

**Mining Law and Regulations
Regional Water Board**

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§ 13050 Definitions

(q)(1) "Mining waste" means all solid, semisolid, and liquid waste materials from the extraction, beneficiation, and processing of ores and minerals. Mining waste includes, but is not limited to, soil, waste rock, and overburden, as defined in Section 2732 of the Public Resources Code, and tailings, slag, and other processed waste materials, including cementitious materials that are managed at the cement manufacturing facility where the materials were generated.

§ 13172 Waste disposal sites; standards & regulations

(e) Adopt policies, standards, and regulations for discharges of mining waste which apply, and ensure compliance with, all surface water and groundwater protection and monitoring requirements of this division, Article 9.5 (commencing with Section 25208) of Chapter 6.5 of Division 20 of the Health and Safety Code, and Subchapter IV (commencing with Section 6941) of Chapter 82 of Title 42 of the United States Code, which are applicable to discharges of mining waste. These policies, standards, and regulations shall include, but are not limited to, all of the following:

- (1) A statewide policy for monitoring surface water and groundwater that may be affected by discharges of mining waste. The policy shall establish the principles the regional boards shall use in developing monitoring plans for discharges of mining waste, including the methods the regional boards shall use in determining the location, number, and type of monitoring sites.
- (2) Regulations requiring that waste discharge requirements issued for discharges of mining waste by regional boards include monitoring requirements consistent with the statewide policy adopted pursuant to paragraph (1).
- (3) Standards for reporting the results of surface water and groundwater monitoring to the regional board. The standards shall establish a reporting format that graphs monitoring data over an appropriate time period and compares the values found for each measured parameter against the standard for that parameter established in the waste discharge requirements.

§ 13260. Reports; fees; exemptions

(k) In addition to the report required by subdivision (a), before any person discharges mining waste, the person shall first submit both of the following to the regional board:

- (1) A report on the physical and chemical characteristics of the waste that could affect its potential to cause pollution or contamination. The report shall include the results of all tests required by regulations adopted by the board, any test adopted by the Department of Toxic Substances Control pursuant to Section

25141 of the Health and Safety Code for extractable, persistent, and bioaccumulative toxic substances in a waste or other material, and any other tests that the state board or regional board may require, including, but not limited to, tests needed to determine the acid-generating potential of the mining waste or the extent to which hazardous substances may persist in the waste after disposal.

- (2) A report that evaluates the potential of the discharge of the mining waste to produce, over the long term, acid mine drainage, the discharge or leaching of heavy metals, or the release of other hazardous substances.

Subdivision (a)

(a) All of the following persons shall file with the appropriate regional board a report of the discharge, containing the information which may be required by the regional board:

- (1) Any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system.
- (2) Any person who is a citizen, domiciliary, or political agency or entity of this state discharging waste, or proposing to discharge waste, outside the boundaries of the state in a manner that could affect the quality of the waters of the state within any region.
- (3) Any person operating, or proposing to construct, an injection well.

§ 13263.1. Mining waste

Before a regional board issues or revises waste discharge requirements pursuant to Section 13263 for any discharge of mining waste, the regional board shall first determine that the proposed mining waste discharge is consistent with a waste management strategy that prevents the pollution or contamination of the waters of the state, particularly after closure of any waste management unit for mining waste.

CHAPTER 5.7. DRAINAGE FROM ABANDONED MINES

§ 13397. Legislative findings

(a) The Legislature finds and declares all of the following:

- (1) Thousands of abandoned mines have been identified in this state. Waste, including acid rock drainage from abandoned mines, has a devastating effect on aquatic life and has degraded some major water bodies in the state. Abandoned mines are the overwhelming source of copper loading to the Sacramento River and the San Francisco Bay/Sacramento-San Joaquin Delta. In some instances, waste from abandoned mines can cause public health and safety problems.

- (2) The formation of acid rock drainage is a process that can continue for centuries after the abandonment of a mine and is difficult to control. The complete elimination of acid rock drainage is not possible at this time.
 - (3) Unless action is taken either by public agencies or private parties, who are not responsible for creating the waste, abandoned mines will continue to discharge waste indefinitely. The cleanup of this waste for the protection of the public and the waterways of the state should be facilitated by limiting the financial responsibility for that cleanup.
 - (4) Public agencies and private parties, who are not otherwise legally responsible for the abandoned mined land, are reluctant to remediate abandoned mined lands unless they are assured that they will be held responsible for completing only the remedial work that they undertake. The public agencies and private parties may be willing to implement partial remediation, but they do not have sufficient resources to pay the cost of meeting all applicable regulatory standards.
- (b) The Legislature further finds and declares that it is the policy of the state to establish a program that permits public agencies and cooperating private parties to reduce the threat to water quality caused by abandoned mined lands without becoming responsible for completely remediating abandoned mine waste to a point that meets water quality objectives and related regulatory requirements. This program should provide a streamlined process for the purpose of approving an abandoned mine remediation plan in lieu of certain state permits and requirements. The implementation of this program will foster projects to improve water quality while ensuring that the taxpayers are not unfairly burdened.

§ 13397.5. Definitions

Unless the context requires otherwise, the following definitions govern the construction of this chapter:

- (a) "Abandoned mine waste" means the residual of soil, rock, mineral, liquid, vegetation, equipment, machines, tools, or other materials or property on, or discharging from, abandoned mined lands, directly resulting from, or displaced by, surface mining operations.
- (b) "Abandoned mined lands" has the same meaning as "abandoned surface mined area," as defined in clause (ii) of subparagraph (A) of paragraph (2) of subdivision (b) of Section 2796 of the Public Resources Code.
- (c) "Acid rock drainage" means acid waste discharge that results from the oxidation of metal sulfide in minerals associated with mined lands.
- (d) "Mined lands" has the same meaning as set forth in Section 2729 of the Public Resources Code.
- (e) "Oversight agency" means either the state board or a regional board. If the remediating agency is a regional board, the state board shall be the oversight agency. If the remediating agency is the state board, the oversight agency shall

be the Site Designation Committee established pursuant to Section 25261 of the Health and Safety Code. The committee shall have the powers and functions specified in Chapter 6.65 (commencing with Section 25260) of Division 20 of the Health and Safety Code, except that neither the chairperson of the state board, nor any designee, shall participate in the actions of the committee relating to the state board as a remediating agency.

- (f) "Remediating agency" or "agency" means any public agency, or any private individual or entity acting under a cooperative agreement with a public agency, that prepares and submits a remediation plan in accordance with this chapter. "Remediating agency" includes, but is not limited to, a public agency that holds title to abandoned mined lands for the purpose of remediating those lands or that is engaging in remediation activities that are incidental to the ownership of the lands for other than mining purposes. "Remediating agency" does not include any person or entity that is not a public agency, that, before implementing an approved remediation plan, owns or has owned a property interest, other than a security interest, in the abandoned mined lands being remediated, or is or has been legally responsible for, or had a direct financial interest in, or participated in, any mining operation, including exploration, associated with the abandoned mined lands being remediated.
- (g) "Remediation plan" means a plan to improve the quality of the waters of the state that have been directly and adversely impacted by abandoned mine waste.

§ 13398. Remediating agency responsibilities

- (a) Notwithstanding any other provision of law, a remediating agency that has implemented an approved remediation plan, or a public agency that is effecting reclamation of a mine site pursuant to the Surface Mining and Reclamation Act of 1975 (Chapter 9 (commencing with Section 2710) of Division 2 of the Public Resources Code), shall not be deemed, based on the actions taken to implement the remediation plan or the reclamation, to be the owner or operator of the abandoned mined lands, or any structure, improvement, waste management unit, or facility on the abandoned mined lands, and shall not be deemed, based on the actions taken to implement the remediation plan or the reclamation, to be responsible for any discharge, or the results of any discharge, of abandoned mine waste on or from any abandoned mined lands, including discharges which have been affected by the activities of the remediating agency or the public agency effecting reclamation of a mine site.
- (b) Except as provided in paragraph (c), Chapter 5.5 (commencing with Section 13370), and Section 13398.9, the responsibilities of a remediating agency are limited to the following:
- (1) Submitting a remediation plan to the oversight agency for approval in accordance with Section 13398.3. A remediation plan may be submitted in connection with a remediation project that was commenced or completed prior to January 1, 1996.
 - (2) Implementing a remediation plan that has been approved by the oversight agency.

- (3) If required by a remediation plan approved by the oversight agency, maintaining any structure, waste management unit, improvement, or other facility constructed, improved, or placed on the abandoned mined lands.
- (4) Periodically monitoring and reporting as required by the oversight agency.
- (5)
 - (A) Determining if the remediation plan implemented by the remediating agency has been effective to provide a substantial improvement in water quality affected by abandoned mine waste.
 - (B) If the remediating agency determines that the remediation plan implemented by the agency is not effective, the remediating agency shall promptly report that determination to the oversight agency. If the remediating agency or the oversight agency determines that the remediation plan implemented by the remediating agency is not effective, the remediating agency shall submit a modified remediation plan to the oversight agency which includes a proposal to improve the plan to make it effective, or a proposal to cease remedial activities on the abandoned mined lands and return those lands, including the water quality on those lands, to a condition that approximates the quality that existed prior to commencing remedial activities. The remediating agency shall implement the modified remediation plan as approved by the oversight agency.
- (6) Notwithstanding any other provision of law, except as provided in Chapter 5.5 (commencing with Section 13370), if the remediating agency implements or has implemented the approved remediation plan and any modifications to the plan approved by the oversight agency, the remediating agency, with regard to any discharge of abandoned mine waste that is the subject of the plan, shall not be required to achieve water quality objectives or to comply with other requirements of this division or other laws that are administered by the state board or the regional boards, and shall not be subject to any enforcement actions pursuant to state law based on actions taken to implement the approved remediation plan, except for violations involving gross negligence, including reckless, willful, or wanton misconduct, or intentional misconduct by the remediating agency.
- (c) The responsibilities of a remediating agency that engages in surface mining operations, as defined in Section 2735 of the Public Resources Code, in conjunction with the remediation or reclamation of abandoned mine waste or that performs reclamation of a surface mining operation pursuant to Section 2773.1 or 2796 of the Public Resources Code, include performing the applicable requirements of Section 2207 of the Public Resources Code and the Surface Mining and Reclamation Act of 1975 (Chapter 9 (commencing with Section 2710) of Division 2 of the Public Resources Code). The State Mining and Geology Board may grant an exemption from the requirements of Section 2207 of the Public Resources Code or from the Surface Mining and Reclamation Act of 1975 to a remediating agency and its contractors solely for the purpose of removing abandoned mine waste in connection with the implementation of an approved remediation plan.

§ 13398.3. Remediation plan

The remediation plan to be submitted by a remediating agency to the oversight agency shall include all of the following:

- (a) Identification of the remediating agency, and a certification that the remediating agency is a remediating agency as defined in this chapter.
- (b) Identification of the abandoned mined lands that are the subject of the plan.
- (c) Identification of the waters of the state, if any, that are affected by the abandoned mined lands.
- (d) A description of the physical conditions at the abandoned mined lands that are causing or have caused adverse water quality impacts.
- (e) A description of the practices, including system design and construction plans, and operation and maintenance plans, proposed to reduce, control, mitigate, or eliminate the adverse water quality impacts and a schedule for implementing those practices. If the plan is prepared for an existing remediation project, the remediation plan shall include a description of practices that have been implemented and the practices that are proposed to improve the existing project, if any.
- (f) An analysis demonstrating that the implementation of the practices described in the plan have caused, or are expected to cause, a substantial improvement in water quality for the identified waters.
- (g) A description of monitoring or other assessment activities to be undertaken to evaluate the success of the implemented practices during and after implementation, including an assessment of baseline conditions.
- (h) A budget and identified funding to pay for the implementation of the plan.
- (i) Remediation goals and objectives.
- (j) Contingency plans.
- (k) A description of the remediating agency's legal right to enter and conduct remedial activities.
- (l) The signature of an authorized representative of the remediating agency.
- (m) Identification of the pollutants to be addressed by the plan.

§ 13398.5. Oversight agency responsibilities

The oversight agency shall do all of the following:

- (a) Comply with the requirements of the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) in connection with the review of any remediation plan.

- (b) Provide an opportunity for public review of, and comment with regard to, the remediation plan.
- (c) Disapprove, approve, or modify and approve a remediation plan at a public meeting.

§ 13398.7. Approval of remediation plans

- (a) The oversight agency may approve the remediation plan if the oversight agency finds that there is substantial evidence in the record that the plan will substantially improve water quality affected by abandoned mine waste.
- (b) The oversight agency may approve a remediation plan for a project that the remediating agency implemented prior to January 1, 1996, if that oversight agency finds that there is substantial evidence in the record that the project has substantially improved water quality adversely impacted by mining activities on the abandoned mined lands undertaken before the project was implemented.
- (c) The remediating agency is not required to include in the remediation plan a plan to achieve water quality objectives, with regard to any discharge of abandoned mine waste that is the subject of the plan, to comply with other requirements of this division, except for Chapter 5.5 (commencing with Section 13370), or to comply with any other law that is administered by the state board or the regional boards, with regard to that discharge.
- (d) The oversight agency may approve a modification of an approved remediation plan to permit additional time for completing the remediation project or to otherwise modify the plan, after an opportunity for public comment.
- (e) If the oversight agency determines that a remediating agency is not implementing the approved remediation plan in substantial compliance with its terms, that oversight agency shall notify the remediating agency of its determination, including the specific causes for that determination.
- (f) If the oversight agency determines that the specific causes for the determination are not adequately addressed pursuant to subdivision (e), or if a compliance plan is not submitted to, and approved by, the oversight agency within 180 days from the date of the notification pursuant to subdivision (e), the oversight agency may determine that the remediating agency is in violation of this chapter. A remediating agency that is in violation of this chapter is not protected by the limitations on responsibility for remediation of abandoned mined lands provided by this chapter and may be subject to any enforcement action authorized by law.

§ 13398.9. Remediating agency liability; Penn Mine

- (a) This chapter has no effect on the tort liability of a remediating agency for personal injury or wrongful death.
- (b) This chapter has no effect on the liability of a remediating agency based upon activities other than those undertaken in connection with the implementation of an approved remediation plan.

- (c) This chapter has no effect on the liability of a remediating agency if that agency, following implementation of an approved remediation plan, benefits from, or participates in, any mining operation, including exploration, associated with the abandoned mined lands subject to the approved remediation plan.
- (d) For the purposes of this chapter, the remediation plan for the Penn Mine property located in Calaveras County shall, if a memorandum of understanding is entered into by the state and other appropriate parties, include the terms and conditions set forth in that memorandum of understanding.

California Code of Regulations Title 27

§20080. SWRCB - General Requirements. (C15: §2510)

(h) **Mining Waste**—Discharges of mining waste, as defined in §22470(a), shall be regulated only by the provisions of Article 1, Subchapter 1, Chapter 7, Subdivision 1 of this division (§22470 et seq.) and by such provisions of the other portions of this subdivision as are specifically referenced in that article.

§20164. Combined CIWMB & SWRCB Technical Definitions

“Inactive mining waste management unit” (SWRCB) means any area containing mining wastes which is located at a present or former mining or milling site, and where all mining operations and discharges of mining waste ended and have not been resumed for 5 years, or more.

“Mining waste” (SWRCB) means all waste materials (solid, semi solid, and liquid) from the mining and processing of ores and minerals including soil, waste rock, and other forms of overburden as well as tailings, slag, and other processed mining wastes.

“Tailings pond” (SWRCB) means an excavated or diked area which is intended to contain liquid and solid wastes from mining and milling operations.

§22207. SWRCB - Closure Funding Requirements. [C15: §§2574(f&g) and 2580(f)]

The requirements of this section apply to dischargers who own or operate a Class II, or Class III waste management unit (**Unit**) or a mining waste management unit (**mining Unit**).

(b) **Mining Unit Closure Funding** — For mining Units only, the discharger shall provide for adequate funding to pay for the costs of closure as required by the mining regulations of Article 1, Subchapter 1, Chapter 7 of this division (§22470 et seq.). The discharger shall provide assurance of financial responsibility acceptable to the RWQCB. The RWQCB shall periodically review financial assurances for mining Units and shall modify the financial assurances as necessary to provide continued compliance with this section. If a lead agency acting under the authority of §2774(a) of the Public Resources Code requires assurances of financial responsibility for a mining Unit, these assurances can be used to fulfill the requirement under this paragraph, provided that:

- (1) the RWQCB approves the assurance; and

(2) the RWQCB is named as alternate payee.

§22212. SWRCB - Post-Closure Funding Requirements. [C15: §§2574(f&g) and 2580(f)]

The requirements of this section apply to dischargers who own or operate a Class II or Class III waste management unit (**Unit**) or a mining waste management unit (**mining Unit**).

(b) **Mining Units** — The discharger shall provide for adequate funding to pay for the costs of post closure maintenance at mining Units, as required by the mining regulations of Article 1, Subchapter 1, Chapter 7 of this division (§22470 et seq.). The discharger shall provide assurance of financial responsibility acceptable to the RWQCB. The RWQCB shall periodically review financial assurances for mining Units and shall modify the financial assurances as necessary to provide continued compliance with this section. If a lead agency acting under the authority of §2774(a) of the Public Resources Code requires assurances of financial responsibility for a mining Unit, these assurances can be used to fulfill the requirement under this paragraph, provided that:

(1) the RWQCB approves the assurance; and

(2) the RWQCB is named as alternate payee.

§22222. SWRCB - Corrective Action Funding Requirements. [C15: §2550.0(b) and §2580(f)]

The requirements of this section apply to dischargers who own or operate a Class II or Class III waste management unit (**Unit**). This section does not apply to discharges of mining waste to mining waste management units (**mining Units**). [*Note: The requirements of this paragraph do not preclude the RWQCB (under authority other than this subdivision) from requiring financial assurance for a known or reasonably foreseeable release at a mining Unit.*]

Chapter 7. Special Treatment, Storage, and Disposal Units

Subchapter 1. Mining Waste Management

Article 1. SWRCB - Mining Waste Management Regulations (C15:Article 7)

[*Note: Regulations in this article were promulgated by the State Water Resources Control Board (SWRCB), are administered by the appropriate Regional Water Quality Control Board (RWQCB) through the issuance of waste discharge requirements (WDRs), and are applicable to the owner or operator of a waste management unit for the treatment, storage, or disposal of mining waste (Mining Unit).*]

§22470. SWRCB - Applicability. (C15: §2570)

(a) **General** ---- This article applies to all discharges of mining wastes. No SWRCB-promulgated parts of this subdivision except those in this article, Article 1 of Chapter 1 (i.e., §20080 et seq.), and such provisions of the other articles of this subdivision as specifically are referenced in this article shall apply to discharges of “mining wastes” as that term is defined in §22480. Mining Units (including surface impoundments, waste piles, and tailings ponds) which receive WDRs after November 27, 1984, shall comply with the siting and

construction standards in this article. Existing active and inactive Mining Units shall comply with the siting and construction requirements of this article as required by the RWQCB. Dischargers shall submit a report of waste discharge in compliance with Article 4, Subchapter 3, Chapter 4 of this subdivision (§21710 et seq.), and shall have WDRs which implement the appropriate provisions of this article unless requirements are waived by the RWQCB. Requirements for new and existing Mining Units are summarized on Table 1.1 of this article. The RWQCB can impose more stringent requirements to accommodate regional and site specific conditions.

- (b) **Dry Unit Liner/LCRS Exemption** ---- A RWQCB can exempt a mining waste pile from the liners and leachate collection and removal systems required in this article if the discharger clearly demonstrates to the RWQCB that leachate will not form in or escape from that Mining Unit. The RWQCB can require extensive monitoring procedures in lieu of certain containment features. Contingency plans shall be developed and shall be implemented if monitoring indicates that the disposal procedures are inadequate.
- (c) **Exemptions Based On No/Little/Poor G.W.** ---- The RWQCB can exempt a Group A or B (see §22480 of this article) Mining Unit from certain provisions of this article if a comprehensive hydrogeologic investigation demonstrates that:
- (1) there are only very minor amounts of groundwater underlying the area; or
 - (2) the discharge is in compliance with the applicable water quality control plan; and
 - (3) either natural conditions or containment structures will prevent lateral hydraulic interconnection with natural geologic materials containing ground water suitable for agricultural, domestic, or municipal beneficial uses. There is no detectable vertical hydraulic interconnection between the natural geologic materials underlying the Unit and natural geologic materials containing such ground water.

If the above demonstration is acceptable to the RWQCB, the discharger can be exempted from requirements for liners and leachate collection and removal systems (see §22490 of this article). However, the discharger shall comply with the requirements of this article relative to siting, precipitation and drainage controls, and surface water quality monitoring. Closure and post closure maintenance periods shall be designed to protect surface water quality. Ground water monitoring, and unsaturated zone monitoring as feasible, shall be conducted during the active life, closure, and post closure maintenance period to verify that the Unit is not affecting ground water suitable for agricultural, domestic, or municipal beneficial uses.

NOTE: Authority cited: Section 1058, Water Code. Reference: Sections 13172, 13226, 13260, and 13263, Water Code; Section 43103, Public Resources Code.

§22480. SWRCB - Groups of Mining Waste. (C15: §2571)

- (a) **Definition** — Mining waste is waste from the mining and processing of ores and mineral commodities. Mining waste includes:
- (1) overburden;

- (2) natural geologic material which have been removed or relocated but have not been processed (waste rock); and
 - (3) the solid residues, sludges, and liquids from the processing of ores and mineral commodities.
- (b) **Waste Group** — Classification Mining wastes shall be classified as Group A, Group B, or Group C mining wastes based on an assessment of the potential risk of water quality degradation posed by each waste. In setting requirements for each mining waste discharge under this article, the RWQCB shall assign the waste to Group A, Group B, or Group C according to the following criteria:
- (1) **Group A** — mining wastes of Group A are wastes that must be managed as hazardous waste pursuant to Chapter 11 of Division 4.5, of Title 22 of this code, provided the RWQCB finds that such mining wastes pose a significant threat to water quality;
 - (2) **Group B** — mining waste of Group B are either:
 - (A) mining wastes that consist 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; or
 - (3) **Group C** — mining wastes from Group C are wastes from which any discharge would be in compliance with the applicable water quality control plan, including water quality objectives other than turbidity.
- (c) **Classification Considerations** — In reaching decisions regarding classification of a mining waste as a Group B or Group C waste, the RWQCB can consider the following factors:
- (1) whether the waste contains hazardous constituents only at low concentrations;
 - (2) whether the waste has no or low acid generating potential; and
 - (3) whether, because of its intrinsic properties, the waste is readily containable by less stringent measures.
- (d) **Treatment** — Mining waste shall be treated or neutralized whenever feasible to minimize the threat to water quality and minimize the need to install waste containment structures.
- (e) **NOTE: Authority cited: Section 1058, Water Code. Reference: Sections 13172, Water Code; Section 43103, Public Resources Code.**

§22490. SWRCB - Mining Unit Siting and Construction Standards. (C15: §2572)

- (a) **Proximity to Faults** — New Mining Units:

- (1) for Group A and B wastes, shall not be located on Holocene faults. Units for Group C wastes may be located on Holocene faults if displacement will not allow escape of wastes or cause irreparable damage to containment structures;
 - (2) shall be outside of areas of rapid geologic change. Exemptions may be allowed by the RWQCB if containment structures are designed and constructed to preclude failure.
- (b) **Flooding** — All Mining Units shall be protected from flooding as shown on Table 1.2 of this article.
- (c) **Construction & Discharge Standards** — General construction standards are given on Table 1.3 of this article. Procedures for determining appropriate methods for discharges of Groups A and B mining wastes are outlined in Figures 1.1 and 1.2 of this article.
- (d) **Registered Professionals** — Containment structures shall be designed by a registered civil engineer, and construction shall be supervised and certified by a registered civil engineer or a certified engineering geologist.
- (e) **General Containment Structure Criteria** — Dischargers shall comply with general criteria for containment structures in §20320.
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- (f) **Liners.**
- (1) **FMLs** — Synthetic liners (40 mil minimum thickness) can be used for waste piles where the discharger can demonstrate that the liner will function adequately during the active life of the waste pile and provided that the waste pile is closed in accordance with §21410.
 - (2) **Relative Permeability** — Permeabilities shall be relative to the fluids, including waste or leachate, to be contained.
 - (3) **Clay Liners** — Clay liners shall be of a minimum of two feet thick and shall be installed at relative compaction of at least 90 percent.
 - (4) **Replaceable Clay-Liners** — Single clay liners may be used for Group B surface impoundments if replaced as specified in §20330(e).
 - (5) **Contingency Plan** — If the RWQCB exempts a discharger from liner requirements for a waste pile, a contingency plan for alternative waste containment shall be developed. The plan shall be implemented if there is failure of the waste pile containment system.
 - (6) Dischargers shall comply with the liner criteria given in §20330(a & d).
- (g) **Leachate Collection and Removal Systems (LCRSs) for Group A and B Wastes.**
- (1) All LCRSs shall be of the blanket type.

- (2) Dischargers shall comply with leachate collection and removal system (**LCRS**) requirements given in §20340(b - e).

(h) **Precipitation and Drainage Controls.**

- (1) **Design Storm** — Diversion and drainage facilities shall be designed and constructed to accommodate the anticipated volume of precipitation and peak flows from surface runoff as follows:
- (A) **Group A** — one 25 year, 24 hour storm;
- (B) **Group B** — one 10 year, 24 hour storm; and
- (C) **Group C** — one 10 year, 24 hour storm.
- (2) **Excess Runoff** — Precipitation on Group A and B waste piles that is not diverted by containment structures shall be collected and managed through the LCRS. The RWQCB can make exemptions to this requirement if the collected fluid does not contain indicator parameters or waste constituents in excess of applicable water quality objectives.
- (3) **Precipitation/Drainage Controls** — Dischargers shall comply with precipitation and drainage control requirements given in §20365(d & e).
- (i) **Incorporated Impoundment Requirements** — Dischargers shall comply with special requirements for surface impoundments given in §20375. Nevertheless, for Mining Units, dischargers shall use the precipitation conditions in ¶(h)(1).

NOTE: Authority cited: Section 1058, Water Code. Reference: Sections 13172, 13226, and 13263, Water Code; Section 43103, Public Resources Code.

§22500. SWRCB - Water Quality Monitoring for Mining Units. (C15: §2573)

- (a) **General** — New and existing Group A and B Mining Units shall comply with the monitoring provisions contained in §20385 through §20430.
- (b) **Monitoring Mandatory** — If a waste pile containing Group A or B mining wastes is granted exemption from construction requirements pursuant to §22470(b), monitoring of the waste moisture content shall be required.

NOTE: Authority cited: Section 1058, Water Code. Reference: Sections 13172, 13226, 13263, and 13267, Water Code; Section 43103, Public Resources Code.

§22510. SWRCB - Closure and Post Closure Maintenance of Mining Units. (C15: §2574)

- (a) **Closure Performance Standard** — New and existing Mining Units shall be closed so that they no longer pose a threat to water quality. No post closure land uses shall be permitted that might impair the integrity of containment structures.
- (b) **Plan** — Mining Units shall be closed according to an approved closure and post closure maintenance plan which implements this section and provides for continued compliance

with the applicable standards in this article for waste containment, precipitation and drainage controls, and monitoring throughout closure and the post closure maintenance period.

- (c) **Reclamation** — The RWQCB shall issue WDRs which incorporate the relevant provisions of an approved mining and reclamation plan (see California Surface Mining and Reclamation Act, Public Resources Code, Section 2770, et seq.), prescribe additional conditions as necessary to prevent water quality degradation, and ensure that there will be no significant increase in the concentration of indicator parameters or waste constituents in ground or surface water, unless requirements are waived.
- (d) **Oversight & Monuments** — Dischargers shall comply with the closure requirements given in §20950(b & d).
- (e) **Inactive Units** — Containment structures at inactive Mining Units shall be subject to the same standards as apply to an active Mining Unit under this article.
- (f) **Closure and Post-Closure Funding** — The discharger shall provide for adequate funding to pay for the costs of closure and post closure maintenance as required by this article. The discharger shall provide assurance of financial responsibility, acceptable to the RWQCB, pursuant to Chapter 6 of this title. The RWQCB shall periodically review financial assurances and shall modify them as necessary.
- (g) **Alternate Financial Assurance** — If a lead agency acting under the authority of §2774(a) of the Public Resources Code requires assurances of financial responsibility, these assurances can be used to fulfill all comparable requirements under ¶(f), provided that:
 - (1) the RWQCB approves the assurance; and
 - (2) the RWQCB is named as alternate payee.
- (h) **Ending Post-Closure** — The post closure maintenance period shall end when the RWQCB determines that water quality aspects of reclamation are complete and waste no longer poses a threat to water quality.
- (i) **Vegetation** — Vegetation for closed Mining Units shall not impair the integrity of containment features. Irrigation of vegetation shall be managed to assure that it does not cause nor increase the production of leachate.
- (j) **Waste Pile Closure Standards** — New and existing Group A and B waste piles shall be closed in accordance with the provisions of §21090(a - c).
- (k) **Surface Impoundment Closure Standards** — New and existing Group A and B surface impoundments shall be closed in accordance with the provisions of paragraphs (a) and (b)(1) of §21400. A surface impoundment can be closed in place if provided with a cover as in §21090(a) and if the liner (or, in the case of a double liner system, the outer liner) is clay.
- (l) **Tailings Pond Closure Standards** — New and existing Group A and B tailings ponds shall be closed in accordance with the provisions of §21090(a - c) and §21400(a).

(m) **Erosion & Sedimentation Protection** — New and existing Group C Mining Units shall be closed in a manner that will minimize erosion and the threat of water quality degradation from sedimentation.

NOTE: Authority cited: Section 1058, Water Code. Reference: Sections 13172, 13226, and 13263, Water Code; Section 43103, Public Resources Code.

Table 1.1. Summary of Requirements for New and Existing Mining Units

Type of Requirement	New Units	Existing Units	Exemptions
Siting	<ul style="list-style-type: none"> (1) Not on Holocene faults; (2) Outside of areas of rapid geologic change; (3) Peak streamflow protection as in Table 1.2 	Peak streamflow protection as in Table 1.2; as required by RWQCBs	New Units may be sited in areas of rapid geologic change if containment structures designed and constructed to preclude failure.
Construction	<ul style="list-style-type: none"> (1) Liners or maximum natural permeability as in Table 1.2 (2) Leachate collection and removal system as in Table 1.3; (3) Precipitation and drainage controls. 	Precipitation and drainage controls.	<ul style="list-style-type: none"> (1) No liners or leachate collection and removal systems required for Group C Units. (2) New waste piles may be exempted from liners and leachate collection and removal systems if it can be demonstrated that leachate will not form or escape — contingency plan required, and additional monitoring may be required.
Monitoring	<ul style="list-style-type: none"> (1) Ground water and surface water; (2) Unsaturated zone monitoring as feasible. 		None
Closure and Post-Closure Maintenance	Closed and maintained in accordance with §22510		None

Table 1.2 Floodplain Siting Criteria

Waste Group	Waste Management Unit	Existing Units¹	New Units
A	Waste Pile Surface Impoundment Tailings Pond	Protect from 100-year peak streamflow	Outside 100-year floodplain
B	Waste Pile Surface Impoundment Tailings Pond	Protect from 100-year peak streamflow	Protect from 100-year peak streamflow
C	Waste Pile Surface Impoundment Tailings Pond	Retrofit as needed to protect surface water quality	Preclude increased sediment in surface water ²

¹ As required by the RWQCB pursuant §22470(a)

² Mining wastes shall not be placed in perennial, intermittent, or ephemeral stream channels unless provision is made to divert runoff around the waste in a non-erosive manner. Wastes shall not be placed where they can be eroded by streamflows or where they can cause accelerated streambank erosion. Waste generated during seasonal mining operations may be exempted from these requirements provided that increased sediment in surface water is precluded

Table 1.3 Natural and Artificial Containment Features for Mining Units

Waste Group	Waste Management Unit	Geologic Setting	Liner(s) Hydr. Cond. Values (Units: cm/sec)	Leachate Collection and Removal
A	Waste Pile	per §2531(b)(1) of Title 23, OR single clay liner $1 \#1 \times 10^{-7}$ cm/sec		Required
	Surface Impoundment or Tailings Pond	not applicable	double liner, both $\#1 \times 10^{-7}$ outer: clay; Inner: clay or synthetic	required ⁽²⁾
B	Waste Pile	Per §20250(b)(1) OR single clay liner	$\#1 \times 10^{-6}$ (1)	required
	Surface Impoundment or Tailings Pond	not applicable	double liner both $\#1 \times 10^{-6}$ // outer: clay or natural permeability ⁽³⁾ ; inner: clay or synthetic OR single replaceable clay liner ⁽⁴⁾	required ⁽²⁾
C	Waste Pile, Surface Impoundment, or Tailings Pond	not applicable	not applicable	not applicable

(1) Synthetic liner may be used for short-term containment [see §22490(f)(1)]

(2) Liner and leachate collection and removal system for tailings pond must be able to withstand the ultimate weight of wastes

(3) Permeability of $\#1 \times 10^{-6}$ cm/sec or natural geologic materials may replace outer liner of double liner system.

(4) Single clay liner ($\#1 \times 10^{-6}$ cm/sec) for surface impoundment, to be removed before last 25 percent (minimum 1 foot thickness) of liner is penetrated by fluid, including waste and leachate.