

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

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

CLOSURE WASTE DISCHARGE REQUIREMENTS  
FOR  
THE JAMESTOWN TRUSTS I & II, THROUGH ITS TRUSTEE  
COUNTY OF TUOLUMNE  
ROBERT CAMERON  
GARY WILSON  
CLOSURE OF THE JAMESTOWN MINE  
TUOLUMNE COUNTY

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

1. The County of Tuolumne, Robert Cameron and Gary Wilson (jointly owners), and the Jamestown Trust I and Jamestown Trust II through their Trustee (operator), (hereafter jointly referred to as Discharger) currently operate and own various portions of the former Jamestown Mine Site. Robert Cameron generally owns the northern end of the Jamestown Mine site including a part of the Tailings Management Facility (TMF), Gary Wilson owns the Harvard Mine Pit, and the County of Tuolumne owns portions of the balance of the Jamestown Mine property. Jamestown Trust I and Trust II were established during litigation between the Regional Water Board and past and present owners and operators of the Jamestown Mine. The detailed descriptions of Jamestown Trusts I and II are in a Stipulated Judgment and settlement agreements, and are briefly described below in the Litigation Background section.
2. The former Jamestown Mine contains four waste management units: the Harvard Mine Pit, the Process Water Retention Pond (PWRP), the waste Rock Storage Area (RSA) and the TMF. There are two Waste Discharge Requirements (WDRs) regulating discharges at this facility. The overall site is currently regulated by Waste Discharge Requirements (WDRs) Order No. 97-082. WDRs Order No. R5-2006-0048 is specific to a discharge from the TMF to Harvard Pit to facilitate closure. This Order combines the two WDRs, requires closure of the TMF, regulates discharges to the PWRP and the Harvard Mine Pit, and regulates continued operation and monitoring of the facility.

**LITIGATION BACKGROUND**

3. On 18 December 1998, the Regional Water Board issued Cleanup and Abatement Order (CAO) No. 98-735 requiring the mine property owners to complete several tasks designed to investigate the extent of, and cleanup, pollution. The CAO also required closure of the TMF in compliance with Title 27. The property owners failed to comply with CAO No. 98-735 and on 17 September 1999, the Regional Water

Board adopted Resolution No. 99-129 for referral to the Attorney General's Office for Civil Liability. On 12 December 2001 the Attorney General's Office filed a Complaint for Injunctive Relief (Complaint) in Tuolumne County Superior Court; and on 10 June 2004 the Attorney General's Office filed a First Amended Complaint (FAC) in Stanislaus County Superior Court. The Complaint and FAC (the Litigation) named the County of Tuolumne, Robert Cameron and Gary Wilson, among others, as Defendants.

4. The parties to the Litigation settled the matter in May and June 2006. These WDRs are partially based on the Settlement Documents agreed to and signed by the parties and the Court to settle the Litigation. "Settlement Documents" means the Stipulated Judgments and related documents by and among the Regional Water Board and the other parties to the Litigation.
5. A part of the Stipulated Judgment and settlement agreements established two trusts, one to implement near and medium term remediation (Jamestown Trust I) and another to implement longer-term response actions (Jamestown Trust II). The Jamestown Trust I has been funded with money solely from the private settling defendants, for the purposes of:
  - a. Holding, investing, and disbursing funds paid to the trust pursuant to the provisions of the Stipulated Judgment;
  - b. Providing financial assurances to the Regional Water Board for the appropriate management of environmental conditions at and emanating from the Site, including but not limited to Phase I as described below and in more detail in the Settlement Documents;
  - c. Providing protection to surface water, groundwater and other natural resources within the jurisdiction of the Regional Water Board that are impacted or threatened to be impacted by releases at or from the Site;
  - d. Implementing steps to address releases and threatened releases at and from the Site, consistent with the written concurrence of the Regional Water Board in its regulatory capacity; and
  - e. Otherwise carrying out the provisions of the trust agreement.
6. To facilitate the settlement and to implement the equitable remediation obligations of the non-governmental settling defendants, Shaw Environmental Liability Solutions, LLC ("SELS") voluntarily agreed to perform the Phase I work for Jamestown Trust I on the terms and conditions set forth in the Settlement Documents, to assume the responsibility and liabilities as set forth herein, and to consent to the jurisdiction of the Regional Water Board. Phase I work includes but is not limited to securing regulatory closure of the TMF, undertaking certain investigation activities, and site

operation and maintenance for a ten-year period. SELS shall not be considered an owner or operator of a mine, or a discharger under these WDRs, but is responsible for implementing all of the obligations of the Discharger as it relates to Phase I work to the extent provided in the Settlement Documents. SELS consents to the jurisdiction of the Regional Water Board but only to the extent of its obligation pursuant to the Settlement Documents. SELS' obligations under these WDRs shall terminate on its completion of Phase I work, subject to the reservations of rights of plaintiffs under the Settlement Documents.

7. To the extent of an inconsistency between the Settlement Documents and these WDRs, the Settlement Documents will control the rights and obligations of the parties to those documents.

### **FACILITY BACKGROUND**

8. The Jamestown Mine is about one mile from Jamestown in Sections 9 and 16, T1N, R14E, MDB&M as shown on Attachment A, which is attached hereto and made a part of this Order by reference.
9. The Jamestown Mine is an inactive gold mine that operated most recently from 1986 to 1994. The mine facility consists of three mine pits (including the Harvard Mine Pit), the TMF, the Rock Storage Area (RSA), the Process Water Retention Pond (PWRP) (a lined surface impoundment constructed to Class II standards) and several storm water retention ponds. The major features of the mine are shown on Attachment B, which is attached hereto and made a part of this Order by reference.
10. Groundwater monitoring has detected evidence that the mine facilities, principally the TMF and the RSA, are discharging mining wastes into groundwater.
11. The TMF is an approximately 120-acre lined tailings impoundment containing approximately 16.6 million tons of tailings. The TMF is classified as a Group B mine waste containment unit. The major structural features of the TMF include an earth/rockfill embankment (Tailings Dam) designed with a filter-drainage network to allow continuous removal of supernatant water and stormwater from the tailings surface. The floor of the impoundment has a clay liner with a leachate collection and recovery system (LCRS). Beneath the clay liner a system of spine drains intercept surfacing groundwater and maintain separation of groundwater from the impoundment liner.
12. Water collected in the tailings dam filter-drainage network, the LCRS and the spine drains discharges to the PWRP and is pumped to the Harvard Mine Pit. The tailings dam filter-drainage network is a system of drainage media and pipe to collect and drain away leachate from the tailings side of the dam. The LCRS is a system of drainage media and perforated pipe installed above the tailings pond liner to collect and drain away leachate percolating downward through the tailings. The spine drain

system is a system of perforated pipe to collect and drain away groundwater collected below the tailings pond liner. The TMF will not fully drain for several years after closure and the PWRP will be maintained as a collection pond. The PWRP shall be closed in the future under revised WDRs when the tailings are fully drained.

13. The Harvard Mine Pit is a 72-acre (maximum aerial extent), 520 feet deep (measured from the south lip) mine pit. The mine pit is slowly filling with storm water and inflowing groundwater that has been polluted by interactions with mine wall rock. WDRs Order No. R5-2006-0048 previously approved the use of Harvard Mine Pit as an engineered alternative Group B mine waste containment unit and approved the discharge of water from the TMF, the PWRP, and other impoundments to the Harvard Mine Pit. This order continues to allow these water transfers.
14. The Harvard Mine Pit must be maintained as a groundwater sink and must not release waters to un-impacted downgradient groundwater. These WDRs require that water levels in the Harvard Mine Pit be maintained below 1320 feet mean sea level (msl), (a level that would discharge to downgradient waters). Mixing TMF water and other site water with Harvard Mine Pit water will not significantly degrade the already polluted water now collecting in the Harvard Mine Pit. In the future and if necessary, funds from the Settlement may be used to control water levels either by natural or enhanced evaporation, or by removal, treatment, and discharge of excess water.
15. Staff estimates that approximately 300 acre-feet of TMF water, mostly interstitial tailings water and groundwater, may be discharged to the Harvard Mine Pit during the next five years.
16. Because the Harvard Mine Pit is permitted under these WDRs as an engineered alternative to the prescriptive standards for a Group B mining surface impoundment, it is recognized that it will not likely be closed as described in Title 27 Section 22510(k).
17. The closure actions in these WDRs are intended to be limited to the Phase I closure described in the Scope of Work. The Scope of Work is part of the Jamestown litigation settlement. Depending on the results of the Phase I investigations there may or may not be significant additional efforts to close other facilities and/or remediate pollution. If justified by the investigation results, revised WDRs may be issued in the future.

**WASTE AND SITE CLASSIFICATION**

18. Water quality<sup>1</sup> at this site may be summarized as follows:

Constituent	Supernatant Pond <sup>2</sup>	TMF	Harvard Mine Pit	PWRP	Background Groundwater	Water Quality Limits <sup>3</sup>
Total Dissolved Solids (TDS) (mg/l)	2580	2730	2030	2940	240	450
Sulfate (mg/l)	1430	1630	1450	1610	17	250
Sodium (mg/l)	190	250	100	220	9	69
Magnesium (mg/l)	240	230	190	250	23	none
Calcium (mg/l)	180	216	233	190	30	none
Arsenic (mg/l)	0.008	0.028	0.40	0.009	0.002	0.01

<sup>1</sup> The average of water quality data collected between first quarter 2005 and the fourth quarter 2006.

<sup>2</sup> The Supernatant Pond is the pond on top of the tailings surface.

<sup>3</sup> Water quality limits used to implement applicable water quality objectives for the protection of beneficial uses of the groundwater.

19. 'Group B Mining Waste' is defined in Title 27, §22480, as either: (A) *mining wastes that consists of or contain hazardous wastes, that qualify for a variance under Chapter 11 of Division 4.5 of Title 22 of this code, provided that the RWQCB finds that such mining wastes pose a low risk to water quality; or (B) mining wastes that consist of or contain nonhazardous soluble pollutants of concentrations which exceed water quality objectives for, or could cause, degradation of waters of the state.*

20. The Supernatant Pond is the ponded water on top of the TMF. Water in the Supernatant Pond, water draining from the TMF, and water in the Harvard Mine Pit contain pollutants that exceed water quality objectives and background concentrations that have caused or could cause degradation of waters of the state. Therefore, these waters are classified as 'Group B Mine Waste' and as such must be discharged to a Group B Mine Waste impoundment as required by Title 27.

### **SITE DESCRIPTION**

21. The native material underlying the TMF, the PWRP, and the Harvard Mine Pit is fractured bedrock with highly variable hydraulic conductivity. Aquifer tests indicate that average bedrock permeabilities range from  $2 \times 10^{-6}$  to  $3 \times 10^{-4}$  centimeters per second.
22. Land uses within 1,000 feet of the Jamestown Mine are residential, agricultural, industrial and commercial.
23. The Jamestown Mine receives an average of 32.7 inches of precipitation per year as measured at the Sonora Ranger Station, approximately four miles northeast of the site. The mean pan evaporation is 78 inches per year as measured at the New Melones Dam Station, approximately 5 miles from the site.
24. The 100-year, 24-hour precipitation event is estimated to be 6.5 inches, based on Miller, Frederick, and Tracey, 1973; "Precipitation – Frequency Atlas of the Western United States, v.IX-California", NOAA Atlas 2, U.S. Dept Commerce, National Weather Service.
25. There are approximately 47 municipal, domestic, industrial, or agricultural groundwater supply wells within one mile of the site.

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

26. The Water Quality Control Plan for the Sacramento River and San Joaquin River Basin, Fourth Edition (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.
27. Surface drainage is to Woods Creek, a tributary to the Tuolumne River, which drains to the San Joaquin River. The site drainage is in the Sonora Hydrologic Area (536.31).
28. The designated beneficial uses of the Tuolumne River (source to New Melones Reservoir), as specified in the Basin Plan, are municipal and domestic supply, agricultural supply, power supply, contact and non-contact water recreation, warm and cold freshwater habitat, and wildlife habitat.
29. The designated beneficial uses of the groundwater, as specified in the Basin Plan, are domestic and municipal, agricultural, and industrial supply.
30. Groundwater west of the Rawhide West Fault flows toward the south. Groundwater east of the fault flows toward and is captured by Harvard Mine Pit.

31. Before active mining, first encountered groundwater was about 2.9 to 34 feet below the native ground surface. The site was dewatered for open pit mining, creating a deep drawdown cone centered on the Harvard Mine Pit. When active mine operations ceased, the operator turned the pumps off, and groundwater levels are slowly recovering.
32. If water levels in the Harvard Mine Pit are maintained below the elevation of Woods Creek (1330 feet msl) then Harvard Mine Pit water will be contained on site. These WDRs require that water levels in the Harvard Mine Pit will be maintained below 1320 feet msl. If necessary in the future, the Harvard Mine Pit will be maintained as a groundwater sink by artificial means (e.g. pumping, treating, etc.).

### **GROUNDWATER MONITORING AND DEGRADATION**

33. Data from groundwater monitoring wells downgradient of the TMF and Waste Rock Storage Area (TDMW-03, -04, -12, -14, -15, -16, -18, -19, RSMW-8, and -9A) demonstrate a pattern of increasing sulfate, chloride, nitrate, and TDS concentrations. The overall pattern in these downgradient monitor wells is of increasing impacts that began after the start of mine operations.
34. The facility has known releases to groundwater and is in evaluation monitoring. The existing evaluation monitoring system consists of three background wells and fifteen downgradient wells. As part of the ongoing Phase I investigation eight additional downgradient wells have been installed and the first sampling results should be reported in the Second Quarter 2007 Monitoring Report.
35. Groundwater downgradient of the TMF, the PWRP, and the RSA has been polluted as result of mining operations. The Harvard Mine Pit is a groundwater sink and nearby groundwater flows into the pit. The full extent of groundwater impacts is not fully understood at this time. An ongoing groundwater investigation is mandated by the Settlement Agreement as part of the Phase I Scope of Work. Staff anticipates that this investigation will result in changes to the evaluation monitoring program. Any necessary monitoring revisions will be incorporated in a subsequent WDR.

### **TMF CLOSURE CONSTRUCTION AND ENGINEERED ALTERNATIVE**

36. The design and operation of the TMF produced a consolidated, well-drained tailings capable of supporting a cover.
37. The TMF shall be closed with a final cover consisting of (from bottom to top) a minimum two feet thick foundation layer composed of reworked and compacted tailings, a minimum one foot compacted clay low-permeability layer with a permeability less than  $1 \times 10^{-6}$  cm/sec, and minimum one foot vegetative soil layer.

38. The Discharger proposed to build the final cover with a minimum slope of one percent. Title 27 Section 21090(b)(1)(B) states in part: "The RWQCB can allow portions of the final cover to be built of less than three percent if the discharger proposes an effective system for diverting surface drainage from laterally-adjacent areas and preventing ponding in the allowed flatter portion."
39. At the TMF, all stormwater from the surrounding area is captured and diverted away from this unit by a perimeter stormwater collection and drainage ditch. The tailings have been drained for ten years and have developed into a relatively high-density mass with low liquid content. The facility contains no putrescible wastes and the tailings are not expected to undergo any significant settlement or subsidence. Therefore, no run-on stormwater from surrounding area is expected, and once the TMF is graded and the cover construction is completed, no subsidence is expected that would cause ponding. The one percent grade is justified due to these facts.
40. The crest of the tailings dam is several feet higher than the elevation of the tailings surface. To allow the tailings to drain and prevent ponding behind the dam crest, the dam will be lowered to match the tailings level and capped. Surface water runoff from the top deck will be drained to an engineered channel and discharged to the existing stormwater drainage system. The storm water drainage system is designed for flows from a 100-year, 24-hour storm event. After closure and with the proper maintenance, stormwater will not pond on the tailings.
41. Title 27 CCR Section 20080(b) 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 Title 27 CCR Sections 20080(c)(1) and (2), the Discharger must demonstrate that the prescriptive design is unreasonably and unnecessarily burdensome and will cost substantially more than an alternative which will meet the criteria contained in Title 27 CCR Section 20080(b), or would be impractical and would not promote attainment of applicable performance standards. The Discharger must also demonstrate that the proposed engineered alternative cover system is consistent with the performance goal addressed by the particular prescriptive standard, and provides protection against water quality impairment equivalent to the prescriptive standard in accordance with Title 27 CCR Section 20080(b)(2).
42. California Water Code, Section 13360(a)(1) 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.
43. The Discharger adequately demonstrated that construction of the prescriptive standard cover with three percent grade, as described in Title 27, would be unreasonable and unnecessarily burdensome when compared to the proposed engineered alternative and that the alternative affords equivalent protection against



water quality impairment. The Discharger has demonstrated that the proposed engineered alternative is consistent with the performance goals for closure of a Group B Mine Waste management unit.

44. Concurrently with closure of the TMF, one or more stormwater retention ponds may be closed. If the pond spoils are Group B Mining Wastes, the spoils may be incorporated in the TMF foundation layer.
45. Construction of the TMF cover shall proceed only after all applicable construction quality assurance plans have been approved.

### **PWRP OPERATIONS**

46. The PWRP shall be maintained as a Group B mining waste containment unit to hold liquids from the Spine Drain system, the Tailings Dam filter-drain system, and the LCRS.
47. The PWRP shall be closed under separate WDRs when all free liquids have drained from the TMF and the PWRP is no longer needed to contain Group B mining waste.

### **HARVARD MINE PIT OPERATIONS**

48. The Harvard Mine Pit shall be maintained as a Group B mining waste containment unit to hold excess liquids from the PWRP and to capture and contain contaminated groundwater.
49. Water levels in the Harvard Mine Pit shall not exceed 1320 feet msl.

### **CEQA AND OTHER CONSIDERATIONS**

50. The action to revise waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resource Code §21000, et seq., and the CEQA guidelines, in accordance with Title 14, CCR, §15301.
51. On 24 February 1986, the Tuolumne County Board of Supervisors certified the final supplemental EIR for the Sonora Mining Corporation, California Gold Project (Jamestown Mine), in accordance with CEQA, Public Resources Code Section 21000, et seq. The EIR discloses that the project may have the following impacts: (a) deterioration of groundwater from leakage of process water/tailings waste will be mitigated by the installation of the tailings management system, (b) contamination of Woods Creek from accidental spills of mill reagents or tailings disposal facility rupture, and (c) contamination of groundwater from accidental spills of toxic materials.

52. The Regional Water Board has reviewed the EIR. This WDR Order provides protection to water quality equal to or more effective than the mitigation measures in the EIR relating to water quality. Compliance with this WDR Order will mitigate or avoid significant impacts on water quality listed in Finding 34 as follows: (a) dewatering and covering the tailings will prevent further deterioration of groundwater quality under the tailings disposal site; and (b) the threat of contamination to Woods Creek or groundwater from rupture of the tailings disposal facility is mitigated by the design of the TMF and by dewatering and installing a final cover on the unit. Because the site no longer operates as a gold extraction facility, mill reagents and other toxic chemicals are no longer present on site.

53. This Order implements:

- a. The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition; and
- b. The prescriptive standards and performance goals of California Code of Regulations, effective 18 July 1997, and subsequent revisions.

54. Section 13267(b) of 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 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 regional 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."

55. The technical reports required by this Order and the attached "Monitoring and Reporting Program No. \_\_\_\_" are 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**

56. 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.

57. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to these WDRs.

**IT IS HEREBY ORDERED** pursuant to Sections 13263 and 13267 of the California Water Code, Orders No. 97-082 and R5-2006-0048 are rescinded and that Jamestown Trust I and Jamestown Trust II through their Trustee, the County of Tuolumne, Robert Cameron and Gary Wilson, 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', 'designated waste', 'Group A' and 'Group B' mining waste unless otherwise specified in these WDRs is prohibited. For the purposes of this Order, the terms 'hazardous waste', 'designated waste', 'Group A' and 'Group B' mining waste are as defined in Division 2 of Title 27 of the CCR.
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.

#### **B. DISCHARGE SPECIFICATIONS**

##### **General Specifications**

1. Wastes shall only be discharged into, and shall be confined to, the waste management units (WMUs) specifically permitted for their containment.

##### **Tailings Management Facility Closure**

2. A third party independent of both the Discharger and the construction contractor shall oversee the performance of all of the construction quality assurance monitoring and testing.
3. The closure of the TMF shall be under the direct supervision of a California registered civil engineer or certified engineering geologist.
4. The Discharger shall submit for review and approval **prior to** construction, design plans and specifications for closure construction, that include the a Construction Quality Assurance Plan meeting the requirements of Title 27 CCR Section 20324.
5. The TMF cover shall be constructed in accordance with the following design (from bottom to top). The lower compacted foundation layer shall be composed of reworked tailings that are a minimum of two feet thick with a minimum relative compaction of 90%. Immediately above the foundation layer, and in direct and

uniform contact with it, shall be a minimum one foot thick compacted clay low-conductivity layer with a hydraulic conductivity less than  $10^{-6}$  cm/sec. This low-conductivity layer shall be immediately overlain with a minimum one-foot thick layer of loosely compacted soil suitable for vegetation.

6. The TMF cover shall have final grades greater than or equal to one percent and a stormwater collection system that prevents erosion of the final cover.
7. The Discharger may propose changes to the cover system design prior to construction, provided that approved components are not eliminated, the engineering properties of the components are not substantially reduced, and the proposed cover system results in the protection of water quality equal to or greater than the design prescribed by Title 27 and this Order. The minor proposed changes may be made following staff approval, but substantive changes to the design require reevaluation as an engineered alternative and require approval by the Regional Water Board.
8. Construction shall proceed only after all applicable construction quality assurance plans have been approved.
9. Within 90 days after completion of construction of the cover, the final documentation required in Title 27 CCR Section 20324(d)(1)(C) shall be submitted for review and approval. The report shall be certified by a registered civil engineer or a certified engineering geologist. It shall contain sufficient information and test results to verify that construction was in accordance with the design plans and specifications, and with the prescriptive standards and performance goals of Title 27.

#### **Protection From Storm Events For All Units**

10. Waste management units shall be designed, constructed and operated to prevent inundation or washout due to flooding events with a 100-year return period.
11. The Discharger shall maintain a *Storm Water Pollution Prevention Plan and Monitoring Program and Reporting Requirements* in accordance with State Water Resources Control Board Order No. 97-03-DWQ, or retain all storm water on-site.
12. 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 100-year, 24-hour precipitation conditions.

### **Group B Surface Impoundments**

13. The Harvard Mine Pit and the PWRP shall continue to operate as Group B mining waste surface impoundments. Group B liquid mine waste from the tailings dam filter-drainage network, the Leachate Collection and Recovery System, the spine drain system, and if necessary stormwater ponds, may be discharged to the PWRP and Harvard Mine Pit.
14. In order to act as a groundwater sink and maintain containment, Harvard Mine Pit water levels shall be kept below 1320 feet msl.
15. The PWRP, the Harvard Mine Pit and related containment structures shall be maintained to prevent, to the greatest extent possible, inundation, erosion, slope failure, washout, and overtopping under 1,000-year, 24-hour precipitation conditions, and shall be designed to contain the 100-year wet season precipitation.
16. Any direct-line discharge to a surface impoundment shall have fail-safe equipment or operating procedures to prevent overfilling.
17. The surface impoundments shall be operated and maintained to prevent scouring and/or erosion of the containment features or impoundment walls at points of discharge to the impoundment and by wave action at the water line.

### **Post-closure Maintenance of the TMF**

18. Prior to any major repairs, the Discharger shall submit design plans and specifications for any on-site construction or major repairs to landfill structures.
19. The Discharger shall perform periodic monitoring of site security systems, final soil cover, drainage system, vegetative cover, final grading, and groundwater monitoring system in compliance with Monitoring and Reporting Program No. \_\_\_\_\_.
20. The Discharger shall perform periodic monitoring inspections to identify and address cover problems, including at least:
  - a. Areas of the vegetative cover requiring replanting;
  - b. Eroded portions of the erosion-resistant layer requiring regrading, repair, or increased erosion resistance;
  - c. Eroded portions of the low-hydraulic conductivity layer needing repair or replacement;

- d. Areas lacking free drainage;
  - e. Areas damaged by equipment operation; and
  - f. Localized areas identified in the iso-settlement survey as having sustained repeated or severe differential settlement.
21. The Discharger shall repair forthwith any breach or other cover problem discovered by periodic monitoring inspections.
22. Annually, prior to 1 October, 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 and to prevent surface drainage from contacting or percolating through wastes.
23. The Discharger shall maintain the vegetative cover, including fertilization, elimination of species whose roots would be expected to damage the low conductivity layer (trees and deep rooted shrubs), and replanting.
24. Prior to conducting any periodic grading operations on the closed TMF, the Discharger shall note on a map of the TMF the approximate location and outline of any areas where differential settlement is visually obvious.
25. Construction of any major repairs shall proceed only after all applicable construction quality assurance plans have been approved.
26. Following the completion of any major repair construction, the final documentation required in §20324(d)(1)(C) of Title 27 shall be submitted. The report shall be certified by a registered civil engineer or a certified engineering geologist. It shall contain sufficient information and test results to verify that construction was in accordance with the design plans and specifications, and with the prescriptive standards and performance goals of Title 27.

### **C. FINANCIAL ASSURANCE**

1. Jamestown Trust I was established to manage funds for the primary purposes of (a) implementing the Phase I work and other actions required by the Landowner Stipulated Judgment and (b) to provide financial assurance to the Regional Water Board that the Jamestown Mine site will be managed in an appropriate manner.
2. These WDRs are being issued to regulate closure of the TMF, and continued operation of the Harvard Mine Pit and the PWRP. Jamestown Trust I, consisting

of the funds of the trust, will provide the financial assurances for these activities. Available information demonstrates that the Stipulated Judgments, settlement agreements and financial assurances provide the Regional Water Board with assurance that the Phase I closure activities for the TMF can and will be completed. The Trustee shall, by **1 March of each year**, submit an accounting of the balance in Jamestown Trust I and forecast the anticipated date, if any, that the Jamestown Trust I is likely to be depleted.

3. The Trustee shall, by **30 April of each year**, prepare and 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 from the waste management unit. The Trust shall provide the assurances of financial responsibility to the Regional Water Board as required by Title 27 CCR, 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 assurances of financial responsibility shall name the Regional Water Board as beneficiary. The Trust shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation.
4. Jamestown Trust I shall, by **30 April of each year**, prepare and submit plans with detailed cost estimates and a demonstration of assurances of financial responsibility to ensure closure and post-closure maintenance of each waste management unit in accordance with its approved closure and post-closure maintenance plans. The Trust shall provide the assurances of financial responsibility to the Regional Water Board as required by Title 27 CCR, Division 2, Subdivision 1, Chapter 6. The assurances of financial responsibility shall provide that funds for closure and post-closure shall be available to the Regional Water Board upon the issuance of any order under California Water Code, Division 7, Chapter 5. The Trust shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation.
5. Jamestown Trust II was created to hold, disperse and grow funds for the long-term remediation of the Jamestown Mine site, to the extent funding within that trust is available. The Trustee shall, by **1 March of each year**, submit an accounting of the balance in Jamestown Trust II and a forecast of the anticipated date, if any, that the Jamestown Trust II is likely to be depleted. Submittal of the annual accounting report required in the Jamestown Trust Agreement II Article V shall comply with this requirement.

#### **D. PROVISIONS**

1. The Trust 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 Trust 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 monitoring 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. The Trust shall maintain legible records of the volume and type of waste discharged to the Harvard Mine Pit and the TMF, 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, copies of these records shall be sent to the Regional Water Board.
4. The Trust shall provide proof to the Regional Water Board **within sixty days after completing final closure of the TMF** that the deed to the surface impoundment facility 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 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 in WDRs for the surface impoundment; 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.
5. The Trust shall complete the tasks outlined in these WDRs and the attached Monitoring and Reporting Program No. \_\_\_\_\_ in accordance with the following time schedule:



- a. **By 31 December 2007** complete closure construction at the TMF in accordance with these WDRs and the Closure Plan submitted on 27 February 2007.
  - b. **By 31 March 2008** submit to the Regional Water Board a complete Closure Report. The Closure Report shall include a Construction Quality Assurance (CQA) Report, an As-built Report and a TMF Closure Certification. The CQA Report shall contain testing data, variance logs (if any) and certify that the TMF closure conforms to project specifications and regulatory requirements. The As-built Report shall contain narrative descriptions of construction and any variances from the Closure Plan, a complete set of as-built diagrams showing final grades, layer thicknesses and details of drainage control structures, and final surveyed drawings of the cover surface. The Closure Report shall comply with all the requirements in Title 27 Section 20324.
  - c. **90 days after the completion of the Phase I Site Investigation**, update the *Harvard Mine Pit Water Level Maintenance Plan*. This update shall include a data evaluation from the Phase I Site Investigation and shall include any necessary changes to the Maintenance Plan.
6. In the event of any change in ownership of the waste management facility, the property owner shall notify the succeeding owner or operator in writing of the existence of this Order. A copy of that notification shall be sent to the Regional Water Board.
  7. 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

Attachments  
RDA;05/29/2007