

Section 7. Conclusions

This section describes how the work completed during the NTCRA met the RAOs and complied with the performance objectives in the Statement of Work in Delivery Order No. AG-0489-D-10-0126 ([Forest Service, 2010](#)).

Completion of the NTCRA at the Blue Ledge Mine Site achieved the project RAOs (see [Section 2](#)), thus protecting humans and wildlife from exposure to elevated metals concentrations in site media and reducing the potential for erosion of contaminated waste rock. Specifically, the RAOs were met by:

- Removing waste rock (66,521 yd³) and placing it in a lined and covered repository, which will also prevent stormwater runoff and leaching of waste rock constituents from entering surface water.
- Ensuring residual amounts of waste rock at the site, as accounted for in the Removal Design, do not pose a potential risk because it is a de minimis quantity in isolated areas that are inaccessible, or is outside the limits of the visible waste rock area, indicating metals concentrations are naturally occurring.
- Installing sediment/pH treatment basins to capture sediments and residual waste rock and to reduce acidic water discharges from the site during low flow conditions, which will mitigate groundwater impacts from waste rock, sediment, and surface water sources.
- Performing reclamation of the waste rock areas to stabilize the areas with log wattles, straw wattles, plants, and native grasses and mitigate future erosion and transport of residual waste rock.
- Results of QC/QA activities verify the NTCRA activities have met the performance criteria.

In addition to meeting the RAO, the NTCRA also achieved the requirements of the following performance objectives, which are included in the Statement of Work in Delivery Order No. AG-0489-D-10-0126 and in [Section 2](#):

- Comply with the provisions of CERCLA, NCP, and all other federal and state ARARs. QC/QA documentation has verified that the NTCRA activities have met the performance objectives, that the work was executed in compliance with all project plans and BMPs, and that the NTCRA satisfies the ARARs to the extent practicable
- Comply with the provisions of ARRA (stimulus bill) and optimize the intent of providing jobs in economically depressed counties. The NTCRA was performed in accordance with the provisions of the ARRA, and all ARRA reporting has been submitted to the FederalReporting.gov website. The project was audited by the U.S. Department of Agriculture Office of Inspector General.

Through 2011, over 40,000 work hours were expended, 26 vendors in excess of \$25,000 were utilized, and 22 workers from the local community were hired and trained.

- Minimize the ongoing release of hazardous substances to the environment from mining-related waste rock. Waste rock was successfully removed from each of the waste rock areas and placed in a lined and capped repository. Installation of sediment/pH treatment basins will capture sediments and residual waste rock constituents and reduce acidic water discharges from the site during low-flow conditions.
- Minimize site disturbance in the project area and associated costs, including those associated with temporary and permanent roads, staging, and stockpile sites. NTCRA activities that disturbed the site were limited to the areas designated for work activities or approved by the Forest Service COR. Site disturbance was further minimized because the work was completed without constructing three of the conceptual haul roads identified in the Removal Design.
- Minimize the excavation of clean soil and rock underlying, mixed in, or adjacent to the waste rock piles, and subsequent haul and placement of these materials into the repository. NTCRA activities were controlled to minimize the excavation of clean soil and rock underlying, mixed in, or adjacent to the WRPs and subsequent haul and placement of these materials into the repository. Soil with metals concentrations exceeding the removal goals that was determined to be naturally occurring and not created by mining activities was left in place.
- Isolate waste rock in a permanent repository to prevent future exposures to humans and the environment from hazardous substances associated with mining waste rock. During the NTCRA, waste rock was successfully isolated in a permanent repository.
- Minimize erosion and off-site sedimentation or leaching of any residual contaminated waste rock, during and following contract activities. BMPs were implemented during the NTCRA activities, and reclamation of disturbed sites was performed. Sediment/pH treatment basins installed during the NTCRA will capture sediments and residual waste rock constituents and reduce acidic water discharges from the site during low-flow conditions.
- Prevent the introduction of moisture to waste rock placed into the repository before the final cover has been constructed and approved. Prior to shutdown of the site in winter 2010, the repository was covered by a temporary plastic cover to prevent moisture from entering the waste rock before the final cover was constructed.
- Reclaim all project-related disturbed sites, both contaminated and non-contaminated, with structural features and revegetation. All project-related disturbed sites, as indicated in the Work Plan and Removal Design, were reclaimed with structural features and revegetation.
- Perform 3 years minimum of on-site operations, maintenance, and monitoring tasks to ensure the continued effectiveness of removal action efforts. The on-site operations, maintenance, and monitoring tasks have commenced to the extent practicable after completion of the NTCRA. This task will be ongoing periodically through the end of the contract period in 2015.
- Perform 3 years minimum of off-site environmental effectiveness monitoring of designated surface waters, stream sediments, macroinvertebrates, and fish. The off-site operations, maintenance, and monitoring tasks have commenced after completion of the NTCRA. The initial

sampling of designated surface waters, stream sediments, macroinvertebrates, and fish has been performed. This task will be ongoing periodically through the end of the contract period in 2015.

- Monitor water quality of nearby residential (Joe Bar, California) drinking water supplies before, during, and for 3 years minimum following removal action activities. Samples of designated residential drinking water supplies were collected before, during, and immediately after the NTCRA. This task will be ongoing periodically through the end of the contract period in 2015.
- Conduct removal action activities while maintaining the safety of the general public, site workers, and Government employees. The Removal Action was performed in accordance with the Site Health and Safety Plan. The site was closed to access by the general public. Off-site activities that could affect the general public, such as road grading or dust control, were performed without incident. Safety of site workers and government employees while on the project site was a daily priority. The Forest Service COR was complimentary of the attention to safety.
- Comply with all applicable Forest Service fire protection and suppression provisions. A Fire Protection and Suppression Plan was prepared and submitted to the Forest Service. Because the site is on private mine claim lands in California, when Industrial Fire Precaution Levels reached Level III, an exemption was requested and granted by the agency responsible for fire suppression on private land in California (CalFire).
- Adhere to applicable wildlife restrictions. No wildlife restrictions were implemented during the NTCRA.
- Prevent the introduction and spreading of noxious weeds at the site and on Forest Service lands. All equipment was cleaned to remove dirt and eliminate the potential for noxious weeds prior to arriving at the site. All equipment was certified as clean and was made available for inspection by Forest Service personnel prior to initiating site work. Certificates of cleaning were provided for each piece of equipment brought to the site.