

Minker/Stout/Romaine Creek Superfund Site

Five-Year Review Findings Fact Sheet

Imperial, Jefferson County, Missouri

Overview

The Minker/Stout/Romaine Creek Superfund site has completed its first Five-Year Review (FYR) on September 15, 2026. The purpose of a FYR is to evaluate the implementation and performance of a remedy to determine whether the remedy is and will continue to be protective of human health and the environment. For this site, the remedy has been deemed *not protective*. The EPA will determine the appropriate response action to reduce risks posed by the current conditions at the site.

The site is located approximately 20 miles southwest of St. Louis in Imperial, Missouri, and was historically contaminated by fill material containing 2,3,7,8-TCDD (dioxin). The site consists of four project areas called Operable Units (OUs) and seven distinct subsites. Due to the early nature of the site's listing on the National Priorities List, not all distinct areas received their own OU. As such, the EPA currently manages all areas under OU00 – Site Evaluation.

Response Action Summary

Basis for Taking Action:

- The site poses a threat to human health and the environment through dioxin exposure to local residents and wildlife.
- These receptors may have come into dermal contact with or ingested contaminated soil or sediment found within the residential area.
- The EPA has classified dioxin as a known human carcinogen, which may pose serious health risks to those interacting with contaminated media.

Previous Response Actions:

- Removal Actions began in 1983 and concluded in 1988. Action Memoranda were completed for the Minker Subsite (including Minker Area Neighbors), Stout Subsite (including Stout Area Neighbors), Romaine Creek, Sullins, and Cashel.
- Remedial Action fully began after the OU1 1988 Record of Decision (ROD) and continued until construction completion in 1997.



30822821

Status of Implementation:

- A “construction complete” status was achieved in 1997 with no known dioxin contamination above the action level of 1 part per billion (ppb) in surface soils; however, dioxin was left at the Minker Subsite at a depth of 4 feet where bedrock was encountered. Concrete retention walls were established above and below gradient of the cover and permanent survey markers were placed to designate the area.
- During the excavation of the Stout Subsite, dioxin concentrations of less than 10 ppb were allowed to remain in place at depths greater than 1 foot when original grade was restored using clean materials, per the Final Closeout Report.

Technical Assessment

QUESTION A: Is the remedy functioning as intended by the decision documents?

No. Sampling results from 2025 confirm the presence of dioxin in soil above the 1 ppb action level. These detections confirm that the remedy is no longer functioning as intended.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels, and Remedial Action Objectives used at the time of the remedy selection still valid?

Since site documents established the 1 ppb cleanup level for dioxin, the toxicity values, risk assessment methodologies, and recognized exposure pathways for dioxin have undergone significant updates. The FYR recommends a new Preliminary Remediation Goal, as listed in the table below, that is protective of human health while still representing an achievable remedial target.

Contaminant of Concern	Media	1988 ROD Action Level	New Preliminary Remediation Goal
Dioxin	Soil	1 ppb (or 1,000 parts per trillion [ppt])	51.1 ppt

QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy?

The EPA is not aware of any additional information that could impact the protectiveness of the remedy at this time. However, increased temperatures across Missouri could potentially impact vegetation that is preventing soil from eroding. This could lead to contaminated soil becoming exposed and the subsequent redistribution of dioxin.

Issues and Recommendations

Issues:

- Surface soil concentrations of dioxin above the ROD action level of 1 ppb.
- Surface soil, subsurface soil, and sediment concentrations of dioxin above the updated human health and ecological risk assessment Preliminary Remediation Goal and Removal Management Level of 51.1 ppt.
- Lack of formal Institutional Controls established at the site.

Recommendations:

- Complete a Removal Action to reduce risks posed by current conditions at the site.
- A FYR Addendum is planned for completion on 5/28/2029 to address these issues and recommendations.

Resources

All reports including the FYR can be found under the Site Document and Data tab of the Site Profile page at: www.epa.gov/superfund/minkerstoutromainecreek. To learn more about dioxin, please visit: www.epa.gov/dioxin.

The site team will continue to update the Site Profile page announcements and key topics as updates become available.

For more information or questions, please contact:

- **Rachael Puleo, Remedial Project Manager**
(816) 912-8844 or puleo.rachael@epa.gov
- **Tanya Young, Community Involvement Coordinator**
(816) 799-3251 or young.tanya@epa.gov