ERM

1701 Golf Rd Suite 1-700
Rolling Meadows, IL 60008

T +1 847 258 8900
F +1 847 258 8901

erm.com

TO	Engineering Management, Inc. (EMI)
FROM	Environmental Resources Management, Inc. (ERM)
DATE	30 January 2026
REFERENCE	Cam-Or Superfund Site
SUBJECT	FINAL Addendum #1 to *Quality Assurance Project Plan for Groundwater Remedial Action Revision 4, July 2022*

In a letter dated October 29, 2019, the United States Environmental Protection Agency (USEPA) recommended sampling drinking water wells downgradient of the Cam-Or Site in Westville, Indiana. A *Response to USEPA Technical Review Comments dated October 29, 2019* submitted by Engineering Management Incorporated (EMI) to USEPA and Indiana Department of Environmental Management (IDEM) on November 27, 2019 identified eight drinking water wells to be sampled, parameters, and sampling and analytical methods. IDEM provided comments on the sampling methods in a letter dated December 5, 2019, and the Cam-Or PRP Group responded on December 23, 2019. After the initial sampling event, the scope was modified to analyze for 1,4-dioxane only. Samples are collected where access is granted.

In a letter dated September 3, 2025, the USEPA noted that private well sampling and analysis procedures should be incorporated into the approved *Quality Assurance Project Plan for Groundwater Remedial Action Revision 4* submitted in July 2022 (2022 QAPP). This addendum provides the sampling and analysis procedures, presented as Standard Operating Procedure 9, an addendum to Worksheet #21 of the approved 2022 QAPP.

QAPP Worksheet #1 & 2: Title and Approval Page
(UFP-QAPP Manual Section 2.1)
(EPA 2106-G-05 Section 2.2.1)

Quality Assurance Project Plan for Groundwater Remedial Action

Cam-Or Superfund Site,
Westville, Indiana

Project No.: 0258036-QAPP-GW

David de Courcy-Bower, PE_{WI}
Supervising Contractor Partner-in-Charge, ERM

Stephanie Wink
Project Manager, ERM

Sandra Mulhearn
Quality Assurance Manager, ERM

KAUSHIK SHANDILYA
Digitally signed by KAUSHIK SHANDILYA
Date: 2026.01.30 14:58:30 -06'00'

Kaushik K. Shandilya
Quality Assurance Manager, USEPA

Digitally signed by Lupita Quintana
Date: 2026.01.30 13:27:09 -06'00'

Lupita Quintana
Remedial Project Manager, USEPA

ERM

DATE
30 January 2026

REFERENCE
Cam-Or Superfund Site

ATTACHMENT A STANDARD OPERATING PROCEDURE SOP 9

STANDARD OPERATING PROCEDURES (SOPs)

Section	Standard Operating Procedure
A.1	SOP 1 Monitoring Well/Piezometer Construction
A.2	SOP 2 Well Development
A.3	SOP 3 Water Level Measurement
A.4	SOP 4 Groundwater Sampling (Low-Flow)
A.5	SOP 5 Soil Sample Collection
A.6	SOP 6 Recovery Well Construction
A.7	SOP 7 Equipment Decontamination
SOP8	SOP 8 Sample Collection Guidelines for PFAS Analysis
SOP9	SOP 9 Private Well Sampling and Analysis

A.9 SOP 9: PRIVATE WELL SAMPLING AND ANALYSIS

The objective of the private well sampling is to collect a representative groundwater sample after the water system (well, pressure tank, and waterlines) has been purged.

A.9.1 Health & Safety

The sampling team shall wear health and safety equipment as outlined in the Site-Specific Health and Safety Plan - Groundwater Remedial Action dated December 2021 (HASP). Samplers will don new sampling gloves at each individual well prior to sampling.

A.9.2 Sample Handling

Sample labeling and shipping for private well samples will be conducted in accordance with applicable procedures described in Section 4 – Field Documentation, Sample Custody, and Shipping Procedures of the Field Sampling Plan – Groundwater Remedial Action dated December 2021 (FSP). Sample custody procedures will be performed in accordance with Section 4 of the FSP.

A.9.3 Quality Assurance and Quality Control

Collect one field duplicate per twenty normal samples and include a trip blank in every sample cooler shipped. As noted by the USEPA, since there are no known potential secondary sources for 1,4-dioxane, a field blank is not necessary.

A.9.4 Laboratory Analyses

The samples will be submitted to Eurofins for analysis of 1,4-dioxane, in accordance with USEPA method 522. In addition to the private well samples and QA/QC samples, the laboratory should analyze one laboratory control sample duplicate (LCSD). Eurofins' SOP for 1,4-dioxane analysis via USEPA method 522 is provided in the QAPP Revision 4, July 2022.

A.9.5 Data Verification and Validation

Data Verification and Validation will be performed in accordance with Group D requirements of the QAPP Revision 4, July 2022.

A.9.6 Sampling

A.9.6.1 Sample Equipment

Laboratory-supplied sample containers, pre-preserved as needed

Sample cooler with ice

Sampling gloves

Paper towels

Pliers to remove aerator as needed

A clean hose

Field logbook

Well Sampling Forms and location map

Chain-of-Custody Forms and sample labels

Camera

A.9.6.2 Assess Water Distribution System

1. Determine the location of the well, the pressure tank, and any treatment systems (water softeners, carbon filters, reverse osmosis systems, sand filter, chlorination, iron removal, etc.).
2. Ask the homeowner if they have a copy of their well log (obtain a copy or take a photograph of it, if possible). If they do not have a copy, ask if they know the depth or any other information about the well.
3. Determine the location of the outside spigot and whether it is connected to a pretreatment system. Determine if it will be possible to connect a hose to the spigot to direct purge water away from the house. (Note that during winter/ freezing conditions it may not be possible or advisable to use an outside spigot as it may lead to damage to the property owner's piping.)
4. Determine if/ which indoor faucets are connected to pretreatment system(s).
5. If the outdoor spigot is connected to a pretreatment system or is inaccessible or not present, determine if a hose can be connected to the pressure tank and a hose run outside of the house or to an indoor sump or sink to properly purge the well and pressure tank system. If an outdoor spigot is not present or cannot be used (e.g., during winter conditions), determine the location of an indoor faucet that is not connected to a treatment system.
6. Determine the type of piping used in the water distribution system (copper, PVC, galvanized steel, etc.)

7. Take photos of the well, pressure tank, treatment systems, outside faucet, and any indoor faucet used for sampling after asking if taking photographs is permitted by the homeowner.
8. Determine if there is a septic system or underground storage tank on the property and the approximate distance of these structures to the well.
9. Record this information in the field logbook and/ or Private Well Sampling Checklist Form.

A.9.6.3 Sample Procedure

1. Purge the water system for 15 minutes through an outside spigot or indoor faucet.
    * Listen for the pump to turn on as an indicator that the tank and plumbing are being evacuated.
    * Purging is preferable from an outdoor faucet through a hose, to direct the water away from the foundation and to minimize loading on the septic system. Purge water will be directed to the ground.
    * If an indoor faucet is used, remove the aerator (faucet screen) first, with permission from the homeowner.
        - If pliers are needed to remove the aerator, place a cloth over the aerator to avoid damage.
2. If samples are to be collected from an outdoor spigot, disconnect the hose before collecting the sample.
3. If, in order to bypass a treatment system, it is necessary to collect a sample from the pressure tank, and the faucet on the pressure tank is located too close to the ground to collect samples directly into sample containers, use a clean hose to purge and sample the water. As noted below, slow the purge rate in the hose to create laminar flow, minimizing the potential for aeration of the sample.
4. If there is a treatment system, a post-treatment sample will be collected to evaluate if the treatment system has an effect on the analytical results. Post-treatment samples are typically collected directly from a faucet in the house. Do not purge Reverse Osmosis systems for longer than 5 seconds before collecting a sample or it impedes the RO system operation.
5. Don new, clean sampling gloves.
6. Slow the purge rate to a minimal rate to create a laminar flow and minimize the potential for aeration of the sample. Collect the sample.

7. Secure, label, and place the samples directly into an iced sample chest.
8. Log the sample collection on a Chain-of-Custody form and in the field logbook and/ or Private Well Sampling Checklist Form.
9. Replace the aerator if removed from a faucet.

Private Well Sampling Checklist Form

Address:	
Owner:	
	Notes
Well Location	
Basement	
Outside (Map/Aerial)	
Well log available? (Y/N)	
Copy or photo of well log (Y/N)	
If no log, well depth, if known	
Septic System on Property? (location)	
Underground Storage Tank on Property?	
Water Distribution System Piping	
Copper	
PVC	
Galvanized steel	
Other (specify)	
Treatment System	
None	
Softener	
Carbon filter	
Reverse Osmosis	
Sand Filter	
Chlorination	
Iron Removal	
Other (specify)	
Whole House Treatment	
Individual Faucet Treatment	
Pre-treatment Sampling Location Outdoor spigot	
Pressure tank spigot	
Hose disconnected before sampling?	
Indoor faucet (location)	
Aerator on faucet removed?	
Post-treatment Sampling Location	
Indoor faucet (location)	
Aerator on faucet removed?	
Other (specify)	
Purge time (minimum 15 minutes)	
Discharge Location of Purged Water	
Outside to ground	
Inside to sink (specify location)	
Inside to basement sump	
Photos (ask permission)	
Well	
Pressure tank	
Treatment system(s)	
Outside spigot	
Inside faucet(s) used for sampling	