

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. \_\_\_\_\_

WASTE DISCHARGE REQUIREMENTS

FOR  
USECC GOLD LIMITED LIABILITY COMPANY  
SUTTER GOLD MINING COMPANY  
SUTTER GOLD MINING INC.  
U.S. ENERGY CORP  
PROPERTY OWNERS  
FOR  
LINCOLN MINE PROJECT  
CONSTRUCTION OF WASTE PILES AND EXPANDED MINING OPERATIONS  
AMADOR COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Water Board) finds that:

1. On 21 October 2005, Waste Discharge Requirements (WDRs) Order No. R5-2005-0164 was adopted for the Lincoln Mine Project. On 3 October 2006, Sutter Gold Mining Company, Inc. requested a change in property ownership, as it had obtained the deed to the property owned by Ronald Ray Littlefield Family Trust, Assessors Parcel No. 015-210-023.
2. These WDRs rescind Order No. R5-2005-0164, and provide updated information regarding the property owners and the work conducted on the Lincoln Mine Project to date.
3. Sutter Gold Mining Company is a subsidiary of Sutter Gold Mining Inc., of which U.S. Energy Corp. owns 65% of the outstanding shares. Sutter Gold Mining Company owns USECC Gold Limited Liability Company.
4. The Sutter Gold Mining Company owns and operates the Lincoln Mine project, which includes 574 acres of mine claims and land owned by USECC Gold Limited Liability Company as well as a number of other entities (listed in Finding No. 5). These landowners are jointly referred to as the "Property Owners." For purposes of this Order, USECC Gold Limited Liability Company, Sutter Gold Mining Company, Sutter Gold Mining Inc., U.S. Energy Corp., and the Property Owners are jointly referred to as "Discharger."
5. Surface operations at the Lincoln Mine Project include the proposed mill facilities, the 4-acre waste rock pile adjacent to the mill and a proposed waste pile (Surface Fill Unit) and dewatering plant which will be located on a 34-acre parcel and used to dispose of dewatered mill tailings regulated by this Order. The Lincoln Mine project area, including both surface and underground workings, will occupy portions of Section 36, T7N, R10E; portions of Sections 31 and 32, T7N, R11E; and portions of Sections 5 and 6, T6N, R11E,

WASTE DISCHARGE REQUIREMENTS ORDER NO. \_\_\_\_\_  
 USECC GOLD LIMITED LIABILITY COMPANY, SUTTER GOLD MINING COMPANY.  
 SUTTER GOLD MINING INC., U.S. ENERGY CORP, PROPERTY OWNERS  
 LINCOLN MINE PROJECT  
 AMADOR COUNTY

MDB&M as shown in Attachment 1, which is incorporated herein and made part of this Order by reference. The Lincoln Mine project area comprises the following Amador County Assessor's Parcel Numbers (APN):

LAND OWNER	APN NO.	ACREAGE
Keystone Mining Co.	08-260-024-502	50.18
USECC Gold Limited Liability Company	08-260-027-501	20.11
Keystone Mining Co.	08-260-030-502	25.38
Koldjeski	15-210-010-01	12.36
Keystone Mining Co.	15-210-017-000	148.39
Sutter Gold Mining Company	15-210-023-00	16.99
USECC Gold Limited Liability Company	15-210-042-501	9.09
USECC Gold Limited Liability Company	15-210-043-501	16.11
USECC Gold Limited Liability Company	15-210-044-501	9.08
USECC Gold Limited Liability Company	18-010-001-502	8.13
USECC Gold Limited Liability Company	18-010-002-502	3.61
USECC Gold Limited Liability Company	18-010-003-502	1.78
USECC Gold Limited Liability Company	18-010-004-502	4.14
USECC Gold Limited Liability Company	18-010-006-502	20.43
USECC Gold Limited Liability Company	18-010-007-502	1.8
USECC Gold Limited Liability Company	18-010-008-502	46.68
USECC Gold Limited Liability Company	18-080-008-502	24.52
USECC Gold Limited Liability Company	40-010-003-000	5.05
USECC Gold Limited Liability Company	40-010-007-200	8
USECC Gold Limited Liability Company	40-010-008-000	8.35
Chisholm	40-010-012-000	6.62
Crotty	40-010-013-000	12.26
Chisholm	40-010-018-501	17.5
USECC Gold Limited Liability Company	40-010-018-502	17.5
USECC Gold Limited Liability Company	40-010-019-502	1.82
USECC Gold Limited Liability Company	40-010-023-501	32.65
USECC Gold Limited Liability Company	40-010-024-501	3.33
USECC Gold Limited Liability Company	40-020-007-000	8
Swift	40-030-087-501	34.42
Total Acreage		574.28

6. Waste Discharge Requirements (WDRs) Order No. 99-035 currently regulates the land application of treated groundwater pumped from the mine. WDRs Order No. 99-035 is inadequate for the expanded mine operations because while the Discharger proposes to continue to collect mine drainage, it will also collect leachate from dewatered mill tailings that will be discharged to the underground workings, as allowed by this Order. The treatment and discharge of the leachate is not regulated by WDRs Order No. 99-035. Therefore, the Discharger is required to submit a Report of Waste Discharge to update WDRs Order No. 99-035. The previous Order required that the Report of Waste Discharge be submitted by 1 June 2006, but the Discharger did not comply with this date.
7. This Order includes specifications for the proposed mining operations; the construction of a Waste Rock Pile and a Surface Fill Unit for disposal of dewatered mill tailings; the encapsulation of dewatered mill tailings underground; and the monitoring of both surface and groundwater in the area of the Stringbean Decline (i.e., the underground workings), the Waste Rock Pile, and around the proposed Surface Fill Unit.
8. The underground gold mine and the processing facilities at the Lincoln Mine project will generate both liquid and solid waste streams that could pose a threat to water quality if not managed properly. The underground mining will remove highly mineralized ore veins along with some of the surrounding host rock. Following the blasting, the newly fragmented ore and host rock will be loaded into carts for transportation. The ore will be transported to two lined ore stockpiles near the mill. The host rock will be transported to the existing Waste Rock waste pile near the mill. The ore will then be processed in the mill and the high-grade ore will be concentrated for metals separation at an off-site facility. The remaining tailings from the processed ore will be separated based on size for two different disposal procedures. The finer mill tailings (less than 325 mesh) will be conveyed through a pipeline to the Surface Fill Unit (waste pile) where they will be dewatered prior to discharge to the waste pile. The coarser mill tailings (greater than 325 mesh) will be drained and mixed with 5% Portland cement slurry as a binder and discharged to the underground workings as an engineered structural support in the excavation from which the ore has been extracted (stope) by appropriate backfilling methods. The Discharger will recycle filtrate from dewatering the enriched ore and both the coarse and fine tailings as process water for the mill operations.
9. This Order allows the discharger to use binders other than Portland cement to mix with the coarser mill tailings, as long as those binders have equivalent properties (hydraulic conductivity, stabilizer, etc.) and the Executive Officer approves the use.
10. The processing of the high-grade ore will be at a facility outside the State of California.
11. The Discharger proposes to start milling ore at 300 tons per day, and expand to 500 tons per day. The milling process will require an estimated 7,200 gallons of process water to charge the mill circuit initially. The Discharger proposes using water from the mine to supply the initial and process make-up water demands of the mill. Municipal water from the City of Sutter Creek would be used to supplement on-site resources.

## WASTE CHARACTERIZATION

12. Nine samples of waste rock were analyzed for acid-base potential. The results ranged from 25.4 to 184 tons of  $\text{CaCO}_3$ /1000 tons. These results, and the discharger's evaluation, show that the waste rock from the underground mining and the processed mill tailings should not be acidic.
13. Based on Title 22 analytical testing, none of the analyte results exceeded hazardous waste total threshold limit concentrations or soluble threshold limit concentrations, except arsenic. Arsenic exceeded the soluble threshold limit concentration limits set forth in Title 22. The Title 22 analysis uses citric acid for the extraction, which is not appropriate in this case since the waste appears to be non-acid generating. When analyzed with deionized water, no soluble concentration exceeded the regulatory limits of Title 22.
14. Gold deposits in the California Mother Lode are associated with sulfide ore bodies containing elevated metals such as arsenic, nickel, and selenium. Dewatering of mines, and moving ore and wall rock to the surface environment, exposes (a) the underground workings, (b) the surrounding rock formations, and (c) the mined material to oxygen. This can cause the sulfide minerals to oxidize, making the associated metals soluble and producing salts such as sulfate. These metals and salts are then available to dissolve into water where they can pose a significant threat to groundwater and surface water quality if not properly managed. Because of the time it takes for sulfide minerals to oxidize and the extended water contact time at the mine, the standard analyses completed as part of the RWD do not necessarily accurately represent the threat to water quality. However, based on February 1999 U.S. EPA document "*Characterization of Mine Leachate and the Development of a Ground-Water Monitoring Strategy for Mine Sites,*" and on impacts seen at other mines in the Mother Lode, the mining and mine waste at the Lincoln Mine project could or will produce nonhazardous soluble pollutants at concentrations which exceed water quality objectives.
15. California Code of Regulations Title 27 (Title 27) defines mining wastes and classifies mining wastes into three groups. Mining waste includes overburden, natural geologic materials that have been removed or relocated but have not been processed (i.e., waste rock), and the solid residues, sludges, and liquids from the processing of ores and mineral commodities. "Group B mining waste" is defined in Title 27 as a mining waste that consist of, or contains, nonhazardous soluble pollutants at concentrations which exceed water quality objectives for, or could cause degradation of, waters of the state. "Group C mining wastes" are wastes from any discharge which would be in compliance with the applicable water quality control plan, including water quality objectives, other than turbidity.
16. Based on waste characterization described in the above Findings, the discharge of processed mill tailings could pose a significant threat to water quality. Therefore, residual tailings and solid waste from the milling process (including both the coarse and fine tailings (greater than and less than 325 mesh waste from the milling process) are classified as a 'Group B' mining waste and as such must be discharged to a Group B

mining unit as required by Title 27. The host rock (waste rock) is classified as Group B waste and can be discharged to the lined Waste Rock pile. Based on monitoring data collected under this Order, the Discharger may later request the waste to be reclassified.

17. The expanded mine operations proposed by the Discharger will continue to generate mine waters (which are currently collected and treated prior to discharge in accordance with the requirements of WDRs Order 99-035). In addition to the mine water, the proposed operations will generate liquid waste streams from three sources: the filtrates from the milling process, leachate from the Surface Fill Unit, and leachate from the mill tailings discharged to the underground workings. The milling process will generate three filtrates including those generated from dewatering the enriched ore, and from dewatering both the coarse and fine mill tailings prior to discharge to the Surface Fill Unit or the underground workings. The Discharger proposes to recycle filtrates from the milling process into the process water for the mill. Like the existing mine water collected, treated and discharged by the Discharger, these additional liquid wastes from the expanded operation may or will contain salts and soluble pollutants at concentrations that can pose a threat to water quality or cause degradation of waters of the state when not properly managed. Therefore, the Discharger is required to submit a Report of Waste Discharge to update WDRs Order No. 99-035.

### **SITE DESCRIPTION**

18. The Lincoln Mine project is within the western Mother Lode gold district of the Sierra Nevada Mountain Range. The local relief of the project area is approximately 400 feet, which is an estimate of the change in elevation from above the proposed Surface Fill Unit (Group B Waste Pile) to the lowest point beneath the mill area. The present underground mine workings consist of the Stringbean Decline, a currently 2,850 foot long tunnel that is 12 feet high by 15 feet wide a 12% decline. From this decline, approximately 1,700 feet of tunnels branch out towards areas where numerous exploration holes have been drilled.
19. The geology of the Lincoln Mine project is characterized by a steeply dipping to vertical sequence of mafic metavolcanic and metasedimentary rocks of the Upper Jurassic Mariposa Formation. These rocks have been cross-cut by gold-bearing quartz ankerite veins. Localized shear zones structurally control the location and distribution of these veins. The three lithologic units near the decline consist of a basal black carbonaceous slate unit, overlain by greenstone of the Brower Creek Volcanics unit of the Mariposa Formation, and then by a highly fractured, thinly bedded black slate.
20. The steeply east dipping isoclinal folded rocks underlying the Lincoln Mine project are cut by a series of northwest trending (55-65 degrees) gold-bearing quartz ankerite veins. The ankerite fills branching and splaying shears and fractures of the Gold Fault Zone. This fault zone is located west of the Melones Fault Zone which generally separates the Paleozoic metamorphic rocks to the east from the Jurassic rocks located west of the Melones fault.

21. Much of the gold mineralization occurs as grains of free gold that are commonly associated with sulfide minerals. The sulfide minerals are present in concentrations of 1-2% in the veins. Of the sulfides, pyrite and arsenopyrite are the most abundant. The silver to gold ratio is low and the purity of the gold is greater than 800 fine.
22. The closest fault with recently recorded seismic activity is the Foothills Fault System. In the site vicinity, the Foothills Fault System is not a known Holocene fault. However, northwest of the Lincoln Mine project near Oroville, a branch of the Foothills Fault System was the site of historic activity. In 1975 the magnitude 5.7 Oroville earthquake occurred along a branch of the Foothills Fault System approximately 80 miles to the northwest of the Lincoln mine project. The Foothills Fault System is a broad, complex zone of branching faults. In the project vicinity, the Foothills Fault System is a broad zone encompassing the Bear Mountains fault to the west and the Melones fault on the east. The Lincoln Mine project site lies within the eastern portion of the northerly trending Foothills Fault System near the Melones fault. The California Geological Survey has concluded there is insufficient evidence to consider the Foothills Fault System active in the Sutter Creek area as there is no documented displacement in Holocene time. The maximum magnitude earthquake for the Foothills Fault System is a magnitude 6.5 earthquake which could result in peak horizontal ground accelerations of 0.5 g.
23. Land uses within 1,000 feet of the project area include pasturelands, and commercial and residential structures.
24. The Lincoln Mine project area receives an average of 30.97 inches of precipitation per year as measured at the Sutter Hill Ranger Station. The elevation of the station is approximately 1591 feet above mean sea level, while the Lincoln Mine project area elevation ranges from 1200 to 1500 feet above mean sea level. The mean pan evaporation is 68.03 inches per year as measured at the Jackson 1NW Station.
25. The 100-year, 24-hour precipitation event is estimated to be 4.25 inches, based on Department of Water Resources' bulletin entitled Rainfall Depth-Duration-Frequency for California, revised November 1982, updated August 1986.
26. The proposed mill facility, Waste Rock Pile and Surface Fill Unit are not within a 100-year flood plain based on detailed geomorphic and geologic studies. The Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps are not available for the Lincoln Mine project area.
27. There are 26 known domestic or agricultural groundwater supply wells within one mile of the site.
28. Adjacent to the mill site, the Discharger maintains an aboveground, 10,000-gallon, diesel storage tank that is surrounded by a 15,000-gallon secondary containment wall. This tank

is regulated by the Aboveground Storage of Petroleum Act under Chapter 6.67, of the Health and Safety Code, Sections 25270 through 25270.13.

### **SURFACE AND GROUND WATER CONDITIONS**

29. The *Water Quality Control Plan for the California Regional Water Quality Control Board, Central Valley Region, 4<sup>th</sup> Edition* (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.
30. Surface water drainage from the Lincoln Mine is to unnamed tributaries of Amador Creek to the northeast and Sutter Creek to the southwest. Sutter Creek is about 1/3 mile to the south of the Lincoln Mine project. Surface water from the proposed Surface Fill Unit drains to Whiskey Gulch which in turn drains to Amador Creek. Amador Creek flows into Dry Creek, which flows into Sutter Creek. Sutter Creek is a tributary of the Mokelumne River.
31. The beneficial uses of the Mokelumne River (between its source and Pardee Reservoir), as specified in the Basin Plan, are municipal and domestic supply, hydropower generation, water contact recreation, non-contact water recreation, warm freshwater habitat, cold freshwater habitat, migration of aquatic organisms, spawning, reproduction, and/or early development, and wildlife habitat.
32. Numerous springs are located above the footprint for the proposed Surface Fill Unit. These springs appear to be controlled by lithology. Surface water from precipitation percolates through permeable volcanic agglomerates of the Mehrtan Formation that cap some local hilltops. The water then penetrates towards the base of the Mehrten Formation which includes less permeable siltstones and claystones. Infiltrating water becomes perched along the contact with the less permeable lower Mehrten. Once the percolating water encounters the less permeable materials it moves along the contact until discharging at the ground surface as springs and seeps.
33. Groundwater beneath the site occurs in the weathered bedrock and to lesser extent in fractures within the unweathered bedrock. The weathered zone ranges from ground surface to 30 feet in depth. In some areas the weathered zone does not exist and bedrock is exposed at the surface. Bedrock fracture intensity varies within the unweathered bedrock, but generally the rock of the Brower Creek Volcanics in the vicinity of the Stringbean Decline becomes quite massive below 100 feet (less fractures). Based on groundwater elevation measurements, the groundwater flow generally follows the topography. The hydraulic conductivity is influenced by rock type and the nature and degree of the bedrock fractures that are predominantly oriented northwest to southeast. The measured hydraulic conductivity of the material underlying the proposed Surface Fill Unit ranges between  $2 \times 10^{-3}$  cm/sec and  $7 \times 10^{-6}$  cm/sec. The measured hydraulic conductivity of the native rock materials in the area of the Stringbean Decline ranges

between  $7 \times 10^{-5}$  cm/sec and  $6.5 \times 10^{-8}$  cm/sec. The average groundwater gradient is approximately 0.12 feet per foot. The average groundwater velocity is approximately 40 feet per year.

34. The designated beneficial uses of the groundwater, as specified in the Basin Plan, are domestic and municipal, agricultural, and industrial supply.

## **GROUNDWATER MONITORING**

### **Waste Rock Pile**

35. The proposed Waste Rock Pile will store mine material prior to milling. The Discharger has yet to install an approved groundwater monitoring system for the waste rock pile. Therefore, this Order requires the Discharger to install and maintain a groundwater monitoring system to comply with Subchapter 3 of Title 27, as well as establish water quality protection standards prior to discharge to the Waste Rock Pile.

### **Group B Waste Pile (Surface Fill Unit)**

36. The Discharger will construct a waste pile for dewatered mill tailings (Group B mine waste) in a small valley about half a mile east of the underground workings of the Stringbean Decline. The proposed Surface Fill Unit will contain mine waste material from the milling process smaller than a 325 mesh sieve. The Discharger has installed three monitoring wells in the vicinity of this proposed waste pile (Wells MWA, MWB and MWC) to determine groundwater flow direction, velocity and water quality. These monitoring wells will also be used as part of the detection monitoring system for the waste pile per Section 20415 of Title 27. At least one additional well is necessary at the point of compliance to comply with Section 20415 of Title 27.
37. Well MWC was installed as the background water quality monitoring well. Between October 2003 and June 2006, eleven independent sampling events have occurred. The data is sufficient to establish water quality protection standards per Title 27. However, the Discharger has not submitted the required Standards. The following table gives an initial representation of the water quality collected from Monitoring Well MWC.



Constituents of Concern	Lowest Detected Concentration	Highest Detected Concentration
Electrical Conductivity	184 micromhos/cm	256 micromhos/cm
Total Dissolved Solids	118 mg/l	210 mg/l
Arsenic	3.0 ug/l	79.4 ug/l
Aluminum	3.31 mg/l	100 mg/l
Cadmium	<1.0 ug/l	<1.0 ug/l
Chromium	17 ug/l	66 ug/l
Chloride	2.2 mg/l	5.1 mg/l
Copper	30 ug/l	48 ug/l
Lead	<3.0 ug/l	19 ug/l
Manganese	6 ug/l	932 ug/l
Iron	<.05 mg/l	70 mg/l
Sulfate	1.9 mg/l	6.8 mg/l
Nitrogen, Total Nitrate -N	<0.05 mg/l	<0.05 mg/l
Perchlorate	N/A	N/A

This order requires further sampling be completed and that water quality protection standards be established prior to discharge to the Surface Fill Unit.

38. The Discharger installed a downgradient well at the point of compliance for the surface fill unit in August 2006 and the well installation report is forthcoming.

### **Underground Mine**

39. There are no monitoring wells currently installed to collect data to establish a water quality protection standard for the underground mining operation. Groundwater samples collected in the vicinity of the Stringbean Decline were obtained from exploratory borings many years ago. Therefore, prior to discharge of mine waste to the underground workings (stopes), the Discharger must install a monitoring system and establish water quality protection standards as required by Title 27.
40. Groundwater samples were collected during the period from 1988 to 1992 from the six monitoring wells located along the mineralized zone near the Stringbean Decline (MDDH-36, MDDH-41, MDDH-43, MDDH,45, MDDH-47, and MDDH-54). Arsenic concentrations range from 0.014 mg/l to 0.0185 mg/l. These results indicate that natural arsenic groundwater concentrations near the ore body exceed the current Maximum Contaminant Level for arsenic of 0.010 mg/l.
41. Groundwater seepage into the Stringbean Decline from vent shafts and other man-made openings that connect the weathered zone above the mine to the underground workings of the decline is estimated to be at around 1.9 gallons per minute (gpm).

### **POST-MINING GROUNDWATER QUALITY**

42. During mining activities, the groundwater in the underground workings will be controlled through pumping, as it is today in the Stringbean Decline. This activity will allow the wall rock and the ore zone to react with oxygen, forming oxides. This is typical of acid mine drainage reactions. However, the wall rock in this area contains carbonate minerals, which buffer the low pH generation. If groundwater is allowed to rise back up after mining ceases, the groundwater will come into contact with the oxidized wall rock and ore zone and will dissolve these oxides. This could result in an increase in salts and metals (such as sulfate and arsenic), which could degrade groundwater.
43. These WDRs do not allow the refilling of mine by groundwater because doing so will likely result in elevated levels of salts and metals in the groundwater. The Discharger has stated that groundwater flows are very low in the vicinity of the Stringbean Decline because of the massive nature of the surrounding greenstone bedrock. The Discharger has provided evidence that sustained groundwater yield in this area is below 200 gallons per day. Additional data is required to support this assertion. If the Discharger is unable to adequately dewater the mine to prevent groundwater impacts, then the Discharger must submit a proposal to amend the Basin Plan to de-designate local groundwater under State Water Resources Control Board (State Board) Resolution No. 88-63, the Sources of Drinking Water Policy.

44. State Board Resolution No. 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter Resolution No. 68-16) requires a Regional Water Board in regulating the discharge of waste to maintain high quality waters of the state (i.e., background water quality) until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than as described in plans and policies (e.g. violation of any water quality objective). The discharge is required to meet waste discharge requirements that will result in the best practicable treatment or control of the discharge necessary to assure that pollution or nuisance will not occur and highest water quality consistent with maximum benefit to the people will be maintained.
45. Although the Discharger has provided information as to the local economic benefit of the mine, the Regional Water Board finds that the Discharger has not demonstrated that it is to the maximum benefit to the people of the State of California to degrade groundwater, and therefore groundwater degradation is not allowed under this Order.

### **WATER QUALITY PROTECTION STANDARD**

46. The Discharger must establish water quality protection standards, which shall consist of the list of constituents of concern (under Title 27 section 20395), the concentration limits (under section 20400), and the Point of Compliance and all Monitoring Points (under section 20405). This Water Standard shall apply during the active life of the Units, the closure period, the post closure maintenance period, and during any compliance period (under section 20410). Furthermore, these values shall represent background water quality for both groundwater and surface water. Prior to any discharge into the Waste Rock Pile or the Group B waste pile (Surface Fill Unit), and prior to initiation of any discharge of mine waste to the underground mine workings, these values shall be approved by the Executive Officer.

### **CONTAINMENT OF MINING WASTE**

#### **Waste Rock Pile**

47. The country rock will be placed onto an engineered liner that complies with Title 27. The design of this unit is equivalent to the prescriptive standard described in Chapter 7 of Title 27. The design of the waste pile consists of, from the top down:
- a. 12-inches of poorly graded gravel, or equivalent, with 4-inch schedule 80 perforated drainpipes wrapped in a single layer geo-fabric as a leachate collection and recovery system.
  - b. 12-inches of clay at a relative compaction of 90 percent, or equivalent, with a minimum hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec.

- c. 12-inches of poorly graded gravel, or equivalent, with 2-inch schedule 80 perforated drainpipes wrapped in a single layer geo-fabric as a leachate collection and recovery system.
- d. An engineered compacted subgrade having all slopes rolled with a smooth drum compactor to eliminate soft spots and protruding rocks.

All leachate derived from the waste rock pile will be drained and captured in a lined detention basin. The liner system will consist of, from top down: a geomembrane liner; geosynthetic clay liner; nonwoven geotextile; and engineered compacted subgrade having all slopes rolled with a smooth drum compactor to eliminate soft spots and protruding rocks prior to installation of the nonwoven geotextile. Once captured, the water will be returned within 24 hours to the mill for use in the ore extraction process.

#### **Group B Waste Pile (Surface Fill Unit)**

48. For containment of mine waste material smaller than a 325 sieve, the Discharger proposes to construct a dewatering plant to dewater the fine mill tailings prior to discharge to an engineered waste pile (Surface Fill Unit). The Surface Fill Unit will be designed and constructed in accordance with Title 27 Group B waste pile containment system.

The Unit will be located half mile east of the Stringbean Decline underground workings, as shown on Attachment 1. The design of the waste pile containment system proposed by the Discharger conservatively assumes the mill tailings would be classified as Group A mine waste and consists from the top down:

- a. A blanket leachate collection and removal system, designed constructed and operated in compliance with Title 27 Subsection 20340;
  - b. A geomembrane liner;
  - c. A geosynthetic clay liner;
  - d. A nonwoven geotextile; and
  - e. An engineered compacted subgrade having all slopes rolled with a smooth drum compactor to eliminate soft spots and protruding rocks prior to installation of the nonwoven geotextile.
49. The Discharger proposes a liner system which will be designed, constructed, and operated to prevent migration of wastes from the Unit to adjacent natural geologic materials, groundwater, or surface water during disposal operations, closure, and the postclosure maintenance period in accordance with the criteria set forth in Title 27 for a waste management unit.

50. Pursuant to Section 22490 of Title 27 the LCRS system is a blanket type design.
51. Section 13360(a)(1) of the California Water Code allows the Regional Water Board to specify the design, type of construction, and/or particular manner in which compliance must be met in waste discharge requirements or orders for the discharge of waste at solid waste disposal facilities.
52. Construction will proceed only after all applicable final design and construction quality assurance plans have been approved by the Executive Officer.

### **Underground Mine Waste Disposal**

53. For mining waste which does not pass through a 325 sieve, the Discharger proposes an engineered alternative to the prescriptive liner requirement for Group B waste containment found in Title 27. The Discharger proposes to encapsulate the material in 5% concrete either as a slurry type backfill and place it in the underground workings as an engineered structural support in the stopes. The dimensions of each encapsulated block will be approximately 200' long, 9' in height and 4' to 10' wide. The actual size of each structural block will be dependent of the size of the mineralized zone. These blocks will be stacked on top of each other as a support column. A geonet drainage layer will be placed between the blocks to allow for drainage. Any standing water will be removed and returned to the mill as process water or discharged to land under separate WDRs. The addition of 5% concrete slurry to the waste will prevent any significant water flow through the waste and affords equivalent protection against water quality impairment to the prescriptive standard.
54. Section 20080(b) of Title 27 allows the Regional Water Board to consider the approval of an engineered alternative to the prescriptive standard. In order to approve an engineered alternative, in accordance with §20080(c)(1) and (2) the Discharger must demonstrate either (a) that the prescriptive design is unreasonably and unnecessarily burdensome and will cost substantially more than an alternative which will meet the criteria contained in §20080(b), or (b) that the prescriptive standard would be impractical and would not promote attainment of applicable performance standards. In accordance with §20080(b)(2) of Title 27, the Discharger must also demonstrate that the proposed engineered alternative(s) provides protection against water quality impairment equivalent to the prescriptive standard.
55. The Discharger has demonstrated that the encapsulation of the greater than 325 sieve mining waste and placement in underground workings as described in Finding 50 is consistent with the performance goals of a Group B mining waste unit, affords equivalent protection against water quality impairment, significantly reduces surface disturbances, improves mine safety and productivity and costs substantially less than the prescriptive standard. Therefore, the encapsulation of greater than 325 sieve mining waste meets the engineered alternative to the prescriptive standard. Construction or underground

discharge of waste will proceed only after all applicable construction quality assurance plans have been approved by the Executive Officer.

### **CEQA AND OTHER CONSIDERATIONS**

56. The Amador County Board of Supervisors approved the Lincoln Mine project and filed a Notice of Determination for the project on 25 August 1993. In a subsequent action the Board of Supervisors adopted Resolution No. 98-351 and approved findings relative the the Conditional Use permit and the Final Subsequent Environmental Impact Report for the amended project on 15 September 1998 in accordance with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.) and CEQA guidelines (14 CCR Section 15000 et seq.). The Regional Water Board considered the environmental impact report (EIR) and incorporated its mitigation measures into these waste discharge requirements. The following list identifies the significant impacts and mitigations regarding water quality:
- a. The EIR states that any additional sediment load in the streams would be mitigated by implementing best management practices. This Order requires that the Discharger annually implement erosion control measures and seek coverage under an NPDES Stormwater Permit.
  - b. Groundwater flow may be influenced by mining operations at the Stringbean Decline; therefore, the EIR requires that the Discharger obtain water supplies or potable water as appropriate to replace lost local spring flows or impacts to the quality or quantity of an existing domestic water supply source attributable, in the opinion of the Amador County Environmental Health Department, to the Lincoln Mine project.
  - c. A domestic wastewater treatment facility is required to accommodate the employees and visitors to the mine. These WDRs do not address the issue of wastewater disposal but require that the Discharger demonstrate that it has received proper County and/or State permits for the disposal of domestic wastewater.
57. This Order incorporates and implements:
- a. Fourth Edition of the Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins;
  - b. The prescriptive standards and performance goals of California Code of Regulations, effective 18 July 1997, and subsequent revisions;

- c. State Board Resolution No. 68-16 – The Anti-Degradation Policy; and
  - d. State Resolution No. 88-63 – The Sources of Drinking Water Policy.
58. Section 13267(b) of California Water Code provides that: “In conducting an investigation specified in subdivision (a), the Regional Water Board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposed to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who had discharged, discharges, or is suspected of discharging, or who proposed to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.”
59. The monitoring and reporting program required by this Order (Monitoring and Reporting Program No. \_\_\_\_\_, attached) is necessary to assure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.

### **PROCEDURAL REQUIREMENTS**

60. All local agencies with jurisdiction to regulate land use, solid waste disposal, air pollution, and to protect public health have approved the use of this site for the discharges of waste to land stated herein.
61. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.
62. The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
63. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.
64. Any person affected by this action of the Regional Water Board may petition the State Water Resources Control Board to review the action in accordance with Sections 2050 through 2068, Title 23, California Code of Regulations. The petition must be received by the State Water Resources Control Board, Office of Chief Counsel, P.O. Box 100, Sacramento, California 95812, within 30 days of the date of issuance of this Order. Copies of the laws and regulations applicable to the filing of a petition are available on the

Internet at [http://www.waterboards.ca.gov/water\\_laws/index.html](http://www.waterboards.ca.gov/water_laws/index.html) and will be provided on request.

**IT IS HEREBY ORDERED** that Order No. R5-2005-0164 is rescinded and pursuant to Section 13263 and 13267 of the California Water Code, that USECC Gold Limited Liability Company, Sutter Gold Mining Company, Sutter Gold Mining Inc., U.S. Energy Corp, and the Property Owners (as identified in Finding No. 5), their agents, successors and assigns, in order to meet the provisions of Division 7 of the California Water Code and the regulations adopted thereunder, shall comply with the following:

#### **A. PROHIBITIONS**

1. The discharge of 'hazardous waste' or 'Group A' mining waste at this facility is prohibited. For the purposes of this Order, the terms 'hazardous waste', 'designated waste', and 'Group A' and 'Group B' mining waste are as defined in Division 2 of Title 27.
2. The discharge of solid waste or liquid waste to surface waters, surface water drainage courses, or groundwater is prohibited.
3. The discharge of wastes outside of a waste management unit or portions of a waste management unit specifically designed for their containment is prohibited except as otherwise permitted under additional Regional Water Board orders.
4. The accumulation of water at the base of the Stringbean Decline, beyond that which is needed to maintain safe pumping operations, is prohibited.
5. Construction of the Waste Rock Pile and the Surface Fill Unit, as well as encapsulation of mining waste, is prohibited until the Executive Officer has approved each applicable final design and construction quality assurance plan in writing.
6. The discharge of mine waste to the Waste Rock Pile, the Surface Fill Unit and the underground mine workings are all prohibited until reports documenting the following work have been submitted and the Executive Officer has approved each in writing:
  - a. Submit a workplan for a groundwater quality monitoring system;
  - b. Installation of an approved groundwater quality monitoring system which includes background monitoring wells;
  - c. Establishment of background groundwater quality through at least one year of monitoring (a minimum of eight samples is required to develop statistical values for inorganic COCs);
  - d. Submittal of a report proposing a Water Quality Protection Standard; and
  - e. Submittal of a plan to maintain the base of the mine free of accumulated water.



7. The discharge of mine waste to the Waste Rock Pile, the Surface Fill Unit and the underground mine workings are all prohibited until the Discharger establishes Financial Assurance funds for corrective action, unit closure, and post-closure maintenance, and the Executive Officer has approved these funds in writing.

## **B. DISCHARGE SPECIFICATIONS**

### **General Specifications**

1. Wastes shall only be discharged into, and shall be confined to, the waste management units (WMUs) specifically designed for their containment.
2. Prior to the discharge of waste to a WMU, all wells within 500 feet of the unit shall have sanitary seals or shall be properly abandoned. A record of the sealing and/or abandonment of such wells shall be sent to the Regional Water Board and to the State Department of Water Resources.

### **Protection From Storm Events**

3. All waste management units shall be designed, constructed and operated to prevent inundation or washout due to flooding events with a 100-year return period.
4. All waste management units' precipitation and drainage control systems shall be designed, constructed and maintained to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 25-year, 24-hour precipitation conditions.
5. Annually, prior to the anticipated rainy season, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the site.
6. To comply with federal regulations for stormwater discharges promulgated by the U.S. EPA, the Discharger shall seek coverage under the State Board's Water Quality Order No. 97-03-DWQ, and shall conduct the monitoring and reporting as required therein.

### **Waste Rock Pile**

7. The design of the waste pile shall consist of, from the top down:
  - a. 12-inches of poorly graded gravel, or equivalent, with 4-inch schedule 80 perforated drainpipes wrapped in a single layer geo-fabric as a leachate collection and recovery system.

- b. 12-inches of clay at a relative compaction of 90 percent, or equivalent, with a minimum hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec.
  - c. 12-inches of poorly graded gravel, or equivalent, with 2-inch schedule 80 perforated drainpipes wrapped in a single layer geo-fabric as a leachate collection and recovery system.
  - d. An engineered compacted subgrade having all slopes rolled with a smooth drum compactor to eliminate soft spots and protruding rocks.
8. The Waste Rock Pile design shall include an unsaturated zone monitoring system capable of measuring both saturated and unsaturated flows that may occur as a result of a release from the waste management unit.
  9. All leachate and storm water derived from the waste rock pile will be drained and captured in a lined detention basin. The liner system will consist from top down: a geomembrane liner; geosynthetic clay liner; nonwoven geotextile; and engineered compacted subgrade having all slopes rolled with a smooth drum compactor to eliminate soft spots and protruding rocks prior to installation of the nonwoven geotextile. Once captured, the water will be returned within 24 hours to the mill for use in the ore extraction process.
  10. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the Waste Rock Pile.
  11. Materials used to construct leachate collection and removal systems (LCRSs) shall have appropriate physical and chemical properties to ensure the required transmission of leachate over the life of the Waste Rock Pile and the post-closure maintenance period.
  12. LCRSs shall be designed, constructed, and maintained to collect twice the anticipated daily volume of leachate generated by the Waste Rock Pile and to prevent the buildup of hydraulic head on the underlying liner at any time. The depth of the fluid in any LCRS sump shall be kept at the minimum needed for safe pump operation.
  13. Any direct-line discharge to the Waste Rock Pile shall have fail-safe equipment or operating procedures to prevent overfilling.
  14. The Waste Rock Pile shall be designed, constructed and maintained to prevent scouring and/or erosion of the liners and other containment
  15. Leachate generation by the Waste Rock Pile to the primary LCRS shall not exceed design requirements. If leachate generation exceeds this value, then the Discharger

shall immediately cease the discharge of waste and shall notify the Regional Water Board in writing within **seven days**. Notification shall include a timetable for remedial action to repair the waste management unit or other action necessary to reduce leachate production.

16. If leachate is detected in the unsaturated zone monitoring system of the Waste Rock Pile (indicating a leak in the containment system) the Discharger shall:
  - a. Immediately cease discharge of waste;
  - b. Report to the Regional Water Board the indication of a leak in the containment system within **72 hours**;
  - c. Submit written notification of the release to the Regional Water Board within seven days. The notification should include a time schedule to investigate the release and implement corrective actions including any repairs to the containment system; and
  - d. Discharge of wastes to the Waste Rock Pile will not resume until the Regional Water Board has determined that repairs to the containment system is complete and there is no further threat to water quality.
17. Leachate generation by a waste containment unit to the LCRS shall not exceed 85% of the design capacity of (a) the LCRS, or (b) the sump pump. If leachate generation exceeds this value and/or if the depth of the fluid in an LCRS exceeds the minimum needed for safe pump operation, then the Discharger shall immediately cease the discharge of waste, excluding leachate, to the waste management unit and shall notify the Regional Water Board in writing within **seven days**. Notification shall include a timetable for a remedial action to repair the containment structures or other action necessary to reduce leachate production.

#### **Waste Rock Pile Closure**

18. The closure of the Waste Rock Pile shall be under the direct supervision of a California registered civil engineer or certified engineering geologist.

#### **Group B Waste Pile (Surface Fill Unit)**

19. The Surface Fill Unit shall consist of, from the top down:
  - a. A blanket leachate collection and removal system, designed constructed and operated in compliance with Title 27 Subsection 20340;
  - b. A geomembrane liner;
  - c. A geosynthetic clay liner;

- d. A nonwoven geotextile; and
  - e. An engineered compacted subgrade having all slopes rolled with a smooth drum compactor to eliminate soft spots and protruding rocks prior to installation of the nonwoven geotextile.
20. The Surface Fill Unit design shall include an unsaturated zone monitoring system capable of measuring both saturated and unsaturated flows that may occur as a result of a release from the waste management unit.
21. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the Surface Fill Unit.
22. Materials used to construct leachate collection and removal systems (LCRSs) shall have appropriate physical and chemical properties to ensure the required transmission of leachate over the life of the Surface Fill Unit and the post-closure maintenance period.
23. LCRSs shall be designed, constructed, and maintained to collect twice the anticipated daily volume of leachate generated by the Surface Fill Unit and to prevent the buildup of hydraulic head on the underlying liner at any time. The depth of the fluid in any LCRS sump shall be kept at the minimum needed for safe pump operation.
24. Any direct-line discharge to the Surface Fill Unit shall have fail-safe equipment or operating procedures to prevent overfilling.
25. The Surface Fill Unit shall be designed, constructed and maintained to prevent scouring and/or erosion of the liners and other containment
26. Leachate generation by the Surface Fill Unit to the primary LCRS shall not exceed design requirements. If leachate generation exceeds this value, then the Discharger shall immediately cease the discharge of waste and shall notify the Regional Water Board in writing within seven days. Notification shall include a timetable for remedial action to repair the waste management unit or other action necessary to reduce leachate production.
27. If leachate is detected in the unsaturated zone monitoring system of the Surface Fill Unit (indicating a leak in the containment system) the Discharger shall:
- a. Immediately cease discharge of waste, excluding leachate to the Surface Fill Unit until the leaks can be found and repaired,

- b. Report to the Regional Water Board the indication of a leak in the containment system within 72 hours,
  - c. Submit written notification of the release to the Regional Water Board within seven days. The notification should include a time schedule to investigate the release and implement corrective actions including any repairs to the containment system, and
  - d. Discharge of wastes to the Surface Fill Unit will not resume until the Regional Water Board has determined that repairs to the containment system is complete and there is no further threat to water quality.
28. Leachate generation by a waste containment unit LCRS shall not exceed 85% of the design capacity of (a) the LCRS, or (b) the sump pump. If leachate generation exceeds this value and/or if the depth of the fluid in an LCRS exceeds the minimum needed for safe pump operation, then the Discharger shall immediately cease the discharge of waste, excluding leachate, to the waste management unit and shall notify the Regional Water Board in writing within **seven days**. Notification shall include a timetable for a remedial action to repair the containment structures or other action necessary to reduce leachate production.

### **Group B Waste Pile (Surface Fill Unit) Closure**

29. The closure of the Surface Fill Unit shall be under the direct supervision of a California registered civil engineer or certified engineering geologist.

### **Underground Mine Waste Disposal**

30. Mining waste larger than 325 sieve shall be mixed with 5% Portland cement as a binder and discharged as a slurry into the mine workings to form blocks to be used as engineered structural supports in the stopes. Upon written approval of the Executive Officer, other binders may be used that provide equivalent or better characteristics to protect water quality.
31. A geonet drainage layer shall be placed between the blocks to drain excess liquid. This excess liquid will drain to engineered sump(s).
32. All sumps shall be drained or pumped to minimize standing water excepting that which is necessary for safe pump operation. At a maximum, the hydraulic depth of standing water at the bottom Stringbean Decline shall not be greater than 12 feet vertically as measured at bottom of the incline.
33. Materials used to construct the drainage layer shall have appropriate physical and chemical properties to ensure the transmission of excess liquid from the waste (slurry blocks) after placement.

34. During mining operations, if the Discharger encounters any intersected fracture that produces groundwater flows greater than 1.9 gpm (or lower flows if needed to comply with Prohibition A.4), the Discharger must control or stop such groundwater inflows by grouting, or other means prescribed by an engineering geologist or civil engineer and allowed by the plan required in Prohibition 6.e.

## C. RECEIVING WATER LIMITATIONS

### Water Quality Protection Standards

1. The concentrations of Constituents of Concern in waters passing through the Points of Compliance shall not exceed the Concentration Limits established pursuant to Monitoring and Reporting Program No. \_\_\_\_\_, which is attached to and made part of this Order.

## D. GROUNDWATER LIMITATIONS

1. Neither the discharge of waste to the Waste Rock Pile, the Surface Fill Unit, the Underground Waste Management Units, nor the act of underground mining shall cause groundwater to be degraded.

## E. FINANCIAL ASSURANCE

1. The Discharger shall demonstrate *financial responsibility for closure and post-closure maintenance* for the underground mine, the Waste Rock Pile, the mill, and the Surface Fill Unit and shall submit a report of financial assurances by **April 30th each year** for Executive Officer review and approval. The assurances of financial responsibility shall provide that funds for closure and post-closure maintenance shall be available to the Regional Water Board upon the issuance of any order under California Water Code, Division 7, Chapter 5. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation. The financial assurance fund for closure and post-closure maintenance shall be established **prior to discharging waste to the** Waste Rock Pile, the Surface Fill Unit and/or underground mine workings
2. Prior to discharge of mine waste and thereafter by **30 April of each year**, the Discharger shall submit plans with detailed cost estimates and a demonstration of assurances of financial responsibility for initiating and completing *corrective action for all known or reasonably foreseeable releases* for the underground mine, the Waste Rock Pile, the mill, and the Surface Fill Unit. The Discharger shall provide the assurances of financial responsibility as required by Title 27, Division 2, Subdivision 1, Chapter 6. The assurances of financial responsibility shall provide that funds for corrective action shall be available to the Regional Water Board upon the issuance of any order under California Water Code, Division 7, Chapter 5. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation. The financial assurance fund for corrective action shall be

established **prior to discharging waste to the** Waste Rock Pile, the Surface Fill Unit and/or underground mine workings

## F. PROVISIONS

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements, dated September 2003, which are hereby incorporated into this Order. The Standard Provisions and Reporting Requirements contain important provisions and requirements with which the Discharger must comply. A violation of any of the Standard Provisions and Reporting Requirements is a violation of these waste discharge requirements.
2. The Discharger shall comply with Monitoring and Reporting Program No. \_\_\_\_\_, which is attached to and made part of this Order. This compliance includes, but is not limited to, maintenance of waste containment facilities and precipitation and drainage controls and the monitoring of groundwater, the unsaturated zone, and surface waters throughout the active life of the waste management units and the post-closure maintenance period. A violation of Monitoring and Reporting Program No. \_\_\_\_\_ is a violation of these waste discharge requirements.
3. At least **ninety days prior to construction of the mill facilities**, the Discharger must submit copies of appropriate County or State permits allowing the discharge of domestic wastewater from the wastewater treatment facilities necessary to accommodate the additional temporary construction and operations employees.
4. By **1 May 2007**, the Discharger shall submit a report of waste discharge to update WDRs Order No. 99-035. The Discharger shall contact Regional Water Board staff at least 90 days prior to this date to determine the information that must be submitted in the report of waste discharge.

5. The Discharger shall complete the following tasks by the required dates:

Unit	Task	Compliance Date
Waste Rock Pile	The Discharger shall submit a report proposing a groundwater monitoring system that complies with Title 27.	Eighteen months prior to discharging waste to the Waste Rock Pile.
Waste Rock Pile	The Discharger shall submit a groundwater system monitoring report that documents that monitoring wells were installed per the approved workplan and contains the information listed in the second section of Attachment 2.	Prior to discharging waste to the Waste Rock Pile.
Waste Rock Pile	The Discharger shall submit unsaturated zone monitoring system workplan that complies with Subchapter 3 of Title 27 and after concurrence, shall install the monitoring system.	Prior to discharging waste to the Waste Rock Pile.
Waste Rock Pile	The Discharger shall submit a report characterizing background water quality conditions and proposed water quality protection standards per Section 20390 of Title 27. This may be included with the Stringbean Alley groundwater study.	Prior to discharging waste to the Waste Rock Pile.
Waste Rock Pile	The Discharger shall submit Final Design that meets requirements of Chapter 3, Subchapter 2, Article 4 of Title 27 and Construction Quality	120 days prior to construction of the Waste Rock Pile.



Unit	Task	Compliance Date
	Assurance plans for the construction of the Waste Rock Pile per Section 20323 of Title 27.	
Waste Rock Pile	The Discharger shall submit a Construction Quality Assurance Report for the Waste Rock Pile per Section 20324(d) of Title 27.	60 days after completion of construction of the containment system or each portion thereof.
Waste Rock Pile	The Discharger shall submit a map of all springs and seeps that complies with Section 21750(g)(5) of Title 27. The map should be accompanied by tabular data indicating the flow and the mineral quality of the water from each spring.	Prior to discharging waste to the Waste Rock Pile.
Waste Rock Pile	The Discharger shall submit a report proposing surface water monitoring system that complies with Subchapter 3 of Title 27.	Prior to discharging waste to the Waste Rock Pile
Waste Rock Pile	Annually, the discharger shall have all best management practices in place and operational to comply with Section 20365 of Title 27.	<b>15 October each year</b>
Surface Fill Unit	The Discharger shall submit a groundwater system monitoring report that documents that monitoring wells were installed per the approved workplan and contains the information listed	<b>1 March 2007</b>

Unit	Task	Compliance Date
	in the second section of Attachment 2.	
Surface Fill Unit	The Discharger shall submit unsaturated zone monitoring system report that complies with Subchapter 3 of Title 27 and after concurrence shall install the monitoring system.	Prior to discharging waste to the Surface Fill Unit
Surface Fill Unit	The Discharger shall submit a report characterizing background water quality conditions and proposed water quality protection standards per Section 20390 of Title 27.	<b>1 April 2007</b>
Surface Fill Unit	The Discharger shall submit a Final Design that meets requirements of Chapter 3, Subchapter 2, Article 4 of Title 27 and Construction Quality Assurance plans for the construction of the Surface Fill Unit per Section 20323 of Title 27.	120 days prior to construction of the Surface Fill Unit
Surface Fill Unit	The Discharger shall submit a Construction Quality Assurance Report for the Surface Fill Unit per Section 20324(d) of Title 27.	60 days after completion of construction of the containment system or each portion thereof.
Surface Fill Unit	The Discharger shall submit an operations, maintenance, and spill response plan for the pipeline that conveys waste from the mill to the Surface Fill Unit.	Prior to discharging waste to the Surface Fill Unit

Unit	Task	Compliance Date
Surface Fill Unit	The Discharger shall submit an emergency response plan for the pipeline which addresses a catastrophic failure of all components related to the transfer of the -325 mesh fill material.	Prior to discharging waste to the Surface Fill Unit.
Surface Fill Unit	The Discharger shall submit a map of all springs and seeps that complies with Section 21750(g)(5) of Title 27. The map should be accompanied by tabular data indicating the flow and the mineral quality of the water from each spring.	Prior to discharging waste to the Surface Fill Unit
Surface Fill Unit	The Discharger shall submit an operations plan for the Surface Fill Unit that complies with Section 21760(b) of Title 27.	Prior to discharging waste to the Surface Fill Unit
Surface Water	The Discharger shall install submit a report proposing a surface water monitoring system that complies with Subchapter 3 of Title 27.	Prior to discharging waste to the Surface Fill Unit
Stringbean Decline Underground Workings	The Discharger shall submit a groundwater monitoring system workplan that complies with Subchapter 3 of Title 27 and contains the information listed in the first section of Attachment 2. Upon concurrence, the system shall be installed.	Prior to discharge of mine waste to the underground workings

Unit	Task	Compliance Date
Stringbean Decline Underground Workings	The Discharger shall submit a groundwater system monitoring report that documents that monitoring wells were installed per the approved workplan and contains the information listed in the second section of Attachment 2.	Prior to discharging waste to the underground workings
Stringbean Decline Underground Workings	The Discharger shall submit a plan for maintaining the entire mine free of accumulated water during mining operations and the duration of post closure.	Prior to discharge of mine waste to the underground workings
Underground mine waste disposal	The Discharger shall submit a report, with supporting data, before any change in binding agent for disposal of waste greater than 325-sieve mesh. The binder may not be used until the Executive Officer provides concurrence.	Prior to use of new Binder

6. The Discharger shall maintain legible records of the volume and type of waste discharged to the Waste Rock Pile, the Surface Fill Unit and the manner and location of the discharge. Such records shall be maintained at the facility until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the Regional Water Board and of the State Water Resources Control Board, and copies of these records shall be sent to the Regional Water Board.
7. The Discharger shall provide proof to the Regional Water Board **within sixty days after completing final closure** that the deed to the Surface Fill Unit property, or some other instrument that is normally examined during title search, has been modified to include, in perpetuity, a notation to any potential purchaser of the property stating that:

- a. The parcel has been used for disposal of Group B solid mine wastes;
  - b. Land use options for the parcel are restricted in accordance with the post-closure land uses set forth in the post-closure plan; and
  - c. In the event that the Discharger defaults on carrying out either the post-closure maintenance plan or any corrective action needed to address a release, then the responsibility for carrying out such work falls to the property owner.
7. In the event of any change in control or ownership of the facility or land application areas, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Regional Water Board, and a statement. The statement shall comply with the signatory paragraph of the Standard Provisions and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved by the Executive.
8. For the purpose of resolving any disputes arising from or related to the California Water Code, any regulations promulgated thereunder, these WDRs, or any other orders governing this site, the Discharger, its parents and subsidiaries, and their respective past, present, and future officers, directors, employees, agents, shareholders, predecessors, successors, assigns, and affiliated entities, consent to jurisdiction of the Courts of the State of California.
9. The Regional Water Board will review this Order periodically and may revise requirements when necessary.

I, Pamela C. Creedon, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region on \_\_\_\_\_.

\_\_\_\_\_  
PAMELA C. CREEDON, Executive Officer