

EPA Federal Facilities Superfund Program – RPM Bulletin 2024-02

Developing a Crosswalk between Legacy and PFAS Sites

April 3, 2024

Purpose

The purpose of this document is to assist United States Environmental Protection Agency (EPA) Remedial Project Managers (RPMs) with the tracking of the location of per- and poly-fluoroalkyl substances (PFAS) with regard to “legacy” contaminants that have been historically addressed in the Superfund program. This is important because the presence of PFAS in the same location and media as legacy contaminants can affect protectiveness, as well as worker safety and remedy selection and function. This strategy will be useful at all phases of the Remedial Investigation, including Remedial Investigation Scoping, Conceptual Model development, sampling and data interpretation, remedy selection, and Federal Facility Superfund Sites’ Five-Year Reviews (FYRs). This Bulletin is providing recommendations that are consistent with existing guidance and identifies best practices based on a review of how PFAS is being addressed at Federal Facilities sites across the US.

Existing Guidance

EPA, 1988. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA. Interim Final. EPA 540-G-89-1004. (<https://semspub.epa.gov/work/06/901141.pdf>)

EPA, 1989. Risk Assessment Guidance for Superfund Volume 1 Human Health Evaluation Manual (Part A). EPA 540-1-89-002. (https://www.epa.gov/sites/default/files/2015-09/documents/rags_a.pdf)

EPA, 2018. Smart Scoping for Environmental Investigations, Technical Guide. EPA 542-G-18-04. November 2018. (<https://semspub.epa.gov/work/HQ/100001799.pdf>)

EPA, 2020. Smart Scoping of an EPA-Lead Remedial Investigation/Feasibility Study. EPA 542- F-19-006. October 2020. (<https://semspub.epa.gov/work/HQ/100002571.pdf>)

Summary

PFAS Remedial Investigations do not occur in a vacuum. If there are other contaminants (volatile organic contaminants, metals, etc.) in the same exposure scenario (current or future residential, industrial, etc.) currently under investigation or that are addressed through ongoing remedial activities, then they must be considered cumulatively in the exposure and risk assessments.

The use of a table to identify co-occurring contaminants can be helpful to project team members as they scope and investigate the site, making decisions about what to assess cumulatively. This RPM Bulletin provides suggestions and examples for consideration by project teams.

Background

At Federal Facilities sites, PFAS are being found at locations ranging from those that have no legacy contaminants to those that have remedies in place for legacy contaminants. We are also seeing that in many sites, there are different contractors working on PFAS than on legacy contamination response actions. In some instances, there has been a push to complete remedial decisions for legacy contaminants at a site or operable unit before embarking on further PFAS investigations. This sets up a risk that PFAS investigations will move forward without considering legacy contaminants or vice versa, resulting in incomplete assessments and/or inappropriate remedial decisions.

Specific concerns include:

- The need for adequate communication among different contractors at the same site/facility to

ensure everyone is fully aware of the chemicals known or likely to be present.

- The need under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) to assess exposures to multiple contaminants in multiple media and address risks from cumulative exposures.
- The need to ensure that a remedy for legacy contaminants is not facilitating the spread of PFAS contaminants.
- The need to determine remedies that will address all contaminants, including PFAS.
- The need to determine if PFAS detections call into question the remedy protectiveness in FYRs.

EPA has issued repeated reminders in multiple venues, including site team meetings, review comments and national meetings, that in accordance with EPA's Risk Assessment Guidance for Superfund, risk calculations will include all relevant contaminants, not just PFAS. We have repeatedly cautioned that designation of operable units is administrative, and not risk-based, so assigning new operable units to PFAS contamination could result in contracting challenges when risks need to be assessed cumulatively.

Several RPMs at different sites have worked with Federal Facilities site teams to develop a crosswalk that identifies where PFAS are co-located with legacy contaminants. We have found these tables to be extremely useful for planning and tracking, as well as in reviewing FYRs.

Expectations and Considerations

The development of a crosswalk table should not be interpreted as a requirement. Instead, we encourage the project team to collaboratively develop a crosswalk table to identify operable units and sites that have or may have media co-contaminated with PFAS. Consideration should be given to legacy contaminant remedies such as in-situ chemical oxidation that may have facilitated PFAS transformation and mobility, including those conducted under the State's oil control program.

The crosswalk table can be used to support scoping and remedial investigation. It can be included in documents such as quality assurance project plans (QAPPs), Sampling and Analysis Plans, Remedial Investigations, Proposed Plans, Records of Decision (RODs) and FYRs to support activities, analyses and decisions.

If the Federal Facility refuses to develop a crosswalk table, consider creating one yourself and sharing with the project team.

The template below illustrates one way that a table can be organized. The table can be tailored to the needs of the site team and updated as necessary as more information is collected. For example, some teams may choose to add columns to include information that will be useful to their needs. References to the investigation (pre-RI, RI) that is the basis for the PFAS information should also be included.

Table 1: Example Crosswalk Table Template

Legacy Site Identifier	PFAS Site Identifier	Site Name	Media: CoCs	PFAS Present?	PFAS RI Started?
OU1 Site 47	AOI 1	Former Metal Plating Shop	Soil: Metals, VOCs	Unknown	N
OU1 Site 47	AOI 1	Former Metal Plating Shop	GW: VOCs	Yes	N
OU1 Site 59	AOI 2	Storage Shed	Soil: Metals	No	N/A
OU3 Site 06	AOI 3	AFFF Testing	Soil: VOCs	Unknown	Y
OU3 Site 06	AOI 3	AFFF Testing	GW: VOCs	Yes	Y