources are "required" by law to provide the data to the agency.

4. MPCA Should Delay Stack Testing Requirements Until Testing Concerns are Resolved

The Coalition questions the utility of MPCA's stack testing proposal in light of potential variability and the small data set that could be generated. MPCA's proposed reliance on OTM-45 likely will produce inconsistent results. Additionally, MPCA already has recognized that PFAS emissions can be impacted by weather, temperature, and other site-specific factors, and MPCA has suggested that tests be conducted "year round" under all kinds of conditions in order to obtain an accurate understanding of PFAS emissions. The Draft Plan's proposed costly "other test method" stack tests – conducted at an undetermined subset of 190 sources – do not seem likely to provide MPCA with a reasonable basis to advance potential future PFAS policy. However, U.S. EPA is in the process of regulating PFAS air emissions through rulemaking. U.S. EPA is also working on modeling analyses for PFAS. Accordingly, supporting U.S. EPA's efforts to regulate PFAS air emissions would be a better use of MPCA's resources than ordering stack testing at an assortment of Minnesota sources.

5. Emission Inventory Reporting Needs to be Conducted with Robust, Approved Methods

The MPCA's Air Program Plan suggests that monitoring for PFAS will take place in two parts, emission inventory reporting and stack testing. MPCA's emission inventory calculation methodology uses the general hierarchy discussed on page 8 of the Draft Plan. Since continuous emission monitoring methods are not yet available for PFAS, MPCA suggested that emissions reporting is likely to rely upon estimates from stack testing or the material balance/emission factor approach. As addressed above, the Coalition has concerns regarding the reliance on OTM-45 for stack testing. There are also some challenges with using the material balance/emission factor approach.

In order for a facility to complete an emission inventory, the amount of PFAS in the fuel would need to be known or reasonably estimable. This is especially challenging for waste to energy facilities where the fuel is non-homogeneous. Currently, there is limited information on the specific items that are known to contain PFAS. Product labeling and material safety data sheets often do not reflect whether (and what) PFAS is present in a specific product. Even if these materials were labeled, the condition of these materials when they arrive at a municipal waste combustor or solid waste facility would not facilitate the accurate identification of articles labeled as containing PFAS. A resulting material sort would require considerable effort, and even then, would result in a calculation that would not be accurate without specific analyses of specific types of wastes being received. Therefore, a material balance is not a viable option for calculating potential PFAS emissions from sources such as waste-to-energy facilities.

Without quantifiable PFAS destruction efficiency of a combustion source derived from stack test data, it is premature to estimate emissions using emission factors, or to determine PFAS impacts through mass balance calculations. It is imperative that a robust, approved test method be in place in order to apply any meaningful PFAS estimates to emission sources.

C. Specific Comments on Appendix B – Wastewater Program Plan

1. The Coalition Questions MPCA’s Approach for Measuring WWTP Influent

The Draft Plan states that, “[a]t conduits of PFAS releases to the environment, such as landfills and wastewater treatment plants, monitoring data will be used to identify upstream PFAS sources so those sources can be targeted for reduction” and that, “[t]he initial focus of monitoring will be on loads and sources of PFAS coming into municipal wastewater plants...the first phase will develop a baseline understanding of influent concentrations at municipal plants...these data will inform source identification and reduction activities.” However, it is not clear how sampling influent at the wastewater treatment plants may identify specific upstream sources. A better approach is to sample the effluent of upstream facilities that are believed to be significant sources. This can identify the specific industrial users on which source reduction efforts should focus. The source reduction efforts could also include sampling the influent to the industrial users to determine if there are PFAS in their source waters and potential PFAS contribution from ambient background. Sampling the influent to a wastewater treatment plant that is a combination of all these potential upstream sources does not provide discrete enough data to determine the next steps of source identification and potential reduction.

2. The Plan Should Provide Flexibility to Adjust the Frequency of Monitoring, Where Appropriate

The frequency of monitoring may need to be adjusted on a case-by-case basis. The Draft Plan requires WWTPs with industrial pretreatment programs (IPP) to “evaluate

institutional and industrial users that have the potential to pass PFAS to their WWTP.” That must occur in the first half of the year. During the second half of the year, the Draft Plan requires that “actions be taken to reduce or eliminate potential PFAS sources or activities.”¹³ This proposed timeframe is overly optimistic and likely unachievable. Delays in addressing PFAS sources could result for a number of reasons, including: 1) PFAS product substitutions are not always available; 2) sources of PFAS may have been generated years ago and would be difficult to identify (e.g. residual PFAS present in treatment system components long after any PFAS use ceased); 3) forcing additional pretreatment at an IPP discharger may take significant time to design and implement; and (4) seasonal variability in production throughput may not be captured in a six-month period of data collection. In addition, the proposed timeframe fails to provide sufficient time for follow-up confirmation sampling, or the time needed to address potential variability of effluent sampling results.

The Coalition requests that MPCA to eliminate the one-year limitation and instead to identify a process for follow-up monitoring and engagement to resolve PFAS pollution at the source on a case-by-case basis.¹⁴ For example, if the goal is to first determine if there are IPP sources of PFAS that need to be reduced and then to determine if source reduction actions were successful, a monitoring frequency should be scheduled to occur initially and then after reductions are put into place. The second portion of monitoring may not occur within one year of the initial period, but instead, may occur at a later point, as appropriate to determine the effect of any actions taken to reduce PFAS.

3. MPCA Should Clarify Which Analytical Method Should Be Used

In the discussion of analytical methods on p. 13 of the Draft Plan, it is clear that MPCA is requiring reporting of all PFAS analyzed. Further clarification is needed as to which laboratory methods are acceptable to MPCA. For example, U.S. EPA methods 533 and 537.1 are different, and results from those methods should be evaluated differently by MPCA. Additionally, with U.S. EPA Methods 8327 and 1633 on-track to soon become widely available, guidance is needed from MPCA on any newly approved analytical methods. There are also developing analytical techniques (e.g., Total Oxidizable Precursor Assay) that might be used as diagnostic tools, but we urge that those only be considered if MPCA provides well-thought, thorough guidance on the use of these techniques and their utility to achieve monitoring objectives. The Coalition strongly advocates for defined analytical methods reporting specific analytes. Having uniform use of analytical methods is fundamental to MPCA obtaining good data upon which to make further programmatic and regulatory decisions.

The Coalition also questions the use of Method 1633, which is a method to test for 40 PFAS compounds in wastewater, surface water, groundwater, soil, biosolids, sediment,

¹³ Draft Plan at 12.

¹⁴ See Section III.A above for the Coalition’s suggestion to apply risk-based approach to this process.

landfill leachate, and fish tissue. This method has been published, but has not been approved. U.S. EPA has stated that this method can be used in various applications, but the Coalition believes that there are significant issues associated with using Method 1633 in the wastewater context. In fact, the Coalition, along with several other groups, recently submitted comments to U.S. EPA (attached), detailing concerns with Method 1633, including potential for false positives for certain PFAS. Beyond these concerns with Method 1633 itself, requiring the use of this unapproved test method is premature. Method 1633 has only gone through single lab validation, the results of which are not yet available. Accordingly, the Coalition recommends that MPCA delay wastewater monitoring until U.S. EPA has approved Method 1633.

D. Specific Comments on Appendix C – Solid Waste and Hazardous Waste Program Plan

1. MPCA Should Delay Monitoring Until U.S. EPA Approves a Test Method for These Media

In Appendix C, the Draft Plan refers generally to analytical methods used to measure PFAS levels in various environmental media, but it does not specify what method should be used here. Importantly, no approved test method for leachate or groundwater currently exists. As mentioned above, the Coalition recommends that Minnesota devote resources to supporting federal development of approved test methods rather than spending resources collecting data that will have limited utility given the variability in testing. Notably, the Draft Plan states generally that analytical methods to measure PFAS exist but does not identify any test method that might be appropriate for this Program Plan. If MPCA intends to require monitoring prior to U.S. EPA approval of a test method, MPCA, at a minimum, must specify what test method facilities should use. Moreover, as discussed in the General Comments, MPCA must ensure that there are enough reliable laboratories to conduct the type and volume of testing proposed under this Program Plan.

2. MPCA Should Provide a List of Intervention Limits (ILs)

The Draft Plan states that ILs will be used to determine whether groundwater would need to be monitored at a facility. The ILs also would inform the frequency of monitoring. Given the Program Plan's reliance on ILs, the Coalition requests that MPCA include a list of ILs in this appendix. The Draft Plan also refers to the ILs when discussing methods, stating, "[a]ll MDH and MPCA accredited labs for PFAS will use methods that measure the PFAS for which there are health-based values, and therefore ILs available." In addition to listing the ILs, MPCA should identify the specific PFAS compounds—for which "health-based values, and therefore ILs are available"—and clarify that only those PFAS compounds are included within the monitoring.

3. Intervention Limits are Inappropriate to Apply to Leachate

While we agree with MPCA's proposed approach to utilize landfill leachate concentration for PFAS from lined facilities as a trigger for groundwater monitoring, the threshold should not be the intervention levels (ILs). Lined facilities should utilize either Health Risk Limits or other standards developed through a systematic approach developed by MDH as the threshold for further monitoring. The use of the ILs is overly conservative for this application. Intervention limits were established as a concentration or measure of a substance, if found to be exceeded in a sample of groundwater, indicates a potential impact from the monitored facility. Intervention limits are 25% of an established regulatory limit. Since the proposal is to monitor leachate on the liner, and not groundwater, the use of intervention limits is an inappropriate threshold.

E. Specific Comments on Appendix D – Industrial Stormwater Program Plan

1. The Program Should be Limited to Stormwater from Industrial Activity that Results in PFAS Discharges

MPCA proposes to use the State's industrial stormwater permitting program to collect information on PFAS in industrial stormwater discharges. However, the agency must constrain its efforts to its authority under the NPDES permit program. The industrial stormwater program regulates "stormwater associated with industrial activity" as defined by 40 CFR § 122.26(b)(14). That does not include all stormwater from industrial sites, but just that stormwater determined to be associated with industrial activity. MPCA appears to want to sample any possible stormwater discharges, even if exposure of the stormwater to materials is not industrial and highly unlikely to actually generate PFAS discharges. For example, MPCA states that protective clothing for firefighters is a potential source of PFAS at airports. There should be some justification, however, for how each potential source of PFAS may impact stormwater. In the example of protective clothing, it is not clear how the protective clothing would necessarily contribute to PFAS in industrial stormwater unless firefighters were fighting fires during storm events. Even in that situation, there is still no evidence that the PFAS that is used as a protective layer in such firefighting gear actually leaches PFAS during storm events. Accordingly, the Coalition requests that MPCA ensure that all potential sources of PFAS listed are both associated with industrial activity and have the potential for exposure to stormwater and subsequent discharge of PFAS.

2. The Draft Plan Should Recognize the Complexity in Implementing Source Reduction Activities for Multiple Industrial Sectors

The Draft Plan states that where elevated PFAS levels are found in stormwater "facilities may be required to conduct source reduction efforts." As an initial matter, we are not sure what "elevated" means. MPCA should specify the quantity or concentration,

for each particular PFAS compound, that would trigger source reduction efforts, based on specific risk goals (as discussed above). In order to impose source reduction measures, MPCA should specify source reduction measures that will be required, confirm that source reduction is related to industrial activities (as opposed to diffuse other sources) and explain the authority under which MPCA will impose the source reduction requirements/standards.

MPCA must also consider the fact that source identification and elimination is particularly complex in the industrial stormwater context. For example, there could be historical uses that take time to identify; sometimes, the stormwater issue could be caused by run-on from neighboring properties. Once sources are identified, it can be difficult to address the contamination, which could require costly treatment technologies, such as soil washing. Moreover, if the source is not from the site conducting sampling, but from a neighboring site, the industrial site would have no authority to demand that their neighbor meet MPCA's standards.

Source reduction and elimination of PFAS in stormwater at industrial sites will need to be tailored to the type of facility and the particular uses of PFAS. Even among the sectors identified as high priority in the Draft Plan, source reduction and elimination approaches may vary widely. Accordingly, MPCA must acknowledge that the monitoring proposed in the Draft Plan is a preliminary tool used to identify sources of PFAS in stormwater. To address those sources will require much more comprehensive, longer-term solutions, which are beyond the proper scope of this Plan.

3. The Plan Provisions as to Airports and PFAS-Containing Firefighting Products Need to be Revised

The Draft Plan asserts that all airports in Minnesota (approximately 150 airports) have used aqueous film-forming foam (AFFF) that contains PFAS. That is incorrect. The Federal Aviation Administration (FAA) only mandates that commercial airports (or "Part 139 airports") use AFFF that meets the Military Specification that until recently mandated PFAS. (Still today, only AFFF with PFAS meet the performance standards of Part 139.) Therefore, very few airports in Minnesota meet this criteria, and all other airports should be exempt from this monitoring requirement.

Even for Part 139 airports, MPCA must recognize the unique issues facing federally regulated Part 139 municipal airports, which are governed by federal law, including in their use of AFFF, and have no choice but to use AFFF in ways that the FAA has mandated. Coalition members in this sector are already engaged nationally and at the state level on issues related to PFAS and AFFF. State laws, regulations, and initiatives that attempt to address these same issues risk creating conflict with federal law and imposing needless state requirements.

Notably, Congress required FAA to authorize a fluorine-free AFFF by October 2021 and the Department of Defense to modify its Military Specification by October 2024. The COVID-19 pandemic, however, has delayed the FAA in its research and testing of

non-fluorinated foam. Accordingly, MPCA should not assume that source reduction efforts could immediately include replacing existing fluorinated AFFF with non-fluorinated AFFF. MPCA should be mindful of the numerous complexities and challenges of approving new foams, producing them, distributing them, updating existing equipment, and collecting old AFFF for appropriate disposal.

In addition, we question whether firefighting related activities are actually “industrial” in terms of the industrial stormwater program. Discharges associated with firefighting are considered authorized non-stormwater discharges. MPCA must act within its statutory and regulatory authority in mandating PFAS monitoring.

4. MPCA Should Incorporate Flexibility as to the Frequency of Monitoring for Industrial Stormwater Discharges

For facilities included in phase one of the Industrial Stormwater Program Plan, the Draft Plan requires that quarterly samples be taken within the first half-hour of a stormwater discharge from the facility for one year. Many facilities that will be included in Phase One, however, already have stormwater permits that require sampling. Accordingly, in order to eliminate unnecessary burdens and minimize the overall burdens of the proposed monitoring, MPCA should incorporate flexibility into the Plan to allow permittees to conduct sampling at a frequency that is consistent with the frequency of other sampling requirements in their existing permits. Also, quarterly sampling also may not be possible during winter months due to freezing weather. Further guidance and flexibility should be provided on this issue as well.

F. Specific Comments on Appendix E – Remediation Program Plan

The Remediation Program Plan suggests that sites may need to conduct monitoring for several matrices, including groundwater, drinking water, surface water, soil, sediment, soil vapor, and ambient air. Again, the Draft Plan has not specified any particular test method that should be used for the various matrices. The Coalition recommends that MPCA delay implementing the Phase One monitoring until U.S. EPA has developed approved test methods for these matrices. At a minimum, MPCA should identify 1) the specific matrices to be monitored, 2) the test methods to be used for each matrix, and 3) the PFAS to be analyzed with each test method.

III. Conclusion

The Coalition appreciates the opportunity to comment on the Draft PFAS Monitoring Plan. 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.

A handwritten signature in blue ink, appearing to read "Jeffrey Longworth".

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