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[TENTATIVE] WASTE DISCHARGE REQUIREMENTS ORDER R5-2020-####

ORDER INFORMATION

Order Type(s):	Waste Discharge Requirements (WDRs)
Status:	Tentative
Program:	Title 27 Discharges to Land
Region 5 Office:	Sacramento (Rancho Cordova)
Discharger(s):	Waste Management, Inc.
Facility:	California Asbestos Monofill, Inc.
Address:	4849 O'Brynes Ferry Road, Copperopolis, 95228
County:	Calaveras County
Parcel Nos.:	64-027-02, 64-027-06, 64-028-11, 64-028-14, and portions of 64-028-18
WDID:	5B052006001
Prior Order(s):	79-231; 89-045; 91-019; 97-142; 98-204

CERTIFICATION

I, PATRICK PULUPA, Executive Officer, hereby certify that the following is a full, true, and correct copy of the order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____ [Month] [Year].

_____
PATRICK PULUPA,
Executive Officer

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GLOSSARY

CAM ..... California Asbestos Monofill, Inc.

ACW ..... Asbestos containing waste

Antidegradation Policy ..... Statement of Policy with Respect to Maintaining High Quality Waters in California, State Water Board Resolution 68-16

Basin Plan ..... *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*

bgs ..... Below Ground Surface

C&D ..... Construction and Demotion Materials

CalRecycle ..... California Department of Resources Recovery and Recycling

CAM ..... California Asbestos Monofill, Inc.

CAP ..... Corrective Action Program

CEQA ..... California Environmental Quality Act

CEQA Guidelines ..... California Code of Regulations, Title 14, section 15000 et seq.

C.F.R. ..... Code of Federal Regulations

COCs ..... Constituents of Concern

CPMP ..... Closure and Post-Closure Maintenance Plan

CQA ..... Construction Quality Assurance

CUP ..... Conditional Use Permit

DMP ..... Detection Monitoring Program

EC ..... Electrical Conductivity

EIR ..... Environmental Impact Report

FEMA .....Federal Emergency Management Agency

Group C Mining Waste.....Mining Waste which, pursuant to Title 27, § 22480 (b)(3), from which any discharge would be in compliance with applicable water quality control plan, including water quality objectives other than turbidity.

Hazardous Waste .....Wastes which, pursuant to Title 22, section 66261.3 et seq., are required to be managed in accordance with Division 4.5 of Title 22. (Title 27, § 20164; Title 23, § 2521(a).)

Inert Waste.....Title 27, section 20230: Inert waste is that subset of solid waste that does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives, and does not contain significant quantities of decomposable waste.

LEA .....Local Enforcement Agency

Leachate.....Liquid formed by the drainage of liquids from waste or by the percolation or flow of liquid through waste. Leachate includes any constituents extracted from the waste and dissolved or suspended in the fluid. (Title 27, § 20164.)

MCE .....Maximum Credible Earthquake

MDB&M .....Mount Diablo Base and Meridian

MDL .....Method Detection Limit

µg/L.....Micrograms per Liter

mg/L.....Milligrams per Liter

MPE .....Maximum Probable Earthquake

msl .....Mean Sea Level

MRP .....Monitoring and Reporting Program

MW.....Monitoring Well

MWP ..... Pit Water Monitoring Point

MU.....Mining Unit

SPRRs .....Standard Provisions and Reporting Requirements

ROWD.....Report of Waste Discharge

TDS.....Total Dissolved Solids

Title 22.....California Code of Regulations, Title 22

Title 27.....California Code of Regulations, Title 27

USEPA.....United States Environmental Protection Agency

VOCs .....Volatile Organic Compounds

WDRs.....Waste Discharge Requirements

WMU .....Waste Management Unit

WQG .....Water Quality Goals

WQPS .....Water Quality Protection Standard

FINDINGS

The Central Valley Regional Water Quality Control Board (Central Valley Water Board) hereby finds as follows:

Introduction

1. Waste Management, Inc. (Discharger) owns and operates California Asbestos Monofill, Inc. (Facility), which is located approximately 5 miles southeast of Copperopolis in Calaveras County Calaveras County, in portions of Sections 16, 15, 21, and 22, Township 1 North, Range 13 East, Mount Diablo Base and Meridian (MDB&M). The Facility's location is depicted in **Attachment A**.

2. As the Facility's owner and operator, the Discharger is responsible for compliance with this Order, which prescribes Waste Discharge Requirements (WDRs) regulating monitoring, closure and post-closure maintenance of the Waste Management Units (WMUs) listed in **Table 1**.

Table 1—Summary of Waste Management/Mining Units Permitted under Order

Unit	Size (acres)	Waste Description/ Unit Classification	Cover Components	Status
LU-1: Landfill/monofill in a former mining pit	Total 77; closure surface 8 acres	Inert waste: ACW and shredded tires; mining influenced water (MIW)	At least two feet of rock reject on top of at least one foot of compacted mill tailings	Inactive; Proposed closure as a shallow lake
Mill Tailings Stockpile	83 acres	Group C mining waste: mill tailings - serpentinite milled to silty sand and gravel	Nine-inch thick layer of rock reject	Closed
Evaporation/infiltration ponds H-1, H-2, and C		Mining influenced water (MIW)	None	Active; Used to dewater pit

Unit	Size (acres)	Waste Description/ Unit Classification	Cover Components	Status
Retention ponds P1-P3		Stormwater	None	Active
Overburden Waste Rock Piles		Overburden rock: crushed, poorly sorted overburden rock	None	Inactive
Rock Reject Pile		Well sorted crushed serpentine rock with low asbestos content, < two-inch	None	Inactive; proposed to use as cover for pit bottom

Materials Accompanying Order

3. The following materials are attached to this Order, and incorporated herein:

   Attachment A—Facility Location
   Attachment B—Facility Features and Monitoring Network
   Attachment C—Land Use
   Attachment D—Mining Pit/LU-1 Cross-section
   Attachment E—Groundwater and Pit Water Piper Diagram

   Standard Provisions & Reporting Requirements for Discharges of Mining Wastes Regulated by Title 27, February 2009 Edition (SPRRs or Standard Provisions)

   Information Sheet for [Tentative] Waste Discharge Requirements Order R5 2020 #### (Information Sheet)

4. This Order is also accompanied by the concurrently adopted **Monitoring & Reporting Program R5 2020 #### (MRP)**, the provisions of which are incorporated as part of this Order. Each time the operative MRP is modified by the Central Valley Water Board or its Executive Officer, the revised version shall become the operative MRP (superseding the prior version) and be incorporated as part of this Order (i.e., in lieu of the prior version).

5. To the extent there are any material inconsistencies between the provisions of this Order, the operative MRP and the SPRRs, the provisions of this Order shall be controlling. However, to the extent a revised MRP contains new or different factual findings reflecting changed conditions or circumstances at the Facility, the revised MRP findings shall be controlling.

6. Additional information about the Facility is set forth in the **Information Sheet**, which is incorporated as part of these findings. (See Finding 3)

Facility

7. The facility is a former asbestos mine which operated from 1962 through 1987. In 1990, the open pit started operating as an unclassified inert waste landfill for asbestos containing waste (ACW). In 1998, the facility started to accept shredded tires. The open pit was operated as an unclassified landfill until 2016 when it ceased to accept waste and the Discharger directed their focus to closure.

8. The facility was operated as an asbestos mine, first by Jefferson Lake Corporation in 1962, followed by Pacific Asbestos Corporation in 1968. Calaveras Asbestos, Ltd., purchased the assets in December of 1975 and operated the mine until December 1987 under Waste Discharge Requirements Order No. 79-231 for Mining and Milling Operations.

9. After mining ceased, Order No. 89-045 reclassified the open pit mine as unclassified landfill for the disposal of ACW only. Order No. 91-019 continued that classification. On 20 June 1997, the Central Valley Water Board issued the current Order No. 97-142 in which the open pit was classified as an unclassified landfill unit/monofill for the discharge of inert waste and shredded tires.
In 2007, the Discharger submitted a Report of Waste Discharge (ROWD). Staff reviewed submitted documentation and the Order and recommended continuance of waste discharge requirements because, at the time, the conditions at the facility had not changed significantly. Five-year continuance was approved in an internal correspondence on 10 December 2008.

10. Order No. 98-204 was issued to change the ownership of California Asbestos Monofill, Inc., to Waste Management, Inc.

11. The Discharger is maintaining coverage under the National Pollution Discharge Elimination General Permit for Industrial Stormwater Pollution No. 5S05I011728.

Waste Classification & Permitting

12. The Facility includes the following onsite features, systems and structures described in **Table 1** and shown in **Attachment B**:

    a. Unclassified LU-1 operated as inert waste landfill in the former mining pit

    b. Closed Mill Tailings Stockpile

    c. Rock Reject and Overburden Rock Stockpiles

    d. Evaporation/infiltration Ponds

    e. Retention Ponds

13. LU-1 landfill is a WMU in the former open pit mine which was approximately 400 feet deep prior to the introduction of waste. Order No. 97-142 classified LU-1 as **unclassified** landfill because it was used for the disposal of ACW and shredded tires which are classified as **inert** as defined in Title 27 Section 20230.

14. Mill tailings in the reclaimed Mill Tailings Stockpile are composed of asbestos-bearing serpentinite rock milled to fine- to coarse-grained silty sand or gravel. Based in the information provided in the February 2016 *Mill Tailings Characterization Report* Mill, mill tailings are classified as **Group C** Mining Waste as defined in Title 27 Section 22480(b)(3).

15. Overburden rock piles are engineered with flat tops and berms along the edges to trap storm water and allow for infiltration. No evidence of runoff or discharge from these piles have been observed by the Discharger.

16. Rock reject piles consist of well sorted crushed serpentinite less than two inches in size with low asbestos content. The material from these piles has been utilized as cover for the Mill Tailings Stockpile. The Discharger is also proposing to use it for LU-1/pit bottom cover. Storm water from the rock reject piles is directed to the evaporation/infiltration ponds H-1 and H-2.

17. On 20 December 2019, the Discharger submitted their latest ROWD. The submitted ROWD and supporting documents contain information related to this revision/update of the WDRs and include the information related to:

    a. Closure of the unclassified landfill/monofill unit LU-1

    b. Closure and post-closure maintenance plan

Site Conditions

18. The facility is located along the Stanislaus River, a short distance downstream from the New Melones Dam, on the USGS New Melones Dam Quadrangle, California, 7.5 minute series topographic map. Hilly topography at the facility is characterized by gentle to moderate slopes, with elevation ranging from 600 to 1500 feet above mean sea level (msl).

19. Bedrock at the site is largely serpentinized ultramafic rock (serpentinite), which has been intruded in association with the Bear Mountain and Melones Fault Zones. Serpentinite is the host rock for the asbestos mined at the site. French and Rogers Creek fractures traverse the northern half of the site (**Attachment B**).

20. Mining pit is intersected by Roger's Creek Fracture crossing from the south rim to the northwest rim (**Attachments B and D**). The trace of this fracture forms a "V" shaped feature along the line of its intersection with the northwest wall. The lowest exposure of the fracture along the pit wall is at about 650 feet msl.

21. Land uses within one mile of the Facility, as shown in **Attachment C,** are general agriculture to the north, unclassified to the east and to the south, and agricultural and unclassified to the west. Adjacent properties are primarily open space and forage for wildlife and cattle. The private property bordering the west side of the Site is used primarily for cattle grazing. The properties to the north, east, and south are federally owned lands managed by the Bureau of Land Management and Army Corps of Engineers with Mineral Resource & Inundation land use designations in the Calaveras County General Plan.

22. There are no municipal, domestic, industrial, or agricultural groundwater supply wells within one mile of the facility. The only wells within 1 mile of the Site are the two onsite wells which were used as a water supply for the former mining operations. These wells are identified as Well 1 and Well 2 on the Attachment C. Well 2 also serves as the background monitoring well MW-1.

23. Based on a site-specific seismic analysis, the controlling maximum credible earthquake (MCE) for the site is a moment of magnitude 6.5 event along the Foothills Fault System located at a distance of 1.25 miles from the Site. It is estimated that a MCE event would produce a peak ground acceleration of 0.38 g at the site with a return period of >10,000 years.

24. Based on data from the nearest weather station (New Melones Dam), the annual average precipitation is 28.4 inches, and a mean annual pan evaporation 71.6 inches. The nearest weather station is reflective of conditions at the Facility. Based on the isohyetal rainfall map obtained from the Prism Climate Group, the 30-year wet season for the facility was calculated to be 23 to 25 inches.

25. Stormwater sedimentation basins/retention ponds are situated in Long Creek Valley of the Facility, as depicted in **Attachment B**. These ponds rarely discharge to Stanislaus River.

26. According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (https://msc.fema.gov/portal), Community-Panel Number 06009C0675E, the Facility is not located within a 100-year floodplain.

Surface Water and Groundwater Conditions

27. Surface water from the Facility drains to Stanislaus River, a tributary to Tulloch Reservoir. According to the Central Valley Water Board's *Water Quality Control Plan for the Sacramento and San Joaquin River Basins* (Basin Plan), the beneficial uses of Tulloch Reservoir include: municipal and domestic use (MUN); agricultural supply (AGR); water contact recreation (REC-1); non-water contact recreation (REC-2); warm freshwater habitat (WARM); and wildlife habitat (WILD).

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

29. According to Order No. 97-142, no continuous water table exists at the facility and there is no known water bearing formation below the base of the mining pit due to competent bedrock underlying the facility. Groundwater distribution is fracture controlled with small unconnected confined and perched aquifers.

30. The site hydrogeologic model shows that the groundwater near the facility is controlled by fractures in the bedrock. Based on these findings, preparation of a groundwater contour map and calculation of groundwater gradients between the monitoring wells and/or the monitoring wells and the pit water does not provide an accurate representation of site groundwater flow conditions.

31. Water enters the mining pit through rainfall, through the pit's rainfall intercept, and through the Roger's Creek Fracture. The fracture acts as a hydrologic barrier causing groundwater flows to daylight in its proximity and concentrating flow in the bottom of the "V" shaped trace from which it spreads very little as it moves toward the pit bottom through the shallow shattered rock layer created by induced fracturing (fracturing caused by blasting and other mining operations).

32. The 2019 water balance model update estimated the inflow from the Rogers Creek Fracture to be 256 acre-feet a year. Because the gradient of this perched confined aquifer is toward the pit, recharge of the aquifer from the pit is not possible as long as the level of pit water remains below 650 feet msl. According to the model, the pit also receives an annual inflow of 78 acre-feet in direct precipitation, 71 acre-feet in surface water, and 0.7 acre feet in deep groundwater. The two annual outflows have been estimated to be 138 acre-feet in evaporation and 0.14 acre-feet in groundwater outflow.

33. As shown in **Table 2** and Piper diagram in **Attachment E** , water quality varies across the site. The mining pit is located within asbestos-ore bearing serpentinized ultramafic rock, which has a groundwater composition that is dominated by the serpentinite rock, with high pH values. Well MW-2 is also located in the asbestos-ore bearing rocks, while wells MW-1 and MW-3 are

located away from the mining pit in non-asbestos-ore bearing rocks. The composition of the groundwater in well MW-2 is similar to the mining pit sump water, with pH values greater than 9 and higher concentrations of sodium and chloride compared to the groundwater in wells MW-1 and MW-3.

Table 2—Groundwater and Pit Water Quality (2019)

Parameter	Location/ Units	Water Quality Goal	MW-1	MW-2	MW-3	Mine Pit Water (MWP)*
Specific Conductivity	µmhos/cm	900	856	673	713	1060
pH	st. units	6-8	7.3	9.5	7.7	9.2
Sulfate	mg/L	250	ND	0.43	ND	355
Total Dissolved Solids	mg/L	500	510	360	400	720

*average of two samples; ND – not detected above method detection limit

34. The similarity of analytical results for pit water and monitoring well MW-2, which is located closest to the mining pit and in the same asbestos-ore bearing geologic formation, indicates that the inert wastes in LU-1 have not impacted pit water quality. Because the groundwater level in MW-2 is several hundred feet higher than water in the mining pit, waste material from the mining pit cannot influence the groundwater quality in well MW-2.

35. Most of the monitoring parameter concentrations in pit water are lower than regulatory limits such as maximum contaminant levels or water quality goals. The four parameters that exceed secondary maximum concentration levels are specific conductivity, pH, total dissolved solids, and sulfate (**Table 2**).

36. Historical monitoring results of the groundwater and mining pit water quality show relatively low concentrations of general minerals, turbidity, and metals since monitoring began in 1990. There have been no consistent upward trending concentrations for the analyzed parameters, and all constituents are typically within the statically calculated maximums using Shewart-CUSUM control charts.

Monitoring Networks

37. As of the date of this Order, the Facility's **groundwater** monitoring network consists of the existing wells and sampling points listed in. **Table 3**

Table 3—Groundwater Monitoring Network

Well	Program	Monitored Unit	Water-Bearing Zone
MW-1	Background	LU-1	N/A
MW-2	Detection	LU-1	N/A
MW-3	Detection	LU-1	N/A
MWP	Detection	LU-1	Pit sump/lake

38. This order continues surface water monitoring as described in MRP. The existing surface water monitoring network consists of the following sampling points shown on the **Attachment B**:

Table 4—Surface Water Monitoring Network

Monitoring Point	Location	Program	Monitored Units
SR-1	Stanislaus River	Background (Upstream)	LU-1
SR-2	Stanislaus River	Background (Upstream)	LU-1
SR-3	Stanislaus River	Downstream	LU-1
LC-1	Long Creek	Background (Upstream)	Mill Tailings Stockpile
LC-2	Long Creek	Detection, at the confluence with Stanislaus River (Downstream)	Mill Tailings Stockpile

See Glossary for definitions of terms and abbreviations in table.

39. As of the adoption of this Order, the above-described networks comply with the monitoring requirements of Title 27. (See Title 27, §§ 20415–20435.) Subsequent changes to these networks will be reflected in a Revised Monitoring & Reporting Program issued by the Executive Officer.

Unit Design

40. Water Code section 13360(a)(1) allows the Central Valley Water Board to specify the design, type of construction, and/or particular manner in which compliance must be met in waste discharge requirements.

Pit/Monofill Unit LU-1

41. The Discharger proposed the final closure plan for the unit based on the lake option described in Order No. 97-142, which was permitted in the event that the top of the waste with cover were to remain below the 678 foot elevation. The current elevations of the top of LU-1 waste with cover are well below that elevation, and range between 440 to 470 foot msl with the lowest elevation at approximately 390 foot msl at the bottom of pit sump utilized for pit dewatering. The maximum thickness of waste in LU-1 is approximately 130 feet.

42. The Discharger proposes to cover the LU-1 waste at the bottom of the pit with at least 2 feet of rock reject over the existing ≥1 foot cover of compacted mill tailings and reduce the current slopes by grading to a maximum slope of 3 horizontal to 1 vertical. The 31 July 2019 *Grading Plan Description for the Proposed Closure of the Mine Pit and Unclassified Landfill Unit* (Grading Plan) was reviewed and received concurrence in 27 August 2019 letter. However, the latest ROWD was submitted with a revised grading plan designed to reduce the amount of rock-reject required to achieve the proposed maximum grades. A letter summarizing grading plan changes was submitted on 27 March 2020. Staff reviewed the letter and the revised grading plan and concurred with the proposed changes in their 22 April 2020 correspondence.

43. The results of the updated 2019 water balance model demonstrated that continued dewatering of the mining pit will be required to prevent the water from overtopping the pit and discharging directly into the Stanislaus River. In ROWD, the Discharger proposes to maintain a maximum pit water level at 480 feet msl which is at the approximate elevation of the Stanislaus River. Therefore, by maintaining the mining pit water level at or below elevation 480 feet msl, there would be no hydraulic gradient from the pit toward the river. To ensure that the pit always functions as groundwater sink, this Order requires that the Discharger maintains pit water level at or below 478 feet msl (see Requirements B.3).

44. The Discharger plans to upgrade the existing pit water management system and submit a technical design and operations plan for review and approval before allowing MIW level to rise within the pit. A 50-foot-wide bench will be constructed for the pump to allow access for installation, monitoring, inspection, and repair. Currently, there is a transformer on the bench in the proposed pumping station area that would provide electricity for the future pumping system. This order requires submittal of the Mining Pit/LU-1 Water Management and Operations Plan as specified in Requirements Time Schedule I.3.

45. Mining pit slope stability analyses were performed to assess the containment integrity after closure. Smaller scale, localized rockfall hazards were not considered to pose a threat to MIW containment therefore they were excluded

from slope stability analyses. Stability analyses considered large-scale failures (global stability) which could endanger containment function of the pit. The results of the pit global stability analysis for all pit walls calculated a minimum static factor of safety of 2.65 and a minimum pseudo-static factor of safety of 1.75 which is greater than the factor of safety of 1.5 required by Title 27.

46. The stability of LU-1 rock-reject cover slopes was assessed along the cross-section of pit bottom shown in **Attachment D**. The analyses were performed for two scenarios: during construction (dry), and post-construction, filled with water to 480 feet msl. The proposed slopes of the rock reject cover meet the minimum required factor of safety of 1.5 for both scenarios. No further analysis was required because the seismic factors of safety for both scenarios passed the minimum screening factor of safety defined in Stewart, J. P., Blake, T. F., & Hollingsworth, R. A. (2003). A Screen Analysis Procedure for Seismic Slope Stability. Earthquake Spectra, 19(3), 697–712.

Mill Tailings Stockpile

47. The Mill Tailings stockpile was reclaimed in January 2018 pursuant to the Reclamation Plan approved by Calaveras County. The stockpile was graded to a stable long-term configuration and covered by a nine-inch thick layer of washed rock reject. The final maximum slopes were graded to 1.75H:1V (horizontal to vertical) with 15-foot-wide benches every 50 vertical feet. A mechanically stabilized earth wall was constructed along the southwest toe of the stockpile to support the stockpile and prevent erosion of mill tailings into the Long Creek drainage, a tributary to the Stanislaus River. Stockpile stormwater conveyance features are designed to convey drainage for a 100-year 24-hour design storm, which exceeds Title 27 requirements, and drain to the retention ponds. Staff observed the reclamation activities and reviewed and concurred with the submitted Construction Quality Assurance report in correspondence dated 18 June 2018.

Evaporation/infiltration Pond

48. The unlined evaporation/infiltration ponds (referred to as evaporation/percolation ponds in Order No. 97-142) H-1, H-2 and C are used to dewater the pit. Pit water is pumped into H-1 and/or C and allowed to evaporate/infiltrate into the ground. H-1 drains into H-2. In 2018, the Discharger submitted closure plan which proposed to remove all asbestos contaminated material. After the work was completed in 2019, the Discharger decided to keep these evaporation/infiltration ponds in service for pit water level management thereafter.

Retention Ponds

49. Three unlined retention ponds in the Long Creek drainage (shown as P1-P3 on Attachment B) are designed to capture and contain stormwater from the facility. The extended detention basin (P3) is designed to provide adequate retention time to settle out any asbestos fibers with capacity for a 1,000 year 24-hr storm event.

Closure and Post-Closure Maintenance & Financial Assurance

50. ROWD includes the Construction Quality Assurance Plan (CQA) for the pit bottom/LU-1 cover grading and cover construction. The plan was prepared by a California-registered civil engineer in accordance with 27 CCR 20324. As specified in Requirements Time Schedule I.2, construction quality certification report signed by a registered civil engineer or certified engineering geologist shall be submitted to the RWQCB for review and approval 60 days after the completed construction. Prior to the accumulation of water in the pit/LU-1 beyond the existing sump, the Discharger shall submit water management system plan for review and approval. See Requirements Section E.2. and Time Schedule I.3.

51. ROWD includes pit/LU-1 post-closure maintenance plan listing responsibilities, resources, and inspection frequency. However, the plan does not include post-closure cost estimates. This Order requires submittal of Final Post-closure Monitoring and Maintenance plan for the entire facility including post-closure cost estimates and financial assurance mechanism update as specified in Requirements Section F and Time Schedule I.5. The Discharger currently maintains Letter of Credit in the amount of $211,410.

52. Evaporation/infiltration ponds, stormwater conveyance systems, and retention ponds will remain in service and will require regular inspection and maintenance which shall be described in the final post-closure plan and included in post-closure cost and financial assurance estimates required by this order (see Requirements Time Schedule I.4 and I.5).

California Environmental Quality Act

53. The facility has been subject of several environmental review documents prepared pursuant to the California Environmental Quality Act (Pub. Resources Code, §§ 21000 et seq. (CEQA)) since the approval of the 1978 Reclamation Plan.

54. In 1987, the Discharger applied to Calaveras County for a Conditional Use Permit (CUP) to operate the facility as an inert waste landfill. As part of this process, a Revised Draft Environmental Impact Report (EIR) was prepared and certified pursuant to CEQA. In 1990, following the certification of EIR, the County issued a CUP and the facility began ACW landfill operations. A Supplemental EIR was completed and certified in 1994 and the CUP was amended to allow for increased tonnage of ACW disposal at the site. In 1997, the Discharger applied to accept shredded tires in addition to ACW, and subsequently prepared an addendum to the EIR which was certified in February 1997. CUP 96-15 was amended and the California Integrated Waste Management Board (CIWMB) (now Cal Recycle) issued Large Tire Facility Permit 05-T1-0726. The Facility began accepting shredded tires in April 1998. In 2007, an EIR addendum was prepared to allow for disposal of mixed tire shreds/tailings, and in 2008, the County approved CUP 2001-110.

55. Closure plans for LU-1 WMU as proposed in Discharger's ROWD are consistent with these previously issued documents.

Other Regulatory Matters

56. This Order is issued in part pursuant to Water Code section 13263, subdivision (a), which provides as follows:

> The regional board, after any necessary hearing, shall prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge…, with relation to the conditions existing in the disposal area … into which, the discharge is made or proposed. The requirements shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of [Water Code] Section 13241.

57. This Order implements the Central Valley Water Board's Basin Plan, which designates beneficial uses for surface water and groundwater and establishes water quality objectives (WQOs) necessary to preserve such beneficial uses.[1] (Wat. Code, § 13241 et seq.)

58. The State Water Board's *Statement of Policy with Respect to Maintaining High Quality Waters in California*, Resolution 68-16 (*Antidegradation Policy*) prohibits the Central Valley Water Board from authorizing degradation of "high quality waters" unless it is shown that such degradation: (1) will be consistent with the maximum benefit to the people of California; (2) will not unreasonably affect beneficial uses, or otherwise result in water quality less than as prescribed in applicable policies; and (3) is minimized through the discharger's best practicable treatment or control.

59. Consistent with Title 27, this Order requires the Discharger to maintain the Facility to contain waste within WMU/MUs, thereby preventing degradation of water quality. To the extent that there are releases from Facility units, the Discharger will be required to address such releases through a Corrective Action Program. (See Title 27, §§ 20385, 20415, 20430.) Because this Order does not authorize any degradation in water quality, it complies with the *Antidegradation Policy*.

60. For the purposes of California Code of Regulations, title 23 (Title 23), section 2200, the Facility has a threat-complexity rating of **2**-**B**, where:

    a. Threat Category "2" reflects waste discharges that can impair receiving water beneficial uses, cause short-term water quality objective violations, cause secondary drinking water standard violations, and cause nuisances; and

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[1] Designated beneficial uses surface water and groundwater are discussed in Findings 23 and 27, respectively.

b. Complexity Category "B" reflects any discharger not included in Category A, with either (1) physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal), or (2) any Class II or Class III WMUs.

Reporting Requirements

61. This Order is also issued in part pursuant to Water Code section 13267, subdivision (b)(1), which provides that:

> The regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region … shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

62. The technical reports required under this Order, as well as those required under the separately issued MRP, are necessary to ensure compliance with prescribed WDRs and the provisions of Title 27. Additionally, the burdens associated with such reports are reasonable relative to the need for their submission.

63. Failure to comply with the reporting requirements under this Order and the MRP may result in enforcement action pursuant to Water Code section 13268.

Procedural Matters

64. All local agencies with regulatory jurisdiction over land-use, solid waste disposal, air pollution and public health protection have approved the use of the Facility's site for the discharge of waste to land as provided for herein.

65. The Discharger, interested agencies and interested persons were notified of the Central Valley Water Board's intent to prescribe the WDRs in this Order, and provided an opportunity to submit their written views and recommendations at a public hearing. (Wat. Code, § 13167.5; Title 27, § 21730.)

66. At a public meeting, the Central Valley Water Board heard and considered all comments pertaining to the discharges regulated under this Order.

67. The Central Valley Water Board will review and revise the WDRs in this Order as necessary.

REQUIREMENTS

IT IS HEREBY ORDERED, pursuant to Water Code sections 13263 and 13267, that the Discharger and their agents, employees and successors shall comply with the following.

A. Discharge Prohibitions—Except as otherwise expressly directed below, the Discharger shall comply with all Standard Prohibitions (SPRRs, § V), which are incorporated herein, as well as the following.

1. The discharge of mining waste (except for rock reject used for LU-1 cover and accumulation of MIW), hazardous waste, designated waste, municipal waste, and inert waste at the Facility is prohibited. For the purposes of this Order, the terms mining waste, hazardous waste, designated waste, municipal waste, and inert waste are as defined in California Code of Regulations 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.

B. Discharge Specifications—Except as otherwise expressly directed below, the Discharger shall comply with all Standard Discharge Specifications (SPRRs, § III), which are incorporated herein, as well as the following.

1. The discharge shall not cause a condition of pollution or nuisance as defined by the Water Code section 13050.

2. The pit/LU-1 and related containment structures shall be maintained to prevent, to the greatest extent possible, inundation, erosion, slope failure, washout, and overtopping under 100-year, 24-hour precipitation conditions, and shall be designed to contain the 100-year wet season precipitation.

3. Water level in the mining pit/LU-1 shall be maintained below 478 feet msl (Finding 43).

4. MIW from the mining pit shall only be discharged into, and shall be confined to, the evaporation/infiltration ponds permitted for pit dewatering activities. The evaporation/infiltration ponds shall be inspected and maintained as specified in the approved Final Post-closure Monitoring and Maintenance plan.

5. Pit dewatering infrastructure such as pipes, valves and pumps shall be inspected and maintained regularly. Leaks or other identified issues shall be repaired or replaced in a timely manner.

6. Pit lake MIW used for facility maintenance shall be limited to the minimum amount necessary for dust control.

7. Accumulated asbestos fibers from evaporation/infiltration and retention ponds shall be removed and disposed appropriately as proposed in the approved final post-closure maintenance plan required by this Order (see Time Schedule I.4).

8. The Discharger shall maintain site security throughout the closure period. Perimeter fences, locked gates and signs shall be maintained to exclude public entry to the site. Locks, gates, signs, and fences shall be inspected quarterly; damaged security features shall be repaired or replaced immediately.

9. Signs shall be repaired or replaced as needed to maintain their visibility. Vegetation that encroaches on or obscures signs shall be cut back or removed.

10. 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.

C. Facility Specifications—The Discharger shall comply with all Standard Facility Specifications (SPRRs, § VI) which are incorporated herein.

1. Precipitation and drainage controls shall be designed and constructed to accommodate the anticipated volume and precipitation and peak flows from surface runoff for one 10-year, 24-hour storm event as required by Title 27 California Code of Regulations subsection 22490(h)(1)(B&C).

2. Pursuant to Title 27 California Code of Regulations section 21710(c)(2), the Discharger shall promptly notify the Central Valley Water Board of any slope failure occurring at a mining unit. Any failure which threatens the integrity of containment features of any of the mining units shall be promptly corrected in accordance with an approved method.

3. Annually, prior to the anticipated rainy season but no later than **1 November**, any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed and reported in compliance with MRP No. R5-2020-XXXX

D. Unit Construction Specifications—Except as otherwise expressly directed below, the Discharger shall comply with all Standard Construction Specifications and Standard Storm Water Provisions (SPRRs, § VII), which are incorporated herein, as well as the following.

1. All containment structures shall be designed by a California registered civil engineer, and construction shall be supervised and certified by a California registered civil engineer or a certified engineering geologist (Title 27 California Code of Regulations section 22490(d)). Waste management/mining units shall receive a final inspection and approval of the construction by Central Valley Water Board staff before use of the units commences [27 CCR §22490(d)].

2. Any report, or any amendment or revision of a report, that proposes a design or design change that might affect a waste management/mining unit's containment features or monitoring systems shall be approved by a registered civil engineer or a certified engineering geologist (Title 27 California Code of Regulations section 21710(d)).

3. Materials used in containment structures shall have appropriate chemical and physical properties to ensure that such structures do not fail to contain waste because of pressure gradients, physical contact with waste or leachate, chemical reactions with soil or rock, climatic conditions, the stress of installation, or because of the stress of daily operations (Title 27 California Code of Regulations section 22490(e) and section 20320(a)).

E. Closure & Post-Closure Maintenance Specifications—Except as otherwise directed below, the Discharger shall comply with all Standard Closure and Post-Closure Specifications (SPRRs, § XI. D) and closure-related Standard Construction Specifications (SPRRs, § XI. F), as well as the following.

1. ROWD includes Construction Quality Assurance Plan (CQA) for LU-1 closure. The plan was prepared by a California-registered civil engineer in accordance with 27 CCR 20324. A construction certification report signed by a registered civil engineer or certified engineering geologist shall be submitted to the RWQCB for approval 60 days after the construction is completed (see Time Schedule I.2).

2. Prior to the accumulation of MIW in the mining pit/LU-1 beyond the existing level, the Discharger shall submit a water management plan for review and approval (see Time Schedule I.3).

3. ROWD includes mining pit/LU-1 post-closure maintenance plan listing responsibilities, resources, and inspection frequency. However, the plan

does not include post-closure cost estimate or proof of financial assurance which shall be provided as specified in Time Schedule I.4.

4. Evaporation/infiltration ponds, stormwater conveyance controls and retention ponds will remain in service and will require regular inspection and maintenance. These inspections and maintenance shall be included in the final post-closure plan and post-closure cost and financial assurance estimates.

5. Inspections and maintenance of Mill Tailings Stockpile shall be included in the final post-closure report and cost and financial assurance estimates.

F. Financial Assurances—Except as otherwise directed below, the Discharger shall comply with all Standard Financial Assurance Provisions (SPRRs, § IV), as well as the following.

1. By **1 June 2021**, pursuant to Title 27 Section 22212, the Discharger shall submit a report detailing required post-closure site monitoring and maintenance including a tabulated cost estimate for the 30-year post-closure period. Additionally, the Discharger shall include documentation showing that it has established or updated an existing irrevocable **post-closure fund** with the Central Valley Water Board named as beneficiary to ensure the funding for post-closure maintenance of the pit/LU-1, Mill Tailings Stockpile, evaporation/infiltration impoundments/ponds, retention/settling ponds, and overburden waste rock and rock reject piles, and any associated infrastructure. The financial assurances mechanism shall be one listed in Title 27 section 22228 for which the Discharger is eligible. For financial assurance mechanisms requiring funding, the Discharger shall either fully fund the mechanism by **1 June 2021** or may propose a payment schedule. If the Discharger proposes a payment schedule to fund the mechanism, it shall submit a report by **1 June 2022** showing that the mechanism is fully funded. For financial assurance mechanisms not requiring funding, such as a Guarantee, the Discharger shall submit a report showing the mechanism is in place by **1 June 2021**.

2. If LU-1 closure is not finalized by **1 June 2021**, the above report shall also include LU-1 closure cost estimates. Funding needed to complete LU-1 closure shall be added to financial assurance estimates and funding mechanism.

3. By **1 June** of each year starting in **2022**, the Discharger shall submit a report to the Central Valley Water Board that reports the balance of the post-closure fund and the amounts of the Guarantees and the adjustments to account for inflation in accordance with Title 27 section 22236.

G. Monitoring Requirements—Except as otherwise directed below, the Discharger shall comply with all applicable Standard Monitoring Specifications (SPRRs, § IX) and Standard Response to Release Specifications (SPRRs, § X), as well as the following:

1. The Discharger shall Comply with all provisions of the separately issued Monitoring R5-2020-#### and any subsequent revisions thereto (operative MRP).

2. The Discharger shall implement the Water Quality Protection Standards (WQPS) set forth in the operative MRP (see also Title 27, § 20390); and shall verify the compliance of each WMU/MU with each subsequent monitoring event.

H. Reporting Requirements—In addition to those Standard Provisions pertaining to notification and reporting obligations (see, e.g., § IX), the Discharger shall comply with the following provisions.

1. The Discharger shall comply with all MRP provisions pertaining to the submittal and formatting of reports and data.

2. Reports shall be submitted electronically via the State Water Board's GeoTracker Database (https://geotracker.waterboards.ca.gov). After uploading, the Discharger shall notify Central Valley Water Board staff via email at CentralValleySacramento@WaterBoards.ca.gov. The following information shall be included in the body of the email:

Attention:	Title 27 Permitting and Mining
Report Title:	[Title]
GeoTracker Upload ID:	[number]
Facility:	California Asbestos Monofill, Inc.
County:	Calaveras County
CIWQS Place ID:	5B052006001

3. All technical reports submitted under this Order shall be prepared by, or under the direct supervision of, a California-licensed civil engineer or engineering geologist. For the purposes of this section, a "technical report" is a report incorporating the application of scientific or engineering principles.

I. Time Schedule - The Discharger shall complete the following tasks in accordance with the specified deadlines:

Table 5—Time Schedule

Item No.	Category	Task	Deadline
1.	Monitoring and Reporting	**Updated Sample Collection and Analyses Plan** Submit an updated Sample Collection and Analysis Plan for monitoring and reporting as specified in the incorporated MRP.	90 days after adoption of this Order
2.	Construction	**Construction Quality Certification Report** A construction certification report signed by a registered civil engineer or certified engineering geologist certifying that pit closure has been performed in accordance with approved engineering report and construction quality assurance plan.	60 Days After Completion of LU-1 closure
3.	Construction Post-closure	**Mining Pit/LU-1 Water Management and Operations Plan** Submit a pit water management and operations plan.	60 Days After Installation of Dewatering Infrastructure
4.	Post-closure	**Final (Closure) and Post-closure Monitoring and Maintenance Plan** Submit a Final Post-Closure (and LU-1 closure, if applicable, see F.2) Monitoring and Maintenance Plan including the tabulated cost estimates for monitoring and maintenance during the post-closure period for the entire facility. The plan shall be implemented for a minimum period of 30 years or until waste no longer represents a threat to water quality, whichever is greater.	1 June 2021

Item No.	Category	Task	Deadline
5.	Financial Assurance	**Financial Assurance Mechanism** Submit proof that the post-closure (and mining pit/LU-1 closure, if applicable) fund mechanism with the Central Valley Water Board listed as a beneficiary has been established to cover the closure (if applicable) and post-closure cost estimates tabulated in the Final (Closure and) Post-closure Maintenance Plan as detailed in 4.	1 June 2021

J. Other Provisions

1. The Discharger shall maintain at the Facility copies of this Order (including all attachments), the operative Monitoring & Reporting Program (i.e., MRP R5-2020-#### and any revisions thereto), and the SPRRs. These materials shall be made available to all operating personnel, who shall be familiar with the contents of such materials.

2. The Discharger shall comply with all applicable provisions of Title 27 (including those provisions not specifically referenced herein)

LIST OF ATTACHMENTS

Attachment A—Facility Location
Attachment B—Facility Features and Monitoring Network
Attachment C—Land use
Attachment D—Mining pit Cross-section

Standard Provisions and Reporting Requirements for Discharges of Mining Wastes Regulated by Title 27, February 2009 (SPRRs or Standard Provisions)

Information Sheet

Monitoring and Reporting Program R5-2020-#### (separate document)

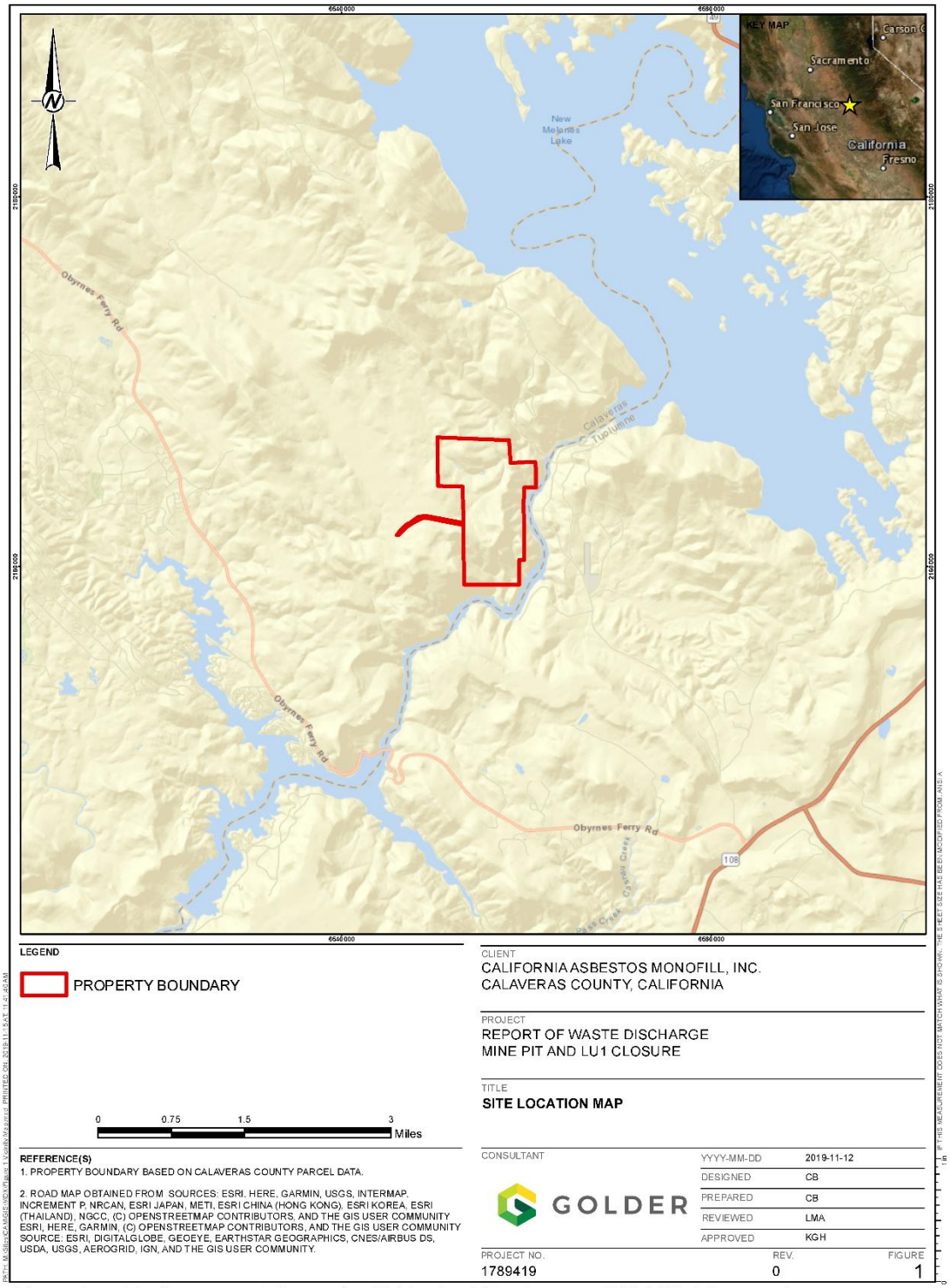
ENFORCEMENT

If, in the opinion of the Executive Officer, the Dischargers fail to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

ADMINISTRATIVE REVIEW

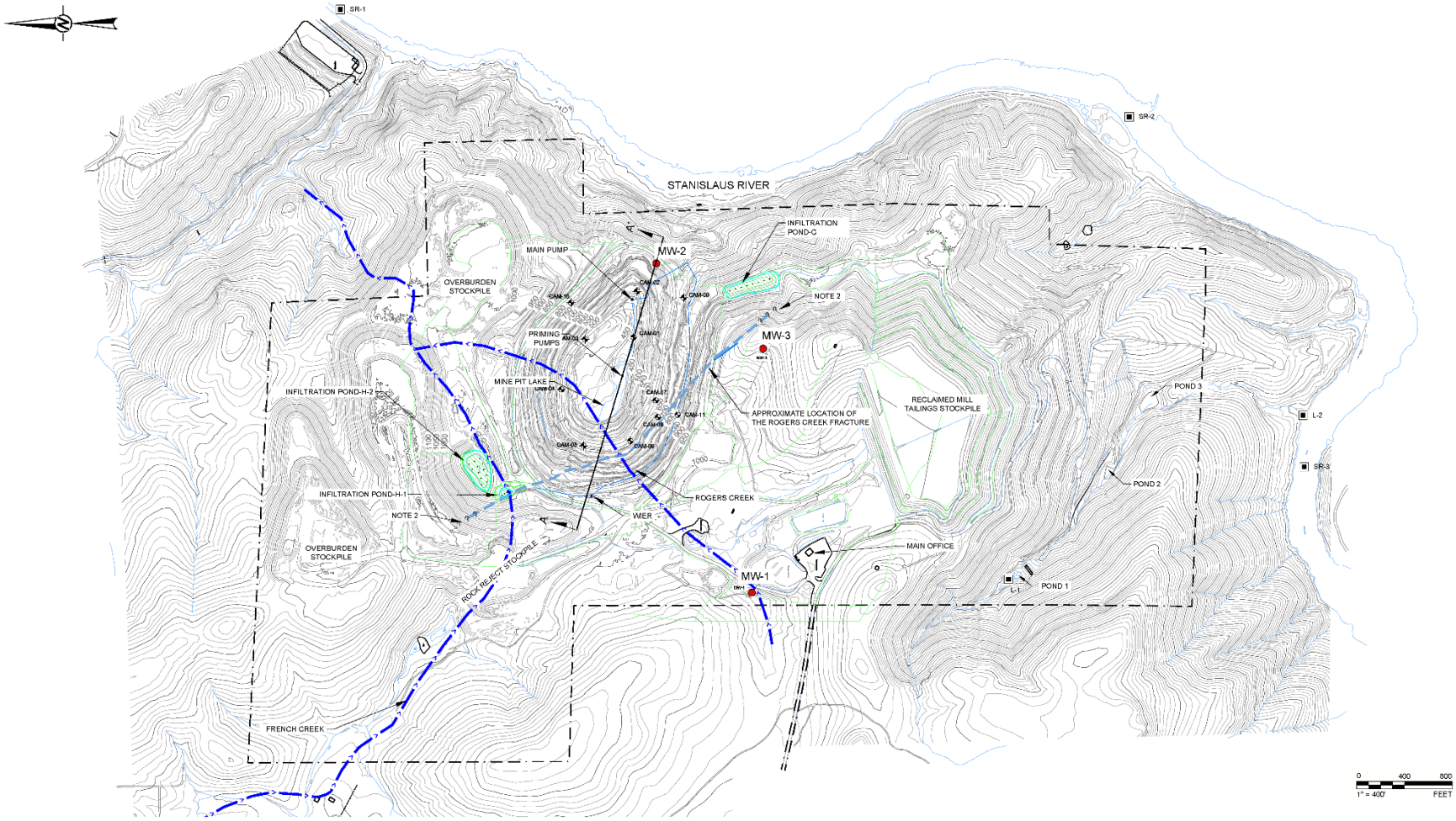
Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. To be timely, the petition must be received by the State Water Board by 5:00 pm on the 30th day after the date of this Order; if the 30th day falls on a Saturday, Sunday or state holiday, the petition must be received by the State Water Board by 5:00 pm on the next business day. The law and regulations applicable to filing petitions are available on the State Water Board website (http://www.waterboards.ca.gov/public_notices/petitions/water_quality). Copies will also be provided upon request.

ATTACHMENT A—FACILITY LOCATION



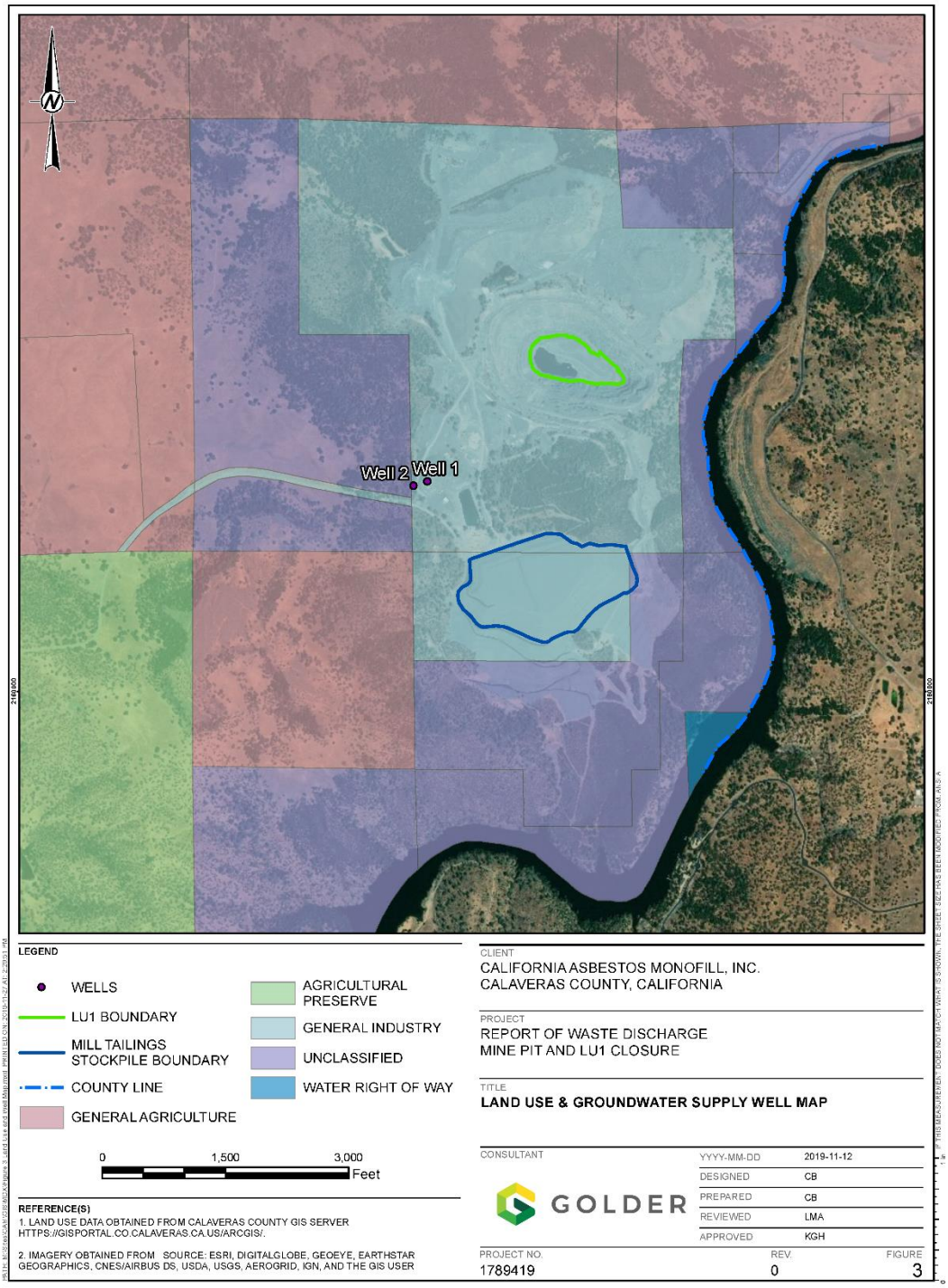
Drawing Reference: Report of Waste Discharge (2019), Figure 1

ATTACHMENT B—FACILITY FEATURES AND MONITORING NETWORK



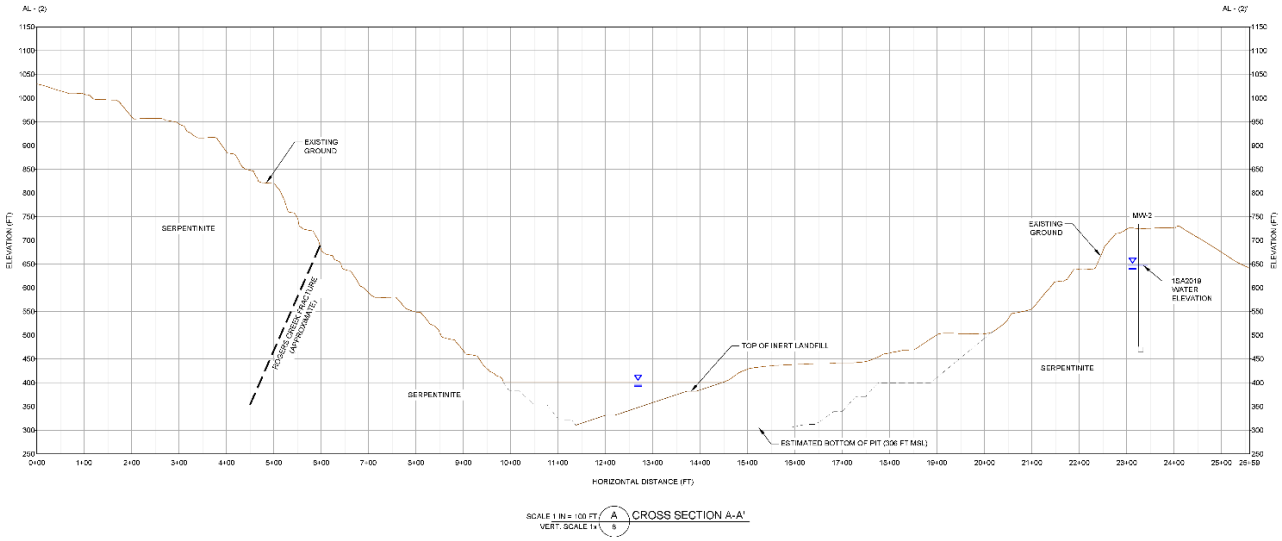
Drawing Reference: Report of Waste Discharge (2019), Figure 2

ATTACHMENT C—LAND USE



Drawing Reference: Report of Waste Discharge (2019), Figure 3.

ATTACHMENT D—MINING PIT/LU-1 CROSS-SECTION



NOTE(S)
1. SERPENTINITE ($k = 1 \times 10^{-5}$ cm/sec)

CLIENT
CALIFORNIA ASBESTOS MONOFILL, INC.
CALAVERAS COUNTY, CALIFORNIA

CONSULTANT
GOLDER

YYYY-MM-DD	2019-11-25
DESIGNED	CMM
PREPARED	CMM
REVIEWED	LMA
APPROVED	KGH

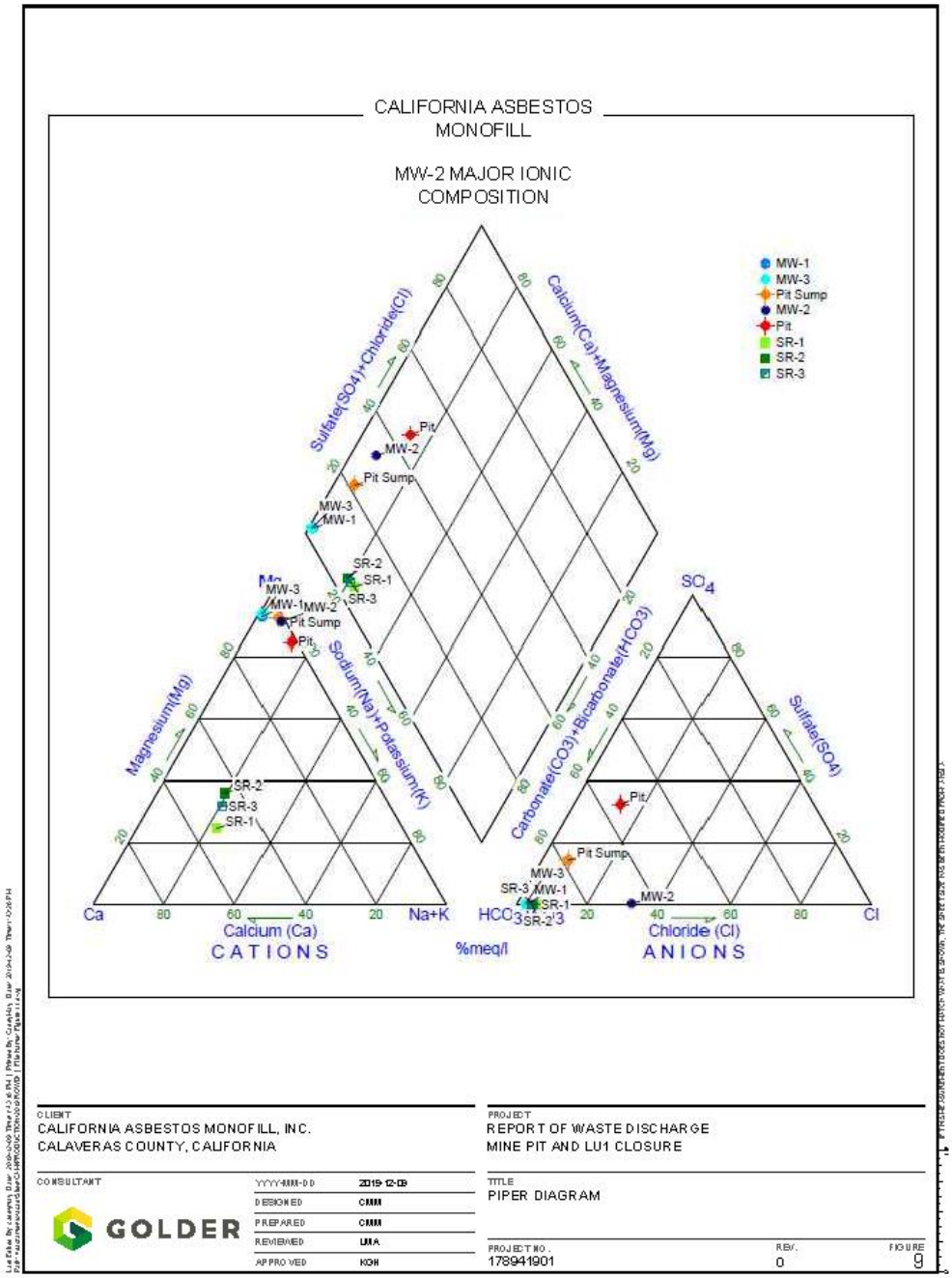
PROJECT
REPORT OF WASTE DISCHARGE
MINE PIT AND LU1 CLOSURE

TITLE
MINE PIT CROSS-SECTION

PROJECT NO 178941901 | REV 0 | FIGURE 8

Drawing Reference: Report of Waste Discharge (2019), Figure 8.

ATTACHMENT E—GROUNDWATER AND PIT WATER PIPER DIAGRAM



Report of Waste Discharge (2019), Figure 9

STANDARD PROVISIONS AND REPORTING REQUIREMENTS

FOR
WASTE DISCHARGE REQUIREMENTS
FOR
DISCHARGES OF MINING WASTES REGULATED BY TITLE 27

(27 CCR §20005 et seq.)
MINING FACILITIES

FEBRUARY 2009

I. APPLICABILITY

A. These Standard Provisions and Reporting Requirements are applicable to “mining waste” disposal sites that are regulated pursuant to the provisions of the California Code of Regulations, title 27 section 20005 et seq. (27 CCR or Title 27). The term “Mining waste” is defined in title 27 section 22480.

B. For this document, WMU is defined as a waste management unit containing mining waste.

C. “Order,” as used throughout this document, means the Waste Discharge Requirements to which these Standard Provisions and Reporting Requirements are incorporated.

D. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, and do not protect the Discharger from liabilities under federal, state, or local laws. This Order does not convey any property rights or exclusive privileges.

E. The provisions of this Order are severable. If any provision of this Order is held invalid, the remainder of this Order shall not be affected.

F. If there is any conflicting or contradictory language between the Waste Discharge Requirements (WDRs), the Monitoring and Reporting Program (MRP), or the Standard Provisions and Reporting Requirements (SPRR), then language in the WDRs shall govern over either the MRP or the SPRR, and language in the MRP shall govern over the SPRR.

G. Unless otherwise stated, all terms are as defined in California Water Code (CWC) section 13050 and in title 27 section 20164.

II. TERMS AND CONDITIONS

A. Failure to comply with any waste discharge requirement, monitoring and reporting requirement, or Standard Provisions and Reporting Requirement, or other order or prohibition issued, reissued, or amended by the Central Valley Water Board or the State Water Resources Control Board, or intentionally or negligently discharging waste, or causing or permitting waste to be deposited where it is discharged into the waters of the state and creates a condition of pollution or nuisance, is a violation of these waste discharge requirements and the California Water Code, which can result in the imposition of civil liability [CWC §13350(a)]

B. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to [CWC §13381]:

1. Violation of any term or condition contained in this Order;

2. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;

3. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge; or

4. A material change in the character, location, or volume of discharge.

C. Before initiating a new discharge or making a material change in the character, location, or volume of an existing discharge, the Discharger shall file a new report of waste discharge, or other appropriate joint technical document, with the Central Valley Regional Water Quality Control Board (hereafter Central Valley Water Board) [CWC §13260(c) and §13264(a)]. A material change includes, but is not limited to, the following:

1. An increase in area or depth to be used for solid waste disposal beyond that specified in waste discharge requirements;

2. A significant change in disposal method, location, or volume (e.g., change from land disposal to land treatment); or

3. A change in the type of waste being accepted for disposal.

D. Representatives of the Central Valley Water Board may inspect the

facilities to ascertain compliance with the waste discharge requirements. The inspection shall be made with the consent of the owner or possessor of the facilities or, if the consent is refused, with a duly issued warrant. However, in the event of an emergency affecting the public health or safety, an inspection may be made without consent or the issuance of a warrant [CWC §13267(c)].

E. The Central Valley Water Board will review this Order periodically and will revise these waste discharge requirements when necessary [CWC §13263(e) and 27 CCR §21720(b)].

F. Except for material determined to be confidential in accordance with California law and regulations, all reports prepared in accordance with terms of this Order shall be available for public inspection at the offices of the Central Valley Water Board [CWC §13267(b)]. Data on waste discharges, water quality, geology, and hydrogeology shall not be considered confidential.

G. The Discharger shall submit to the Central Valley Water Board for review and approval a closure and post-closure maintenance plan prepared in accordance with Closure and Post-Closure for Mining WMUs [27 CCR §22510].

III. GENERAL PROVISIONS

A. The discharge shall neither cause nor contribute to the contamination, degradation, or **pollution of groundwater** via the release of waste constituents in either liquid or gaseous phase.

B. Wastes shall not be discharged to any surface water body without a Stormwater Permit or a NPDES permit.

C. The discharge shall neither cause nor contribute to any **surface water pollution**, contamination, or nuisance, including, but not limited to:

1. floating, suspended, or deposited macroscopic particulate matter or foam;

2. increases in bottom deposits or aquatic growth;

3. an adverse change in temperature, turbidity, or apparent color beyond natural background levels;

4. the creation or contribution of visible, floating, suspended, or

deposited oil or other products of petroleum origin;

5. the introduction or increase in concentration of toxic or other pollutants/contaminants resulting in unreasonable impairment of beneficial uses of waters of the State.

D. The discharge shall not cause any increase in the concentration of waste constituents in soil-pore gas, soil-pore liquid, soil, or other geologic materials outside of the waste management unit (WMU) if such waste constituents could migrate to waters of the State—in either the liquid or the gaseous phase—and cause **a condition of contamination, pollution, degradation, or nuisance**.

E. The discharge shall not cause the release of pollutants, or waste constituents in a manner which could cause a condition of contamination, pollution, degradation, or nuisance to occur, as indicated by the most appropriate statistical or non-statistical data analysis method and retest method listed in the Monitoring and Reporting Program.

F. The Discharger shall take **all reasonable steps to minimize any adverse impact** to the waters of the state resulting from noncompliance with this Order. ("Order," as used throughout this document, means the Waste Discharge Requirements). Such steps shall include accelerated or additional monitoring as necessary to determine the nature, extent, and impact of the noncompliance.

G. In the event of any change of ownership or responsibility for construction, operation, closure, or post-closure maintenance of the waste discharge facilities described in this Order, the Discharger shall notify the Central Valley Water Board prior to the effective date of the change and shall include a statement by the new Discharger that construction, operation, closure, or post-closure maintenance will be in compliance with this Order and any revisions thereof [27 CCR §21710(c)(1)].

H. The Discharger shall notify the Central Valley Water Board of a material change in; the types, quantity, or concentrations of wastes discharged; site operations and features; or proposed closure procedures, including changes in cost estimates. This notification shall be given a reasonable time before the changes are made or become effective. No changes shall be made without Central Valley Water Board approval following authorization for closure pursuant to the site Notification of Closure [27 CCR §21710(a)(4)].

I. The Discharger shall maintain legible records of the volume and type of each waste discharged at each WMU or portion of a WMU, and the manner and location of discharge. These records shall be on forms approved by the State Water Resources Control Board or Central Valley Water Board and shall be maintained at the waste management facility until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the State Water Resources Control Board or Central Valley Water Board at any time during normal business hours. At the beginning of the post closure maintenance period, copies of these records shall be sent to the Central Valley Water Board. [27 CCR §21720(f)].

J. All WMUs shall be protected from flooding as required in title 27 section 22490(b).

K. Diversion and drainage facilities shall be designed and constructed to accommodate the anticipated volume of precipitation and peak flows from surface runoff as follows [27 CCR §22490(h)(1)]:

1. Group A – one 25 year, 24 hour storm;

2. Group B – one 10 year, 24 hour storm; and

3. Group C – one 10 year, 24 hour storm.

L. Precipitation on Group A and B waste piles that is not diverted by containment structures shall be collected and managed through the leachate collection and removal system (LCRS). The Central Valley Water Board 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 [27 CCR §22490(h)(2)].

M. Dischargers shall comply with special requirements for surface impoundments given in title 27 section 20375. Nevertheless, for Mining Units, Dischargers shall use the precipitation conditions in title 27 section 22490(h)(1).

IV. FINANCIAL ASSURANCE PROVISIONS

A. The Discharger shall establish an irrevocable fund for closure and post-closure maintenance to ensure closure and post-closure maintenance of each classified WMU in accordance with an approved closure and post-closure maintenance plan [27 CCR §22510(f)].

B. 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 provided that:

1. the Central Valley Water Board approves the assurance; and

2. the Central Valley Water Board is named as alternate payee. [27 CCR §22510(g)]

V. DISCHARGE SPECIFICATIONS

A. The Discharger is responsible for accurate characterization of wastes, including a determination of whether or not wastes will be compatible with containment features and other wastes at the WMU and whether or not the wastes are required to be managed as a Group A, Group B or Group C mining waste [27 CCR §22480]

B. Group B and Group C WMUs contained with liners shall be designed, constructed, and operated to ensure that wastes will be a minimum of 5 feet above the highest anticipated elevation of underlying groundwater [27 CCR §20240(c), §20330(a), and §22490(f)(6)], including the capillary fringe.

C. The Discharger shall submit operations plans and any amended operation plans describing those WMU operations which could affect water quality, including, but not limited to [27 CCR §21760(b)]:

1. A description of proposed treatment, storage, and disposal methods;

2. Contingency plans for the failure or breakdown of waste handling facilities or containment systems, including notice or any such failure, or any detection of waste or leachate in monitoring facilities, to the Central Valley Water Board, local governments, and water users downgradient of the WMU(s); and

3. A description of inspection and maintenance programs which will be undertaken regularly during disposal operations and the post-closure maintenance period.

VI. FACILITY SPECIFICATIONS

A. Surface and subsurface drainage from outside of a WMU shall be

diverted from the WMU [27 CCR §20365(e)].

B. Collection and holding facilities associated with precipitation and drainage control systems shall be emptied immediately following each storm or otherwise managed to maintain the design capacity of the system [27 CCR §20365(d)].

C. The Discharger shall promptly notify the Central Valley Water Board of any slope failure occurring at a WMU. Any failure which threatens the integrity of containment features or the WMU shall be promptly corrected in accordance with an approved method [27 CCR §21710(c)(2)].

VII. CONSTRUCTION SPECIFICATIONS

A. All containment structures shall be designed by a California registered civil engineer, and construction shall be supervised and certified by a California registered civil engineer or a certified engineering geologist as meeting the prescriptive standards, or approved engineered alternative design, in accordance with this Order prior to waste discharge. WMUs shall receive a final inspection and approval of the construction by Central Valley Water Board staff before use of the WMU commences [27 CCR §22490(d)].

B. Any report, or any amendment or revision of a report, that proposes a design or design change that might affect a WMU's containment features or monitoring systems shall be approved by a registered civil engineer or a certified engineering geologist, as appropriate [27 CCR §21710(d)].

C. Materials used in containment structures shall have appropriate chemical and physical properties to ensure that such structures do not fail to contain waste because of pressure gradients, physical contact with waste or leachate, chemical reactions with soil or rock, climatic conditions, the stress of installation, or because of the stress of daily operations [27 CCR §22490(e) and §20320(a)].

D. WMU liners shall be designed and constructed to contain the fluid, including gas, waste, and leachate [27 CCR §20330(a)].

E. Hydraulic conductivities shall be determined primarily by appropriate field test methods in accordance with accepted civil engineering practice. The results of laboratory tests with both water and leachate, and field tests with water, shall be compared to evaluate how the field

permeabilities will be affected by leachate. It is acceptable for the Discharger to use appropriate compaction tests in conjunction with laboratory hydraulic conductivity tests to determine field permeabilities as long as a reasonable number of field hydraulic conductivity tests are also conducted [27 CCR §20320(c)].

F. Hydraulic conductivities specified for containment structures other than the final cover shall be relative to the fluids (leachate) to be contained. Hydraulic conductivities for the final cover shall be relative to water [27 CCR §20320(b)].

G. Leachate collection and removal systems shall be designed and operated to function without clogging through the scheduled closure of the WMU and during the post-closure maintenance period. The systems shall be tested at least annually to demonstrate proper operation. The results of the tests shall be compared with earlier tests made under comparable conditions [27 CCR §20340(d)].

H. Leachate collection and removal systems shall be designed and constructed to ensure that there is no buildup of hydraulic head on the liner. The depth of fluid in the collection sump shall be kept at the minimum needed to ensure efficient pump operation [27 CCR §20340(c)].

I. For Units constructed (or reconstructed) after July 18, 1997, all construction of liner systems and final cover systems shall be performed in accordance with a Construction Quality Assurance Plan certified by a registered civil engineer or a certified engineering geologist [27 CCR §20323] and approved by the Executive Officer.

VIII. REPORTING REQUIREMENTS

A. General Requirements

1. In the event the Discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the Discharger shall **notify the Central Valley Water Board by telephone** as soon as it or its agents have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing within two weeks. The written notification shall state the nature, time, and cause of **noncompliance**, and shall describe the measures being taken to prevent recurrences and shall include a timetable for corrective actions.

2. The Discharger shall **immediately notify the Central Valley Water Board** of any **evidence of a release**, or of any flooding, equipment failure, slope failure, or other **change in site conditions** which could impair the integrity of waste or leachate containment facilities or of precipitation and drainage control structures.

3. The Discharger shall **mail a copy of each** monitoring **report** and any other reports required by this Order to the appropriate office or the current address if an office relocates. Addresses for each office as of November 2008 are:

California Regional Water Quality Control Board
Central Valley Region
11029 Sun Center Drive #200
Rancho Cordova, CA 95670

California Regional Water Quality Control Board
Central Valley Region
1685 “E” Street
Fresno, CA 93706-2007

California Regional Water Quality Control Board
Central Valley Region
415 Knollcrest Drive, Suite 100
Redding, CA 96002

4. The Discharger shall **retain records of all monitoring information**, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Central Valley Water Board Executive Officer.

Such records shall show the following for each sample:

a. Identity of sample and of the Monitoring Point or Background Monitoring Point from which it was taken, along with the identity of the individual who obtained the sample;

b. Date, time, and manner of sampling;

c. Date and time that analyses were started and completed, and the name of the personnel and laboratory performing each analysis;

d. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used;

e. Calculation of results; and

f. Results of analyses, and the method detection limit (MDL) and practical quantitation limit (PQL) for each analysis.

Such records shall also include legible records of the volume and type of each waste discharged at each WMU and the manner and location of discharge. These waste discharge records shall be maintained at the facility until the beginning of the post-closure maintenance period, at which time copies of these records shall be sent to the Central Valley Water Board.

5. **All reports and transmittal letters shall be signed** by persons identified below:

a. *For a corporation:* by a principal executive officer of at least the level of senior vice-president.

b. *For a partnership or sole proprietorship:* by a general partner or the proprietor.

c. *For a municipality, state, federal or other public agency:* by either a principal executive officer or ranking elected or appointed official.

d. A duly authorized representative of a person designated in a, b or c above if;

i. the authorization is made in writing by a person described in a, b, or c of this provision;

ii. the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a WMU, superintendent, or

position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

iii. the written authorization is submitted to the Central Valley Water Board.

Any person signing a document under this Section shall make the following certification:

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

6. In reporting the monitoring data, the Discharger shall arrange the **data in tabular form** so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to clearly illustrate the compliance with waste discharge requirements or lack thereof.

7. The results of any monitoring done more frequently than required at the locations specified herein shall be reported to the Central Valley Water Board.

B. Reports to be Filed with the Central Valley Water Board

1. A transmittal **letter** explaining the essential points in each report shall accompany each report. Such a letter shall include a discussion of any violations found since the last such report was submitted, and shall describe actions taken or planned for correcting those violations. If the Discharger has previously submitted a detailed time schedule for correcting the violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred since the last submittal, this shall be stated in the letter of transmittal.

2. Each monitoring report (e.g., Detection Monitoring Report, Constituents of Concern 5-Year Report) shall include a

compliance evaluation summary. The summary shall contain at least:

a. For each monitored ground water body, a description and graphical presentation of the gradient and direction of **ground water flow** under/around the WMU, based upon water level elevations taken during the collection of the water quality data submitted in the report.

b. For each monitoring well addressed by the report, a description of the method and time of water level measurement, the type of pump used for **purging** and the placement of the pump in the well, and the method of purging (pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity during purging, calibration of the field equipment, results of pH, temperature, conductivity, and turbidity testing, well recovery time, and method of purge water disposal).

c. For each Monitoring Point and Background Monitoring Point addressed by the report, a description of the type of pump (or other device) used and its placement for **sampling**, and a detailed description of the sampling procedure (number and description of the samples, field blanks, travel blanks, and duplicate samples taken, the type of containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations).

d. A **map or aerial photograph** showing the locations of observation stations, Monitoring Points, and Background Monitoring Points.

e. **Laboratory** statements of results of all analyses evaluating compliance with requirements.

f. An evaluation of the effectiveness of the leachate monitoring and control facilities, and of the run-off/run-on control facilities.

g. A summary and certification of completion of all Standard Observations for the WMU, for the perimeter of the WMU, and for the receiving waters. The terms ‘Standard Observations’ and ‘receiving waters’ as used in this document are defined below in section **XII. Definitions**.

h. The quantity and types of wastes discharged and the locations in the WMU where waste has been placed since submittal of the last such report.

3. The Discharger shall report by telephone concerning any **seepage from the disposal area** immediately after it is discovered. A written report shall be filed with the Central Valley Water Board within seven days, containing at least the following information:

   a. a map showing the location(s) of seepage;

   b. an estimate of the flow rate;

   c. description of the nature of the discharge (e.g., all pertinent observations and analyses); and

   d. corrective measures underway or proposed, and corresponding time schedule.

   See RESPONSE TO A RELEASE below.

4. The Discharger shall submit an **Annual Monitoring Summary Report** to the Central Valley Water Board summarizing the monitoring results from the previous year. This report shall contain:

   a. For each Monitoring Point and Background Monitoring Point, submit in **graphical format** the laboratory analytical data for all samples taken within at least the previous five calendar years. Each such graph shall plot the concentration of one or more constituents for the period of record for a given Monitoring Point or Background Monitoring Point, at a scale appropriate to show trends or variations in water quality.

      The graphs shall plot each datum, rather than plotting mean values. For any given constituent or parameter, the scale for background plots shall be the same as that used to plot downgradient data. Graphical analysis of monitoring data may be used to provide significant evidence of a release.

   b. Unless otherwise exempted by the Executive Officer, all monitoring analytical data obtained during the previous two six-month Reporting Periods, presented in tabular form as

well as on computer disk, either in EXCEL format or in another file format acceptable to Central Valley Water Board staff. Data may be submitted in commonly available compressed format. The Central Valley Water Board regards the submittal of data in hard copy and electronic format as "...the form necessary for..." statistical analysis (27 CCR §20420(h)), in that this facilitates periodic review by the Central Valley Water Board's statistical consultant.

c. A **comprehensive discussion of the compliance record**, and the result of any corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the waste discharge requirements.

d. A **map** showing the area and elevations in which filling has been completed during the previous calendar year.

e. A **written** summary of the monitoring results, indicating any changes made or observed since the previous annual report.

f. An evaluation of the effectiveness of the leachate monitoring/control facilities.

IX. PROVISIONS FOR MONITORING

A. General

1. The Discharger shall maintain a **written sampling and analysis plan** sufficient to assure compliance with the terms of this Order. Anyone performing sampling on behalf of the Discharger shall be familiar with the sampling and analysis plan.

2. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and regularly **calibrated** to ensure their continued accuracy.

3. The Discharger shall construct or abandon all **monitoring wells** to meet or exceed the standards stated in the State Department of Water Resources Bulletin 74-81 and subsequent revisions, and shall comply with the reporting provisions for wells required by Water Code Sections 13750 through 13755.

4. All sample analyses shall be conducted at a **laboratory accredited**

for such analyses by the State Department of Health Services. The **Quality Assurance-Quality Control Program** must conform to EPA guidelines (e.g., "Laboratory Documentation Requirements for Data Validation," January 1990, USEPA Region 9) or to procedures approved by the Central Valley Water Board.

5. The director **of the laboratory** whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Central Valley Water Board.

6. Unless samples are from water supply wells or unless otherwise specified by Central Valley Water Board staff, all ground water samples to be analyzed for **metals** shall be field-filtered. Filtration methods shall minimize the entrainment of air into the sample (by using, for example, in-line pressure filtration).

B. Sampling and Analytical Methods

1. For any given monitored medium, the samples taken from all monitoring points and background monitoring points to satisfy the data analysis requirements for a given reporting period shall all be taken within a span not to exceed 30 days, unless the Executive Officer approves a longer time period, and shall be taken in a manner that ensures sample independence to the greatest extent feasible. Specific methods of collection and analysis must be identified. Sample collection, storage, and analysis shall be performed according to the most recent version of USEPA Methods, such as the latest editions, as applicable, of:
(1) Methods for the Analysis of Organics in Water and Wastewater (USEPA 600 Series), (2) Test Methods for Evaluating Solid Waste (SW-846, latest edition), and (3) Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79- 020), and in accordance with the approved Sample Collection and Analysis Plan.

2. If methods other than USEPA-approved methods or Standard Methods are used, the exact methodology shall be submitted for review and approval by the Executive Officer prior to use.

3. The **methods of analysis and the detection limits** used must be appropriate for the expected concentrations. For the monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e., "trace" or "ND") in data from background

monitoring points for that medium, the analytical method having the lowest MDL shall be selected from among those methods which would provide valid results in light of any matrix effects or interferences.

4. **"Trace" results** - results falling between the MDL and the PQL - shall be reported as such, and shall be accompanied by both the estimated MDL and PQL values for that analytical run.

5. **MDLs and PQLs** shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. These MDLs and PQLs shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the lab, rather than simply being quoted from USEPA analytical method manuals. In relatively interference-free water, laboratory-derived MDLs and PQLs are expected to closely agree with published USEPA MDLs and PQLs.

6. If the laboratory suspects that, due to a change in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived MDL/PQL values, the results shall be flagged accordingly, along with estimates of the detection limit and quantitation limit actually achieved. **The MDL shall always be calculated such that it represents the lowest achievable concentration associated with a** 99**% reliability of a nonzero result.** The PQL shall always be calculated such that it represents the lowest constituent concentration at which a numerical value can be assigned with reasonable certainty that it represents the constituent's actual concentration in the sample. Normally, PQLs should be set equal to the concentration of the lowest standard used to calibrate the analytical procedure.

7. Unknown chromatographic peaks shall be reported, along with an estimate of the concentration of the unknown analyte. When unknown peaks are encountered, second column or second method confirmation procedures shall be performed to attempt to identify and more accurately quantify the unknown analyte.

8. All **QA/QC data** shall be reported, along with the sample results to which they apply, including the method, equipment, analytical detection and quantitation limits, the percent recovery, an

explanation for any recovery that falls outside the QC limits, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name and qualifications of the person(s) performing the analyses. Sample results shall be reported unadjusted for blank results or spike recoveries. In cases where contaminants are detected in QA/QC samples (i.e., field, trip, or lab blanks), the accompanying sample results shall be appropriately flagged.

9. The statistical method shall account for data below the PQL with one or more statistical procedures that are protective of human health and the environment. Any PQL validated pursuant to §20415(e)(7) of Title 27 that is used in the statistical method shall be **the lowest concentration (or value) that can be reliably achieved** within limits of precision and accuracy specified in the WDRs for routine laboratory operating conditions that are available to the facility. The Discharger's technical report, pursuant to §20415(e)(7) of Title 27, shall consider the PQLs listed in Appendix IX to Chapter 14 of Division 4.5 of Title 22, California Code of Regulations, for guidance when specifying limits of precision and accuracy. For any given constituent monitored at a background or downgradient monitoring point, an indication that falls between the MDL and the PQL for that constituent (hereinafter called a "trace" detection) shall be identified and used in appropriate statistical or nonstatistical tests. Nevertheless, for a statistical method that is compatible with the proportion of censored data (trace and ND indications) in the data set, the Discharger can use the laboratory's concentration estimates in the trace range (if available) for statistical analysis, in order to increase the statistical power by decreasing the number of "ties".

10. Background for water samples shall be represented by the data from all samples taken from applicable background monitoring points during that reporting period (at least one sample from each background monitoring point). The Discharger may propose an alternate statistical method [to the methods listed under 27 CCR §20415(e)(8)(A-D)] in accordance with §20415(e)(8)(E) of Title 27, for review and approval by the Executive Officer.

11. The Discharger may propose an alternate statistical method [to the methods listed under title 27 section 20415(e)(8)(A-D)] in accordance with title 27 section 20415(e)(8)(E), for review and

approval by the Executive Officer. Upon receiving written approval, alternate statistical procedures may be used for determining the significance of analytical results for common laboratory contaminants (i.e., methylene chloride, acetone, diethylhexyl phthalate, and di-n-octyl phthalate). Nevertheless, analytical results involving detection of these analytes in any background or downgradient sample shall be reported and flagged for easy reference by Central Valley Water Board staff.

12. The Discharger shall use the following non-statistical method for all analytes that are detected in less than 10% of the background samples. The non-statistical method shall be implemented as follows:

    a. From the constituent of concern or monitoring parameter list, identify each analyte in the **current** sample that exceeds either its respective MDL or PQL. The Discharger shall conclude that the exceedance provides a preliminary indication of a release or a change in the nature or extent of the release, at that monitoring point, if ***either:***

        i. The data contains two or more analytes that are detected in less than 10% of background samples that equal or exceed their respective MDLs; or

        ii. The data contains one or more analyte that equals or exceeds its PQL.

    b. **Discrete Retest** [27 CCR §20415(e)(8)(E)]:

        i. In the event that the Discharger concludes (pursuant to paragraph 12.a., above) that there is a preliminary indication of a release, then the Discharger shall immediately notify Central Valley Water Board staff by phone or e-mail and, within 30 days of such indication, shall collect two new (retest) samples from the monitoring point where the release is preliminarily indicated.

        ii. For any given retest sample, the Discharger shall include, in the retest analysis, **only the laboratory analytical results for those analytes detected in the original sample**. As soon as the retest data are available, the Discharger shall conclude that there is measurably

significant evidence of a release if two or more analytes equal or exceed their respective MDLs or if one or more analyte equals or exceeds its PQL and shall:

a. **Immediately** notify the Central Valley Water Board about any constituent or constituents verified to be present at the monitoring point, and follow up with written notification submitted by certified mail **within seven days** of validation; and

b. Comply with section **IX.B.**14 of this document**, Sampling and Analytical Methods**, if any constituent or constituents were verified to be present.

iii. Any analyte that triggers a discrete retest per this method shall be added to the monitoring parameter list such that it is monitored during each regular monitoring event.

13. If the Executive Officer determines, after reviewing the submitted report in 12.b. above, that the detected constituent most likely originated from the WMU(s), the Discharger shall **immediately** implement the requirements of section **X.C., Release Has Been Verified,** of this document.

14. If the Discharger determines that there is measurably significant evidence of a release from the WMU at any monitoring point, the Discharger shall **immediately** implement the requirements of section **X.C., Release Has Been Verified**, of this document.

X. RESPONSE TO A RELEASE

A. Monitoring Point Evidence of a Release

If the Discharger determines that there is “measurably significant” evidence of a release from the WMU (i.e. the initial statistical comparison or nonstatistical comparison indicates, for any constituent of concern or monitoring parameter, that a release is tentatively identified), the Discharger shall [27 CCR §20420(j)]:

a. **Notification — immediately notify Central Valley Water Board staff verbally** of the finding and **provide** written notification by certified mail **within seven days** of such

determination. The notification shall, for each affected monitoring point, identify the monitoring parameters and constituents of concern that have indicated "measurably significant" evidence of a release from the WMU [27 CCR §20420(j)(1)];

b. **Retest Optional** — can immediately initiate the verification (retest) procedure pre-approved by the Central Valley Water Board [pursuant to §20415(e)(8)(E) of Title 27] to verify that there is "measurably significant" evidence of a release from the WMU for a parameter or constituent which has indicated a release at a monitoring point [27 CCR §20420(j)(2)]; and

c. **Next Step** — immediately following detection of a release [or after completing the retest pursuant to b) above and confirming the existence of a release], shall comply with the requirements of C. (Release Has Been Verified) below [27 CCR §20420(j)(3)].

B. Physical Evidence of a Release

If the Discharger determines there is significant **physical** evidence of a release, the Discharger shall notify the Central Valley Water Board **by certified mail within 7 days** of such determination, and within 90 days shall submit an amended report of waste discharge to make any appropriate changes to the detection monitoring program [27 CCR §20420(l)(1) & (2)].

C. Release Has Been Verified

1. If the detection was made based upon sampling and analysis for monitoring parameters, **immediately** sample all monitoring points in the affected medium at that WMU and determine the concentration of all constituents of concern. Because this constituent of concern scan does not involve statistical testing, the Discharger need collect and analyze only a single water sample from each monitoring point in the affected medium [27 CCR §20420(k)(1)].

2. The Discharger, **within 90 days** of determining "measurably significant" evidence of a release, shall submit an amended report of waste discharge to establish an evaluation monitoring program meeting the requirements of §20425 of Title 27 [27 CCR §20420(k)(5)].

3. The Discharger, **within 180 days** of determining "measurably significant" evidence of a release, shall submit to the Central Valley Water Board an initial engineering feasibility study for a corrective action program necessary to meet the requirements of §20430 of Title 27. At a minimum, the engineering feasibility study shall contain a detailed description of the corrective action measures that could be taken to achieve background concentrations for all constituents of concern [27 CCR §20420(k)(6)].

4. If the Discharger determines that there is "measurably significant" evidence of a release from the WMU at any monitoring point, the Discharger may demonstrate that a source other than the WMU caused the evidence of a release or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation or by natural variation in groundwater, surface water, or the unsaturated zone. The Discharger may make a demonstration pursuant to §20420(k)(7) of Title 27 in addition to or in lieu of submitting both an amended report of waste discharge or an engineering feasibility study; however, the Discharger is not relieved of the requirements of §20420(k)(6) & (7) of Title 27 unless the demonstration successfully shows that a source other than the WMU caused the evidence of a release or that the evidence resulted from error in sampling, analysis, or statistical evaluation or from natural variation in groundwater, surface water, or the unsaturated zone. In making this demonstration, the Discharger shall notify the Central Valley Water Board by certified mail of the intent to make the demonstration **within seven days** of determining "measurably significant" evidence of a release. The report shall be submitted to the Central Valley Water Board **within 90 days** of determining "measurably significant" evidence of a release demonstrating that a source other than the WMU caused the evidence [27 CCR §20420(k)(7)].

5. The Discharger, **within 90 days** of establishing an Evaluation Monitoring Program, shall conduct an evaluation monitoring program to assess the nature and extent of the release from the

WMU and to design a corrective action program meeting the requirements of §20430 of Title 27. At a minimum, an evaluation monitoring program for a WMU shall include:

a. An assessment of the nature and extent of the release from the WMU. This assessment shall include a determination of the distribution and concentration of each constituent of concern throughout the zone affected by the release. The Discharger shall submit this assessment to the Central Valley Water Board **within 90 days** of establishing an evaluation monitoring program [27 CCR §20425(b)].

b. Update the initial engineering feasibility study for corrective action based on the data collected to delineate the release and from the ongoing monitoring program. The Discharger shall submit this updated engineering feasibility study to the Central Valley Water Board **within 90 days** of establishing an evaluation monitoring program [27 CCR §20425(c)

c. Submit an amended report of waste discharge to establish a corrective action program meeting the requirements of §20430 of Title 27 based on the data collected to delineate the release and on the updated engineering feasibility study. The Discharger shall submit this report to the Central Valley Water Board **within 90 days** of establishing an evaluation monitoring program [27 CCR §20425(d)].

D. Release Beyond Facility Boundary

1. Any time the Discharger concludes that a release from the WMU has proceeded beyond the facility boundary, the Discharger shall so notify all persons who either own or reside upon the land that directly overlies any part of the plume (Affected Persons).

2. Initial notification to Affected Persons shall be accomplished within 14 days of making this conclusion and shall include a description of the Discharger's current knowledge of the nature and extent of the release.

3. Subsequent to initial notification, the Discharger shall provide updates to all Affected Persons, including any persons newly affected by a change in the boundary of the release, within 14 days of concluding there has been any material change in the nature or extent of the release.

4. Each time the Discharger sends a notification to Affected Persons, the Discharger shall provide the Central Valley Water Board, within seven days of sending such notification, with both a copy of the notification and a current mailing list of Affected Persons.

XI. STANDARD CONDITIONS

A. Supervision and Certification

1. All WMUs shall be **designed and constructed** under the direct supervision of a California registered civil engineer or a certified engineering geologist, as appropriate, and shall be certified by that individual as meeting the prescriptive standards, or approved engineered alternative design, and performance goals of Title 27 prior to waste discharge.

2. Designs of WMUs shall include a **Construction Quality Assurance Plan**, which shall:

   a. be submitted for review and approval by the Central Valley Water Board prior to construction;

   b. demonstrate that the WMU has been constructed according to the specifications and plans as approved by the Central Valley Water Board; and

   c. provide quality control on the materials and construction practices used to construct the WMU and prevent the use of inferior products and/or materials which do not meet the approved design plans or specifications.

3. **Closure** of each WMU shall be performed under the direct supervision of a California registered civil engineer or California certified engineering geologist.

B. Operations

1. The Discharger shall maintain in **good working order** and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.

2. For any **electrically** operated equipment at the site, the **failure** of which could cause loss of control or containment of waste

materials, or violation of this Order, the Discharger shall employ safeguards to prevent loss of control over wastes. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.

3. The fact that it would have been necessary to halt or reduce the permitted activity in Order to maintain compliance with this Order shall not be regarded as a defense for the Discharger's violations of the Order.

4. The discharge shall remain within the designated disposal area at all times.

5. By the effective date of waste discharge requirements, the Discharger shall have a plan for preventing and controlling **accidental discharges**, and for minimizing the effect of such events. This plan shall:

   a. Identify the possible sources of accidental loss or leakage of wastes from each waste storage, treatment, or disposal unit.

   b. Evaluate the effectiveness of present WMUs and operational procedures, and identify needed changes or contingency plans.

   c. Predict the effectiveness of the proposed changes in waste management facilities and procedures and provide an implementation schedule containing interim and final dates when changes will be implemented.

   The Central Valley Water Board, after review of the plan, may establish conditions that it deems necessary to control leakage and minimize its effects.

6. Any direct-line discharge to a surface impoundment shall have fail-safe equipment or operating procedures to prevent overfilling.

7. Surface impoundments shall be designed, constructed, and maintained to prevent scouring and/or erosion of the liners and other containment features at points of discharge to the impoundments and by wave action at the waterline.

8. Leachate removed from a surface impoundment LCRS shall be discharged to the impoundment from which it originated.

9. Solids which accumulate in a surface impoundment shall be periodically removed to maintain minimum freeboard requirements and to maintain sufficient capacity for the surface impoundment leachate and for the discharge of wastes. Prior to removal of these solids, sufficient samples shall be taken for their characterization and classification pursuant to Article 2, Subchapter 2 of Title 27. The rationale for the sampling protocol used, the results of this sampling, and a rationale for classification of the solids shall be submitted to the Central Valley Water Board for review. The solids will be discharged to an appropriate WMU based on characterization.

10. Water used for facility maintenance shall be limited to the minimum amount necessary for dust control.

C. Siting

1. New WMUs 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 [27 CCR §22490(a)(1)].

2. New WMUs shall be outside areas of rapid geologic change. Exemptions may be allowed by the RWQCB if containment structures are designed and constructed to preclude failure [27 CCR §22490(a)(2)].

3. Surface drainage from tributary areas and internal site drainage from surface or subsurface sources shall not contact or percolate through wastes, and shall either be contained on-site or be discharged in accordance with applicable storm water regulations.

D. Closure

1. New and existing WMUs 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 [27 CCR §22510(a)].

2. WMUs shall be closed according to an approved closure and post closure maintenance plan which provides for continued compliance with applicable standards for waste containment, precipitation and drainage controls and monitoring throughout closure and the post

closure maintenance period [27 CCR §22510(b)].

3. Closed WMUs shall be provided with at least two **permanent monuments**, installed by a licensed land surveyor or by a registered civil engineer authorized to perform land surveying, from which the location and elevation of all wastes, containment structures, and monitoring facilities can be determined throughout the post-closure maintenance period [27 CCR §20950(d)].

4. Final cover slopes for Group A and Group B waste piles shall not be steeper than a horizontal to vertical ratio of one and three quarters to one, and shall have minimum of one fifteen-foot wide bench for every fifty feet of vertical height [27 CCR §21090(a)].

E. Post-Closure

1. WMUs 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 [27 CCR §22510(a)].

2. The post-closure maintenance period shall end when the Central Valley Water Board determines that water quality aspects of reclamation are complete and waste no longer poses a threat to water quality [27 CCR §22510(h)].

3. The owner of the mine shall have the continuing responsibility to assure protection of usable waters from discharged wastes and from gases and leachate generated by discharged waste during the active life, closure, and post-closure maintenance period of the WMUs and during subsequent use of the property for other purposes.

XII.DEFINITIONS

Unless otherwise stated, all terms are as defined in Chapter 2, Division 7, of the California Water Code (Section 13050 et.seq.), in Article 2, Chapter 2, Division 2, Title 27 of the California Code of Regulations (27 CCR §20005 et seq.), and in Section 258.2, and elsewhere in Part 258, Title 40 of the Code of Federal Regulations.

The following additional definitions apply to the Order:

A. "**Affected Persons**" means all individuals who either own or occupy land outside the boundaries of the parcel upon which the WMU is

located that has been or may be affected by the **release** of leachate or waste constituents (in gas or liquid phase) from a WMU.

B. "**Background Monitoring Point**" means a device (e.g., well) or location (e.g., a specific point along a lakeshore), upgradient or sidegradient from the WMU, or as otherwise approved by the Executive Officer, where water quality samples are taken that are not affected by any release from the WMU and that are used as a basis of comparison against samples taken from downgradient Monitoring Points.

C. "**Composite liner**" means a liner that consists of two or more components, which include a Synthetic Liner in direct and uniform contact with an underlying layer of prepared, low-permeability soil such that the net permeability of the resulting combination is significantly less than would be expected by reference to the permeability of the individual components layers.

D. Unless otherwise specified, "**composite sample**" means a combination of individual samples either collected over a specified sampling period or collected over an area at one time (synoptically):

1. at equal time intervals,

2. at varying time intervals so that each sample represents an equal portion of the media to be sampled.

The duration of the sampling period shall be specified in the Monitoring and Reporting Program. The method of compositing shall be reported with the results. **"Constituents of Concern (COC)**" means those constituents which are likely to be in the waste in the WMU or which are likely to be derived from waste constituents in the event of a release.

E. "**Daily maximum concentration**" means the highest measurement made on any single discrete sample or composite sample.

F. "**Grab sample**" means a discrete sample collected in less than 15 minutes.

G. "**Matrix effect**" means any change in the method detection limit or practical quantitation limit for a given analyte as a result of the presence of other constituents - either of natural origin or introduced **by** humans as a result of a release or spill - that are present in the sample of water or soil-pore gas being analyzed.

H. "**Method detection limit** (**MDL**)" means the lowest constituent concentration associated with a 99% reliability of a "non-zero" analytical result. The MDL shall reflect the detection capabilities of the specific analytical procedure and equipment used by the laboratory. MDLs reported by the laboratory shall not simply be restated from USEPA analytical method manuals. In relatively interference-free water, laboratory-derived MDLs are expected to closely agree with published USEPA MDLs. If the lab suspects that, due to matrix or other effects, the detection limit for a particular analytical run differs significantly from the laboratory-derived MDL, the results should be flagged accordingly, along with an estimate of the detection limit achieved.

I. "**Monitoring Parameters**" means the short list of constituents and parameters used for the majority of monitoring activity at a given WMU. Monitoring for the short list of Monitoring Parameters constitutes "indirect monitoring," in that the results are used to indicate indirectly the success or failure of adequate containment for the longer list of Constituents of Concern.

J. "**Monitored Media**" means those water-, solid-, or gas-bearing media that are monitored pursuant to the Monitoring and Reporting Program. The Monitored Media may include:

1. Ground water in the uppermost aquifer, in any other portion of the zone of saturation in which it would be reasonable to anticipate that waste constituents migrating from the WMU could be detected, and in any perched zones underlying the WMU,

2. Any bodies of surface water that could be measurably affected by a release,

3. Soil pore liquid beneath and/or adjacent to the WMU, and

4. Soil pore gas beneath and/or adjacent to the WMU.

K. "**Monitoring Point**" means a device (e.g., well) or location (e.g., a specific point along a lakeshore), downgradient from the WMU and that is assigned in this Order, at which samples are collected for the purpose of detecting a release by comparison with samples collected at Background Monitoring Points.

L. "**Monthly** average **concentration**" means the arithmetic mean of measurements made during the month.

M. "**Monthly average discharge**" means the total discharge by volume during a calendar month divided by the number of days in the month that the facility was discharging (e.g. gallons per day, cubic feet per day).
Where less than daily sampling is required by this Order, the monthly average shall be determined by the summation of all the measured discharges divided by the number of days during the month when the measurements were made.

N. "**Order**," as used throughout this document, means the Waste Discharge Requirements. The Monitoring and Reporting Program and Standard Provisions and Reporting Requirements are incorporated by reference into the Waste Discharge Requirements.

O. "**Practical quantitation limit** (**PQL**)" means the lowest constituent concentration at which a numerical concentration can be assigned with reasonable certainty that its value represents the constituent's actual concentration in the sample. Normally PQLs should be set equal to the concentration of the lowest standard used to calibrate the analytical procedure. The PQL shall reflect the quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. PQLs reported by the laboratory shall not simply be restated from U.S. EPA analytical method manuals. In relatively interference-free water, laboratory-derived PQLs are expected to closely agree with published U.S. EPA PQLs. If the lab suspects that, due to matrix or other effects, the quantitation limit for a particular analytical run differs significantly from the laboratory-derived PQL, the results should be flagged accordingly, along with an estimate of the quantitation limit achieved.

P. "**Reporting Period**" means the time interval during which samples are collected and analyzed, and the results then reported to the Central Valley Water Board, to comply with a specified monitoring and reporting frequency. The maximum reporting period for analysis of all Constituents of Concern is five years; for Monitoring Parameters it is six months (generally, Spring/Summer = April 1 to September 30, and Fall/Winter = October 1 to March 31). The Reporting Period for the Annual Summary Report extends from April 1 of the previous year to March 31 of the current year. The due date for the submittal of any given report will be 15 days after the end of its Reporting Period, unless otherwise stated.

Q. "**Receiving Waters**" refers to any surface or ground water which actually or potentially receives waste constituents, leachate, or surface or ground waters which come in contact with waste materials or

contaminated soils.

R. "**Sample size**":

1. For Monitoring Points, means the number of data points obtained from a given Monitoring Point during a given Reporting Period used for carrying out the statistical or non-statistical analysis of a given analyte during a given Reporting Period; or

2. For Background Monitoring Points, means the number of new and existing data points collected under §20415(e)(11 and 12) from all applicable Background Monitoring Points in a given monitored medium—used to collectively represent the background concentration and variability of a given analyte in carrying out statistical or non-statistical analysis of that analyte during a given Reporting Period.

S. "**Standard Observations**" means:

1. For Receiving Waters:

   a. Floating and suspended materials of waste origin: presence or absence, source, and size of affected area;

   b. Discoloration and turbidity: description of color, source, and size of affected area;

   c. Evidence of odors: presence or absence, characterization, source, and distance of travel from source;

   d. Evidence of water uses: presence of water-associated wildlife;

   e. Flow rate; and

   f. Weather conditions: wind direction and estimated velocity, total precipitation during recent days and on the day of observation;

2. Along the perimeter of the WMU:

   a. Evidence of liquid leaving or entering the WMU, estimated size of affected area, and flow rate (show affected area on map);

b. Evidence of odors: presence or absence, characterization, source, and distance of travel from source; and

c. Evidence of erosion and/or of daylighted refuse.

3. For the WMU:

a. Evidence of ponded water at any point on the waste management facility (show affected area on map);

b. Evidence of odors: presence or absence, characterization, source, and distance of travel from source;

c. Evidence of erosion and/or of daylighted refuse; and

T. "**Standard Analysis and Measurements**" means:

1. Turbidity, in NTU;

2. Water elevation to the nearest 1/100th foot above mean sea level; and

3. Sampling and statistical/non-statistical analysis of the Monitoring Parameters.

U. "**Synthetic Liner**" means a layer of flexible, man-made material that is installed in accordance with the standard of the industry over an area of land prior to the discharge of waste there.

V. "**VOC_{water}**" (Volatile Organics Monitoring Parameter for Water) means the composite monitoring parameter encompassing all VOCs that are detectable in less than ten percent of applicable background samples from a monitored water-bearing medium (e.g., the unsaturated zone, the uppermost aquifer, a zone of perched groundwater, or a surface water body). This parameter is analyzed via the non-statistical analytical method described elsewhere in this Order to identify a release to waters of the state of VOCs whose presence in background water is detected too infrequently to allow statistical analysis.

W. "**VOC_{spg}**" (Volatile Organics Monitoring Parameter for Soil Pore Gas) means Monitoring Parameters addressing all volatile organic constituents detectable in a sample of soil pore gas.

X. "**Volatile** organic **constituents** (**VOCs**)" means the suite of organic constituents having a high vapor pressure. The term includes at least the 47 organic constituents listed in Appendix I to 40 CFR Part 258.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

[TENTATIVE] WASTE DISCHARGE REQUIREMENTS ORDER R5 2020 ####
FOR
WASTE MANAGEMENT, INC.
CALIFORNIA ASBESTOS MONOFILL, INC.
CALAVERAS COUNTY

INFORMATION SHEET

Waste Management, Inc. (Discharger), owns and operates California Asbestos Monofill, Inc. (Facility), located approximately 5 miles southeast of Copperopolis in Calaveras County. The facility is a former asbestos mine which operated from 1962 through 1987. In 1990, the open pit started operating as an unclassified inert waste landfill LU-1 for asbestos containing waste (ACW). In 1998, the facility started to accept shredded tires. The open pit was operated as an unclassified landfill until 2016 when it ceased to accept waste and the Discharger shifted their focus to closure.

The Facility waste management/mining units consist of unclassified LU-1 operated as inert waste landfill in the former mining pit, reclaimed and closed mill tailings stockpile, rock reject and overburden rock stockpiles, three evaporation/infiltration ponds, and stormwater retention ponds.

This Order provides the specifications and requirements for the closure of LU-1 waste management unit and for the Facility post-closure monitoring and maintenance. The Discharger is proposing to cover LU-1 with at least two feet of rock reject, to grade the cover to maximum slopes of 3H:1V (H-horizontal, V-vertical), and to allow mining influenced water to accumulate in the pit to form a shallow lake. This Order requires that the Discharger continues to dewater the pit and maintains the pit water level below 478 feet msl. Furthermore, the Order requires submittal of the Post-closure Monitoring and Maintenance Plan including cost estimates and establishment of financial assurance mechanism for this purpose.

NV