

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER NO. R5-2007-0700

FOR

CARSON HILL ROCK PRODUCTS
CARSON HILL GOLD MINING CORPORATION

CARSON HILL GOLD MINE
CALVERAS COUNTY

This Order is issued to Carson Hill Rock Products (Sutton Enterprises) and Carson Hill Gold Mining Corporation (CHGMC), subsidiary of BHP Billiton, based on provisions of California Water Code Section 13304, which authorizes the California Regional Water Quality Control Board, Central Valley Region (hereafter Regional Water Board) to issue a Cleanup and Abatement Order (Order), and California Water Code Section 13267, which authorizes the Regional Water Board to require technical and monitoring reports.

The Executive Officer of the Regional Water Board finds, with respect to the Discharger's acts, or failure to act, the following:

1. Waste Discharge Requirements (WDRs) Order No 5-01-150, adopted by the Regional Water Board on 14 June 2001, prescribes requirements for the Carson Hill Rock Products and Carson Hill Gold Mining Corporation (hereafter jointly referred to as "Discharger") for the Carson Hill Gold Mining facility. The WDRs incorporate by reference the August 1997 "Standard Provisions and Reporting Requirements for Waste Discharge Requirements for Discharges Regulated by Title 27 and/or Part 258" (Standard Provisions).
2. The Discharger has caused, and continues to cause, impacts to groundwater and surface water as a result of the failure to properly close its Waste Management Units (WMUs) and waste rock dumps in accordance with Prescriptive Standards set forth in Title 27 California Code of Regulations (CCR), Division 2 (Title 27).
3. The Discharger has failed to install precipitation and erosion controls in and around the WMUs and waste rock dumps, contributing to groundwater and surface water impacts.
4. The Discharger has failed to implement Best Management Practices (BMPs) and has failed to submit annual erosion control plans as required in WDRs Order No. 5-01-150.
5. This Order requires the Discharger to prepare a corrective action program to (a) close WMUs 1 through 3 and the waste rock dumps within a specified period; (b) design and install appropriate precipitation and erosion controls for the WMUs and waste rock dumps, including collection of seeps observed at the toe of waste rock dumps; (c) prepare the annual erosion control plan for the 2006/2007 wet season, (d) prepare an appropriate work

plan for the storage and final disposal of clarifier slimes, and (f) evaluate and select remedial actions to return polluted groundwater to background concentrations in compliance with Title 27 .

BACKGROUND

6. Carson Hill Gold Mining is adjacent to State Highway 49, near the town of Carson Hill, and overlooks the northwest shore of the Coyote Creek arm of New Melones Reservoir, in Section 13, T2N, R13E, MDB&M.
7. CHGMC operated a heap leach gold extraction mine from February 1988 to November 1989. Western Mining Corporation (WMC) purchased CHGMC in February 1988 and continued to operate the mine.
8. WDRs Order Nos. 86-011 and 88-204 regulated operation of the recent gold mining project to protect waters of the state. The former gold mining facilities consisted of the Carson Hill Open Pit, three leach units, five overburden disposal units or waste rock dumps, a low-grade ore storage area, a barren pond, a crushing plant, and a recovery plant.
9. At the conclusion of processing, WDRs Order No. 88-204 required that the leached ore be detoxified. The three leach units (LU-1 through LU-3) were still in operation when mining and crushing stopped. These three units were comprised of ore crushed to minus 1.25 inches, which was stacked into the lined bowl to create valley leaches. The ore was processed with dilute cyanide solution to recover the cyanide-soluble gold from the crushed rock. LU-1 through LU-3 were detoxified and classified as Group "C" mining waste on 1 November 1990, 3 December 1991, and 7 February 1992, respectively. These three leach units are now referred to as WMU-1, WMU-2, and WMU-3.
10. Final closure (detoxification) reports indicate that the detoxification standards in each of the three waste management units were achieved. WMC completed closure under Closure WDRs Order No. 92-099 in conformance with Title 27.
11. Sutton Enterprises, dba Carson Hill Rock Products, purchased the mineral and surface rights to the 550-acre former gold mine from the CHGMC, a subsidiary of WMC, on 22 May 1997.
12. WDRs Order No. 98-142 added Sutton Enterprises as an owner and reflected Sutton Enterprise's proposal to utilize the closed mine site to produce landscape rocks from the existing quarry, as well as other rock products from the overburden sites and three WMUs.
13. WDRs Order No. 5-01-150 were adopted to update the criteria for the mercury content of rock products which could be used offsite and to require the Discharger to submit: an acceptable work plan for permanent disposal of clarifier slimes; an acceptable work plan for treatment to remove soluble metals from the clarifier slimes; and an evaluation and

selection of remedial actions to return polluted groundwater to background concentrations. Additional information, which led to the adoption of these WDRs is described below.

14. WMC, including its subsidiary CHGMC, was acquired by BHP Billiton in 2005. CHGMC, now an indirect subsidiary of BHP Billiton, retained the responsibility concerning closure and reclamation requirements associated with WDR No. 5-01-150. It is staff's understanding that the original sales agreement between CHGMC and Sutton Enterprises was carried forward with the acquisition of WMC.

ROCK QUARRY CLARIFIER SLIMES

15. In a letter dated 11 September 2000, the Discharger was required to submit an amended report of waste discharge (ROWD) by 2 October 2000, pursuant to Section 13267 of the California Water Code (CWC). This requirement was imposed because the Discharger was illegally disposing of clarifier slime from the rock quarry operations on top of WMU-3. The amended ROWD was to include a characterization of the slime, a description of the process that produce the slime, the storage and disposal methods of the slime, and the volume of slime produced by the wash plant. The characterization of the slime was to include total and soluble concentrations of general minerals and inorganics and a determination if the slime is a designated or hazardous waste.
16. On 6 November 2000, staff received an Amended ROWD. The ROWD described the disposal of clarifier slime into the mine pit and other changes from the operations as described in WDRs Order No. 98-142. Clarifier slimes contain total and leachable concentrations of inorganics (cadmium and molybdenum) that exceed the California Public Health Goal and water quality goals for agriculture.
17. In a letter dated 16 November 2000, staff determined that the clarifier slimes are designated waste and classified them as a Group B mine waste. The clarifier slimes were required to be isolated from groundwater and surface water; Regional Water Board staff requested a work plan by 8 December 2000 proposing how this would be accomplished.
18. In a letter dated 24 April 2001, staff responded to the April 2001 *Proposed Work Plan to Address Clarifier Slimes Storage for the Carson Hill Rock Products*. The Clarifier Slimes work plan proposed storing and/or drying the clarifier slimes on the existing WMUs that are being mined. Staff was concerned about runoff from the clarifier slimes stored and the potential to degrade groundwater or surface water. Staff requested the Discharger to provide more detail by 17 May 2001.
19. WDRs Order No. 5-01-150 were adopted in June 2001 to reflect, among other items, the management of the clarifier slimes. The WDRs required the Discharger to prepare a work plan for permanent disposal of the clarifier slimes and a work plan for treatment to remove soluble metals from the clarifier slimes

20. In an enforcement letter dated 24 September 2003, the Discharger was issued a CWC 13267 Order for Technical Reports for failure to submit acceptable work plans for (1) the permanent disposal of clarifier slimes, for (2) the treatment to remove soluble metals from the clarifier slime, and (3) to submit an evaluation and selection of remedial actions to return polluted groundwater to background concentrations. Provision 11 of WDRs Order No. 5-01-150 required the reports. As required by Provision 12 and 13 of the WDRs, the Discharger was to obtain the Executive Officer's approval of work plans 1 and 2, above, prior to disposing of clarifier slimes in the WMUs and prior to treating the clarifier slimes for removal of soluble metals. Neither work plan had been finalized. Work plan number 3 was unacceptable as described in the Regional Water Boards letter dated 5 November 2002.
21. In letter dated 1 December 2003, Regional Water Board staff responded to the work plan to address clarifier slimes storage submitted on 4 November 2003. Staff found that the document was incomplete and requested the Discharger to address the report's deficiencies. Because the Discharger was using the closed WMU-3 for storage of clarifier slimes, staff considered this to be a discharge of waste to the unit, and pursuant to Title 27, no longer considered WMU-3 a closed unit. Staff requested an addendum to the work plan by 1 January 2004 and proposed to revise the WDRs once the supporting documentation was submitted.
22. In an email dated 10 March 2004, staff notified the Discharger that the *"Updated Work Plan to Address Clarifier Slimes Storage"* had not been submitted by the requested date of 1 January 2004. This non-submittal was a violation of the CWC 13267 Order dated 24 September 2003.
23. On 12 March 2004, WMC responded to staff's 10 March 2004 letter and concluded that *"the clarifier slimes are generated solely by the aggregate mining activity of Carson Hill Rock Products. The responsibility for the ultimate solution to the issue of the clarifier slimes, as described in WDR 5-01-150, rests with Carson Hill, not WMC."*
24. On 22 November 2004, staff received a letter report from Environmental Services Network (ESN) called *Annual Facility Monitoring Letter Report for 2004 for the Carson Hill property*. This letter described work performed at the facility. Completed projects included the removal of all remaining slimes or silty fill material from WMU-3 to a holding area in the west-northwest corner of WMU-2 and reseeded of former slime storage area of WMU-3.
25. According to the 2005 Facility Monitoring Report dated 1 December 2005, approximately 4,500 tons of clarifier slimes were being stored within WMU-2 and the slime storage area was bermed off to prevent run-off. However, staff has not verified whether the clarifier slimes were isolated from groundwater or surface water.
26. In a letter dated 20 December 2006, Carson Hill Rock Products submitted a document titled *Clarifier Tank: Description of Clarification Process*. The letter did not address earlier concerns regarding clarifier slimes as described in the Findings above, nor did the letter

address the earlier removal of clarifier slimes or whether groundwater or surface water are isolated and protected from this byproduct of aggregate washing.

27. The Discharger has failed to submit an acceptable and complete plan to address previous, current, and future clarifier slimes storage and final disposal. As of the date of this Order, it is unclear how the clarifier slimes are being stored and their final disposition, and whether the slimes are isolated from groundwater or surface water at the site. The clarifier slimes are generated by the aggregate mining activity, and Carson Rock Products (i.e. Sutton Enterprises) is responsible for the plan.

STORM WATER

28. The Discharger submitted an erosion control plan dated October 1998.
29. In a letter dated 5 October 2001, staff stated that proper storm water controls or berms were not in place along the north and northwestern boundaries of WMU 3. Staff was also concerned that WMU-3 continued to accept leachate from WMU-1 and WMU-2 for spray irrigation during the summer months. Staff requested Carson Hill construct appropriate storm water controls around WMU-3 to prevent overland flows onto the unit. Photos and an as-built construction report were requested by 1 November 2001.
30. Staff received the requested photos and construction letter report dated 5 November 2001.
31. Staff's 14 February 2002 Notice of Violation stated that the Discharger violated WDRs Order No. 5-01-150, Discharge Specification B.7.e because an Annual Erosion Control Plan had not been submitted by 15 November of each year.
32. On 22 November 2004, staff received a letter report from Environmental Services Network (ESN) called *Annual Facility Monitoring Letter Report for 2004 for the Carson Hill property*. This letter described work performed at the facility, which included a complete evaluation of run-on/run-off potential of all three WMUs; repair or construction of run-on/run-off facilities around the WMUs; a survey of erosion control fences across the waste rock slopes; and a review of general site conditions prior to the rainy season.
33. The Discharger had submitted a 2005 Facility Monitoring Report as required by WDR No. 5-01-150, Discharge Specification B.7.e. The report was received 23 January 2006, two months beyond the due date. According to the Facility Monitoring Report, an erosion control channel was built upgradient of WMU-2, erosion controls measures were instituted around all three WMUs to minimize infiltration and erosion, and erosion control fences were inspected and noted to be in good shape. However, infiltration of storm water into the WMUs continued to plague the facility. At the end of the 2005 evaporation season, WMU-3 had a storage capacity of approximately 8,000,000 gallons.
34. On 17 May 2006, staff met with the Discharger for a site inspection. The Discharger discussed water management issues and current activities associated with WMUs and

waste rock dumps. The Discharger also discussed covering WMUs 1 and 2. The Discharger committed to prepare and submit a 30% engineered design plan for longer-term water management. The design plan was due 30 June 2006.

35. Staff met with the Discharger on 26 September 2006. Staff requested that the Discharger (a) submit a closure plan to close WMUs 1 through 3 in accordance with Title 27 Prescriptive Standards, (b) obtain an industrial storm water permit, and (c) construct and install the required precipitation and erosion controls. Once the closure plan has been approved, staff will revise Waste Discharge Requirements.
36. The Discharger has submitted an approved "Notice of Intent" required for a storm water permit and has recently filed an appropriate Storm Water Pollution Prevention Plan (SWPPP) with the Regional Water Board. However, the Discharger did not submit an approved Erosion Control Plan by the 15 November 2006 deadline. The 2006 Facility Monitoring Report was received on 20 November 2006. According to the 2006 Facility Monitoring Report, surface water ditches were installed west of WMU-1 to reduce flow to waste rock dump No. 5. Storm water controls for the other WMUs and waste rock dumps do not meet the requirements of Title 27. The facility is impacting or threatening to impact waters of the State from the seeps at the base of the waste rock dumps, erosional problems associated with overland flow, and runoff from the rock quarrying area. Chemical analytical data for constituents of concern (COCs) associated with the seeps at the base of the waste rock dumps is presented in Table 2 below.

GROUNDWATER

37. Groundwater beneath the Carson Hill Gold Mine is monitored using seven ground water wells that include: M-1, M-2, M-4, M-5, M-7, M-16, and M-17. Wells M-4 and M-5 monitor groundwater upgradient of WMU-3 and WMU-2, respectively. M-2 is located southwest (cross gradient) to WMU-1. Wells M-1, M-7, M-16, and M-17 monitor groundwater downgradient of WMU-1, WMU-2, and WMU-3. Three additional wells are used to monitor water levels and water quality in the three WMUs.
38. Spine drains SD-1 and SD-2 were positioned under the liner systems at WMU-1 and WMU-2, respectively, to drain preexisting groundwater springs encountered during construction and minimize water pressure on the liners. French Drain No. 3 (FD-3) was positioned between WMU-1 and WMU-3 to intercept groundwater springs observed during construction. According to the 2006 Facility Monitoring Report, spine drains SD-1 and SD-2, and FD-3 drain groundwater year round, and contain elevated concentrations of several constituents of concern. Golder Associates, consultants for CHGMC, suggest that the liner systems beneath the WMUs are leaking and have affected groundwater as evidenced by the chemical analytical results reported in SD-1, SD-2, and FD-3. These underdrains discharge water to the New Melones Reservoir in violation of WDRs No. 5-01-150.
39. MRP No. 5-01-150, Section E. Post Closure Monitoring Program, indicates the Discharger proposes to collect and return the spine drain fluids as irrigation wastewater on WMU-3 in

conjunction with the current practice of spray irrigating leachate from WMU-1, WMU-2 and WMU-3. Currently, fluids from the spine drains and French drain are not collected and returned to WMU-3.

40. Additional seeps observed at the base of the waste rock dumps discharge to the New Melones Reservoir and Carson Creek north of the facility in violation of WDRs No. 5-01-150.
41. Water Quality Protection Standards (WQPS) for groundwater and surface water were submitted in the 23 June 1992 report titled "*Carson Hill Gold Mine, Revised Post-Closure Water Quality Detection Monitoring Program,*" as prepared by Adrian Brown Consultants, Inc., on behalf of WMC.
42. A Revised Monitoring and Reporting Program (MRP) Order No. 5-01-150 was signed by the Executive Officer on 14 June 2001. The revised MRP included the WQPSs shown in Table 1 below. The standards were based on background concentrations for groundwater and surface water at the Carson Hill Rock Products site.
43. There has been a release of wastes from each of the three waste management units and waste rock dumps to ground water and surface water as indicated by the selected concentrations of COCs shown in Table 1 below. The concentrations shown are an average of the last four semi-annual sampling events for total dissolved solids (TDS), cyanide, sulfate, nitrate, arsenic, cadmium, nickel, and selenium.

Table 1: Concentrations of Constituents of Concern¹

Well ID	TDS (mg/L)	Total Cn (mg/L)	SO ₄ (mg/L)	NO ₃ (mg/L)	As (mg/L)	Cd (mg/L)	Ni (mg/L)	Se (mg/L)
Groundwater								
WQPS	491	0.2	159/350*	7.5	0.01/0.018**	0.01	0.025	0.011/0.018***
M-01 ^A	930	0.02	422	43	0.0049	0.016	0.035	0.128
M-02	450	0.015	109	1.5	0.0075	0.0007	0.008	0.011
M-03	NA	NA	NA	NA	NA	NA	NA	NA
M-04 ^B	495	0.02	158	2.5	0.0049	0.003	0.024	0.007
M-05 ^B	407	0.02	98	1.4	0.0026	0.001	0.025	0.002
M-06	NA	NA	NA	NA	NA	NA	NA	NA
M-07 ^A	970	0.01	351	3.0	0.0034	0.0007	0.0075	0.005
M-10	NA	NA	NA	NA	NA	NA	NA	NA
M-16 ^A	2,550	0.01	1,250	125	0.125	0.0007	0.075	0.036
M-17 ^A	687	0.01	195	6.5	0.0016	0.0007	0.011	0.002
WMU1 ^C	6,575	0.81	3,650	502	0.0056	0.001	0.025	0.063
WMU2 ^C	3,100	0.96	1,867	185	0.0020	0.0007	0.087	0.009
WMU3 ^C	9,500	0.13	5,600	335	0.0050	0.0007	0.313	0.017

Surface Water								
WQPS	256 ² /59 ³	0.2	54 ² /12 ³	4.0 ² /3.0 ³	0.01	0.005	0.01	0.005
SD-1 ^D	3,050	0.0344	1,310	68	0.001	0.00002	0.0004	0.009
SD-2 ^D	3,300	0.014	1,750	173	0.0005	0.00044	0.065	0.002
FD-3 ^D	1,433	0.0022	660	18	0.001	0.0005	0.027	0.002
WRDT-2 ^D	2,400	0.0022	883	22	0.0069	0.00053	0.220	0.0094
WRDT-3 ^D	1,847	0.0031	1,106	17	0.001	0.000084	0.013	0.0058
WRDT-4 ^D	2,533	0.0022	1,733	66	0.001	0.00015	0.0043	0.012
WRDT-5 ^D	2,120	0.0029	617	15	0.0015	0.00012	0.018	0.011

¹ Concentrations are average of last four semi-annual sampling results. NA = Data not available.

^A Downgradient wells; ^B Upgradient Wells; ^C Wells located within waste management units. ^D chemical results are compared to WQPS for surface water sampled during 1st and 2nd quarter 2006 by Butch Moore and Golder Associates. ^{2/3} Surface water WQPS for C-02/R-02. *Except for M-1 and M-7 where sulfide is 350 mg/L; ** Except for M-2 where arsenic is 0.018 mg/L; *** Except for M-1 where selenium is 0.018 mg/L.

Bolded values = WQPS exceedences.

44. When concentrations of COCs are compared to the established WQPS shown in Table 1, it is apparent groundwater and surface water have been impacted by elevated concentrations of TDS, sulfate, nitrates, arsenic, cadmium, nickel, and selenium.
45. In a letter dated 5 November 2002, staff rejected a work plan for an evaluation and selection of remedial actions to return polluted groundwater to background concentrations in accordance with WDRs Order No. 5-01-150, Provision D.11. The report was rejected because a professional engineer or geologist, registered in the State of California, did not prepare the report. Staff requested the Discharger re-submit the required report by 1 March 2003.
46. In a letter dated 1 April 2003, authorized representatives for Carson Hill Gold Mine requested an extension to the required work plan for an evaluation and selection of remedial actions to return polluted groundwater to background concentrations. This report was due 1 March 2003.
47. In a letter dated 24 September 2003 staff stated that they had not received the above work plan. Pursuant to CWC Section 13267 the Discharger was required to submit (1) an evaluation and selection of remedial actions to return polluted groundwater to background concentrations; (2) an updated report for the permanent disposal of clarifier slimes generated from the sizing operations and; (3) an updated report for treatment to remove soluble metals from the clarifier slimes. The failure to submit the required reports is a violation of WDRs Order No. 5-01-150, Provision 11, 12, and 13.
48. In a letter dated 3 May 2005, staff requested a Report of Waste Discharge (ROWD) from the Discharger to reflect the current water quality issues affected by the rock quarry activities and past mining activities. Based on the water quality analysis, groundwater

contained in the WMUs has been impacted by elevated concentrations of TDS, total cyanide, nitrate, sulfate, iron, manganese, nickel, sodium, and selenium from percolation of rain water through the vegetated soil cover and waste rock. Groundwater monitoring results also confirm that groundwater continues to be impacted by mining activities for the same constituents listed above, including cadmium. Concentrations of these constituents exceed background groundwater concentrations and/or water quality objectives. The discharges are from residual contamination from past spray irrigation practices, past overflow of wastewater from the WMUs, and/or wastewater percolating through the waste rock overburden piles.

49. Post closure maintenance monitoring shows that the closure/reclamation cap on the WMUs is not effective in protecting groundwater and the overburden rock piles or waste rock dumps are impacting water quality. The presence of large volumes of contaminated groundwater in the WMUs and the need to continue operating a water management system to prevent future discharges obligates the Regional Water Board to request corrective action measures per Title 27 Section 20430(c).
50. Corrective Action measures may include final closure of the site by capping the WMUs and waste rock dumps, clean closure, constructing a groundwater pump and treat system or a combination of these activities. In the letter dated 3 May 2005, staff classified the waste in the WMUs as Group B mining waste under Title 27 CCR, Section 22480(b)(2)(B). This meant the WMUs and waste rock dumps would need to be capped according to the Group B mining waste closure requirements described in Title 27 CCR Section 22510.
51. On 7 April 2006, staff met with the Discharger to discuss an emergency water management plan at the Carson Hill Mine. WMUs -1 through -3 were nearly full and the Discharger was concerned the WMUs might overtop. Therefore, the Discharger proposed a short-term water management plan using reverse osmosis to treat extracted groundwater from WMU-3. Water in WMUs -1 and -2 would be drained to WMU-3 as liquid levels were drained down in WMU-3. The Discharger also proposed a longer-term water treatment system and the installation of temporary low-permeability covers over the WMUs.
52. Presently, most of the water from the WMUs has been removed and either treated or evaporated. Title 27 prescriptive covers have not been placed on the WMUs; therefore, storm water will continue to percolate into the WMUs, threatening groundwater quality. No approved plan has been submitted to prevent future accumulation of storm water in the WMUs or to propose remedial actions to return polluted groundwater to background concentrations. The Discharger has not submitted a final corrective action plan.

ENGINEERING FEASIBILITY STUDY AND CLOSURE

53. CHGMC submitted an Engineering Feasibility Study (EFS) on 2 November 1998 as required in WDRs No. 98-142. The EFS included a proposed action program consisting of recommendations for alternative closure/monitoring, reduction of the post closure compliance period, and development of risk-based cleanup levels for the site. The EFS

also included a work plan to characterize the WMUs overflows and a scope of work to physically stop the overflows.

54. Based on the 27 April 1999 site inspection, the WMUs were out of compliance with WDR No. 98-142 for failing to attain and maintain two feet of freeboard in the WMUs 1 through 3.
55. In a letter dated 10 May 1999, staff requested the Discharger immediately implement the scope of work proposed in the EFS to physically stop the overflows and attain the two feet of freeboard required. This included installing a drain line to allow drainage of water from WMU-1 and WMU-2 into WMU-3, diversion of drainage around the top of WMU-3 pad to minimize infiltration into WMU-3, and installation and operation of an extraction well with a small surge tank and mechanical evaporator in WMU-3.
56. In a letter dated 17 May 1999, staff stated that the 2 November 1998 EFS did not meet the requirements of WDRs No. 98-142 or Title 27 for the following reasons (1) the EFS did not propose concentration limits for all constituents of concern and monitoring parameters, (2) the EFS did not base the proposal for concentration limits greater than background (CLGB) on the technological and economic feasibility of achieving background for each of the COCs or demonstrate that the COCs will not pose a substantial present or potential hazard to the environment as long as the CLGB is not exceeded, and (3) the EFS did not contain a detailed description of the corrective action measures that could be taken to achieve background for all COCs. Therefore, Regional Water Board staff requested a revised EFS and Water Quality Protection Standards to be submitted by 14 June 1999.
57. The document was not received, and therefore, in a letter dated 11 September 2000, the Discharger was required to submit a revised EFS and WQPS, a work plan to determine the leachability of antimony, mercury, and molybdenum, and to resume quarterly monitoring. Pursuant to CWC Section 13267, the work plan to determine leachability of antimony, mercury, and molybdenum was due 2 October 2000 and a revised EFS and WQPS report was due by 31 October 2000.
58. In a letter dated 18 December 2000, staff had reviewed the revised EFS submitted on 2 October 2000. Staff determined the EFS was incomplete because it did not contain the required WQPS for corrective actions. Staff requested the Discharger to "evaluate the technological and economic feasibility of corrective action to remediate the existing groundwater contamination."
59. Staff approved the work plan to determine leachability of antimony, mercury, and molybdenum in a letter dated 19 December 2000.
60. In a letter received on 12 March 2004, the Discharger discussed WMU-1, -2 and -3 closure options that would result in a "Final Closure" either by the "Closure as a Landfill" process or the "Clean Closure" process under Title 27. This closure would be dependent on Western Mining Company reaching an acceptable agreement with Carson Hill Rock Products.

61. In a letter dated 18 March 2004, staff commented on the Annual 2003 Monitoring Report, which included the *Engineering Feasibility Study for Corrective Action at the Carson Hill Rock Products* facility. The information provided did not meet the basic requirements for an engineering feasibility study or corrective action in compliance with Title 27. The proposed corrective action reflected continued spray irrigation over WMU-3 and monitoring.
62. In an email dated 30 June 2004, staff requested an update and status of the Engineering Feasibility Study for Corrective Action. Staff subsequently requested a ROWD in the form of a Corrective Action Program (CAP) by 25 July 2005. In a letter dated 22 July 2005, the Discharger requested a 90-day extension (to 25 October 2005) to prepare and submit a CAP.
63. Carson Hill Rock Products intent is to mine the waste rock from WMUs 1 through 3 and produce aggregate products such as road base. The intent of this action was to facilitate closure of the WMUs by removing the waste.
64. In a letter submitted to the Regional Water Board dated 23 May 2005, Western Mining Company indicated that any acceptable CAP would require a significant increase in the rate at which waste rock is removed from the site. Carson Hill Rock Products removes waste rock at an approximate 150,000 tons/year, which is not a sufficient rate to implement a CAP in a reasonable timeframe.
65. Staff met with Carson Hill Gold Mining Corporation on 26 July 2005. Carson Hill Gold Mining Corporation committed to responding with a comprehensive CAP by the 25 October 2005 deadline. However, the requested CAP was not received by the 25 October 2005 deadline. There is no record of the CAP on file.
66. On 22 June 2006, the Discharger submitted a Proposed Corrective Action Program (CAP). The elements of the CAP included (1) short-term water treatment using reverse osmosis; (2) long-term water treatment consisting of minimizing infiltration of precipitation into the WMUs and collecting water from seepage points at the toes of the waste rock dumps including spine drains #1 and #2, and French Drain #3; (3) enhanced evaporation by creating three evaporation ponds over WMU #3; (4) winterizing the evaporation ponds with a temporary cover separating contact water from non-contact (storm) water; (5) installation of an interim cover over WMU #1 to minimize infiltration into the WMU; and (6) installing a removable cover over WMU #2 that would enable site operators to continue to mine WMU #2.
67. Staff concurred with the CAP in a letter dated 27 June 2006. However, staff were concerned because many of the engineered details were omitted. Staff requested that the Discharger submit a Final Report of Long Term Water Treatment to include the missing engineered details. Staff reiterated that the Discharger is responsible for controlling run-on/run-off of surface water and shall construct and maintain the appropriate drainage controls for the WMUs.

68. On 17 July 2006, the Discharger submitted a second submittal of water management information for the Proposed CAP dated 22 June 2006. The submittal addressed the main issues of enhanced evaporation, seep collection, and storm water controls. However, the final design details for seep collection and storm water controls were not included.
69. In a letter dated 10 August 2006, staff requested the Discharger to submit an updated ROWD and Construction Quality Assurance (CQA) plan to reflect changes in operations and engineered controls proposed in the CAP. Staff stated that the Discharger should obtain the appropriate Industrial Storm Water Permit and submit an interim storm water control plan to manage runoff/runoff during the 2006/2007 wet season. The interim storm water control plan was due 11 September 2006. The Discharger was requested to submit an updated ROWD and CQA plan.
70. On 15 August 2006, Regional Water Board staff met with the Dischargers to discuss the storm water permit process and status of the proposed CAP. The Dischargers presented preliminary figures of proposed storm water controls and introduced the possibility of delaying the full implementation of the CAP due to lack of access to Federal property where the observed seeps were emanating at the base of the waste rock dumps. However, the Dischargers wanted to clarify their concerns of covering the WMUs. Staff required the WMUs be covered per Title 27 Prescriptive Standards to reduce infiltration of storm water with the understanding that Sutton Enterprises will be allowed to continue to mine the units. The Dischargers agreed to cover the units per Title 27 Prescriptive Standards and committed to preparing a "mining plan" to facilitate the continued mining of the units.
71. The Discharger submitted an Amendment to the Proposed CAP in a letter dated 17 August 2006. This Plan recommended delaying the full implementation of the CAP due to negotiations with the Bureau of Reclamation regarding accessing Federal property which is affected by the observed seeps at the base of the waste rock dumps. The amended CAP did propose to install the covers over WMUs -1 through -3. Regional Water Board staff agreed with the amended CAP in a letter dated 25 August 2006. Staff requested a construction schedule and completion of the WMU covers and storm water controls by 15 November 2006.
72. In an email dated 12 September 2006, the Dischargers submitted a construction schedule, which included the installation of low permeable liners and storm water controls for WMUs 1 through 3. However, it is staffs understanding that CHGMC was subsequently denied access to the property and implementation of the proposed CAP could not proceed.
73. In a separate email dated 12 September 2006, CHGMC notified staff that "Carson Hill Gold Mining Corporation (CHGMC) has been unable to commence operations to implement the first phase of the proposed CAP before the 2006/2007 rainy season. In order to complete operations, which will minimize erosion and avoid exposed soils during the rainy season, CHGMC believes that operations must commence no later than September 18. To expedite matters, CHGMC filed a lawsuit against Sutton Enterprises seeking an injunction that would allow immediate access to the Mine."

74. In a fax dated 13 September 2006, staff received a letter from Counsel for Sutton Enterprises. The letter expressed concern that Regional Water Board staff were considering the amended CAP without their participation and that certain aspects of the CAP would unnecessarily and irreparably damage Sutton Enterprises property and their business. They expressed concern that covering the WMUs would limit access to the crushed rock "without any assurances about when or how such covers will be removed or rolled back to allow access to the rock or about the additional costs that will result to access rock from under such covers."
75. Staff met with Sutton Enterprises on 26 September 2006. Staff requested a closure plan to close WMUs -1 through -3 in accordance with Title 27 Prescriptive Standards, obtain an industrial storm water permit, and construct and install the required precipitation and erosion controls. Once the closure plan has been approved, staff will prepare revised WDRs.
76. As of the date of this CAO, staff has not been notified by the Discharger as to the status of the lawsuit. It is staff's understanding that access to the Mine property to construct and install the low permeable liners and storm water controls has not been granted by Sutton Enterprises. The failure to install the required controls will allow storm water to enter the WMUs and/or sheet flow unchecked across the waste rock dumps to New Melones Reservoir degrading both groundwater and surface water quality.

SUMMARY OF CLOSURE ISSUES

77. The Discharger has failed to provide an acceptable work plan for clarifier slime storage and final disposal of previous, current, or future clarifier slimes. The clarifier slimes are generated by the aggregate mining operation and Carson Hill Rock Products (i.e. Sutton Enterprises) must prepare an acceptable plan for storage and final disposal. The plan must include a description of how the slimes were previously produced, where Carson Hill Rock Products previously stored slimes, how the slimes were stored and what containment controls were in place to isolate groundwater or surface water from the slimes, a chronology of slime storage and final disposition, and a description of the current process of slimes production. The clarifier slimes have been designated a Group B mine waste.
78. The Discharger has failed to provide Annual Erosion Control Plans by 15 November of each year as required by WDR No. 5-01-150. The record indicates the required Annual Erosion Control Plans have not been submitted for the years 1999 through 2003.
79. Storm water runoff /runoff has not been managed in accordance with Title 27. Appropriate precipitation or erosion controls have not been installed and non-contact storm water is not directed away from the WMUs or waste rock dumps. Non-contact storm water that sheet-flows across the WMUs and waste rock dumps becomes a concentrated flow down the steep southern face, creating observed erosion channels, rills, and surface cracks, which threaten the stability of the slopes. Some diversion ditching and berms have been

installed west of WMU #1. However, appropriate storm water controls have not been installed around WMU-2, WMU-3, or waste rock dumps 2, 3, or 4.

80. The WMUs are not covered in accordance with Title 27 Prescriptive Standards. Storm water is allowed to percolate through the WMUs, thus filling the WMUs above the minimum freeboard limit causing potential overtopping. This has been an ongoing problem from season to season and because this water is in direct contact with the spent ore, soluble metals and salts are mobilized and impacting groundwater.
81. Storm water, which fills the WMUs, has placed undue stress over the liners and LCRS systems, causing leaks in the liners as evidenced by wastewater collected in the spine drains and french drain. Surface water that has percolated into the WMUs and through the waste rock dumps is expressing itself as seeps at the base of these units. These seeps discharge into New Melones Reservoir in violation of the WDRs.
82. Groundwater monitoring wells located within the WMUs and downgradient of the WMUs indicate groundwater has been impacted. When concentrations of COCs detected in groundwater are compared to the established WQPS shown in Table 1, it is apparent groundwater has been impacted by elevated concentrations of TDS, sulfate, nitrates, arsenic, cadmium, nickel, and selenium.
83. Water samples collected from the spine drains and french drain indicates that storm water percolating into the WMUs is contacting spent ore and is mobilizing soluble metals and salts that are leaking through the liner system and impacting groundwater. Fluids collected by the spine drains and french drain are discharging to the New Melones Reservoir in violation of WDRs No. 5-01-150.
84. Seeps observed at the toe of the waste rock dumps are impacting surface water. Concentrations of TDS, sulfates, nitrates, nickel, selenium are elevated above the WQPS shown in Table 1. Storm water percolating through the waste rock dumps is expressing itself at the toe of the dumps, which is discharging to New Melones Reservoir in violation of WDRs No. 5-01-150.
85. As of the date of the CAO, the Discharger has not implemented the proposed CAP, nor has the Discharger proposed an acceptable corrective action to return groundwater to background groundwater conditions.

CLOSURE REQUIREMENTS FOR WMUS

86. In order to prevent a continuing source of groundwater and surface water pollution, Waste Management Units -1 through -3 and waste rock dumps must be closed within an accelerated time period and in compliance with the regulations described, in part, below.
87. Title 27 CCR Section 20430 states, in part *“(b) The discharger shall take corrective action to achieve the following goals: to remediate releases from the Unit; to ensure that the*

discharger achieves compliance with the Water Standard adopted under Section 20390 for that Unit.”

88. Title 27 CCR Section 20430 states, in part: *“(c) The discharger shall implement corrective action measures that ensure that COCs achieve their respective concentration limits at all Monitoring Points and throughout the zone affected by the release, including any portions thereof that extend beyond the facility boundary, by removing the waste constituents or treating them in place. The discharger shall take other action approved by the RWQCB to prevent noncompliance with those limits due to a continued or subsequent release from the Unit, including but not limited to, source control. The WDRs shall specify the specific measures that will be taken”*
89. Title 27 CCR Section 20430 states, in part: *“(j) Any time the RWQCB determines that the corrective action program does not satisfy the requirements of this section, the discharger shall, within 90 days of receiving written notification of such determination by the RWQCB, submit an amended report of waste discharge to make appropriate changes to the program.”*
90. Title 27 CCR Section 22510 states, in part: *“(a) New and existing Mining Units shall be closed so that they no longer pose a threat to water quality. No post closure land uses shall be permitted that might impair the integrity of containment structures.”*
91. Title 27 CCR Section 22510 states, in part: *(b) Mining Units shall be closed according to an approved closure and post closure maintenance plan which implements this section and provides for continued compliance with the applicable standards in this article for waste containment, precipitation and drainage controls, and monitoring throughout closure and the post closure maintenance period.*
92. Title 27 CCR Section 22510 states, in part: *“(f) The discharger shall provide for adequate funding to pay for the costs of closure and post closure maintenance as required by this article. The discharger shall provide assurance of financial responsibility, acceptable to the RWQCB, pursuant to Chapter 6 of this title. The RWQCB shall periodically review financial assurances and shall modified them as necessary.”*
93. Title 27 CCR Section 22510 states, in part: *“(j) New and existing Group A and B waste piles shall be closed in accordance with the provisions of 21090(a – c).”*
94. Title 27 CCR Section 20340 states, in part: *“(d) LCRSs shall be designed and operated to function without clogging through the scheduled closure of the Unit and during the post closure maintenance period.”*

REGULATORY CONSIDERATIONS

95. The Water Quality Control Plan for the California Regional Water Quality Control Board, Central Valley Region, 4th Edition (hereafter Basin Plan), designates beneficial uses,

establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.

96. The designated beneficial uses of underlying groundwater, as stated in the Basin Plan, are domestic and municipal supply, agricultural supply, and industrial supply.
97. The watershed is drained by intermittent streams that flow into Carson Creek to the west and Coyote Creek to the east. Both creeks flow into the New Melones Reservoir. The designated beneficial uses of the New Melones Reservoir, as stated in the Basin Plan, are municipal, domestic, agricultural, and industrial supply; contact recreation; esthetic enjoyment; fresh water replenishment; and preservation and enhancement of fish, wildlife and other aquatic resources
98. Section 13304(a) of the California Water Code provides that: *“Any person who has discharged or discharges waste into waters of this state in violation of any waste discharge requirements or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including, but not limited to, overseeing cleanup and abatement efforts. A cleanup and abatement order issued by the state board or a regional board may require provision of, or payment for, uninterrupted replacement water service, which may include wellhead treatment, to each affected public water supplier or private well owner. Upon failure of any person to comply with the cleanup or abatement order, the Attorney General, at the request of the board, shall petition the superior court for that county for the issuance of an injunction requiring the person to comply with the order. In the suit, the court shall have jurisdiction to grant a prohibitory or mandatory injunction, either preliminary or permanent, as the facts may warrant.”*
99. Section 13304(c)(1) of the California Water Code provides that: *“If the waste is cleaned up or the effects of the waste are abated, or, in the case of threatened pollution or nuisance, other necessary remedial action is taken by any governmental agency, the person or persons who discharged the waste, discharges the waste, or threatened to cause or permit the discharge of waste within the meaning of subdivision (a), are liable to that governmental agency to the extent of the reasonable costs actually incurred in cleaning up the waste, abating the effects of the waste, supervising cleanup or abatement activities, or taking other remedial action. The amount of the costs is recoverable in a civil action by, and paid to, the governmental agency and the state board to the extent of the latter’s contribution to the cleanup costs from the State Water Pollution Cleanup and Abatement Account or other available funds. ”*

100. Section 13267(b)(1) of the California Water Code provides that: *“In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.”*
101. The State Water Resources Control Board (hereafter State Water Board) has adopted Resolution No. 92-49, the *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304*. This Policy sets forth the policies and procedures to be used during an investigation or cleanup of a polluted site and requires that cleanup levels be consistent with State Water Board Resolution No. 68-16, the *Statement of Policy With Respect to Maintaining High Quality of Waters in California*. Resolution No. 92-49 and the Basin Plan establish the cleanup levels to be achieved. Resolution No. 92-49 requires the waste to be cleaned up to background, or if that is not reasonable, to an alternative level that is the most stringent level that is economically and technologically feasible in accordance with Title 23, CCR Section 2550.4. Any alternative cleanup level to background must (1) be consistent with the maximum benefit to the people of the state; (2) not unreasonably affect present and anticipated beneficial use of such water; and (3) not result in water quality less than that prescribed in the Basin Plan and applicable Water Quality Control Plans and Policies of the State Water Board.
102. Chapter IV of the Basin Plan contains the *Policy for Investigation and Cleanup of Contaminated Sites*, which describes the Regional Water Board’s policy for managing contaminated sites. This policy is based on CWC Sections 13000 and 13304, the Title 27, Division 2, Subdivision 1 regulations, and State Water Board Resolution Nos. 68-16 and 92-49. The policy addresses site investigation, source removal or containment, information required to be submitted for consideration in establishing cleanup levels, and the bases for establishment of soil and groundwater cleanup levels.
103. The State Water Board’s *Water Quality Enforcement Policy* states in part: *“At a minimum, cleanup levels must be sufficiently stringent to fully support beneficial uses, unless the Regional Board allows a containment zone. In the interim, and if restoration of background water quality cannot be achieved, the Order should require the discharger(s) to abate the effects of the discharge. Abatement activities may include the provision of alternate water supplies.”* (Enforcement Policy, p. 19)

104. As described in this order, the Discharger has discharged waste in violation of waste discharge requirements and other orders of the Regional Water Board and has caused or permitted waste to be discharged or deposited where it has discharged to waters of the state and has created, and continues to threaten to create, a condition of pollution or nuisance.
105. The technical reports required by this Order are necessary to assure compliance with this Order and the WDRs, and to protect the waters of the state. Existing data and information about the site indicates that waste has been discharged or may continue to be discharged at the property, which is currently owned and operated by the Dischargers named in this Order.
106. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.), pursuant to Title 14 CCR Section 15321(a)(2). The implementation of this Order is also an action to assure the restoration of the environment and is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.), in accordance with Title 14 CCR, Sections 15308 and 15330.
107. Any person adversely affected by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with Sections 2050-2068 of CCR Title 23. The State Water Board must receive the petition within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions may be found on the Internet at <http://www.waterboards.ca.gov/centralvalley> or will be provided upon request.

IT IS HEREBY ORDERED THAT, pursuant to Sections 13267 and 13304 of the California Water Code, Carson Hill Rock Products and the Carson Hill Mining Corporation, their agents, successors, and assigns, shall investigate the discharges of waste, clean up the waste, and abate the effects of the waste, forthwith, resulting from activities at the Carson Hill Gold Mine, including the quarrying and rock crushing facilities, in conformance with State Water Board Resolution No. 92-49 *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304*, with the Regional Water Board's *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (in particular the Policies and Plans listed within the Control Action Considerations portion of Chapter IV), and with the corrective action provisions of Title 27 CCR Division 2.

"Forthwith" means as soon as is reasonably possible. Compliance with this requirement shall include, but not be limited to, completing the tasks listed below.

Any person signing a document submitted under this Order shall make the following certification: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and on my inquiry of those individuals immediately responsible for obtaining the

information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”

1. By **1 February 2007**, the Discharger shall submit an *Annual Erosion Control Plan* for the 2006/2007 wet season in accordance with WDR No. 5-01-150. The Discharger shall submit subsequent annual erosion control plans by 15 November.
2. By **28 February 2007**, the Discharger shall submit a *Final Closure and Post Closure Maintenance Plan* for Waste Management Units -1 through -3 and the waste rock dumps in accordance with Title 27 CCR, Section 22510(b). The Final Closure and Post Closure Maintenance Plan can be submitted in the form of a Corrective Action Program (CAP) that also evaluates and selects remedial alternatives to return groundwater impacts to background groundwater concentrations. The Final Closure Plan may be in the form of an engineered alternative to the Title 27 prescriptive standards, as long as it complies with all requirements for engineered alternatives. If an engineered alternative is submitted, it may describe a seasonally removed cover (i.e., interim cover) for certain WMUs. However, it must also include a date by which mining will cease and by which the WMU(s) will receive installation of a final cover. The WMUs and waste rock dumps shall be closed as a Group B Mine Waste. The report shall comply with the following:
 - (a) All containment structures shall be designed by, and construction shall be supervised by, a California registered civil engineer or a certified engineering geologist, and shall be certified by that individual as meeting the prescriptive standards, or approved engineered alternative design, in accordance with this Order.
 - (b) Materials used in the final cover shall have appropriate chemical and physical properties to ensure that such structures do not fail to contain waste because of pressure gradients, physical contact with waste or leachate, chemical reactions with soil or rock, climatic conditions, the stress of installation, or because of the stress of daily operations.
 - (c) Any report, or any amendment or revision of a report, that proposes a design or design change that might affect a WMU's containment features or monitoring systems shall be approved by a registered civil engineer or a certified engineering geologist [Title 27 CCR Section 21710(d)].
 - (d) Any proposed engineered alternative cover for WMUs -1 through -3 must comply with State Water Board Resolution No. 93-62. Furthermore, the performance requirements of any geosynthetic membrane shall include, but are not limited to, a need to limit infiltration of water, to the greatest extent possible; mechanical compatibility with stresses caused by equipment traffic, and for final covers the result of differential settlement over time and durability throughout the post-closure maintenance period [Title 27 CCR Section 20324(i)(1)].

- (e) The final cover for WMUs-1 through -3 shall be designed and constructed to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping [Title 27 CCR Section 20365(a)]. Furthermore, the upper surface of the WMUs and waste rock dumps shall be graded such that the overall slope is graded with an overall slope greater than three degrees as required by Title 27 Section 21090(a-c).
- (f) The final cover for WMUs -1 through -3 and waste rock dumps shall be designed to withstand the maximum probable earthquake without damage to the foundation or to the structures that control leachate, or surface drainage, or erosion, or gas [Title 27 CCR Section 20370(a)]. In addition, any seismic analysis shall comply with Title 27 CCR Section 21750(f)(5) & (7).
- (g) WMUs -1 through -3 shall include protective barriers to prevent washout or inundation from the 100-year flood event.
- (h) All construction of liner systems and final cover systems shall be performed in accordance with a Construction Quality Assurance Plan certified by a registered civil engineer or a certified engineering geologist [Title 27 CCR Section 20323] and approved by the Executive Officer.
- (i) The Construction Quality Assurance (CQA) program shall be supervised by a registered civil engineer or a certified engineering geologist who shall be designated the CQA officer [Title 27 CCR Section 20324(b)(2)].
3. By **28 February 2007**, the Discharger shall submit an *Amended Report of Waste Discharge* in accordance with Title 27 CCR, Section 21710. The Report of Waste Discharge shall include the information listed in Finding No. 77, and in addition, shall discuss any changes in operations or activities associated with the gravel operation and production of slimes including but not limited to the (1) storage of slimes, (2) evidence the slimes are isolated from groundwater and surface water, and (3) final disposal of slimes; closure of the Waste Management Units -1 through -3 and waste rock dumps, including but not limited to, precipitation and erosion controls, and post closure maintenance of the WMUs and LCRSs.
4. By **15 October 2007**, the Discharger shall install either a final cover on WMU 1 or shall install an engineered alternative interim cover on WMU 1. The final cover or interim cover shall comply with the approved Final Closure and Post Closure Maintenance Plan and with Title 27.
5. By **31 December 2007**, the Discharger shall submit the final Construction Quality Assurance Report for WMU-1 that contain all reports submitted concerning the placement of the final or interim cover. This document shall provide evidence that the CQA plan was implemented as proposed and that the construction proceeded in accordance with design criteria, plans, and specifications. The Discharger shall submit copies of the Final Documentation report to the Regional Water Board as prepared by the CQA officer.

6. By **15 October 2008**, the Discharger shall install either a final cover on both WMU-2 and WMU- 3, or shall install an engineered alternative interim cover on both WMU-2 and WMU-3. The final cover or interim cover shall comply with the approved Final Closure and Post Closure Maintenance Plan and with Title 27.
7. By **15 October 2008**, the Discharger shall install a final cover on all three waste rock dumps. The final cover shall comply with the approved Final Closure and Post Closure Maintenance Plan and with Title 27.
8. All Financial Assurance funds (closure, post closure and foreseeable release) shall be fully funded and accepted by the California Integrated Waste Management Board no later than **15 October 2008**.
9. By **31 December 2008**, the Discharger shall submit the final Construction Quality Assurance Report for WMUs-2 and -3 and the three waste rock dumps that contain all reports submitted concerning the placement of the final or the interim cover. This document shall provide evidence that the CQA plan was implemented as proposed and that the construction proceeded in accordance with design criteria, plans, and specifications. The Discharger shall submit copies of the Final Documentation report to the Regional Water Board as prepared by the CQA officer.
10. **Beginning 1 May 2007**, and by the first day of the second month following each calendar quarter (**i.e., by 1 February, 1 May, 1 August, and 1 November each year**), the Discharger shall submit a progress report describing the work completed to date regarding each of the reporting requirements described above.

The Discharger shall immediately comply with all other Prohibitions, Specifications, and Provisions of Waste Discharge Requirements Order No. 5-01-150 not specifically mentioned above. In addition to the above, the Discharger shall comply with all applicable provisions of the California Water Code that are not specifically referred to in this Order.

In accordance with California Business and Professions Code Sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain the professional's signature and/or stamp of the seal.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement or may issue a complaint for administrative civil liability.

Failure to comply with this Order may result in the assessment of an Administrative Civil Liability up to \$1,000 per day or up to \$10,000 per day of violation, depending on the violation, pursuant to the California Water Code, including Sections 13268, 13271, and 13350. The Regional Water Board reserves its right to take any enforcement actions authorized by law.

This order is effective upon date of signature.

Original signature on file

PAMELA C. CREEDON, Executive Officer

11 January 2007

(Date)