Montana Pole and Treating Plant Superfund Site

Project

Montana Pole and Treating Plant Superfund Site
Butte, MT, USA (EPA Region 8)

Application

Site Remediation

Scope

Tracking airborne dust, VOCs, and wind shifts that may impact site workers and communities downwind of remedial activities.

Equipment and services

4x Aeroqual AQS 1 monitors
Aeroqual Cloud software

PM_{10}, VOCs, wind

Client

Montana Department of Environmental Quality (DEQ)

Consultants

Tetra Tech, Inc.

Equipment partner

Pine Environmental

Date

2021 - 2023

Project cost

$6 million

Tetra Tech, Inc. is contracted to provide technical and advisory services in EPA Region 8 for the Superfund Technical Assessment and Response Team (START V). This includes the Montana Pole and Treating Plant Superfund site in Butte, Montana. The former plant treated wood for industrial use with a toxic mix of preservatives, including pentachlorophenol (PCP), dioxins, and polyaromatic hydrocarbons (PAHs), which had contaminated soil and groundwater. In 2020, after decades of cleanup activities, Tetra Tech oversaw the final stage of bioremediation for the remaining 25 acres.

Project challenges

The project involved creating a Corrective Action Management Unit (CAMU) to transfer, store, and cap soils contaminated with PCP, dioxins, and PAHs that did not meet cleanup levels. A key issue was airborne dust and VOC vapors impacting onsite workers and the local community. The DEQ required monitoring exposure levels according to Occupational Safety and Health Administration (OSHA) standards and the National Ambient Air Quality Standards (NAAQS). This was complicated by localized air quality impacts from mining operations and Interstate 15/90, which runs through the site.

Tetra Tech deployed several Aeroqual AQS 1 air monitors at the site perimeter to track real-time PM_{10}, VOCs, and wind shifts. Using Aeroqual Cloud software, Tetra Tech accurately apportioned site contributions and used the exceedance alerts function to effectively deploy dust suppression strategies to protect worker health and the downwind community.

Project outcome

By implementing Aeroqual's solution, Tetra Tech reduced the air monitoring and mitigation costs by over 50% while ensuring negligible community and worker health impacts. The DEQ now securely manages the completed CAMU as the land is prepared for commercial and recreational purposes. Colin McCoy of Tetra Tech summarized the project, stating, "This real-time monitoring system was a win-win-win for us, the client, and the community."

> "The highlight for us was getting real-time updates from the Aeroqual software whenever there was an exceedance. That saved us time, energy, and expense – over 50% less than we would normally spend."
>
> **Colin McCoy**
> **Operations Manager, Tetra Tech, Inc.**