

May 3, 2024

Tony Kwilas
Director, Environmental Policy
Minnesota Chamber of Commerce
380 St. Peter Street, Suite 1050
St. Paul, MN 55102

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 5, 2023, from the Minnesota Chamber of Commerce (MBA) on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document

Dear Tony Kwilas:

The MPCA appreciates the Chamber's review and valuable input on the draft MPCA Remediation Division PFAS Guidance (PFAS Guidance) and MPCA's guidance development process. The MPCA recognizes the importance of conducting meaningful consultation with all stakeholders in Minnesota.

Below are the Chamber's concerns as provided in your October 5, 2023, letter followed by the MPCA's responses:

1. Beginning with the initial screening in Milestone 1, Action 1, the list of industries and potential sources of PFAS, given its ubiquity, is lengthy. However, the draft Guidance also describes industrial, commercial, and even domestic uses of PFAS. In light of this, it appears more challenging to screen out a single facility, or any piece of property, including residential, for past use of PFAS. This essentially will lead to the conclusion that all properties are potential PFAS sites, which will overwhelm the current regulatory systems in place. Thus, some discretion will be required by environmental professionals and MPCA staff. We request that MPCA provide more clarity on how environmental professionals and MPCA will be expected to exercise this discretion.
 - o MPCA response: The MPCA acknowledges that the list of uses and potential sources of PFAS is vast and includes industrial, commercial, and domestic products. The MPCA also recognizes that the use of PFAS containing products does not indicate an imminent scenario where PFAS will be released to the environment. Potential PFAS release scenarios where known PFAS products were used and there is a likely potential for PFAS to be released into the environment are the situations to focus on when evaluating sources.
2. Ambient Conditions. The Chamber encourages MPCA to collaborate with a broad sector of industry partners to establish a clear, well-laid out process for ambient determination, as this will be a challenging and impactful endeavor.

- o MPCA response: The MPCA acknowledges the need to continue to collaborate with a broad sector of industry partners to evaluate the evolving understanding of PFAS ambient levels in the environment and how they impact release source investigation and cleanup levels.
- 3. Risk Assessment. Will MPCA staff be allowed to deviate from RBVs to develop site-specific targets? The Chamber urges the Agency to work with a broad coalition that includes greater industry representation to consider these issues and to expand the draft Guidance to address these important questions.
 - o MPCA response: The MPCA may work with a responsible party to development site-specific values for a site. Contact the MPCA project team for the site to discuss the process for developing site-specific values.
- 4. Figure 1, Page 17. The use and disposal of consumer goods should also be listed as a source of PFAS.
 - o MPCA response: The MPCA acknowledges that the use and disposal of consumer goods containing PFAS is a potential source of PFAS releases to the environment.

We appreciate your interest in providing feedback to the MPCA on the draft PFAS Guidance. If you have any questions about the contents of this response, please contact me at 651- 757-2893 or by email at timothy.grape@state.mn.us.

Sincerely,

Timothy Grape

This document has been electronically signed.

Timothy Grape
Supervisor
Superfund Unit 1
Remediation Division

TG:df

May 3, 2024

Shane Oksanen
Public Utilities Supervisor
City of Montgomery
16638 340th Street
Montgomery, MN 56069

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated September 5, 2023, from the City of Montgomery on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document.

Dear Shane Oksanen:

The MPCA appreciates your review and valuable input. We reviewed your letter dated September 5, 2023 (letter) including comments referencing the testing work conducted at your facility.

Below are the comments you provided in the above referenced letter followed by MPCA's responses to the comments:

1. The first test was done under normal operations and the numbers are significantly lower. The second test was taken while draining Aeration Basin (Oxidation ditch) 1. The numbers are through the roof. We clean out our tanks every year and the test was taken while emptying oxidation Ditch 1. I believe the numbers would have been closer to the first test if maintenance was not being performed. The guy collecting the test didn't think it would matter that much.
 - o MPCA Response: the testing referenced in your comment letter does not appear to be directly related to the draft Remediation PFAS Guidance document. If you have specific questions for our wastewater program in relation to the above referenced testing, please reach out to Jaramie Logelin of the MPCA Municipal Wastewater program at jaramie.logelin@state.mn.us.

We appreciate your interest in providing feedback to the MPCA. If you have any questions about the contents of this response, please contact me at 651-757-2893 or by email at timothy.grape@state.mn.us.

Sincerely,

Timothy Grape

This document has been electronically signed.

Timothy Grape
Supervisor
Superfund Unit 1
Remediation Division

TG:df

cc: Jaramie Logelin, MPCA Municipal Wastewater (electronic)

May 7, 2024

Sean Leary
GZA GeoEnvironmental
7505 Metro Boulevard, Suite 300
Edina, MN 55439

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 6, 2023, from GZA GeoEnvironmental on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document

Dear Sean Leary:

The MPCA appreciates your review and valuable input on the draft MPCA Remediation Division PFAS Guidance (PFAS Guidance) and MPCA's guidance development process. The MPCA recognizes the importance of conducting meaningful consultation with all stakeholders in Minnesota.

Below are GZA GeoEnvironmental's concerns as provided in your October 6, 2023, letter followed by the MPCA's responses:

1. Comment: Page iii, in the What is PFAS while your definition is fine, but it conflicts with some of the MULTIPLE EPA Definitions.
 - MPCA Response: The MPCA acknowledges that there are multiple definitions for the family of manufactured chemicals defined as PFAS. Specific PFAS compounds are discussed throughout this document by chemical name and composition for clarity.
2. Comment: Page 2. Suggest change in term from Desktop Review as this applies that the work can be completed from the office without the need for observations of the site. E1527-21 is referenced, and industry understand a Desktop review to mean less than a Phase I ESA.
 - MPCA Response: Acknowledged. The term desktop was removed, and this section was renamed Initial Site Review in the final PFAS Guidance.
3. Comment: Page 3. Since they mention E1527, suggest they incorporate/mention E3358-23, "Standard Guide for Per and Polyfluoroalkyl Substance Site Screening and Initial Characterization". If you haven't seen it, it's available on our Compass subscription.
 - MPCA Response: Acknowledged and E3358-23 reference has been added to the document.
4. Comment: Page 3-4. This is accurate but misses a point. Because apparel laundering occurs at homes, releases from sanitary sewer systems and septic systems are common. PFOS found in all domestic WW samples I've seen - frequently above some states' criteria.
 - MPCA Response: The MPCA acknowledges that apparel laundering can include both commercial and domestic (residential) scenarios.

5. Comment: Page 4. We disagree that car wash facilities should be put in the low-risk smaller release category based on our experience.
 - MPCA Response: The MPCA acknowledges that larger PFAS releases may occur from commercial car washing facilities.
6. Comment: Page 4. SDS rarely useful because PFAS can be present below 1% and/or they are frequently listed as proprietary ingredients. While correct, they are usually a waste of time. But a necessary waste of time :) Usually must dig a layer deeper into proprietary information.
 - MPCA Response: The MPCA acknowledges that Safety Data Sheets do not always accurately reflect the presence or amount of PFAS that may be present in chemicals used at a facility and additional evaluation of chemical usage at a site may be warranted.
7. Comment: Page 4, bullet 3, There is a potential... This would be true for every home with a well near a septic system or sanitary sewer in permeable geological deposits or fractured bedrock.
 - MPCA Response: The MPCA acknowledges the potential for residential sources of PFAS via septic systems. This is also true for other hazardous substances that may be part of identified releases related to use of household products and disposed of via septic systems. The intent is to provide guidance on the need to sample potential risk receptors that may be impacted from a significant release or potential release situation that would result in enrollment of a site into an MPCA Remediation program.
8. Comment: Page 7, Bullet I. Coordinate w/ prior comment about municipal sewer systems, they can be a source, preferential pathway, or both.
 - MPCA Response: The MPCA acknowledges the potential for sewer utilities to be a source and preferential migration pathway for contamination.
9. Comment: Page 8, Initial Investigation Action. Reference E1689-20, "Standard Guide for Developing Conceptual Site Models for Contaminated Sites"?
 - MPCA Response: Acknowledged ASTM E1689-20 for CSMs.
10. Comment: Page 10, Methods table. Does not include ASTM methods, Region V CRL was a driving force for some of them.
 - MPCA Response: Comment acknowledged and MPCA will continue to update analytical methods as they evolve.
11. Comment: Page 11-121, Groundwater to surface water/surface water to groundwater section. And proper surface water sampling techniques are important, as indicated on prior page, PFAS concentrate at the air/water interface, so you must not sample from it if you're looking for the "water" concentration. Foam concentrations can be orders of magnitude higher than the surface water itself.
 - MPCA Response: Comment acknowledged; no action required.
12. Comment: Page 12-13, Develop the CSM Action 2: Source Evaluation Section: Several states have "background" information available.
 - MPCA Response: Comment acknowledged, and additional relevant background information can be provided on a site-specific basis as necessary.

13. Comment: Page 17, Figure 1 Pathway to Human Health. True, but voluntary consumer product/indoor air exposure differs from those exposures from the release(s) and must be evaluated separately.
 - MPCA Response: Comment acknowledged. This Figure 1 has been removed from the final Remediation PFAS Guidance.
14. Comment: Page 18, Risk-based Values section: This is probably true for "older" PFAS/PFAS containing products (PFOA/PFOS, etc.) but not necessarily for "newer" PFAS products with shorter chains and alcohol functional groups.
 - MPCA Response: Comment acknowledged, and we will continue to evolve these distinctions under Risk-based Values as the science and understanding of PFAS use in products evolves.
15. Comment: Page 22, Risk evaluation section: Different sample design too - for risk assessment random or statistical sampling strategies appropriate as opposed to statements earlier about worst-case like at soil transitions.
 - MPCA Response: Comment acknowledged. Site specific sampling designs/plans should be prepared to adequately evaluate the site situation and appropriate risk assessment elements.
16. Comment: Page 28, Ambient background concentrations: Wouldn't release be a better term in the underlined sentence? *Background concentration refers to the concentration of a chemical that is ubiquitous and consistently present in the environment and would be present even if the site of concern did not exist.*
 - MPCA Response: Comment acknowledged, and the final Remediation PFAS Guidance was modified to include this change.
17. Comment: Page 34-35, Interim response actions section, Reverse Osmosis: But RO concentrates the PFAS in the reject water which must be disposed. \Note a good option for homes IMHO, particularly those w/o public sewers, but does the POTW really want the PFAS either?
 - MPCA Response: Comment acknowledged. PFAS impacted mitigation/filtration materials and media should be properly managed and disposed of.
18. Comment: Page 36, Milestone: Assess remedial technologies, Separation list: Foam Fractionation also in separation group.
 - MPCA Response: Comment acknowledged and incorporated into the final Remediation PFAS Guidance.
19. Comment: Page 38, Table: For colloidal carbon they don't describe the fact that desorption will occur as the source (groundwater) concentration decreases . . . what then. The "treatment area" becomes the source to downgradient groundwater it was protecting earlier.
 - MPCA Response: Comment acknowledged. The effectiveness of specific remedial technologies should be evaluated as part of the FFS and the site-specific situation.
20. Comment: Page 45, Cost-cutting area: Disposal of PFAS contaminated materials & Investigation derived waste chapter: IDW and remedial waste characterization/disposal could be economically prohibitive.

- MPCA Response: Comment acknowledged, and the MPCA has recognized these economic challenges when completing site investigation work on our fund lead Remediation sites.

21. Comment: Page 53, Annex I: This list is not well done. Lacks citation - doesn't even list laundries or land application/disposal which are mentioned in the text. Suggest reference to the ASTM screening mentioned earlier. EU and NJ also have better lists than this.

Probably the weakest section of the whole document and arguably, the most important.

- MPCA Response: Comment acknowledged, and Annex I has been updated and a citation included for the final Remediation PFAS guidance.

22. Comment: Page 53, Annex I: High performance floor wax, car finishes, etc.

- MPCA Response: Comment acknowledged, and this Annex has been updated and a citation included for the final Remediation PFAS Guidance.

We appreciate your interest in providing feedback to the MPCA on the draft Remediation PFAS Guidance. If you have any questions about the contents of this response, please contact me, Tim Grape, at 651-757-2893 or by email at timothy.grape@state.mn.us.

Sincerely,



This document has been electronically signed.

Timothy Grape
Supervisor
Superfund Unit 1
Remediation Division

TG:df

May 3, 2024

Roger Schroeder
Minnesota Landfill Coalition
504 Fairgrounds Road
Marshall, MN 56258

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 5, 2023, from the Minnesota Landfill Coalition (LF Coalition) on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document

Dear Roger Schroeder:

The MPCA appreciates LF Coalition's review and valuable input on the draft MPCA Remediation Division PFAS Guidance (PFAS Guidance) and MPCA's guidance development process. The MPCA recognizes the importance of conducting meaningful consultation with all stakeholders in Minnesota.

Below are the LF Coalition's concerns as provided in your October 5, 2023, letter followed by the MPCA's responses:

1. The guidance does not provide a balanced discussion of the highly effective waste containment provided in modern Subtitle D landfills. The guidance should be revised to correct these deficiencies. Modern engineered landfills have the ability to contain or sequester PFAS.
 - o MPCA response: The MPCA acknowledges that modern engineered landfills are designed to contain or sequester PFAS. The MPCA also acknowledges that Subtitle D landfills have the potential to contain PFAS materials that may result in PFAS-containing leachate that requires additional handling, management, and disposal.
2. The primary drivers of the industry's concerns are the following:
 - Regulatory uncertainty at both the Federal & State level
 - Lack of "passive receiver" regulatory exclusion EPA/MPCA from CERCLA/MERLA
 - General liability and risk of 3rd party lawsuits under CERCLA/MERLA
 - Potential rejection of landfill leachate by WWTPs due to PFAS concerns
 - o MPCA response: The MPCA recognizes the vital role that landfills, and wastewater treatment facilities play in ensuring that solid waste and wastewater are appropriately managed and treated so as not to adversely impact human health or the environment. It is important for the MPCA Remediation program to acknowledge the fate and transport cycle of PFAS in our environment and all the different ways that PFAS contamination may be redistributed in the environment including via solid waste disposal, wastewater discharge, and biosolids land applications. The MPCA needs to be transparent with all stakeholders about how PFAS may be released and redistributed in the environment so we can accurately and adequately regulate PFAS site investigation and clean-up activities in our Remediation program.

Roger Schroeder

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3. Additionally, we are concerned about how this guidance will affect legacy or unlined facilities since they are listed in the Desktop Review and “Annex 1” portions of the guidance document. PFAS is ubiquitous in the environment.
 - o MPCA response: The MPCA guidance needs to take into account all potential sources of PFAS when evaluating a release of PFAS to the environment including the possibility of a release associated with a legacy or unlined disposal facility. The PFAS source evaluation in the guidance is designed to assist in determining the source(s) of a release to the environment based on a robust site investigation process including, but not limited to, concentration gradients, fate, and transport of the contaminants of concern, groundwater flow direction, and site stratigraphy.

We appreciate your interest in providing feedback to the MPCA on the draft PFAS Guidance. If you have any questions about the contents of this response, please contact me at 651-757-2893 or by email at timothy.grape@state.mn.us.

Sincerely,



This document has been electronically signed.

Timothy Grape

Supervisor

Superfund Unit 1

Remediation Division

TG:df

May 3, 2024

Neil Byce
Crow Wing Recycling
714 Industrial Park Road SW
Brainerd, MN 56401

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 6, 2023, from the Recycled Materials Industry on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document

Dear Neil Byce:

The MPCA appreciates the Recycled Materials Industry's review and valuable input on the draft MPCA Remediation Division PFAS Guidance (PFAS Guidance) and MPCA's guidance development process. The MPCA recognizes the importance of conducting meaningful consultation with all stakeholders in Minnesota.

Below are the requests provided in your October 6, 2023, letter followed by the MPCA's responses:

1. We kindly ask that "scrapyards" and "metal salvage facilities" be excluded from this section and reclassified as potential pass-through entities. This would also be consistent with the IRTC Section 2.6 document the MPCA references (page 6, section 2.6.3 see attached and highlighted)
 - o MPCA response: The MPCA acknowledges that scrapyards and metal salvage facilities may generally be characterized as receivers of PFAS materials versus industries that make or intentionally use PFAS containing materials. Clarifying language to this effect will be added to the Remediation PFAS Guidance document. It is also important for the MPCA Remediation program to acknowledge the fate and transport cycle of PFAS in our environment and all the different ways that PFAS may be redistributed in the environment including via commercial and industrial receivers and handlers of PFAS containing materials.
2. On page 3 the recycled materials industry, specifically "scrapyards" and "metal salvage facilities," are depicted as solid waste facilities. Our current classification does not align with the designation of solid waste facilities according to existing regulations.
 - o MPCA response: The MPCA acknowledges that "scrapyards" and "metal salvage facilities" are not defined as solid waste facilities and are therefore not regulated as solid waste facilities by the MPCA. Clarifying language to this effect will be added to the Remediation PFAS guidance document on page 3.

We appreciate your interest in providing feedback to the MPCA on the draft PFAS Guidance. If you have any questions about the contents of this response, please contact me at 651- 757-2893 or by email at timothy.grape@state.mn.us.

Neil Byce
Page 2
May 3, 2024

Sincerely,

Timothy Grape

This document has been electronically signed.

Timothy Grape
Supervisor
Superfund Unit 1
Remediation Division

TG:df

May 7, 2024

Marie De los Santos
Ramboll
1650 West End Blvd, #100
St. Louis Park, MN 55416

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 5, 2023, from Ramboll on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document

Dear Marie De los Santos:

The MPCA appreciates the MBA's review and valuable input on the draft of the MPCA Remediation Division PFAS Guidance (PFAS Guidance) and the MPCA's guidance development process. The MPCA recognizes the importance of conducting meaningful consultation with all stakeholders in Minnesota.

Below are Ramboll's concerns as provided in your October 5, 2023, letter followed by the MPCA's responses:

1. Comment: Change abbreviation of BF to Brownfield in the line *Property boundary as identified by the legal description (BF)*
 - o MPCA response: The comment is acknowledged, and The Remediation PFAS Guidance has been updated accordingly.
2. Comment: In the word *potential* in the sentence: *Through the life cycle, a site is evaluated for a potential contaminant release tot the environment,*
 - o MPCA response: The comment is acknowledged, and The Remediation PFAS Guidance has been updated accordingly.
3. Comment: We've seen use of the word "guidance" previously with the VI documents. However, the MPCA routinely states that following the "guidance" is required. To make communication with property owners/RPs easier, MPCA should use terminology consistent with its intent (i.e., guidance is not a requirement).
 - o MPCA Response: The MPCA acknowledges that this document is guidance and not promulgated rule. We have modified the use of the term "required" where appropriate. There are elements of the guidance that are required by the MPCA in order for the MPCA Remediation program to issue a specific approval, liability assurance letter, or No Action/No Further Action determinations.
4. Comment: Chart was missing on page iii.
 - o MPCA Response: MPCA added a table number and title.

5. Comment: Perhaps an alternative name or more robust definition would assist in identifying the use of CCAs. Cross-functional decision gates or something of the sort?
 - o MPCA Response: Comment acknowledged.
6. Comment: Update title of table to include PFAS Remediation
 - o MPCA Comment: Comment acknowledged.
7. Comment: The Contents page should be moved to Page 3 of the document.
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.
8. Comment: In the PFAs in MERLA flowchart between Desktop Review and Site Investigation add: *A yes/no decision gate differentiator when PFAS potential presence is identified during the desktop review would help reader comprehension.*
 - o MPCA Response: Comment acknowledged.
9. Comment: In the PFAs in MERLA flowchart in the Desktop Review: *Instead of using circuitous language, could this refer to the Monitoring Plan or simply refer to desktop req's?*
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.
10. Comment: At the Risk Assessment stage, PFAS would be detected in both scenarios.
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.
11. Comment: The wording for this stage (Site Investigation to Risk Assessment) of the LC is misleading. In this stage, sampling would be completed for which the RESULTS will be compared against criteria (rather than meeting criteria as the decision gate "yes" at the desktop phase would necessitate sampling).

Suggested language might be "Desktop criteria met, PFAS identified during sampling" with detections leading to RA.

 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.
12. Comment: In the Risk Assessment stage when no risk is identified include: PFAS not detected or below state and federal criteria.
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.
13. Comment: In the Risk Assessment stage when no risk is identified include Site removed from program for PFAS contamination.
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.

14. Comment: In the PFAs in MERLA flowchart between Site Investigation and Risk Assessment add: *A decision gate for yes/no on PFAS identification would help reader understanding. Also, a good place to evaluate program suitability.*
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.
15. Comment: PFAS in MERA Flowchart Legend note: *This statement isn't very clear. "Brownfields" is not a stage, but rather a program. What is trying to be conveyed by listing Brownfields here?*
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.
16. Comment: See comment in LCS 3- should background sources be considered during the desktop review?
 - o MPCA Response: During the Initial Site Review (formerly Desktop Review) stage, one of the main goals is to determine if investigation of the site is necessary based on potential sources on or nearby the site. Defining what is background may be pertinent for evaluating an onsite versus offsite release source and determining potential responsible parties. For Brownfields, the source of contamination may not be as relevant as determining presence or absence in order to proceed with redevelopment of the property without creating exposure risks.
17. Comment: What is meant by existing sites and full evaluation? Brownfields/Superfund sites? Would it be more accurate to state that these sites will be requested to follow the LCS.
 - o MPCA Response: Comment acknowledged, and this sentence was clarified to indicate that existing sites are sites that are already enrolled in an MPCA Remediation Program.
18. Comment: See comment in LCS 3- should background sources be considered during the site investigation?
 - o MPCA Response: Yes, anthropogenic background sources should be considered when evaluating analytical data collected during the site investigation stage. This is important when determining all potential sources and for delineating the full extent and magnitude of contamination from the release.
19. Comment: Recommend keeping Action 1 to obtaining and completing receptor survey for development of the SAP. The caveat could be noted within the drinking water survey that should potable wells be identified; sampling of these wells should be prioritized during implementation of the SAP.
 - o MPCA Response: Comment acknowledged.
20. Comment: Same Comment on bullet three of page 6 as previous comment:
MPCA Response: Comment acknowledged.
21. Comment: Page 7 text, Sample all potentially impacted drinking water wells and municipal water supply wells first. This seems very out of place to sample wells first without doing the receptor survey/SAP development. Additionally, the section is largely discussing receptor survey methods.
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.

22. Comment: Page 7 part 1, bullet a: Should this state "...search radius of IDENTIFIED groundwater contamination"?
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.
23. Comment: Page 7, part V: Should item C state that this information builds on data generated in LCS 1?
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.
24. Comment: A background sample seems prudent for the surface soil/sediment media, particularly in light of a potential air deposition pathway. A bullet for consideration to allow for appropriate comparison should be recommended.
 - o MPCA Response: Background evaluation is discussed in MPCA's PFAS Ambient background concentrations information sheet:
<https://www.pca.state.mn.us/sites/default/files/tdr-g1-25.pdf>
25. Comment: Page 9 bullet 7: Cite table on following page (Table needs a title and Table ID #)
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.
26. Comment: Page 12, remove second PFAS text: *Many PFAS precursors are polyfluorinated PFAS, meaning they are not fully fluorinated, while the terminal PFAS are perfluorinated (i.e., fully fluorinated).*
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.
27. Comment: Page 12, include page number for table in text: *As shown in Table (table from Goal 1, Milestone 1, Action 2)*
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.
28. Comment: Page 18. Broken link: *Human health vapor intrusion screening values have not been developed for the PFAS listed in **Error! Reference source not found.***
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.
29. Comment: Page 23. How will this work for sites with other COCs, particularly when concentrations may cause matrix interference? The action levels are so low that impacts of non-PFAS compounds may prevent appropriate precision.
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.
30. Comment: Page 24. **Step 4. Compare the EPCs to the applicable RBVs2 from **Error! Reference source not found** and calculate HQs and ELCRs.**
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.

31. Comment: Page 24 Step 5 - If below, would be helpful to state that further investigation/evaluation is not typically warranted.
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.

32. Comment: Page 28. As outlined in **Error! Reference source not found.**,
 - o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.

33. Comment: Page 28. First, MPCA should define "anthropogenic background" because that is the appropriate term for PFAS. "Ambient", while accurate, can be either anthropogenic or naturally occurring (except for PFAS) and does not serve to move the site decision making process forward. Therefore, because PFAS are not naturally occurring, suggest a more clear term is "anthropogenic background". To not acknowledge that in some areas, there is an anthropogenic background is not serving the cause of environmental justice by the choice of terminology. Acknowledging an anthropogenic background doesn't excuse an RP from cleanup; however, it will lead to better remedial design/solutions for a site to have a well-developed understanding of potential for recontamination, O&M plan development, and remedy effectiveness and longevity.

This section also implies that sites necessarily need to collect site-specific precipitation, atmospheric deposition, and incoming utility sources (e.g., municipal water supply) sampling to 'prove innocence' if they are required to sample for PFAS. Because the MPCA ambient background memo did not itself consider site-specific attributes of soil/sediment on sample results, it seems unlikely that highly detailed background sampling programs that evaluate fate and transport factors (e.g., pH, TOC, mineral assemblages, water chemistry, etc.) will benefit a potential RP/NRP in either proving innocence or separating liability from anthropogenic background. Consider if some tiered level of what is an appropriate demonstration of "background" might be appropriate depending on the nature of the RP/NRP. Was it a site for source production or secondary manufacture usage or was there incidental usage?

Shouldn't background really be a consideration discussed in each of the life cycle stages 1 and 2? To consider only LCS 3 might not benefit the investigation efficiency so consider moving portions of this discussion forward in the guidance document so DQOs can be better informed.

For this risk discussion, can this guidance offer more instruction, especially for developing background for groundwater, surface water, or sediment media, which are all much more likely to be impacted by ambient inputs or reference existing guidance? It seems like this section is incredibly brief for how important it is to those performing the work.

- o MPCA Response: Comment acknowledged. Ambient/anthropogenic background evaluations and discussions with the MPCA project team can occur at any Life Cycle Stage. This is an area of continually evolving science and will likely be updated as new information becomes available.

34. Comment: Page 30. Background should be considered for recontamination potential, remedy longevity, and O&M procedures.

- o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.

35. Comment: Page 32. Expand the scope: "...special consideration must be given to the unique transport, storage, and fate of PFAS, and the limited...

Rationale: PFAS storage in the vadose zone and at air-water interfaces within the capillary zone above the groundwater table greatly affects PFAS retardation in the subsurface and the evolution of PFAS distribution with time at release sites. With transport in groundwater, PFAS retard, like any contaminant, and undergo chromatic separation of multicomponent releases and biotic transformation of precursor PFAS into analytical target PFAS (i.e., PFCAs).

- o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.

36. Comment: Page 34. Is there is reference missing? Should environmental conditions require corrective measures to immediately reduce unacceptable risks to human health or the environment, the Agency may require an Interim Response Action (IRA) prior to or parallel with the RI/RA process (Ref.).

- o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.

37. Comment: Page 35. The acronym RAOs is undefined and not in the acronyms list. Was MDD intended to be referenced?

- o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.

38. Comment: Page 43-44. The section about What about Ambient background concentrations references a MPCA white paper that was recently completed. Please provide a link or append to the guidance accordingly.

- o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.

39. Comment: Page 44. Thank you for the clear expectation to: *There is no expectation that PFAS testing be conducted at a brownfield site in the absence of a potential source.*

- o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.

40. Comment: Page 44. Great suggestions presented in the section under Remediation.

- o MPCA Response: We appreciate your comment, thank you.

41. Comment: Page 45, Action 1: Characterize waste. Is the bullet "Appropriate type" referring to a grab sample vs. a composite sample?

- o MPCA Response: Comment acknowledged, and REM PFAS Guidance updated accordingly.

Marie De los Santos

Page 7

May 7, 2024

We appreciate your interest in providing feedback to the MPCA on the draft PFAS Guidance. If you have any questions about the contents of this response, please contact me, Tim Grape, at 651-757-2893 or by email at timothy.grape@state.mn.us.

Sincerely,

Timothy Grape

This document has been electronically signed.

Timothy Grape

Supervisor

Superfund Unit 1

Remediation Division

TG:df

May 3, 2024

Liz Robertson
Minnesota Department of Health
Site Assessment and Consultation Unit
625 Robert Street N
St. Paul, MN 55164-0975

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 4, 2023, from the Minnesota Department of Health (MDH) on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document

Dear Liz Robertson:

The MPCA appreciates your valuable input on the draft MPCA Remediation Division PFAS Guidance (PFAS Guidance) and MPCA's guidance development process in your October 4, 2023, correspondence. The MPCA recognizes the importance of conducting meaningful consultation with all stakeholders in Minnesota.

The MPCA has provided the following responses to your comments below and we have incorporated your valuable feedback into the updated Remediation PFAS Guidance document.

1. Glossary is incomplete if the intention is to include all acronyms and abbreviations used throughout the document. If that is not the intention, how was it decided which terms/acronyms/abbreviations were included in the glossary?
 - o MPCA Response: Comment acknowledged, and the glossary section was updated accordingly.
2. PFAS in MERLA Flowchart - delete one of the titles (probably don't need the one right above the flowchart), and the colors do not translate well to grayscale printing - the greenish and grayish colors in the legend and the flowchart look the same when printed, the yellow font color looks no different from white font color when printed.
 - o MPCA Response: Comment acknowledged, and the document was updated accordingly.
3. In-text citations are used inconsistently.
 - o MPCA Response: Comment acknowledged, and the document was updated accordingly.
4. Page 6 under Initial Investigations Action 1 - the italics line beginning with "Receptor Survey" and what follows doesn't make sense. Is that supposed to be a definition?
 - o MPCA Response: Comment acknowledged, and the document was updated accordingly.
5. Page 10 table needs a title.

- o MPCA Response: Comment acknowledged, and the document was updated accordingly.
- 6. Page 15 "Note" box - is "conducting" a typo?
 - o MPCA Response: Comment acknowledged, and the document was updated accordingly.
- 7. Page 18 reference error in opening paragraph.
 - o MPCA Response: Comment acknowledged, and the document was updated accordingly.
- 8. Page 38 table needs a title.
 - o MPCA Response: Comment acknowledged, and the document was updated accordingly.
- 9. Page 41 suggests omitting "(aka well advisory)" from the Special Well and Boring Construction Area description. To my knowledge SWBCAs are not typically referred to as a "well advisory" by MPCA or MDH.
 - o MPCA Response: Comment acknowledged, and the document was updated accordingly.
- 10. Formatting is not consistent throughout Resources section.
 - o MPCA Response: Comment acknowledged, and the document was updated accordingly.
- 11. Figures and Tables are not numbered correctly throughout the document.
 - o MPCA Response: Comment acknowledged, and the document was updated accordingly.
- 12. Use of capitalization is not consistent throughout the document.
 - o MPCA Response: Comment acknowledged, and the document was updated accordingly.
- 13. Formatting of Heading 1, Heading 2, etc. is not consistent throughout the document.
 - o MPCA Response: Comment acknowledged, and the document was updated accordingly.

We appreciate your interest in providing feedback to the MPCA on the PFAS Guidance. If you have any questions about the contents of this response, please contact me at 651-757-2893 or via email at timothy.grape@state.mn.us.

Sincerely,



This document has been electronically signed.

Timothy Grape
Supervisor
Superfund Unit 1
Remediation Division
TG:df

May 3, 2024

Joshua Gad
Minnesota Environmental Science and Economic Review Board President
WRRF Superintendent
City of Mankato
10 Civic Center Plaza
Mankato, MN 56001

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 5, 2023, from the Minnesota Environmental Science and Economic Review Board (MESERB) on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document

Dear Joshua Gad:

The MPCA appreciates MESERB's review and valuable input on the draft MPCA Remediation Division PFAS Guidance (PFAS Guidance) and MPCA's guidance development process. The MPCA recognizes the importance of conducting meaningful consultation with all stakeholders in Minnesota.

Below are MESERB's primary comments on the draft PFAS guidance as provided in your October 5, 2023, letter followed by the MPCA's responses:

1. Publicly owned wastewater treatment plants (POTWs) do not produce or use PFAS, and the MPCA should provide local governments with clear liability protection for the investigation and remediation of PFAS.
 - o MPCA response: The MPCA recognizes the vital role that POTWs play in ensuring that wastewater received by municipalities is appropriately managed, treated, and discharged so as not to adversely impact human health or the environment. The MPCA Remediation program has enforcement discretion regarding responsible parties and passive receivers of contamination associated with identified releases under the Minnesota Environmental Response and Liability Act (MERLA) Statute 115B.03 (<https://www.revisor.mn.gov/statutes/cite/115B.03>). The MPCA Superfund program within the Remediation Division does not intend to identify municipal wastewater facilities as responsible parties in Superfund based on passively receiving PFAS through the wastewater stream. The MPCA also acknowledges that there is language in the draft Remediation PFAS Guidance document that will be modified in the final Guidance document to clarify and more accurately reflect the potential for PFAS fate and transport related to WWTPs and land applied biosolids situations in the context of direct sources versus conduits. The two locations in the draft Remediation PFAS Guidance document where language modifications will be made include:
 - Page 4 – “Desktop Review Milestone 1, Action 2 Section,” Paragraph 2 “Off-site sources that may be of particular concern that may require expansion of the

1,000-foot site radius could include fire training facilities or other AFFF releases, land disposal facilities, and wastewater treatment plants.”

- Page 12 – “Develop the CSM Action 2: Source Evaluations Section,” Paragraph 1 “It is also important to consider secondary sources of PFAS at a site, such as: sump, wastewater, or stormwater discharges, irrigation, pesticide applications, imported soils, and applications of biosolids.”
2. The MPCA’s Wastewater and Remediation Divisions should work collaboratively with municipal POTWs to develop a specific PFAS remediation strategy applicable to POTWs.
- MPCA response: the MPCA is interested in continuing to work collaboratively with municipal stakeholders, including MESERB, to develop a comprehensive strategy to address PFAS in wastewater and biosolids.

We appreciate your interest in providing feedback to the MPCA on the draft PFAS Guidance. If you have any questions about the contents of this response, please contact me at 651- 757-2893 or by email at timothy.grape@state.mn.us.

Sincerely,

Timothy Grape

This document has been electronically signed.

Timothy Grape
Supervisor
Superfund Unit 1
Remediation Division

TG:df

May 3, 2024

James Rice

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated September 30, 2023, from James Rice on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document

Dear James Rice:

The MPCA appreciates your valuable input on the draft MPCA Remediation Division PFAS Guidance (PFAS Guidance) and MPCA's guidance development process. The MPCA recognizes the importance of conducting meaningful consultation with all stakeholders in Minnesota.

The comments provided in your September 30, 2023, correspondence include specific questions and comments regarding the status of a municipal water system for the City of Old Cottage Grove and references to previous testing of private wells. Specific questions related to the status of municipal water supply in Cottage Grove should be directed to City officials. Questions regarding private residential well testing should be directed to the Minnesota Department of Health (MDH) at (651) 201-4897.

There were no specific comments in your September 30, 2023, correspondence related to the contents of the draft Remediation PFAS guidance document for the MPCA to respond to.

We appreciate your interest in providing feedback to the MPCA on the draft Remediation PFAS Guidance. If you have any questions about the contents of this response, please contact me at 651-757-2893 or by email at timothy.grape@state.mn.us.

Sincerely,

Timothy Grape

This document has been electronically signed.

Timothy Grape
Supervisor
Superfund Unit 1
Remediation Division

TG:df

May 3, 2024

Gabrielle Batzko
Coordinator
Tri-County Solid Waste Management Commission
705 Courthouse Square
St. Cloud, MN 56303-4701

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 5, 2023, from Gabrielle Batzko on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document

Dear Gabrielle Batzko:

The MPCA appreciates your review and valuable input on the draft MPCA Remediation Division PFAS Guidance (PFAS Guidance) and MPCA's guidance development process. The MPCA recognizes the importance of conducting meaningful consultation with all stakeholders in Minnesota.

We have reviewed the comments you provided in your submittal dated October 5, 2023. Below are the comments you provided followed by MPCA's responses to the comments:

1. Expand the Glossary – there are acronyms not included that would be helpful.
 - o MPCA response: Comment acknowledged; the glossary has been updated.
2. Page 3 - "If a site has a connection to one of these industry categories, a deeper look may be warranted to determine if the specific operations at the site may have used PFAS. For example, a paper mill that produced coated paper or food packaging may be viewed differently than a paper mill that solely produced paper towels or tissues." How does the MPCA plan to prioritize? The document goes on to say, "both types of facilities are included in this list as potentially associated with PFAS release." There is more than a potential chance. What products are most common? A lot of people don't know how common these chemicals are, it would be helpful to expand on these statements.
 - o MPCA response: The MPCA agrees that additional evaluation may be warranted to determine if a facility or industry may have had operations involving the use of PFAS or PFAS containing products.
3. Page 3 - Document states "PFAS release" and "PFAS were introduced..." Who were they introduced by? The document should continue to differentiate between those who may test high for concentrations of PFAS, those who produce PFAS, and those who release PFAS. There is a difference between intentional and unintentional use and that should be noted. Likewise, on Page 53, the document says, "Industries and industrial practices associated with the generation, use, storage, or disposal of PFAS". Define and stress that there is a stark difference between how these terms are applied to PFAS and different industries.

- o MPCA response: The MPCA added language to the guidance document acknowledging the distinction between PFAS generators and intentional users of PFAS versus unintentional receivers of PFAS such as municipal wastewater treatment plants.
- 4. Page 4 - "The MPCA recommends starting with a baseline radius of 1,000 feet from the edge of all receptors identified at a site." Why is the baseline less than a quarter mile if PFAS are "highly soluble and mobile" and the ASTM standard is, at minimum, double? How does this work toward and respect EJ goals and marginalized communities?
 - o MPCA response: The MPCA acknowledges that the 1,000-foot radius may not capture every potential PFAS release that may impact a site. The 1,000-foot radius is intended to capture potential releases in the immediate vicinity of a site where concentrations are likely to be highest.
- 5. Page 4 - Land disposal sites SHOULD require expansion of the radius as consumer goods, food, etc., are disposed of at these sites and all landfills will eventually leak.
 - o MPCA response: The MPCA will evaluate the effectiveness of the existing 1,000-foot radius for potential sources including land disposal sites as the science of PFAS fate and transport continues to advance and we gain knowledge from the investigations completed under this guidance.
- 6. Page 4 - "Another important consideration in the desktop review is traditional ecological knowledge (TEK) pertaining to the site." This is really important! Are there long-term impacts or generational impacts that EJ communities should know about? Could this be an exchange of knowledge?
 - o MPCA response: The MPCA acknowledges the importance of traditional ecological knowledge and how it may provide valuable insight into impacts related to PFAS contamination in a community. We have incorporated TEK considerations into the initial site review section of the guidance document.
- 7. Page 4 - "Current or historical use of the remediation site indicates potential or known use of PFAS." Proposed reword...Current or historical *land use and zoning regulations regarding* the remediation site. Where did laws used to restrict people to living, who was living nearest to remediation sites, how/ has that changed, etc.
 - o MPCA response: Comment acknowledged, and the guidance document was updated to include land use and zoning regulations language.
- 8. Page 17 - Under "Sources," "Other including natural processes for some contaminants." Consider rewording as this could get confusing and easily taken out of context. Could be interpreted as PFAS could be sourced directly from natural process.
 - o MPCA response: Comment acknowledged, and the guidance document has been updated to reflect this language modification.

9. Page 17 - Food is listed under “exposure pathways/routes”, but agriculture is hardly discussed.
 - o MPCA response: Comment acknowledged and MPCA has removed this figure and provided updated language regarding exposure pathways/routes in this section.
10. Page 18 - “Error! Reference source not found” first paragraph.
 - o MPCA response: Comment acknowledged, and link has been corrected.
11. Pages 18-19 - Inconsistent in-text citations for Table 2 and Figure 2.
 - o MPCA response: Comment acknowledged, and citations have been corrected based on updated tables and figures in the guidance document.
12. Page 21 - Figure 2 feels a little out of place. It is a helpful visualization but may be better place in a different part of the guidance.
 - o MPCA response: Comment acknowledged, and Figure 2 has been updated in the guidance document.
13. Page 22 - “For PFAS that bioaccumulate in fish tissue, such as PFOS, fish consumption can be a significant source of exposure” What populations tend to consume a lot of fish? What groups of people source fish close to home? How does the MPCA plan to alert people who source their fish away from their residence, or on a periodic basis, of PFAS contamination or a remediation project? Have there been thoughts on if/how PFAS will impact those that harvest wild rice?
 - o MPCA response: The MPCA Remediation program notifies or requires responsible parties to notify communities of potential and confirmed exposure associated with an identified release of contamination including exposure through consumption of impacted wildlife. The MPCA is following ongoing research into fish consumption and the impacts of wild rice harvesting from PFAS contamination and will incorporate these findings into future guidance document updates.
14. Page 28 - There is a link for an ambient background PFAS concentration memo that appears like normal text (link does work).
 - o MPCA response: Comment acknowledged, and the link to the ambient background document has been updated in the guidance document.
15. Page 35 – Broken link
 - o MPCA response: Comment acknowledged, and the link has been updated in the guidance document.
16. Page 46 - Given that so many landfills have become superfund sites, why are landfills a viable option for PFAS disposal?
 - o MPCA response: The MPCA Remediation program does not have the authority to regulate what materials are disposed of in solid waste landfills.

17. Page 48 - Under "Site investigation," how is the MPCA planning to select a point of contact, and how is the MPCA planning to identify "each individual EJ community?" While layers on a map that could make this seem easy, does the MPCA plan on taking an intersectional and holistic approach to make sure that the agency is getting the most accurate and useful information?

- o MPCA response: The MPCA will use all available information and resources to identify the appropriate points of contact for EJ communities impacted by a Remediation program site in accordance with our Environmental Justice Framework: <https://www.pca.state.mn.us/sites/default/files/p-gen5-05.pdf>.

Overall thoughts:

18. Little detail regarding agriculture and food systems

- o MPCA response: Comment acknowledged, this Remediation PFAS Guidance document is focused on the investigation, risk assessment and remediation of PFAS releases to the environment and is not intended to provide extensive details on specific commercial or industrial processes including agriculture and food systems.

19. Little detail regarding waste

- o MPCA response: Comment acknowledged, this Remediation PFAS Guidance document is focused on the investigation, risk assessment, and remediation of PFAS releases to the environment and is not intended to provide extensive detail on waste or waste processes.

20. Needs more detail about how the intersections of multiple issues could cause a concern for PFAS contamination.

- o MPCA response: Comment acknowledged, this Remediation PFAS Guidance document is focused on the investigation, risk assessment, and remediation of PFAS releases to the environment. The MPCA will continue to update the guidance document as our understanding of the intersection of multiple issues that could cause a concern for PFAS contamination expands.

21. Broken links throughout

- o MPCA response: Comment acknowledged, and the links have been updated throughout the guidance document.

22. EJ needs more of a focus. There are very few specifics on how the agency is going to address EJ elements, community members (not just representatives), etc. Likewise, while there are criteria for EJ, this document does not consider that someone/community may not fit into the defined criteria but still may be struggling with PFAS. Consider creating a secondary set of criteria with the intent of remaining EJ focused, for communities that do not fit the original EJ criteria provided in the draft guidelines but would like to receive help for contamination outside of their control.

Gabrielle Batzko

Page 5

May 3, 2024

- o MPCA response: The MPCA is committed to environmental justice, the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, concerning the development, implementation, and enforcement of environmental laws, regulations, and policies. The MPCA is committed to making decisions that do not place disproportionate pollution burdens on these communities. Additional information regarding the MPCA's strategy for incorporating Environmental Justice in all our programs can be found at: <https://www.pca.state.mn.us/about-mPCA/environmental-justice>.

We appreciate your interest in providing feedback to the MPCA on the draft Remediation PFAS Guidance. If you have any questions about the contents of this response, please contact me at 651-757-2893 or by email at timothy.grape@state.mn.us.

Sincerely,



This document has been electronically signed.

Timothy Grape

Supervisor

Superfund Unit 1

Remediation Division

TG:df

May 3, 2024

Elizabeth Wefel
Coalition of Greater Minnesota Cities
c/o 525 Park Street, Suite 470
St. Paul, MN 55103

Craig Johnson
League of Minnesota Cities
145 University Avenue West
St. Paul, MN 55103

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 3, 2023, from the Coalition of Greater Minnesota Cities (CGMC) and League of Minnesota Cities (LMC) on the MPCA Draft Remediation Per and Poly-fluoroalkyl Substances (PFAS) Guidance document

Dear Elizabeth Wefer and Craig Johnson:

The MPCA appreciates your review and valuable input on the draft MPCA Remediation Division PFAS Guidance document. The MPCA recognizes the important role that cities play in protecting Minnesota's water resources through their wastewater facilities and biosolids programs. We reviewed your letter dated October 3, 2023 (letter) including comments and recommendations on the draft MPCA Remediation Division PFAS Guidance.

Below are the recommendations you provided in the above referenced letter followed by MPCA's responses to the recommendations:

1. Remove references to municipal wastewater and the land application of their biosolids from the guidelines.
 - MPCA response: The MPCA recognizes the vital role that wastewater treatment facilities play in ensuring that wastewater received by municipalities is appropriately managed, treated, and discharged so as not to adversely impact human health or the environment. It is important for the MPCA Remediation program to acknowledge the fate and transport cycle of PFAS in our environment and all the different ways that PFAS may be redistributed in the environment including via wastewater discharge and biosolids land applications. The MPCA needs to be transparent with all stakeholders about how PFAS may be released and redistributed in the environment so we can accurately and adequately regulate PFAS site investigation and clean-up activities in our Remediation program. Removing references to municipal wastewater and the land application of biosolids in our understanding of their potential role in PFAS fate and transport, would limit our ability to accurately and effectively regulate PFAS site investigations and remedial actions at sites where these mechanisms are relevant. The MPCA acknowledges that land applied materials that have the potential to contain PFAS include more than biosolids and as a result, we will incorporate language in the

guidance that reflects this broader reference to land applied materials versus biosolids alone. The MPCA also acknowledges that there is language in the draft Remediation PFAS Guidance document that will be modified in the final Guidance document to clarify and more accurately reflect the potential for PFAS fate and transport related to wastewater treatment plants (WWTPs) and land applied biosolids situations in the context of direct sources versus conduits. The two locations in the draft Remediation PFAS Guidance document where language modifications will be made include:

- Page 4 – “Desktop Review Milestone 1, Action 2 Section”, Paragraph 2 “Off-site sources that may be of particular concern that may require expansion of the 1,000-foot site radius could include fire training facilities or other AFFF releases, land disposal facilities, and wastewater treatment plants.”
 - Page 12 – “Develop the CSM Action 2: Source Evaluations Section”, Paragraph 1 “It is also important to consider secondary sources of PFAS at a site, such as: sump, wastewater, or stormwater discharges, irrigation, pesticide applications, imported soils, and applications of biosolids.”
2. Work with municipal stakeholders to develop a comprehensive strategy to address PFAS in wastewater and biosolids;
 - o MPCA response: The MPCA is actively working with municipal stakeholders and values the collaboration and feedback provided by our stakeholders. The MPCA looks forward to continuing our work with municipal stakeholders, including CGMC and LMC, to enhance our efforts in addressing PFAS in wastewater and biosolids.
 3. Develop and implement guidance policies or legislation directing enforcement efforts away from passive receivers of PFAS, such as municipal wastewater facilities.
 - o MPCA response: The MPCA Remediation program has enforcement discretion regarding responsible parties and passive receivers of contamination associated with identified releases under the Minnesota Environmental Response and Liability Act (MERLA) Statute 115B.03 (<https://www.revisor.mn.gov/statutes/cite/115B.03>). The MPCA Superfund program does not intend to identify municipal wastewater facilities as responsible parties in Superfund based on passively receiving PFAS through the wastewater stream. It is also important for the MPCA Remediation program to acknowledge the fate and transport cycle of PFAS in our environment and all the different ways that PFAS may be redistributed in the environment including via commercial and industrial receivers and handlers of PFAS-containing materials.

We appreciate your interest in providing feedback to the MPCA on the draft Remediation PFAS Guidance. If you have any questions about the contents of this response, please contact me at 651-757-2893 or by email at timothy.grape@state.mn.us.

Elizabeth Wefer
Craig Johnson
Page 3
May 3, 2024

Sincerely,

Timothy Grape

This document has been electronically signed.

Timothy Grape
Supervisor
Superfund Unit 1
Remediation Division

TG:df

May 3, 2024

Elijah Stuber
Environmental Compliance Specialist
City of St. Cloud
1201 7th Street South
St. Cloud, MN 56301

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 5, 2023, from the City of St. Cloud (the City) on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document

Dear Elijah Stuber:

The MPCA appreciates the City's review and valuable input on the draft MPCA Remediation Division PFAS Guidance (PFAS Guidance) and MPCA's guidance development process. The MPCA recognizes the importance of conducting meaningful consultation with all stakeholders in Minnesota.

Below are the City's comments and concerns as provided in your October 5, 2023, letter followed by the MPCA's responses:

1. Based on the statement on the top of page 45, "PFAS are classified as a hazardous waste under MERLA due to their potential to be a hazard to human health or the environment" and listing wastewater treatment plants as sources as mentioned in Life Cycle Stages 1 – 3 above, the City would appreciate clarification on the classification of wastewater treatment facilities as sites of PFAS contamination under MERLA."
 - o MPCA response: The MPCA recognizes the vital role that wastewater treatment facilities play in ensuring that wastewater received by municipalities is appropriately managed, treated, and discharged so as not to adversely impact human health or the environment. It is important for the MPCA Remediation program to acknowledge the fate and transport cycle of PFAS in our environment and all the different ways that PFAS may be redistributed in the environment including via wastewater discharge and biosolids land applications. The MPCA needs to be transparent with all stakeholders about how PFAS may be released and redistributed in the environment so we can accurately and adequately regulate PFAS site investigation and clean-up activities in our Remediation program. The MPCA also acknowledges that there is language in the draft Remediation PFAS Guidance document that will be modified in the final Guidance document to clarify and more accurately reflect the potential for PFAS fate and transport related to wastewater treatment plants (WWTPs) and land applied biosolids situations in the context of direct sources versus conduits. The two locations in the Draft Remediation PFAS Guidance document where language modifications will be made include:

Elijah Stuber

Page 3

May 3, 2024

Sincerely,

Timothy Grape

This document has been electronically signed.

Timothy Grape

Supervisor

Superfund Unit 1

Remediation Division

TG:df

May 3, 2024

Drew Hatzenbihler
Environmental/Recreation Manager
Morrison County Public Works
213 1st Avenue SE
Little Falls, MN 56345

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 4, 2023, from Morrison County on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document

Dear Drew Hatzenbihler:

The MPCA appreciates Morrison County's review and valuable input on the draft MPCA Remediation Division PFAS Guidance (PFAS Guidance) and MPCA's guidance development process. The MPCA recognizes the importance of conducting meaningful consultation with all stakeholders in Minnesota.

Below are Morrison County's concerns as provided in your letter dated October 4, 2023, followed by the MPCA's responses:

1. Landfills and other disposal facilities should be shielded from liability for liquid or gas discharges that may contain PFAS.
 - o MPCA response: The MPCA recognizes the vital role that landfills, and disposal facilities play in ensuring that solid waste is appropriately managed and treated so as not to adversely impact human health or the environment. It is important for the MPCA Remediation program to acknowledge the fate and transport cycle of PFAS in our environment and all the different ways that PFAS contamination may be redistributed in the environment including via waste disposal. The MPCA needs to be transparent with all stakeholders about how PFAS may be released and redistributed in the environment so we can accurately and adequately regulate PFAS site investigation and clean-up activities in our Remediation program.
2. Existing landfills will have no record of existing PFAS containing wastes disposed of before this new guidance is enacted making it impossible to narrow down liability from a release.
 - o MPCA response: The Remediation PFAS Guidance does not require landfills to provide records of existing PFAS containing wastes disposed of before the release of the Guidance document.
3. The guidance fails to adequately shield potential PFAS disposal facilities from liability. As a result, PFAS cleanup will ultimately function as a way of passing liability for PFAS contamination to disposal facilities as generator liability would likely be unenforceable. In addition, given the potential liability concerns, it is entirely likely that many disposal facilities will be unwilling to

receive PFAS-contaminated waste or charge high fees for disposal, making PFAS contamination remediation cost prohibitive or impossible.

- o MPCA response: The Remediation PFAS Guidance document provides guidance on identifying, delineating, mitigating, and remediating PFAS releases to the environment and is not intended to provide a shield for facilities that manage and dispose of PFAS-containing materials. The MPCA acknowledges that disposal facilities have discretion regarding the materials they receive including PFAS-contaminated waste materials.
4. Waste disposal facilities do not produce or use PFAS in their operations but without proper procedures and guidance, these facilities could bear the burden of liability.
- o MPCA response: The MPCA acknowledges that disposal facilities do not typically produce or use PFAS in their operations and that disposal facilities have discretion regarding the materials they receive including PFAS contaminated waste materials.

We appreciate your interest in providing feedback to the MPCA on the draft PFAS Guidance. If you have any questions about the contents of this response, please contact me at 651- 757-2893 or by email at timothy.grape@state.mn.us.

Sincerely,



This document has been electronically signed.

Timothy Grape
Supervisor
Superfund Unit 1
Remediation Division

TG:df

May 3, 2024

Douglas M. Carnival
McGrann Shea Carnival Straughn & Lamb, Chartered
Counsel to the National Waste & Recycling Association
U.S. Bancorp Center
800 Nicollet Mall, Suite 2600
Minneapolis, MN 55402

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 5, 2023, from the National Waste & Recycling Association (NWRA) on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document

Dear Douglas M. Carnival:

The MPCA appreciates the NRWA's review and valuable input on the draft MPCA Remediation Division PFAS Guidance (PFAS Guidance) and MPCA's guidance development process. The MPCA recognizes the importance of conducting meaningful consultation with all stakeholders in Minnesota.

Below are the NRWA's concerns as provided in your letter dated October 5, 2023, followed by the MPCA's responses:

1. "Currently, sites sampling remediation material for PFAS are experiencing difficulties in finding disposal options because the landfills are not accepting the material due to the unknown regulatory and liability risks. The primary drivers of the industry's concerns are the following:
 - Regulatory uncertainty at both a Federal & State level.
 - Lack of "passive receiver" regulatory exclusion EPA/MPCA from CERCLA/MERLA.
 - General Liability and Risk of 3rd party lawsuits under CERCLA/MERLA.
 - Potential rejection of landfill leachate by WWTPs due to PFAS concerns"
- o MPCA response: The MPCA recognizes the vital role that landfills, and wastewater treatment facilities play in ensuring that solid waste and wastewater is appropriately managed and treated so as not to adversely impact human health or the environment. It is important for the MPCA Remediation program to acknowledge the fate and transport cycle of PFAS in our environment and all the different ways that PFAS contamination may be redistributed in the environment including via solid waste disposal, wastewater discharge, and land applications of PFAS containing materials, including but not limited to, biosolids. The MPCA needs to be transparent with all stakeholders about how PFAS may be released and redistributed in the environment so we can accurately and adequately regulate PFAS site investigation and clean-up activities in our Remediation program.
2. "Until these issues are resolved, it is unlikely that landfills will accept PFAS remediation material for disposal, since the potential regulatory consequences and legal risks far outweigh what marginal revenue gained from tip fees."

- o MPCA response: The MPCA acknowledges the important role that solid waste landfill facilities play in the site investigation and remediation process when it comes to disposal of contaminated materials from these activities and that landfill facilities are not required to accept PFAS containing materials.
- 3. “Additionally, we are concerned about how this guidance will affect legacy or unlined facilities, since they are listed in the “Desktop Review” and “Annex 1” portions of the guidance document. PFAS is ubiquitous in the environment, as MPCA recognizes in the guidance, and it is a virtual certainty that there will be PFAS detected from sources other than our facilities.”
 - o MPCA response: The MPCA guidance needs to take into account all potential sources of PFAS when evaluating a release of PFAS to the environment including the possibility of a release associated with a legacy or unlined disposal facility. The PFAS source evaluation in the guidance is designed to assist in determining the source(s) of a release to the environment based on a robust site investigation process including, but not limited to, concentration gradients, fate ,and transport of the contaminants of concern, groundwater flow direction, and site stratigraphy.

We appreciate your interest in providing feedback to the MPCA on the draft PFAS Guidance. If you have any questions about the contents of this response, please contact me at 651- 757-2893 or by email at timothy.grape@state.mn.us.

Sincerely,



This document has been electronically signed.

Timothy Grape
Supervisor
Superfund Unit 1
Remediation Division

TG:df

May 3, 2024

David L. Wagger PhD
Chief Scientist/Director of Environmental Management
Institute of Scrap Recycling Industries, Inc.
1250 H Street NW, Suite 400
Washington D.C. 20005

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 6, 2023, from the Institute of Scrap Recycling Industries, Inc. (ISRI) on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document

Dear David Wagger:

The MPCA appreciates the ISRI's review and valuable input on the draft MPCA Remediation Division PFAS Guidance (PFAS Guidance) and MPCA's guidance development process. The MPCA recognizes the importance of conducting meaningful consultation with all stakeholders in Minnesota.

Below are the comments provided in your October 6, 2023, letter followed by the MPCA's responses:

1. MPCA Should Not Arbitrarily Lump "Scrapyards" with Industries that Make and/or Intentionally Use PFAS."
 - o MPCA response: The MPCA acknowledges that scrapyards may generally be characterized as receivers of PFAS materials versus industries that make or intentionally use PFAS containing materials.
2. "Distinguishing Between PFAS Users and PFAS Receivers is a Good Concept that MPCA Should Actually Use."
 - o MPCA response: The MPCA will include additional language in the Remediation PFAS Guidance to clarify distinctions between industry users of PFAS and facilities that are receivers of PFAS waste. It is also important for the MPCA Remediation program to acknowledge the fate and transport cycle of PFAS in our environment and all the different ways that PFAS may be redistributed in the environment including via commercial and industrial receivers and handlers of PFAS containing materials.
3. "Scrapyards," "Scrap Yards," and "Metal Salvage Facilities" are Not Solid Waste Facilities
 - o MPCA response: The MPCA acknowledges that "scrapyards," "scrap yards," and "metal salvage facilities" are not defined as solid waste facilities and are therefore not regulated as solid waste facilities.

David L. Wagger Ph.D.

Page 2

May 3, 2024

We appreciate your interest in providing feedback to the MPCA on the draft PFAS Guidance. If you have any questions about the contents of this response, please contact me at 651- 757-2893 or by email at timothy.grape@state.mn.us.

Sincerely,

Timothy Grape

This document has been electronically signed.

Timothy Grape

Supervisor

Superfund Unit 1

Remediation Division

TG:df

May 3, 2024

Chris Greene

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 5, 2023, from Barr Engineering Co. on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document

Dear Chris Greene:

The MPCA appreciates your review and valuable input on the draft MPCA Remediation Division PFAS Guidance document. We reviewed your letter dated October 5, 2023 (letter) including comments on the draft MPCA Remediation Division PFAS Guidance.

Below are the comment areas you provided in the above referenced letter followed by MPCA's responses to the comments:

1. Pg. 6: Could you define "responsible party" and "non-responsible party?"
 - o MPCA Response: Under Minnesota Statute 115B.03, subdivision 1, a party is responsible for a release or threatened release of a hazardous substance, or a pollutant or contaminant, from a facility if the party:
 - (1) owned or operated the facility:
 - (i) when the hazardous substance, or pollutant or contaminant, was placed or came to be located in or on the facility;
 - (ii) when the hazardous substance, or pollutant or contaminant, was located in or on the facility but before the release; or
 - (iii) during the time of the release or threatened release;
 - (2) owned or possessed the hazardous substance, or pollutant or contaminant, and arranged, by contract, agreement or otherwise, for the disposal, treatment or transport for disposal or treatment of the hazardous substance, or pollutant or contaminant; or
 - (3) knew or reasonably should have known that waste the person accepted for transport to a disposal or treatment facility contained a hazardous substance, or pollutant or contaminant, and either selected the facility to which it was transported or disposed of it in a manner contrary to law.
 - A non-responsible party would be any party that does not meet the criteria listed above for a responsible party.
2. Pg. 6-7: In addition to wells, what about surface water sampling and withdrawals/uses? (I see this is partially addressed later under Action 2.)

- o MPCA Response: The Remediation PFAS guidance requires sampling and delineation of extent and magnitude and risk evaluation related to PFAS contamination in all potentially impacted media.
- 3. Pg. 6, top: capitalization on header: “Site investigation goal 1” There are other word/line/character spacing issues, missed superscripts, etc. but I didn’t note them all. I assume there will be a final readthrough to catch these little issues.
 - o MPCA Response: Yes, the MPCA formatting team has reviewed the draft document to identify and correct formatting issues present in the draft guidance version and has made these formatting corrections in the final document.
- 4. Pg. 8: “Surface water sampling is necessary if there was a known direct release of PFAS to the surface water body or if there is a confirmed or likely PFAS contaminant migration pathway to the surface water via surface runoff...” Why the qualification? Is it intended to exclude potential PFAS coming to the surface water site via aerial deposition, as noted later in the document?
 - o MPCA Response: The qualification is intended to capture the scenario where there is a confirmed or likely pathway for PFAS contamination to migrate to a surface water body versus the scenario where there was confirmed observation that PFAS contamination actually migrated to the surface water during an observed/documented spill or release event that resulted in PFAS contamination migrating to a surface water.
- 5. Pg. 8: “Initial Investigations Action 2” should this be milestone 1 action 2? At times it was difficult to follow the hierarchy of stage/goal/milestone/action.
 - o MPCA Response: The formatting of the final document has been revised to be easier to follow each stage.
- 6. Pg. 13: “background”—in addition to environmental background there is also human background exposure levels to consider—usually in terms of serum concentration of PFAS.
 - o MPCA Response: The MPCA updated the PFAS ambient background concentrations fact sheet dated March 2024 (<https://www.pca.state.mn.us/sites/default/files/tdr-g1-25.pdf>) and we will continue to update our understanding of ambient background for PFAS as the science evolves.
- 7. Pg. 15: “hazard” is described as the “inherent danger of a chemical.” How is this distinct from toxicity? Then a bullet point defines hazard as the presence of PFAS at a site. In Figure 1, hazard is combined with the term stressor. Is it assumed that any presence of PFAS, no matter how low, generates risk?
 - o MPCA Response: Toxicity is the potential for a substance to cause harm and is one of several factors in determining whether a substance is potentially hazardous. The MPCA has replaced Figure 1 in the final guidance document. The MPCA uses established Risk Based Values (RBVs) to evaluate the exposure risk in specific media.

8. Pg. 18, top: “bad reference not found?? Also pg. 24 step 4 and pg. 28, Fig. 2, maybe include surface water? SW can be a source of irrigation or livestock water.”
 - o MPCA Response: The formatting of the document has been revised and all references have been verified to confirm active links. The MPCA has removed the draft Figure 2 and incorporated language regarding evaluating additivity and surface water risks in section 3.3.2 of the final Guidance document.

9. Pg. 48—EJ cross-cutting issue: “I thought this was a good summary of the impact of EJ concerns on the whole process. You may want to consider and mention health disparities in population of concern, which are often tied to economic/social inequity.”
 - o MPCA Response: The MPCA appreciates this feedback and clarification regarding mental health disparities in populations of concern.

10. General comment: “I did not see a lot of discussion on separating site-based exposure from non-site, background exposure. I may have missed it, though.”
 - o MPCA Response: The MPCA updated the PFAS ambient background concentrations fact sheet dated March 2024 (<https://www.pca.state.mn.us/sites/default/files/tdr-g1-25.pdf>) and we will continue to update our understanding of ambient background for PFAS as the science evolves.

We appreciate your interest in providing feedback to the MPCA on the draft Remediation PFAS Guidance. If you have any questions about the contents of this response, please contact me at 651-757-2893 or by email at timothy.grape@state.mn.us.

Sincerely,



This document has been electronically signed.

Timothy Grape

Supervisor

Superfund Unit 1

Remediation Division

TG:df

May 3, 2024

Brandy Toft
Environmental Director
Leech Lake Band of Ojibwe
Division of Resource Management
115 Sixth Street NW
Cass Lake, MN 56633

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 3, 2023, from Leech Lake Band of Ojibwe (Band) on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document

Dear Brandy Toft:

The MPCA appreciates the Band's review and valuable input on the draft MPCA Remediation Division PFAS Guidance document (PFAS Guidance) and the MPCA's guidance development process. The MPCA recognizes the importance of conducting meaningful consultation and collaboration with the Band and all Tribal governments of Minnesota.

Below are the Band's concerns as provided in your October 3, 2023, letter followed by the MPCA's responses:

1. Tribal governments did not receive an opportunity outside of the public comment period to engage with MPCA on the PFAS remediation guidance. MPCA should be working with Tribes directly, on a one-on-one basis, to ensure that Tribal concerns are recognized and understood by MPCA, and an open dialogue is maintained during these types of program developments. Tribes are governments, not special interest groups or individual state citizens. Due to Tribes' sovereign status and the subject-matter expertise of their environmental departments, Tribal concerns must be given "significant weight" in areas of concern. The Band has been working with state and federal agencies to address PFAS detected at the Bug-O-Nay-Ge-Shig School in the winter of 2023, given more time/one on-one engagement, the Band would have been able to provide direct feedback on this experience with the state and what lessons have been learned as well as the gaps that the state might be able to fill that would benefit rural residents.
 - o MPCA response: The MPCA acknowledges and supports the importance of working with Tribes directly to ensure Tribal concerns are recognized and understood by the MPCA. We would appreciate the opportunity to work on a one-on-one basis with the Tribes to ensure Tribal concerns are incorporated into the PFAS Guidance. We also invite the Tribes to participate on our Stakeholder Advisory team for sharing feedback on implementation effectiveness and ongoing updates to the PFAS Guidance. Additional information regarding the PFAS Stakeholder Advisory group can be found at: <https://www.pca.state.mn.us/business-with-us/developing-pfas-remediation-guidance>.

2. Tribes should be consulted directly for projects that impact Tribal lands.
 - o MPCA response: The MPCA agrees that Tribes should be consulted directly for Remediation projects that impact Tribal lands. The MPCA would appreciate the opportunity for further discussion with the Leech Lake Band of Ojibwe on how best to coordinate and consult directly on these projects including Tribal points of contact and preferred communication approaches. The PFAS Guidance that is currently being developed is a statewide guidance for how to evaluate, investigate, and clean-up PFAS contamination in the environment and is not being proposed for legislative rulemaking.
3. The Leech Lake Band of Ojibwe requests between 60-75 days to capture Tribal comments. This comment period could begin prior to the 30-day public comment period.
 - o MPCA response: The MPCA implemented a standard 30-day public comment period for the draft PFAS Guidance. However, we are available for continued and ongoing communication with the Band and are receptive to your feedback on the PFAS Guidance prior to and after public release of the PFAS Guidance. Your feedback will help to inform us better about what is and what is not working effectively with the guidance for the Band. We acknowledge that the PFAS landscape is continually evolving and that our PFAS Guidance document will need regular updating to keep up with the advancements in industry knowledge of PFAS investigation, fate and transport, and remedial strategies. We encourage and appreciate ongoing and continuous feedback from the Band on any and all of our guidance documents.

We appreciate your interest in providing feedback to the MPCA on the draft PFAS Guidance. If you have any questions about the contents of this response, please contact me at 651-757-2893 or by email at timothy.grape@state.mn.us.

Sincerely,

Timothy Grape

This document has been electronically signed.

Timothy Grape
Supervisor
Superfund Unit 1
Remediation Division

TG:df

May 3, 2024

Casy Fath
Barr Engineering Co.
4300 Market Pointe Drive, Suite 200
Minneapolis, MN 55435

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 6, 2023, from Barr Engineering Co. on the MPCA Draft Remediation PFAS Guidance document

Dear Casy Fath:

The MPCA appreciates your review and valuable input on the draft MPCA Remediation Division PFAS Guidance document. We reviewed your letter dated October 6, 2023 (letter) including comments on the draft MPCA Remediation Division PFAS Guidance. The MPCA recognizes the importance of conducting meaningful consultation with all stakeholders in Minnesota.

Below are the comment areas you provided in the above referenced letter followed by MPCA's responses to the comments.

1. Life-Cycle Stages - For example, an innocent buyer of a Brownfield site may take on the evaluation of nearby receptors from nearby industries, both of which (the nearby receptors and nearby industries) do not have connections to the Brownfield Site.
 - o MPCA Response: the MPCA Brownfields program does not require voluntary parties to take on evaluation of nearby receptors that are not located on the Brownfields property.
2. Life-Cycle Stages - The draft Guidance document states that analytical results should be compared to Risk Based Values (RBVs) for the Risk Assessment Stage and that when RBVs are not available for a PFAS, that the party will work with MPCA staff to determine a path forward for assessing risk for that PFAS in that media. The MPCAs guidance¹ includes a required list of 34 individual PFAS; at present, RBVs are available for seven of these PFAS with some lacking any media or pathway criteria. Historically, risk assessments have been performed without available RBVs, however, this is a potentially very large and challenging effort given the evolving nature of the science on the topic, inherent complexities of assessing risk, and anticipated frequency of detected PFAS at sites. Given the anticipated complexity and magnitude of PFAS risk assessments, it should be recognized that a complex risk assessment completed now could come to different conclusions for a similar nearby risk assessment completed next year, and so on.
 - o MPCA Response: the MPCA acknowledges that a complex risk assessment completed now could come to different conclusions for a similar nearby risk assessment completed next year based on the evolution of the science and available health risk information and established RBV for PFAS compounds. This guidance and risk assessment approach

is consistent with how the MPCA evaluates other hazardous substances under the Minnesota Environmental Response and Liability Act (MERLA) including volatile organic compounds (VOCs), metals, polyaromatic hydrocarbons (PAHs), etc.

3. Background Concentrations - Broader and more clear guidance regarding site-specific background evaluation, including consideration of urban sites, may be beneficial for many sites.
 - o MPCA Response: the MPCA updated our PFAS ambient background concentrations guidance dated March 2024 (<https://www.pca.state.mn.us/sites/default/files/tdr-g1-25.pdf>) and we will continue to update our guidance on this topic as our understanding and the science around ambient background PFAS evolves.
4. PFAS as a Hazardous Waste - The draft Guidance document first states on page 52 of 60 that “PFAS are classified as a hazardous waste under MERLA.” The draft Guidance document defines hazardous substance, but does not define “hazardous waste,” and notes the PFAS is not listed as a hazardous waste under the federal RCRA law. More clarity, including a definition and examples in context, on this would be beneficial given the importance and implication of these terms.
 - o MPCA Response: the MPCA takes the position that PFAS, because of their quantity, concentration, or chemical characteristics may pose a substantial present or potential hazard to human health or the environment when improperly managed and are therefore hazardous wastes as defined in Minn. Stat. 116.06, subd. 11, clause (b). Because PFAS found in releases and threatened releases meet the definition of a hazardous waste under Minn. Stat. 116.06, subd. 11, they are therefore hazardous substances under MERLA, Minn. Stat. 115B.02, subd. 8. As such, the Site Remediation program evaluates PFAS in the same manner as other hazardous substances that result in an identified release to the environment. Note that all PFAS-containing materials do not necessarily qualify as “hazardous wastes” as defined in the Resource Conservation and Recovery Act (RCRA).

We appreciate your interest in providing feedback to the MPCA on the draft Remediation PFAS Guidance. If you have any questions about the contents of this response, please contact me at 651-757-2893 or by email at timothy.grape@state.mn.us.

Sincerely,

Timothy Grape

This document has been electronically signed.

Timothy Grape
Supervisor
Superfund Unit 1
Remediation Division

TG:df

May 3, 2024

Albert Cox PhD
Midwest Biosolids Association
241 North 5th Street
Springfield, IL 62702

RE: Minnesota Pollution Control Agency (MPCA) Response to comment letter dated October 5, 2023, from Midwest Biosolids Association (MBA) on the MPCA Draft Remediation Per- and Polyfluoroalkyl Substances (PFAS) Guidance document

Dear Albert Cox PhD:

The MPCA appreciates the MBA's review and valuable input on the draft of the MPCA Remediation Division PFAS Guidance (PFAS Guidance) and the MPCA's guidance development process. The MPCA recognizes the importance of conducting meaningful consultation with all stakeholders in Minnesota.

Below are the MBA's concerns as provided in your October 5, 2023, letter followed by the MPCA's responses:

1. Removal of all references to biosolids, which are resources generated from wastewater treatment plants at Publicly Owned Treatment Works (POTW), from this remediation guidance is strongly recommended. There are three primary reasons for this recommendation. Firstly, biosolids are generally not a significant source of PFAS relevant to the remediation of contaminated sites, except in rare instances where biosolids become contaminated due to heavy industrial discharge into POTW. Secondly, the inclusion of biosolids as a source of PFAS in this guidance could inaccurately portray biosolids as a significant PFAS source, potentially leading to misidentifying POTW as Potentially Responsible Parties under MERLA. Thirdly, the challenges associated with wastewater treatment necessitate that land application of biosolids remains the most sensible option for the beneficial utilization of these reclaimed resources.
 - o MPCA response: The MPCA recognizes the vital role that POTW play in ensuring that wastewater received by municipalities is appropriately managed, treated, and discharged so as not to adversely impact human health or the environment. It is important for the MPCA Remediation program to acknowledge the fate and transport cycle of PFAS in our environment and all the different ways that PFAS may be redistributed in the environment including via wastewater discharge and biosolids land applications. The MPCA needs to be transparent with all stakeholders about how PFAS may be released and redistributed in the environment so we can accurately and adequately regulate PFAS site investigation and clean-up activities in our Remediation program. Removing references to municipal wastewater and the land application of biosolids in our understanding of their potential role in PFAS fate and transport, would limit our ability to accurately and effectively regulate PFAS site investigations and remedial actions at sites where these mechanisms are relevant. The MPCA acknowledges that land applied materials that have the potential to contain PFAS

include more than biosolids and as a result, we will incorporate expanded language in the guidance document that reflects this broader reference to land applied materials versus biosolids alone.

Though separate from this guidance document, the MPCA appreciates the collaboration of the wastewater industry on characterizing and managing PFAS associated with wastewater treatment, including biosolids.

The MPCA also acknowledges that there is language in the draft Remediation PFAS Guidance document that will be modified in the final Guidance document to clarify and more accurately reflect the potential for PFAS fate and transport related to wastewater treatment plants (WWTPs) and land applied biosolids situations in the context of direct sources versus conduits. The two locations in the Draft Remediation PFAS Guidance document where language modifications will be made include:

- i. Page 4 – “Desktop Review Milestone 1, Action 2 Section,” Paragraph 2 “Off-site sources that may be of particular concern that may require expansion of the 1,000-foot site radius could include fire training facilities or other aqueous film-forming foam (AFFF) releases, land disposal facilities, and wastewater treatment plants.”
 - ii. Page 12 – “Develop the CSM Action 2: Source Evaluations Section,” Paragraph 1 “It is also important to consider secondary sources of PFAS at a site, such as: sump, wastewater, or stormwater discharges, irrigation, pesticide applications, imported soils, and applications of biosolids.”
2. It is important to acknowledge that POTWs play a vital role in maintaining keeping our waterways clean while simultaneously generating valuable resources, including clean water and the solid residuals of the treatment process, known as municipal biosolids.
 - o MPCA response: The MPCA recognizes the vital role that POTWs play in ensuring that wastewater received by municipalities and the resulting municipal biosolids are appropriately managed, treated, and discharged so as not to adversely impact human health or the environment.
3. The POTWs do not generate or use PFAS but are passive receivers of PFAS through the wastewater they are mandated to treat in a responsible manner. These entities, along with other passive receivers of PFAS, should be granted clear liability exemptions under MERLA.
 - o MPCA response: the MPCA Remediation program has enforcement discretion regarding responsible parties and passive receivers of contamination associated with identified releases under the Minnesota Environmental Response and Liability Act (MERLA) Statute 115B.03 (<https://www.revisor.mn.gov/statutes/cite/115B.03>). The MPCA Superfund program does not intend to identify municipal wastewater facilities as responsible parties in Superfund based on passively receiving PFAS through the wastewater stream or distribution of biosolids.

4. MPCA's wastewater division (including the biosolids program) AND its remediation division should work with public utilities to develop a separate specific strategic framework for addressing PFAS investigation and remediation issues associated with wastewater and biosolids.
 - o MPCA response: The MPCA Municipal program values the collaboration and feedback received from our municipal stakeholders and looks forward to continuing to work with municipal stakeholders to enhance our efforts in developing a comprehensive strategy to address PFAS in wastewater and biosolids.

We appreciate your interest in providing feedback to the MPCA on the draft PFAS Guidance. If you have any questions about the contents of this response, please contact me at 651-757-2893 or by email at timothy.grape@state.mn.us.

Sincerely,



This document has been electronically signed.

Timothy Grape
Supervisor
Superfund Unit 1
Remediation Division

TG:df