

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

RESOLUTION R5-2013-0053

AUTHORIZATION FOR THE EXECUTIVE OFFICER TO APPLY FOR FUNDS FROM
THE STATE WATER POLLUTION CLEANUP AND ABATEMENT ACCOUNT FOR THE
PENN MINE LANDFILL FINAL COVER PARTIAL RECONSTRUCTION PROJECT
CALAVERAS COUNTY

WHEREAS, the California Regional Water Quality Control Board, Central Valley Region (hereinafter Central Valley Water Board), finds that:

1. There is in the State Water Quality Control Fund the State Water Pollution Cleanup and Abatement Account (Account) which is administered by the State Water Resources Control Board (State Water Board).
2. Upon application by a regional board that is attempting to remedy a significant unforeseen water pollution problem, posing an actual or potential public health threat, and for which the regional board does not have adequate resources budgeted, the State Water Board may order moneys to be paid from the Account to the regional board to assist it in responding to the problem.
3. The Penn Mine is an abandoned copper and zinc mine adjacent to the Mokelumne River that operated intermittently from the 1860s through the 1950s. In the 1960s, the East Bay Municipal Utility District (EBMUD) acquired part of the Pen Mine property to build the Camanche Reservoir. In 1978, EBMUD and the Central Valley Water Board constructed a remediation project in an attempt to reduce the impacts caused by acid mine drainage from the abandoned mine. The Central Valley Water Board and EBMUD were subsequently found jointly responsible under the Clean Water Act for the acid mine drainage due to their operation of the remediation project. (*Committee To Save Mokelumne River v. East Bay Mun. Utility Dist.* (9th Cir. 1993) 13 F.3d 305.)
4. The Central Valley Water Board expended approximately \$5,454,000 from the Account between 1995 and 2000 for Environmental Impact Report preparation, operation of a wastewater treatment system, landfill design and construction, mine waste excavation and disposal, landfill closure, revegetation, and stream restoration.
5. The Penn Mine Landfill was constructed with a composite liner system, a leachate collection and removal system, and has a final cover consisting of a soil foundation layer, a geomembrane, a geocomposite drainage layer, three feet of soil, and vegetation. The landfill was cut into a hillside and includes an underdrain to intercept any seepage from the hillside. There are also four groundwater monitoring wells that were installed around the landfill.

6. Past funding agreements between EBMUD and the Central Valley Water Board have resulted in the equal sharing of costs associated with the Penn Mine project.
7. The Central Valley Water Board was previously authorized to expend funds from the Account under Account CA 138. During 2006, remaining funds in Account CA 138 were de-obligated and the account was closed.
8. The landfill continues to generate more leachate than was originally anticipated. The leachate volumes spike immediately after rainfall events indicating a significant source of surface water into the landfill. Leachate buildup on the landfill liner system is a threat to underlying groundwater quality and leachate is periodically removed from the landfill sump; however, no groundwater impacts have been detected in the monitoring wells to date.
9. The leachate is highly acidic and contains very high concentrations of metals due to contact with the acid-generating mine waste rock in the landfill and costs for hauling and disposal of the leachate will continue until the source of water into the landfill is abated.
10. An investigation was conducted in 2012 by Shaw Environmental & Infrastructure, Inc. (Shaw) to find the source of water into the landfill. Shaw submitted an 18 January 2013 *Investigation Summary Report & Recommendations* report wherein Shaw concludes that the most likely source of the water into the landfill is through the gap between the cover and the liner despite the designed overlap of the cover system with the underlying liner system.
11. The Shaw report recommends performing work to weld the final cover geomembrane to the liner geomembrane and to reconstruct the radial drain around the landfill perimeter to eliminate the potential source of surface water into the landfill.
12. A 12 March 2013 detailed cost estimate for the proposed work totaling \$702,370 was submitted to the Central Valley Water Board and EBMUD. A 10 May 2013 revised cost estimate totaling \$946,181 was submitted to incorporate additional necessary features requested by Central Valley Water Board and EBMUD staff. EBMUD also informed Central Valley Water Board staff that there would be additional third party oversight costs for the project estimated at \$55,000. Half of these costs would be \$500,590.
13. The Penn Mine Landfill project requires \$600,000 to pay for the Central Valley Water Board's share of the final cover partial reconstruction project, including an approximate 20 percent contingency to cover unforeseen costs that could be encountered during the reconstruction work. Any funds remaining after the work is completed can be de-obligated and the account can be closed. The Central Valley Water Board, EBMUD, and Shaw are currently discussing a cost-sharing agreement that would release Shaw from obligations imposed by Change Order 8 in exchange for a commitment from Shaw to fund a portion of the final cover partial reconstruction project. Though such an

agreement could reduce the Central Valley Water Board's share of the costs, a final agreement has not been reached at this time.

14. The Central Valley Water Board does not have sufficient resources budgeted for the work associated with the Penn Mine Landfill final cover reconstruction project.

Therefore be it RESOLVED that:

1. The Executive Officer is hereby authorized to apply to the State Water Resources Control Board for \$600,000 for half of the costs associated with the final cover partial reconstruction project at the Penn Mine Landfill.
2. The Executive Officer is hereby authorized to enter into engineering services and construction contracts for work associated with the final cover partial reconstruction project at the Penn Mine Landfill.
3. The Executive Officer is hereby authorized to amend the cost sharing agreement with the EBMUD, if deemed necessary by the parties, for activities associated with the final cover partial reconstruction project at the Penn Mine Landfill, contingent upon the State Water Board authorizing the expenditure of sufficient funding.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a true, full, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Central Valley Region, on 31 May 2013.

Original signed by

PAMELA C. CREEDON, Executive Officer

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