

SIN 899-4 – Waste Management Services

- ***Data Collection and Feasibility or Risk Analysis***
- ***RCRA/CERCLA Site Investigations***
- ***Hazardous and Nonhazardous Exposure Assessments***
- ***Waste Characterization and Source Reduction Studies***
- ***Review and Recommendation of Waste Tracking or Handling Systems***
- ***Waste Management Plans and/or Surveys***



Waste Management Services

MCS has performed waste management services for federal, state, and local agencies, as well as private companies. MCS personnel are experienced in a wide variety of environmental regulations, site investigation methods, solution design, analytical evaluations, and construction oversight.

Our services under this SIN are:

Data Collection and Feasibility or Risk Analysis

MCS provides data collection and feasibility assessments, as well as long-term management support for risk management issues. We identify risks associated with environmental issues and assist our clients with developing an approach to minimize and manage these risks.

Resource Conservation and Recovery Act/ Comprehensive Environmental Response, Compensation, and Liability Act (RCRA/CERCLA) Site Investigations

MCS personnel are up-to-date on RCRA and CERCLA regulations and routinely perform site investigations and feasibility studies that meet those requirements. Our highly experienced engineers and scientists are able to recommend the most cost-effective and technologically-sound solutions.

Hazardous and Nonhazardous Exposure Assessments

MCS has conducted comprehensive surveys for hazardous materials such as asbestos and lead for a wide variety of clients from government agencies to individual home owners. Our staff can sample and analyze for PCBs, heavy and toxic metals, volatile and semi-volatile compounds, petroleum hydrocarbons, and pesticides.

Waste Characterization and Source Reduction Studies and Review and Recommendation of Waste Tracking or Handling Systems

We not only identify and characterize hazardous and non-hazardous waste streams for our clients, but also design and implement waste handling and tracking systems. We have assisted many clients such as the US Forest Service and US Army Corps of Engineers develop effective programs to properly store, treat, and dispose of their waste.

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Waste Management Plans and/or Surveys

MCS has helped with all aspects of hazardous and non-hazardous waste management including the preparation of emergency response plans, corrective action plans, and recycling and disposal plans designed to clean up contaminated air, soil, surface water, and groundwater.

Projects



Site Investigation Report

EE/CA

Repository Investigation

*Groundwater Monitoring Well
Installation*

Permanent Repository Design

Nancy Lee Mine Site Investigation, Engineering Evaluation/Cost Analysis (EE/CA), and Design, Lolo National Forest, US Forest Service, Region 1

The Nancy Lee Mine site investigation, EE/CA, and Design was Task 1 of several tasks performed for the Lolo National Forest. The Nancy Lee Mine and Mill was the largest of nine adits and shafts studied. Work included a reclamation investigation of a 1,500-foot section of Mill Gulch, a tributary to the Clark Fork River, to delineate the impact of mill tailings on surface water and groundwater in the drainage. The repository investigation included the installation of groundwater monitoring wells prior to the repository construction and the installation of a permanent monitoring well after repository construction was completed. We completed an expanded EE/CA which included the alternative of removing tailings and waste rock and placing all mine wastes in an engineered repository. MCS prepared a design for a permanent regional repository that incorporated comments from the Lolo National Forest and was part of critical source removal under CERCLA.



Stream Restoration

Removed Mill Tailings

Engineered a Repository

Protected Endangered Species

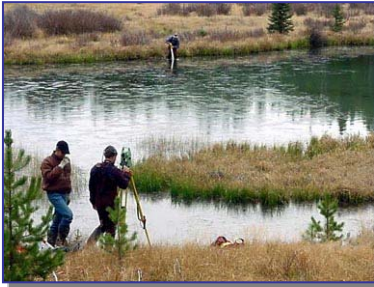
Spring Creek Tailings Removal and Stream Restoration, US Forest Service

MCS performed an abandoned mine reclamation and stream restoration along approximately 1,400 feet of Spring Creek, a tributary to the upper Clark Fork River near Deerlodge, Montana. The project was a CERCLA removal action designed by CDM Federal Programs to eliminate Clean Water Act violations. MCS removed approximately 11,000 cy of mill tailings from the channel and floodplain and placed them in an engineered repository built by MCS. This project required installation of about 5,000 lf of silt fencing with straw bales to protect undisturbed sections of the creek. Spring Creek is a spawning tributary for the endangered Westslope Cutthroat Trout. This project required extensive runoff and erosion control work to prevent snowmelt and summer thunder storms

at the high elevation (6,500 feet) from impacting the creek. No violations occurred during the project.

Frohner Meadows Complex Site Investigation and EE/CA, Helena National Forest, US Forest Service, Region 1

Tailings from historical milling operations at the Frohner Mill were placed in or adjacent to Frohner Basin Creek. Much of the tailings were transported to the Frohner Meadows either while operations were occurring or during flood events after the mill ceased operations. Most of the tailings from the Frohner Mill settled in upper Frohner Meadows. A second tailings release occurred into lower Frohner Meadows during mining operations at the Nellie Grant Mine during the 1980s. MCS characterized the nature and extent of tailings by collecting samples at various locations and estimated the volume of tailings by completing hand- and backhoe-excavated test pits. MCS compiled the data into a site investigation report. A streamlined risk assessment and reclamation alternatives were presented in an EE/CA.



Site Investigation Report

EE/CA

Tailings Samples Characterization

Elkhorn Mill Site Investigation and Phase III Beaverhead-Deerlodge National Forest, US Forest Service, Region 1

MCS performed a site investigation in 2001 and 2002 at the former mill at the Elkhorn Mine in the Beaverhead-Deerlodge National Forest. The investigation was part of the overall reclamation and restoration of the historic mining town of Coolidge, in the Pioneer Mountains of southwest Montana. Reclamation alternatives were prepared following the risk assessment. Work included characterizing mill tailings and unprocessed ore, completing a site investigation report and reclamation investigation report, and presenting reclamation alternatives to the client. In June 2004, MCS was contracted to perform a CERCLA time-critical removal action at the Elkhorn Mill. The initial phase of the project required MCS to design the construction project including all drawings and specifications. Major components of the construction phase included removal and disposal of remaining wood debris, construction of a new cell at the on-site repository, and removal of the tailings and waste rock to the repository. We constructed an engineered cover consisting of a geocomposite liner, a drainage layer with filter fabric, and a vegetated soil cover over the waste.



Tailings and Unprocessed Ore Characterization

Site Investigation and Reclamation Investigation Reports

Tailings and Waste Rock Removal