



Kerr-McGee Chemical Corp. (Soda Springs Plant) Superfund Site Proposed Plan



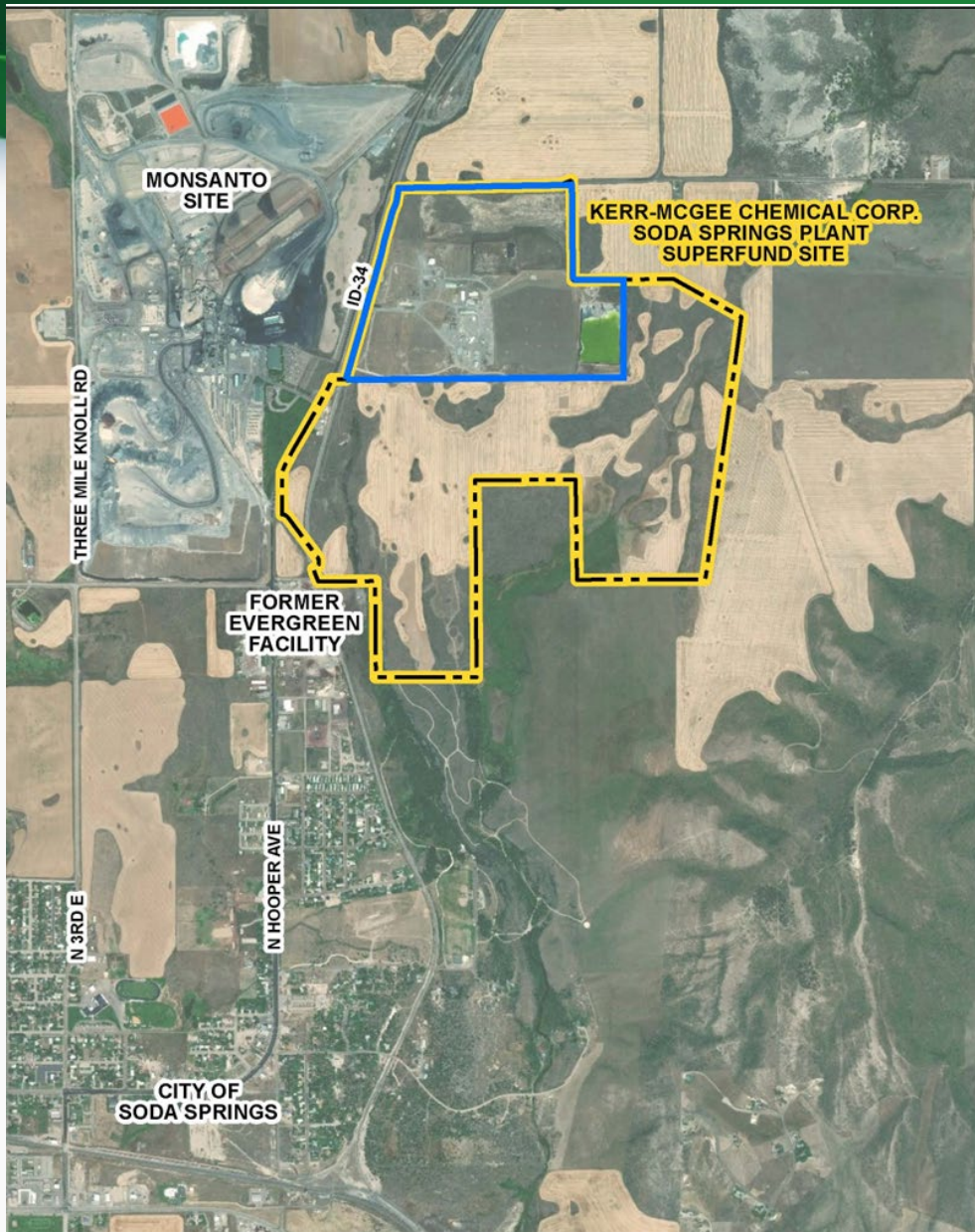
**Soda Springs, Idaho
Public Hearing
March 29, 2023**

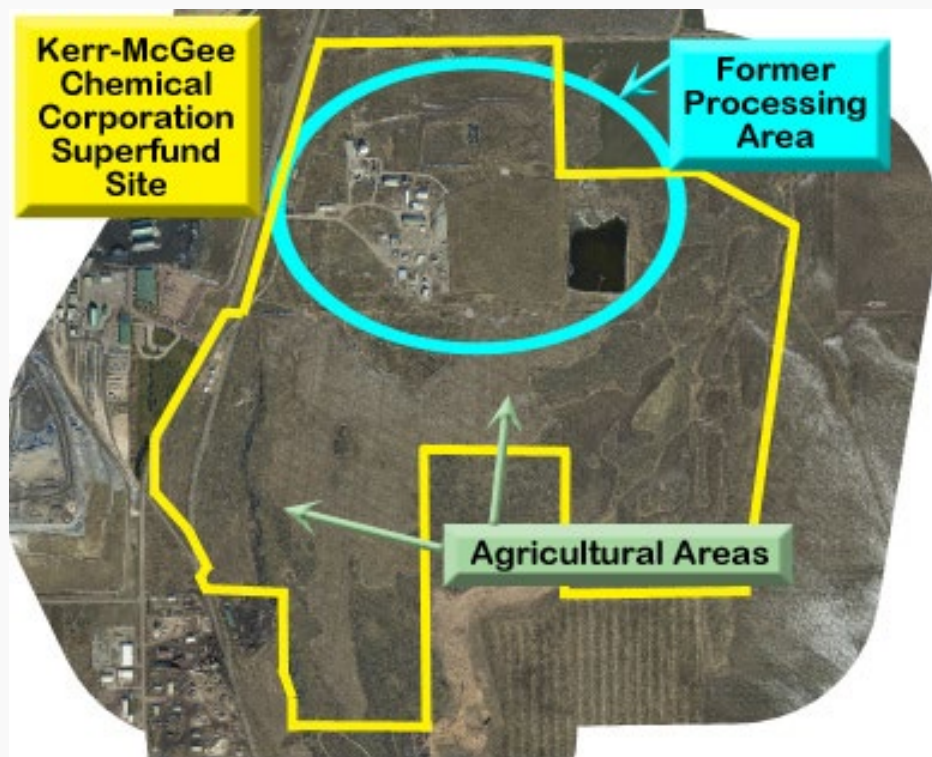


Overview

- ✓ Site Overview and History
- ✓ The Superfund Process
- ✓ EPA's Proposed Plan
- ✓ Public Comment Period
- ✓ Next Steps







- ✓ Site operated by Kerr-McGee from 1964 to 2002
 - Vanadium Plant
 - Fertilizer Plant
 - Lithium-Manganese Oxide Production

- ✓ Approximately 158 acres used for manufacturing

- ✓ Approximately 389 acres were not used for manufacturing; portions are leased for cropland



Site History

- ✓ Listed on National Priority List in 1989
- ✓ 1995 ROD
 - Liquid source elimination and recycling calcine tailings
- ✓ 2000 ROD Amendment
 - Change recycling of calcine tailings to capping
- ✓ 2005-2015
 - Tronox bankruptcy, DOJ settlement, establishment of Multistate Trust





Who is the Multistate Trust?

- ✓ Court-appointed, independent trust
- ✓ Private landowner with public purpose of protecting human health and environment
- ✓ The Multistate Trust
 - Owns the property
 - Uses Trust funds to investigate and clean up the Site
 - Ultimately will sell or transfer the property for reuse
- ✓ Trust funds can only be used for environmental actions
- ✓ Beneficiaries of the Trust:
 - United States (EPA as Lead Agency)
 - State of Idaho (IDEQ as non-Lead Agency)



GREENFIELD
ENVIRONMENTAL TRUST GROUP



2015- 2016 Waste Removal Project

- ✓ 1,100,000 pounds hazardous waste
- ✓ 350,000 pounds non-hazardous waste
- ✓ 650,000 pounds recycled





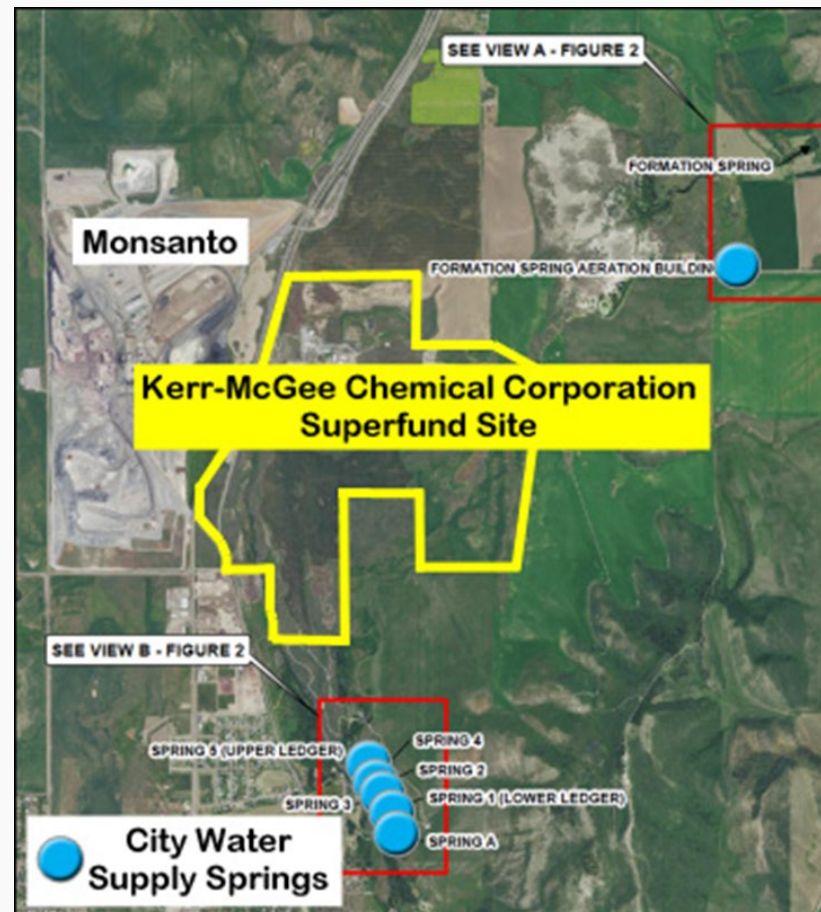
2018 10-Acre Pond Time-Critical Removal Action





Supplemental Remedial Investigation

- ✓ Domestic Well Study
- ✓ City Water Supply Sampling
- ✓ Site Investigations
 - Surface and Subsurface Soil Samples
 - Leachability Samples
 - Background Soil Samples
 - Pore Water Samples
 - Spring Samples
 - Sediment Samples
 - Pond Samples
 - Groundwater Samples
- ✓ Human Health and Ecological Risk Evaluations
- ✓ Institutional Controls Evaluation





Why is EPA taking further action?

FIFTH FIVE-YEAR REVIEW REPORT FOR
KERR-MCGEE CHEMICAL CORP. (SODA SPRINGS PLANT) SUPERFUND SITE
CARIBOU COUNTY, IDAHO



SEPTEMBER 2022

Prepared by
U.S. Environmental Protection Agency
Region 10
Seattle, Washington

- ✓ The remedy is short-term protective and currently protects human health and the environment because there is no exposure to contaminated groundwater or soil.
- ✓ Two significant groundwater plumes of molybdenum and vanadium originate on the property and migrate off-site
- ✓ Prevent exposure to contaminants in groundwater by people
- ✓ Restore groundwater to its highest beneficial use as a drinking water source within a timeframe that is reasonable



Focused Feasibility Study

- ✓ Evaluation of Anticipated Impacts of 10-Acre Pond Time Critical Removal Action
- ✓ Monitored Natural Attenuation Evaluation
- ✓ Bench and Pilot-Scale Treatability Studies
- ✓ Remedial Action Alternatives Analysis
 - No Further Action
 - Monitored Natural Attenuation
 - In-Situ Active Groundwater Treatment
 - Groundwater Capture and Ex-Situ Treatment

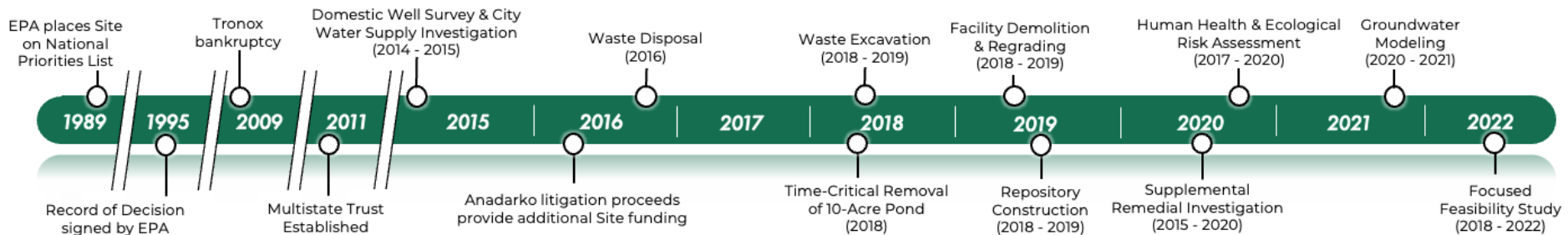


Monitored Natural Recovery (MNR)

Steps in the Superfund Cleanup Process



**We
Are
Here**





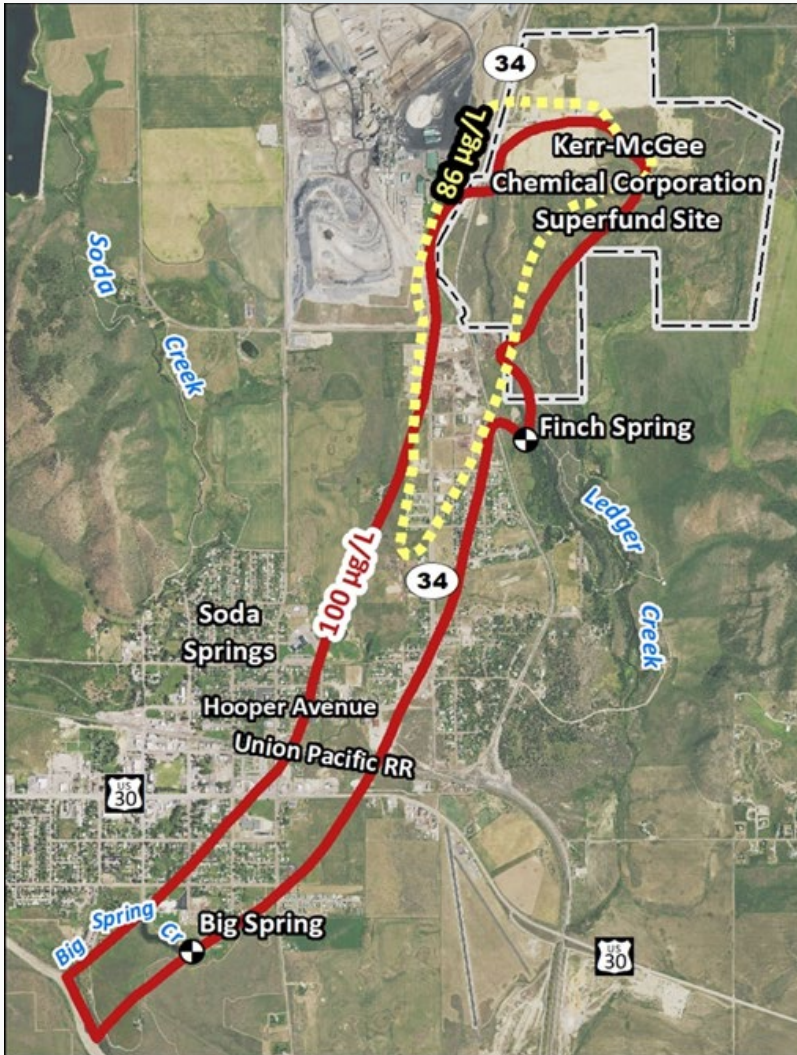
How Does EPA Develop Cleanup Goals?

- Established standards (ARARs)
- Risk-based concentrations from risk assessment
- Background concentrations



How Does EPA Determine What to Do?

- ✓ Contaminants defining cleanup footprint include: Molybdenum and Vanadium
- ✓ Preliminary Remedial Goals (PRGs)
- ✓ Cleanup Levels (CULs)





Summary of Alternatives

Alternative	Description	Estimated Costs
(1) No Further Action	<ul style="list-style-type: none">Plugging and abandoning groundwater monitoring wells, while continuing to monitor groundwater quality in a small number of wells until cleanup goals are achieved throughout the plume.	\$4,700,000
(2) Monitored Natural Attenuation	<ul style="list-style-type: none">MNA to address remaining subsurface COC sources and groundwater plumes until cleanup goals are achieved throughout the plume.	\$10,200,000
(3) In-Situ Active Groundwater Treatment	<ul style="list-style-type: none">Includes all elements of Alternative 2Includes active groundwater extraction, pumping, mixing amendment and reinjection via a series of recovery and injection trenches and /or wells.Pilot testing of the in-situ treatment amendment mixture.	\$22,000,000
(4) Groundwater Capture and Ex-Situ Treatment	<ul style="list-style-type: none">Includes all elements of Alternative 2Includes groundwater extraction, pumping, and treating in an on-Site water treatment plant via a series of recovery wells.	\$37,500,000
(5) Hybrid In-situ and contingent Ex-situ groundwater treatment	<ul style="list-style-type: none">Includes all elements of Alternatives 3 and 4Ability to add additional elements as contingencies.	\$45,200,000



EPA's Nine Evaluation Criteria

The Proposed Cleanup Plan must:

- 1) Protect People's Health and the Environment
- 2) Comply with Federal and State Environmental Laws

It must achieve the best balance of:

- 3) Long-term Effectiveness and Permanence
- 4) Reduction of Toxicity, Mobility, and Volume through Treatment
- 5) Short-term Effectiveness
- 6) Implementability
- 7) Cost

Criteria considered after public comment period:

- 8) State/Tribal Acceptance
- 9) Community Acceptance



Notes: Institutional Control boundaries proposed in Figure 6-1 are not shown but are included in this alternative.

LEGEND

- | | | | |
|---|--------------------------------------|----------------------------------|--|
| ◆ Pilot In-Situ Wells | ◆ Type 2 - CMT Multilevel Well | → Direction of Mobilization | ▭ Property Boundary |
| ● Potential Future In-Situ Wells | ◆ Groundwater Well | — CMT Multilevel Well Transect | ▭ Groundwater Plume Core Mobilizing Off-site |
| ◆ Potential Future Ex-Situ Extraction Wells | ◆ Groundwater Well with Transducer | — As-Built Fence | ▭ Vanadium Groundwater Plume >86 µg/L RSL |
| ◆ Extraction Wells | ▭ Ex-Situ Treatment Plant Building | ▭ Industrial Boundary | ▭ Molybdenum Groundwater Plume >100 µg/L RSL |
| ◆ Injection Wells | — Extraction Piping | ▭ Area of Concern (AOC) Boundary | ▭ MNA Downgradient of Active Treatment Area |
| ◆ Type 1 - CMT Multilevel Well | — Injection Piping | | |
| | — Potential Future Extraction Piping | | |

Figure 8-1
Preferred Alternative Hybrid Layout
Proposed Plan for the Kerr-McGee Chemical Corporation
Soda Springs Plant Superfund Site
Soda Springs, Idaho

Preferred Alternative



3 Ways to Submit Comments

Deadline: April 14, 2023



Email

Lipowski.zoe@epa.gov



Leave a voicemail

206-553-0526



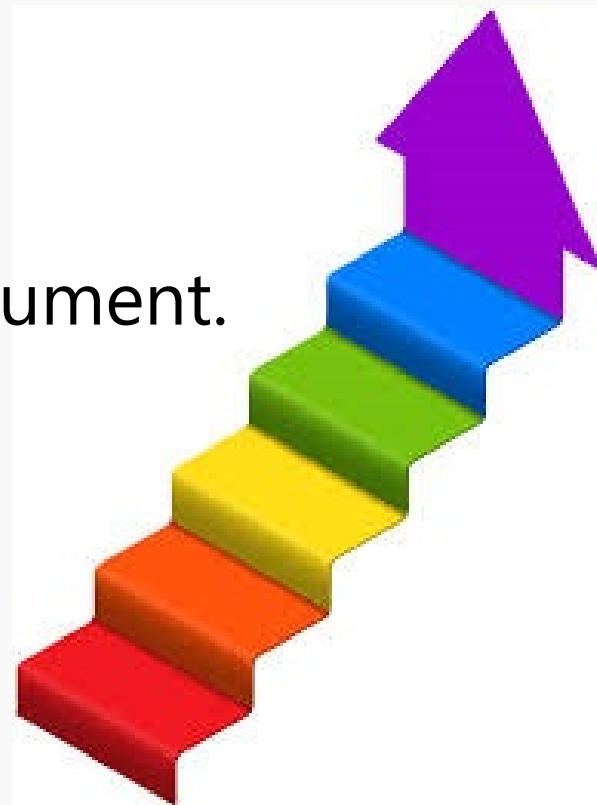
Mail-in Comments

Zoë Lipowski, RPM
U.S. EPA Region 10
1200 6th Avenue, Suite 155
Mail Stop 12-D12-12
Seattle, WA 98101



Next Steps

- Send us your comments.
- EPA will respond to comments.
- EPA writes the final decision document.
- The cleanup is designed.
- The cleanup gets implemented.





For more information about the Kerr-McGee Site Proposed Plan:

- www.epa.gov/superfund/kerr-mcgee-soda-springs
- <https://sodasprings.greenfieldenvironmental.com/>
- Zoë Lipowski, Remedial Project Manager
Lipowski.zoe@epa.gov
(206) 553-0526

A photograph of a geyser erupting in a snowy landscape. The geyser is a tall, narrow column of white steam rising from a rocky base. The foreground is filled with snow and brown, mineral-rich water flowing through channels. In the background, there are evergreen trees and a clear blue sky with a bright sun in the upper left corner.

Thank you!