CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION


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# WASTE DISCHARGE REQUIREMENTS ORDER R5-2025-0042

## ORDER INFORMATION

| | |
|---|---|
| **Order Type(s):** | Waste Discharge Requirements (WDRs) |
| **Status:** | ADOPTED |
| **Program:** | Mines |
| **Region 5 Office:** | Sacramento (Rancho Cordova) |
| **Discharger:** | US Mine Corporation |
| **Facility:** | US Mine Corporation Ione Plant |
| **Address:** | 8625 Highway 24, Ione 95640, CA |
| **County:** | Amador County |
| **Parcel Nos.:** | 05-130-012, -033, -034, -051; 05-150-007, -008; 05-160-003, -004, -009, -010, -012, -014 and -015; 05-190-021 |
| **GeoTracker ID:** | T1000001260 |
| **Prior Order(s):** | Res_59-141; 86-134; 5-01-169; R5-2009-0019; R5-2015-0145; R5-2019-0038 |

## 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 20 June 2025.

Patrick Pulupa
Digitally signed by Patrick Pulupa
Date: 2025.07.09 10:40:45 -07'00'
Water Boards

PATRICK PULUPA,
Executive Officer

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## GLOSSARY

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

**amsl**.....above mean sea level

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

**Beneficiary**.....Central Valley Regional Water Quality Control Board

**Central Valley Water Board .....**Central Valley Regional Water Quality Control Board

**CCR** .....California Code of Regulations

**CDB** .....Clay Drying Beds/clay settling ponds

**CEQA**.....California Environmental Quality Act

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

**CFR**.....Code of Federal Regulations

**COCs** .....Constituents of Concern

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

**CQA** .....Construction Quality Assurance

**Designated Waste** .....(a) Hazardous Waste subject to variance from management requirements per Health and Safety Code section 25143; and (b) Nonhazardous Waste containing pollutants that, under ambient conditions, could be released in concentrations exceeding applicable WQOs, or that could reasonably be expected to affect beneficial uses of water. (Water Code, § 13173.)

**DMP** .....Detection Monitoring Program

**DOC** .....Department of Conservation

**EC** .....Electrical Conductivity

**EIR** .....Environmental Impact Report

**EMP** .....Evaluation Monitoring Plan

**GLOSSARY**

| | |
|---|---|
| **FEMA** | Federal Emergency Management Agency |
| **HMC** | Heavy Mineral Concentration Plant |
| **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).) |
| **LCRS** | Leachate Collection and Removal System |
| **LEA** | Local Enforcement/Lead Agency for SMARA |
| **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 |
| **Mining Unit (MU)** | Waste management unit for the treatment, storage, or disposal of mining waste. |
| **Mining Waste** | All waste materials (solid, semi-solid, and liquid) from the mining and processing of ores and minerals including soil, waste rock, and other forms of overburden as well as tailings, slag, and other processed mining wastes (Title 27, § 20164.) |
| **MIW** | Mining-influenced water – any water with chemical composition altered by mining |
| **MPE** | Maximum Probable Earthquake |
| **MRP** | Monitoring and Reporting Program |
| **MU** | Mining Unit/Waste management unit for the treatment, storage, or disposal of mining waste |

**GLOSSARY**

**MW**.....Groundwater Monitoring Wells

**PCP**.....Pre-concentration Plant

**ROWD**.....Report of Waste Discharge

**SMARA**.....The Surface Mining and Reclamation Act of 1975

**SPRRs**.....Standard Provisions and Reporting Requirements

**TDS**.....Total Dissolved Solids

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

**Title 23**.....California Code of Regulations, Title 23

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

**TSS**.....Total Suspended Solids

**USEPA**.....United States Environmental Protection Agency

**WDR**.....Waste Discharge Requirements

**WQOs**.....Water Quality Objectives

**WQPS**.....Water Quality Protection Standard

# FINDINGS

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

## Introduction

1. US Mine Corporation (hereafter Discharger or US Mine) owns and operates the US Mine Co. Ione Plant (Facility), which is located at 8625 Highway 24, Ione, approximately 1.25 miles south of Ione in Amador County, Sections 35 and 36, T5N, R9E, and Sections 1 and 2, T5N, R9E MDB&M. The Facility's location is depicted in **Attachment A**.

2. The facility is a sand, clay, and heavy mineral mining and processing operation regulated under authority given in Water Code section 13000 et seq.; and California Code of Regulations, Title 27 (Title 27), sections 22470 - 22510, and sections referenced therein.

3. The Facility encompasses approximately 3,570 -acre property of which 402 acres have been mined, constructed, or reclaimed. Mining activities are currently confined to the portion of the property located south of Ione, west of California Highway 124, and north of California Highway 88, as shown on **Attachment A**. The facility consists of and is proposed to consist of mining units summarized in Table 1 and shown on **Attachment B**. The property is owned by the Discharger and comprised of Assessor's Parcel Numbers (APNs) 05-130-012, -033, -034, -051; 05-150-007, -008; 05-160-003, -004, -009, -010, -012, -014 and -015; 05-190-021

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

**FINDINGS**

Table 1— **Mining Units Permitted under this Order**

| Mining Unit | Size (acres) | Unit description | Status |
|---|---|---|---|
| Ponds I and K | 70 | Former clay tailing ponds | Idle |
| South Pond/ Pond L | 70 | Sand and laterite mining pit (20 acres) & proposed clay tailings pond (50 acres) | Operating |
| M Pit | 16 | Mining pit | Operating |
| Area B/Pit | 24 | Mining pit | Planned |
| Mill Pond | 9 | Process water pond | Operating |
| CDB* Ponds 1&2 | 20 | Clay settling ponds; lined by two feet of compacted clay | Operating |
| Phase 2 CDB Ponds 3-9 | 60 | Proposed sets of clay settling ponds; lined by two feet of compacted clay | Planned |
| Upper Decant Pond | 8 | To collect decant water from the proposed CDB Ponds 6-9; lined by two feet of compacted clay | Planned |
| Decant Pond | 8 | Collects decant water from CDB ponds; lined by two feet of compacted clay | Operating |
| Pond J | 27 | Stormwater retention pond/overflow for Decant Pond | Operating |

* See Glossary for definitions of terms and abbreviations in table.

**FINDINGS**

5. Since the previous WDRs were adopted in 2019, the Discharger completed the following activities at the Facility:

    a. In 2021, a heavy mineral separation plant operated by Twin Pines Minerals LLC was added to the beginning of ore processing (**Attachments C and D**). A heavy mineral separation circuit was also added to the sand separation plant.

    b. At the same time, the mining of old tailings commenced in Area 2 for re-processing in the heavy mineral separation plant (**Attachment B**).

    c. In December 2023, US Mine acquired Twin Pines Minerals LLC assets and continued the mining of old tailings and the operation of heavy mineral separation circuits.

    d. In 2023, US mine completed construction of CDB Ponds 1&2 and started utilizing them for discharge and recovery of clay slurry,

6. The Discharger submitted an Amended Report of Waste Discharge on 5 April 2024. After a request for additional information, the Discharger submitted an updated Amended Report of Waste Discharge (ROWD) on 12 September 2024. The latest ROWD and supporting documents contain information related to this revision. The Discharger is proposing the following significant modifications

    a. The inclusion of the new pre-concentration plant (PCP) and heavy minerals concentration (HMC) facility into the processing circuit;

    b. The proposal for construction of Phase 2 CDB pond system (CDB Ponds 3-9) and the Upper Decant Pond to collect decant water from CDB Ponds 6-9.

    c. The reclassification of 50 acres of L Pond from an idle mining pit to an active tailings pond.

## Materials Accompanying Order

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

   **ATTACHMENT A—FACILITY LOCATION**
   **ATTACHMENT B—MINING UNITS AND MONITORING POINTS**
   **ATTACHMENT C—CLAY AND HEAVY MINERAL SEPARATION AREAS**
   **ATTACHMENT D—SAND SEPARATION AREA**
   **ATTACHMENT E—GROUNDWATER CONDITIONS**
   **ATTACHMENT F—PH CONDITIONS**
   **ATTACHMENT G—PHASE 2 CLAY DRYING POND LOCATION**
   **ATTACHMENT H—CONCEPTUAL DESIGN OF PHASE 2 CLAY DRYING BED PONDS**

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

   Information Sheet for Waste Discharge Requirements Order (Information Sheet)

8. This Order is also accompanied by the concurrently adopted **Monitoring & Reporting Program R5-2025-0042 (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).

9. 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 that a revised MRP contains new or different factual findings reflecting changed conditions or circumstances at the Facility, the revised MRP findings shall be controlling.

10. Additional information about the Facility is set forth in the **Information Sheet**, which is incorporated as part of these findings. (See Finding 7)

## Facility

11. The facility was first regulated by Resolution No. 59-141 issued to Owens-Illinois Inc. which prescribed requirements for discharge from the plant to land and Dry Creek. WDR Order No. 86-134 issued to Owens-Illinois Inc. prohibited the discharge to surface waters. WDR Order No.5-01-169 issued to Unimin Corporation and Howard Estates required groundwater monitoring at the Facility. The Discharger's groundwater monitoring analytical results detected waste

constituents in groundwater that degraded waters of the state. Based on those results, the facility was regulated by Title 27 requirements in revised WDRs Order R5-2009-0019. After US Mine acquired the property in 2015, Order R5-2015-0145 amended Order R5-2009-0019 by updating the facility name and ownership information. The revised Order R5-2019-0038 permitted the addition of Phase 1 Clay Drying Bed Ponds for discharge of clay tailings to allow for recovery of clay products.

12. The facility was in continuous operation from 1955 to 2013. In 2014, Unimin Corporation initiated reclamation activities and planned to complete reclamation in 2015. US Mine Corporation acquired the Facility and restarted mining and production in the second half of 2016 after a break in mining and processing from 2013-2016. Mining and processing have been intermittent until the addition of heavy mineral separation plant in 2021.

## Mining And Processing Information

13. The Discharger is mining Ione Formation from Pit M (**Attachment G**) with a hopper, conveyor belt, and trommel assembled within the pit to allow dozers and haul trucks to feed ore directly into a slurry line which can be pumped straight from the pit to the processing plant. This configuration has allowed an increase in volume of mined and processed material. In ROWD, the Discharger reports mining 7,500-10,000 tons of raw ore per day with approximately 4,000 – 5,000 tons per day of glass sand production, 3,000-3,500 tons per day of clay, and approximately 400-600 tons per day of heavy mineral concentrate.

14. The raw ore is beneficiated through a series of density separators, hydro-sizers, cyclones, vibrating screens, Humphrey's spirals, and magnetic separators to facilitate separation of clay, heavy minerals, iron-rich sand, and silica sand in two main processing areas (**Attachments C-E**). The pH of process water is neutralized by addition of sodium hydroxide. Silica sand and heavy mineral concentrate are stockpiled dry on pads behind the separation plants (**Attachment E**). Clay slurry is directed to the CDB system where gravitational settling and subsequent evaporation allows for harvesting of dried clay to be sold as a product.

15. In addition to the CDB Pond system, the Discharger proposes to use the former mining pit Pond L for discharge of clay tailings at times when the current and future CDB settling ponds may be at capacity. The Discharger proposes to treat the clay slurry discharged from the processing plants in the thickener plant prior to discharge. In the thickener plant, clay slurry is mixed with an amine polymer and thickened to paste form prior to discharge. Alternately, the Discharger is testing

the use of Pre-concentration Plant at the mining pit M to remove clay prior to beneficiation.

## Waste Classification & Permitting

16. This Order continues the classification set forward by Orders R5-2009-0019 and R5-2019-0038, which classified clay tailings resulting from the sand separation process as Group B mining waste and required treatment and management to bring clay solids to Group C classification as defined in Title 27, section 22480:

    ***Group B*** *– mining waste of Group B is either:*

    *(a) mining wastes that consist of or contain hazardous wastes, that qualify for a variance under Chapter 11 of Division 4.5, of Title 22 of this code, provided that the [regional water quality control board] finds that such mining wastes pose a low risk to water quality;*

    *(b) or mining wastes that consist of or contain nonhazardous soluble pollutants of concentrations which exceed water quality objectives for, or could cause, degradation of waters of the state; or*

    ***Group C*** *– mining wastes from Group C are wastes from which any discharge would be in compliance with the applicable water quality control plan, including water quality objectives other than turbidity.*

17. Prior to the construction of Phase 1 CDB Ponds, the Discharger submitted *Characterization of Water and Clay Byproducts, US Mine Corporation Ione Plant, Ione, California* (Characterization Report) on 3 August 2018. A pilot test simulating gravity connected ponds was conducted using a series of 55-gallon drums. Samples of clay tailings, settled clay, and decanted process water were collected and analyzed. Laboratory analyses were limited to the constituents of concern (COC) identified by the Order which are low pH, high concentrations of total dissolved solids (TDS) and sulfate, and high concentrations of metals such as aluminum, sodium, nickel and lead. The COC concentrations in the samples collected from the simulated clay settling experiment are shown in **Table 2** below.

18. In 2024, following the addition of heavy mineral processing (HMC) plant and Pre-concentration Plant (PCP), the Discharger collected and characterized decant liquids from the primary and secondary heavy mineral stockpiles and PCP clay slurry output. These results are also provided in **Table 2**.

Table 2— **The concentrations of COC in characterized samples compared to standards and water quality goals**

| Sample/ COC | Aluminum (µg/l)* | Iron (mg/l)** | Lead (µg/l) | Nickel (µg/l) | Sodium (mg/l) | Sulfate (mg/l) | Total Dissolved Solids (mg/l) |
|---|---|---|---|---|---|---|---|
| Decant Water | <50-1,300 | <0.10-11 | 5-23 | 20-28 | 170–220 | 560-770 | 735-770 |
| Clay Slurry Water | 1,300 | 5.2 | 30 | 24 | 170 | 570 | 730 |
| HMC | <30-110 | <0.030 | <0.21 | 230-260 | 81-89 | 1300 | 1900-2000 |
| PCP | NA | 0.12-0.14 | <50 | 370-410 | NA | NA | NA |
| Intrawell Water Quality Protection Standards | 94-4,400 | 24-110 | 5-9 | 59-77 | 95 – 892 | 120-667 | 732-3136 |
| CA Primary MCL | 1,000 | none | 15 | 100 | none | none | none |
| Lowest Applicable WQO | 50[1)] | 0.3[1), 2)] | 0.2[3)] | 12[3)] | 20[4)] | 250[2)] | 500[2)] |
| Background Groundwater Data | 9,200 | 38 | 42 | 25 | 60 | 173 | 429 |

*µg/L = micrograms per liter
**mg/L = milligrams per liter
a) Heavy Mineral Concentrate samples of decant water from primary and secondary HMC stockpiles
b) Preconcentration Plant clay slurry
1) U.S. Environmental Protection Agency (USEPA), Secondary Maximum Contaminant Level (MCL)
2) California Division of Drinking Water Secondary MCL
3) California Public Health Goal (PHG)
4) USEPA Health Advisory
NA – not analyzed

19. In ROWD, the Discharger presents waste characterization and classification data which suggest that the processing of clay slurry in the CDB settling ponds, the thickener plant, and the Pre-concentration Plant and HMC Plant provides treatment and management of these clay slurry tailing streams to bring them to Group C mining waste classification as described below:

a. The results of acid base accounting analyses of clay samples indicate that acid generation from solid clay is not likely.

b. The concentrations of aluminum, iron, and lead in process water samples exceeded water quality goals, but they remained below the maximum intrawell WQPS for onsite groundwater monitoring wells.

c. Neutralization of decant process water with sodium hydroxide reduced metal concentrations and can be considered treatment to reduce the need for containment pursuant to Title 27 section 22480(d).

d. For CDB Ponds, US Mine constructed a continuous low permeability clay liner consisting of at least 2 feet of compacted in-situ clay with hydraulic conductivity less than $10^{-6}$ centimeters per second (cm/s) on the bottom of the proposed series of ponds to protect underlying groundwater from any impact associated with their proposed use.

e. The analyses of hydraulic permeability of Pond L bottom proposed for containment of treated clay tailings have consistently reported a hydraulic conductivity of approximately $1x10^{-7}$ cm/s.

20. The data suggests that the discharge consists of or contains pollutants that, under ambient environmental conditions at a mining unit, could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of the waters of the state. Therefore, the discharge is a Group B mining waste and as such requires treatment and management to achieve Group C classification as allowed by Title 27 section 22480 (d) which says *Treatment- Mining waste shall be treated or neutralized whenever feasible to minimize the threat to water quality and minimize the need to install waste containment structures*.".

21. This order continues Group B classification of clay slurry, but concurs that the proposed treatment and management strategies achieve Group C classification for clay solids of treated discharges.

## Site Conditions

22. The US Mine Ione Plant lies along a drainage divide between Jackson Creek to the south, and Dry Creek to the north. Elevation varies across the active area from about 390 feet above mean sea (amsl) on the northeast to about 240 feet amsl on the southwest. Slopes outside of mine pits in the area are gentle to moderate, with local steep slopes at the active mining pit.

**FINDINGS**

23. The Ione Plant is mining the Ione Formation which consists of middle Eocene (about 45 million years old) clay, sandstone, and siltstone. In the area around the facility, the Ione Formation is deposited unconformably on the Jurassic (about 145 to 200 million years old) metamorphosed bedrock wherever surface exposures are present. In the subsurface, the Ione Formation is separated locally from the older metamorphic rocks by other sedimentary rocks. The Ione Formation, near the Ione Plant, was deposited in a northwest-southeast depression between the pre-Ione metamorphic rocks to the east, and the Carabas Paleo-ridge, a topographical high underlain by pre-Ione metamorphic formations. The Carabas Paleo-ridge is expressed at the surface as two northwest-southeast elongated areas of Jurassic metamorphic rock to the west of the Ione Plant. The Ione beds define a broad synclinal trough with a northwest-southeast oriented axis between the Carabas Paleo-ridge and the metamorphic rocks to the east.

24. Land uses within one mile of the facility include railroad tracks, the City of Ione and Charles Howard Park to the north, agricultural land with sparse residences across Jackson Valley Road to the south and to the east, and rural agricultural land to the west. As shown on **Attachment A**, California Highway 124 crosses the northern half of the property from north to south, and California Highway 88/104 passes from east to west through the approximate middle of the property but south from the active mining area.

25. There are four domestic, industrial and agricultural supply wells within one mile of the Facility. There are 4 domestic groundwater supply wells within one mile south of the facility. The four domestic wells are located two each in Sections 1 and 2, Township 5N, Range 9E, MDM&B, respectively. Two observation/monitoring wells are located within one mile north of the facility.

26. On a map of earthquake shaking potential for California (California Department of Conservation [DOC] 2016) the Ione plant is located in a region distant from known, active faults. Such areas are expected by DOC to experience low levels of shaking, and less frequent ground shaking than locations closer to active fault systems.

27. The Ione Fault, part of the Bear Mountains Fault System, is located about one mile east of the Ione plant (DOC 2010). The Bear Mountains Fault System is not classified as a Class A (capable of producing a magnitude 7.0 or greater event) or B (capable of producing a magnitude 6.5 or greater) on California Probabilistic Seismic Hazard Maps. Cramer and others (1978) documented microearthquake activity along the Bear Mountains Fault Zone north of Folsom with event magnitudes ranging from 0.7 to 2.1, and noted that surface deformation and surface rupture were not known to be associated with this fault.

28. Based on a site-specific seismic analysis, the controlling maximum credible earthquake (MCE) for the site is a moment of magnitude less than 6.7 event along the Greenville Fault at the closest rupture distance of 60 miles/kilometers southwest from the site. It is estimated that a MCE event would produce a peak ground acceleration of 0.213 g with a 2% probability of occurring in 50 years.

29. The facility receives an average of 22.04 inches of precipitation per year as measured at the Ione Station (No. 044283). The mean pan evaporation is 54 inches per year as measured at the Ione Station. The 100-year wet season was calculated to be about 40 inches based on data from the Western Regional Climate Center for the Ione Station. The estimated 100-year, 24-hour rain event is 4.88 inches, and the estimated 1,000-year, 24- hour rain event is 6.54 inches based on the data from the Camp Pardee Station (No. 04-1428) located about 7 miles from the facility. The nearest weather stations are reflective of the conditions at the Facility.

30. Most of the Ione plant is internally drained with storm water directed to mine pits and storage ponds. Accumulated runoff is used in the current mining process. During very large rain events, runoff from a small, disturbed area at the site flows off-site at the plant entrance along Highway 124. This water is managed by US Mine in accordance with the State Water Board's operative General Permit for Storm Water Discharges Associated with Industrial Activities, NPDES Permit No. CAS000001 (Industrial General Permit).

31. According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (https://msc.fema.gov/portal) Community-Panel Number 06005C0529G, the Facility is not located within a 100-year floodplain.

## Surface Water and Groundwater Conditions

32. The *Water Quality Control Plan for Sacramento and San Joaquin River Basins, Fifth Edition* (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.

33. The Ione plant lies along a drainage divide between Jackson Creek about 1.25 miles to the south, and Sutter Creek about one mile to the north. Stormwater is captured and contained onsite in active areas at the Ione plant for use in processing. Undeveloped portions of the site drain overland to Sutter Creek north of the plant, and Jackson Creek south of the plant. Sutter Creek is an intermittent stream. The Jackson Creek flow is regulated by operation of the Amador Lake dam upstream from the Ione plant. Sutter Creek flows into Dry Creek about one-mile northwest of the Ione Plant. Jackson Creek is tributary to Dry Creek, and

their confluence is located about 5.5 miles southwest of the Ione plant. Dry Creek is a tributary to the Mokelumne River downstream from Camanche Reservoir about 27 miles southwest of the Ione plant.

34. The designated beneficial uses of the Mokelumne River – Camanche Reservoir to Delta (Hydro Unit No. 531.2), as specified in the Basin Plan, are agricultural supply; water contact recreation; canoeing and rafting, non-contact water recreation; other non-contact recreation; warm fresh water habitat; cold freshwater habitat; warm migration of aquatic organisms; cold migration of aquatic organisms; warm spawning of aquatic organisms; cold spawning of aquatic organisms; and wildlife habitat.

35. The Ione Plant is located at the eastern edge of the San Joaquin Valley Groundwater Basin—Cosumnes Sub basin (Groundwater Basin No. 5-22.16). Historical documents identify the Ione Formation as yielding small quantities of groundwater and/or groundwater that was of low quality. Groundwater monitoring during 2024 showed that all monitoring wells comply with intra-well standards calculated based on historical analytical data, and that concentrations of monitored parameters appear to be stable at each monitoring well.

36. The first encountered groundwater ranges from about 10 feet to 35 feet below the ground surface depending on the proximity to mine features. Groundwater elevations of the unconfined aquifer range from about 170 feet MSL to 350 feet MSL. The groundwater within the Ione Formation seems to form one interconnected flow system with very low horizontal hydraulic conductivity (about $3.5 \times 10^{-6}$ cm/s) and correspondingly low horizontal flow velocity of about 1.1 feet per year. Vertical flow within the Ione Formation at the site is likely to be negligible.

37. Monitoring data indicate background groundwater quality for first encountered groundwater with electrical conductivity (EC) ranging between 210 and 340 micromhos/cm, and total dissolved solids (TDS) ranging between 160 and 210 milligrams per liter (mg/L).

38. Low pH of groundwater appears to be characteristic of the Ione Formation and seems to be the result of natural variability in mineralogy of the Ione Formation. As shown in **Attachment G,** the pH values in groundwater and water in surface impoundments have been relatively low and variable. Groundwater pH values are generally below the WQO of 6.5, but have not decreased after mining resumed in 2016.

39. 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.

40. According to the Basin Plan, the designated beneficial uses of groundwater at the Facility are municipal and beneficial use (MUN), agricultural supply (AGR) and industrial process supply (PRO).

## Monitoring Networks

41. The existing groundwater monitoring network for the site consists of background monitoring wells MW-J and MW-N, and detection monitoring wells MW-A, MW-B, MW-E, MW-I MW-K, MW-L, MW-M, MW-P, MW-Q, and MW-R as shown on **Attachment B**. Two of the wells, MW-L and MW-M, monitor the deep groundwater zone; the rest of the detection wells are monitoring the shallow groundwater zone. MW-O and MW-H are used for the measurements of depth to water and field parameters.

42. The Discharger's detection monitoring program for groundwater at the facility satisfies the requirements contained in Title 27.

43. The only surface water monitored at the site is the water in impoundments and former mining pits. Ponds J, K, L, Mill Pond, and the Decant Pond shall be sampled and monitored as specified in MRP No. R5-2025-0042 which is attached to and incorporated to this order.

## Water Quality Protection Standard

44. A Water Quality Protection Standard (WQPS) is the analytical framework through which MUs are individually monitored for releases and impacts to water quality. (Title 27, § 20390, subd. (a).)

45. The Discharger submitted the Water Quality Protection Standard (WQPS) report on 25 June 2009 proposing statistical data analysis methods to calculate concentration limits for each monitored constituent in accordance with Title 27. The WQPS report proposed to use Intrawell data analysis to calculate tolerance limits for the monitored constituents.

46. In accordance with Title 27, this Order, by virtue of its incorporation of **Monitoring & Reporting Program R5-2025-0042 (MRP)** and subsequent revisions thereto, establishes a WQPS for each MU at the Facility.

## Design of Mining Units

47. 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 or orders for the discharge of waste at solid waste disposal sites.

### Clay Drying Beds

48. In early 2024, the Discharger constructed a new clay tailing impoundment system to separate and harvest clay and reclaim process water. The system consists of two lanes of impoundments for separation of clay solids named Clay Drying Bed Ponds (CDB 1 and CDB 2) and a Decant pond for collection of process water. Each lane is segmented into a series of five ponds separated by cascading weirs to facilitate settling of clay and clarification of process water. Once the basins in one of the lanes are sufficiently full, the flow of clay tailings to that row is shut off and the discharge is rerouted to the adjacent lane until filled and the dried clay from the first lane is mined out.

49. In their September 2024 ROWD, the Discharger proposed to construct three additional parallel lanes of CDB ponds to accommodate the need for increased clay storage capacity and increased control of product quality. Phase 2 of the CDB system consists of three separate lanes (termed CDB-3, CDB-4, and CDB-5) located parallel to and immediately northeast of CDB-1 and CDB-2. In their 9 May 2025 Response to Comments, the Discharger proposed to expand Phase 2 to four additional lanes (termed CDB-6, CDB-7, CDB-8, and CDB-9) located approximately 1,000-1,500 feet east of CDB Ponds 1-5 **(Attachments G** and **H**). In conjunction, they proposed to construct an Upper Decant Pond to collect decant water from the CDB Ponds 6-9 **(Attachments G** and **H**).

50. According to ROWD, the CDB pond Phase 2 construction is to comply with the construction standards provided in California Code of Regulations Title 27 (CCR T27) section 22490, as well as special requirements for surface impoundments provided in CCR T27 section 20375. Like Phase 1, the proposed system will be rated for the Title 27 section 22490 (h)(1)(C) Design Storm of 10-year, 24-hour storms (3.21 inches of precipitation); allow for 2 or more feet of freeboard; lined with at least two feet of compacted clay liner; and installed at a relative compaction of 90 percent with a permeability of $1x10^{-6}$ cm/sec or less. The location and the schematic drawing of Phase 2 CDB Ponds are shown in **Attachments G** and **H**.

51. The impoundments shall be constructed and operated to prevent migration of wastes from the Unit to adjacent natural geologic materials, groundwater, or

surface water during disposal operations, closure, and the post-closure maintenance period in accordance with the criteria set forth in Title 27 for surface impoundments.

52. The Decant Pond has been designed to hold a capacity of approximately 6.8 million gallons and is also collecting storm water from its drainage area. The water from the Decant Pond is reclaimed and transferred into the Mill Pond for reuse in processing, or overflows to Pond J, depending on the available capacity in the Mill Pond.

53. ROWD included water balance calculations for existing and future impoundments. Existing and projected future inter-pond flows and water levels confirm that the CDB system has capacity for waste discharge and storm demands. Impoundment capacities and pump systems are sufficient to handle flows expected during operation through the dry and wet seasons of the year.

54. The construction of Phase 2 of CDB Ponds can proceed only after all applicable technical design drawings and specifications and construction quality assurance plans have been reviewed and approved by the Central Valley Water Board.

Tailings Pond L

55. The Discharger is proposing to use a part of mining pit South Pit/Pond L (hereafter referred to as Pond L) for discharge of clay tailings as a backup when the CDB Ponds are not available. This Order permits the use of Pond L for discharge of clay tailings after their pre-treatment either in PCP, HMC, or in thickener plant because:

    a. The hydraulic conductivity testing of the South Pit/Pond L has consistently yielded low permeability values in the range of $10^{-7}$ to $10^{-8}$cm/sec for the Ione Formation lining the bottom of the pit.

    b. Characterization of clay slurry discharged from PCP, HMC, and paste plant described in the Waste Classification & Permitting section shows concentrations of CAM-17 metals in the discharge which are either below the detection limit or in concentrations below water quality objectives.

**Reclamation, Post-Closure Maintenance & Financial Assurances**

56. Title 27 section 22212 requires the Discharger to establish financial assurances for post-closure maintenance for 30 years. Surface mining operations at the Facility are subject to the California Surface Mining and Reclamation Act (SMARA, 1975). For the purposes of SMARA, Amador County is the Local Enforcement Agency (LEA). The Discharger's Reclamation Plan (RP77-5) and

related financial assurance for the cost of reclaiming all disturbed areas have been approved by LEA. The Reclamation Plan is designed to minimize water degradation, control soil erosion and other adverse effects from the surface mining operation and return the mined land to a usable condition.

57. Title 27 California Code of Regulations section 22510(c) requires the Regional Water Quality Control Boards to issue WDRs which incorporate the relevant provisions of an approved mining and reclamation plan (see SMARA, section 2770 et seq.), prescribe additional conditions as necessary to prevent water quality degradation, and ensure that there will be no significant increase in the concentration of indicator parameters or waste constituents in ground or surface water, unless requirements are waived.

58. Order R5-2019-0038 allowed the Discharger to utilize Financial Assurances established in compliance with SMARA regulations to cover a part of their Financial Assurance requirement, and to establish a separate second Financial Assurance mechanism with the Central Valley Water Quality Control as a beneficiary to fulfill any remaining requirements. This order continues this approach. The Discharger's request to name Central Valley Water Board as a beneficiary to the Irrevocable Standby Letter of Credit was approved by LEA and formalized by an Amendment on 9 May 2017. The 2024 SMARA Financial Assurance Cost Estimate was **$1,579,256** which is more than the amount of **$1,412,354.83** of the existing surety bond**.** Every time the Discharger increases the value of the existing surety bond per LEA instructions, the Discharger shall provide a copy to Central Valley Water Board within 15 days of LEA approval.

59. The Discharger's Reclamation Plan (RP77-5) may not be equivalent to the Closure and Post-Closure Maintenance Plan required by Title 27 section 22510(b) therefore the LEA financial assurances may not be equivalent to the Closure and Post-Closure Funding required by Title 27 section 22510(f). After the construction of Phase 2 CDB Ponds, the Discharger shall update Closure and Post-Closure Maintenance Plan to become the operative document for post-closure maintenance of existing and future mining units for the entire post-closure maintenance period of at least 30 years, and until it is demonstrated that the Facility no longer poses a threat to the public health and safety and the environment. (See Title 27, §§ 20950(a)(1), 21180(a).)

60. If closure and post-closure cost estimates in the updated Closure and Posto-closure Maintenance Plan exceed reclamation plan estimates, the Discharger shall either increase the amount of their reclamation bond, or establish a separate financial instrument with Central Valley Water Board as a beneficiary to fulfill potential requirements in excess of the existing surety bond.

## California Environmental Quality Act

61. The issuance of this Order, which prescribes requirements and monitoring of waste discharges at an **existing facility**, with negligible or no expansion of its existing use, is exempt from the procedural requirements of the California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq., pursuant to California Code of Regulations, title 14, section 15301 (CEQA Guidelines). The discharges authorized under this Order are substantially within parameters established under prior WDRs.

## Other Regulatory Matters

62. 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.*

63. 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 described in the findings of Surface and Groundwater Conditions (Water Code, § 13241 et seq.).

64. 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.

65. Consistent with Title 27, this Order requires the Discharger to maintain the Facility to contain mining waste within MUs, thereby preventing degradation of water quality. To the extent that there are releases from Facility MUs, 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*.

66. For the purposes of California Code of Regulations, title 23 (Title 23), section 2200, the Facility has a threat-complexity rating of **3-B**, where:

    a. Threat Category "3" reflects waste discharges that could either degrade water quality without violating water quality objectives, or cause beneficial use impairments that are minor relative to Categories 1 and 2; and

    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

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

> [T]he 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.

68. 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 and State Water Board Resolution 93-62. Additionally, the burdens associated with such reports are reasonable relative to the need for their submission.

## Procedural Matters

69. 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 provided for herein.

**FINDINGS**

70. 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.)

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

72. 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 Dischargers shall comply with all Standard Prohibitions (SPRRs, § V), which are incorporated herein, as well as the following.

1. The discharge of ‘hazardous waste’, ‘designated waste’, ‘Group A’ and ‘Group B’ mining waste is prohibited unless otherwise specified in this Order. For the purposes of this Order, the terms ‘hazardous waste’, designated waste’, ’Group A’ and ‘Group B’ mining waste are as defined in Title 23, § 2510 et seq. and Division 2 of Title 27 of the CCR.

2. The discharge of solid waste or liquid waste to surface waters, surface water drainage courses, or groundwater is prohibited unless otherwise specified in this Order.

3. The discharge of any waste other than mining waste generated at the Facility is prohibited. Prohibited wastes may include, but are not limited to, oil, grease, solvents, other petroleum products, and toxic and hazardous materials.

4. The discharge of wastes outside of a waste management unit or portions of a waste management unit specifically designed for their containment is prohibited.

5. The discharge of mining waste at the Facility from sources other than the US Mine Corporation Ione Plant is prohibited.

6. No discharge of mining waste into the Phase 2 tailing impoundments CDB-3, CDB-4, CDB-5, CDB-6, CDB-7, CDB-8, and CDB-9 shall take place until the Construction Quality Assurance Report is approved by Central Valley Water Board staff.

7. The discharge of solid waste or liquid waste to surface waters, surface water drainage courses, or groundwater 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 §13050.

2. Clay tailings shall only be discharged into and shall be confined to tailings impoundments specifically designed for their containment. In addition to CDB Ponds, clay tailings may be treated and discharged into the part of Pond L designed for their discharge.

3. Decant water shall be reclaimed from the Decant Pond and re-used in mining and processing.

4. The discharge of decant water outside the Decant Pond, Mill Pond, or Pond J is prohibited.

5. The Discharger may replace some or all of raw Amador Water Agency water needed to supplement onsite processing water with the tertiary recycled water supplied by the same agency.

## C. Facility Specifications

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

1. The Discharger shall maintain site security throughout the closure and post-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.

2. 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.

3. Annually, prior to the anticipated rainy season but no later than **1 November**, 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.

4. The Discharger shall immediately notify Central Valley Water Board staff by telephone and email and immediately take measures to regain surface impoundment capacity when freeboard levels are equal to or less than 2 feet plus the amount needed to hold the 10-year 24-hr storm to the nearest tenth of a foot.

5. The Discharger shall record onsite rainfall to track the magnitude of storm events and shall record surface impoundment freeboard levels in accordance with the attached monitoring and reporting program.

## D. Unit Construction Specifications

The Discharger shall comply with all Standard Construction Specifications listed in Section VII. of the SPRRs dated February 2009.

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 California Code of Regulations Title 27 section 22490(h)(1)(C).

2. Mining units shall be designed, constructed and operated to prevent inundation or washout due to flooding events with a 100-year return period.

3. The existing and future clay tailings impoundments CDB-1 to CDB-5 and the Decant Pond shall have capacity for clay slurry flows to the impoundment, seasonal precipitation, and one 10-year 24-hour design storm, and maintain at least 2 feet of freeboard.

4. The surface impoundments shall be designed, constructed and maintained to prevent scouring and/or erosion of the compacted clay liners and other containment features at points of discharge to the tailings ponds and by wave action at the water line.

5. After clay removal from CDB ponds, the Discharger shall inspect clay liner for integrity and make any repairs to the liner to provide two feet of clay compacted to 90 percent compaction with hydraulic permeability less than $10^{-6}$ cm/s liner before the discharge of clay tailings into the pond.

6. The Discharger shall submit a design report including plans, specifications, and a construction quality assurance plan for review and approval prior to construction any new mining units.

7. The Discharger shall submit a final construction quality assurance report documenting construction of any new mining units for review and approval prior to discharging wastes to the mining unit.

## E. Closure & Post-Closure Maintenance Specifications

Except as otherwise directed below, the Dischargers shall comply with all Post-Closure Specifications (SPRRs, §XI. D) and closure-related Standard Construction Specifications (SPRRs, §XI. F), as well as the following with respect to closure.

1. As detailed in H. Provisions 11., the Discharger shall submit an amended Closure and Post-Closure Maintenance Plan (CPMP) to include closure of the proposed CDB-3 to -5 clay drying beds. The CPMP shall be prepared by a California-registered civil engineer or certified engineering geologist, and contain all applicable information required in Title 27 section 21769. The plan shall include updated cost of closure and post-closure monitoring and maintenance, and may require the establishment of an additional financial assurance mechanism in excess of the SMARA Irrevocable Standby Letter of Credit**.**

## F. Financial Assurances

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

1. If applicable, the Discharger shall establish an irrevocable fund for closure and post- closure maintenance to ensure closure and post-closure maintenance in accordance with an approved amended closure and post-closure maintenance plan [Title 27 §22510(f)]. This Order continues to allow the Discharger to utilize Financial Assurance mechanism established in compliance with SMARA regulations to cover a part of their Financial Assurance requirement, and to establish, if applicable, a separate second financial mechanism to fulfill any remaining requirements. Alternately, in lieu of the establishment of a second financial mechanism, the Discharger may increase the amount of their Financial Assurance mechanism established in compliance with SMARA regulations to include any closure and post-closure costs and ensure that the Central Valley Water Board continues to be named beneficiary.

2. By **30 October** of each year, the Discharger shall submit a report to the Central Valley Water Board that reports the balance closure and post-closure funds or the amounts of financial instruments and the adjustments to account for inflation in accordance with Title 27 section 22236.

## G. Monitoring Requirements

Except as otherwise directed below, the Dischargers shall comply with all applicable Provisions for Monitoring (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 Monitoring and Reporting Program R5-2025-0042 and any subsequent revisions thereto (the operative MRP).

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

3. For all MUs, the Discharger shall implement a groundwater and surface water detection monitoring program (DMP) in accordance the operative MRP and Title 27, § 20385, 20415 and 20420.

4. For each monitoring event, the Discharger shall determine whether the mining unit is in compliance with the Water Quality Protection Standard using procedures specified in the operative MRP and the Standard Monitoring Specifications.

5. For each MU subject to corrective action, the Discharger shall implement a corrective action monitoring program (CAMP) in accordance with Title 27, § 20385, 20415 and 20430, and Section I of the SPRRs.

## H. Reporting Requirements

Except as otherwise directed below, the Dischargers shall comply with all applicable Provisions for Reporting (SPRRs, § VII), as well as the following:

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) Geotracker ID T10000012601. After upload, 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 & Mining/Staff Name |
| **Report Title:** | [Enter Report Title] |
| **GeoTracker Upload ID:** | [Number] |
| **Facility:** | US Mine Co. Ione Plant] |
| **County:** | Amador County |
| **CIWQS Place ID:** | 788029 |

3. All technical reports submitted under this Order shall be prepared by, or under the direct supervision of, a California-licensed civil engineer, Certified Engineering Geologist, or a Registered Geologist where allowed by law (See Business and Professions Code § 7800 – 7887)geologist,. For the purposes of this section, a "technical report" is a report incorporating the application of scientific or engineering principles.

**REQUIREMENTS**

## I. Time Schedule

The Discharger shall complete the following tasks in accordance with the specified deadlines:

Table 3—**Time Schedule**

| Item No. | Category | Task | Deadline |
|---|---|---|---|
| 1. | Construction | Submit technical construction and design plans and construction quality assurance plan for review and approval (see D. Unit Construction Specifications and Section VII. of SPRRS. | 90 Days prior to construction. |
| 2. | Construction | Submit construction quality assurance report(s) for review and approval upon completion demonstrating construction was in accordance with approved construction plans and Section VII. of the SPRRs. | 60 Days Prior to Proposed Discharge to Unit(s) |
| 3. | Final Closure | Submit an updated Final Closure and Post-Closure Monitoring Maintenance Plan including closure and post-closure cost estimates in accordance with Section E of this Order and Section XI. of the SPRRs. | 90 Days from completion of Phase II CDB Ponds |
| 4. | Financial Assurance Mechanism | If applicable, submit a separate financial assurance mechanism providing coverage for closure and post-closure costs exceeding SMARA financial instrument, or a copy of SMARA assurance instrument increase rider. | 60 days after approval of updated Final CPMP |
| 5. | Financial Assurance Mechanism | Submit a copy of SMARA financial assurance instrument increase riders. | 15 days after approval by LEA |

## J. Other Provisions

1. The Discharger shall provide proof to the Central Valley Water Board **within sixty days after completing final closure** that the deed to the facility property, or some other instrument that is normally examined during title search, has been modified to include, in perpetuity, a notation to any potential purchaser of the property stating that:

    a. The parcel has been used for disposal of wastes.

    b. Land use options for the parcel are restricted in accordance with post-closure land uses set forth in any post-closure plan (if applicable).

    c. If the Discharger defaults on carrying out either any corrective action needed to address a release, groundwater monitoring, or any post-closure maintenance, then the responsibility for carrying out such work falls to the property owner.

2. The Discharger shall maintain at the Facility copies of this Order (including all attachments), the operative Monitoring & Reporting Program (i.e., MRP R5-2025-0042 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.

3. 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—MINING UNITS AND MONITORING **POINTS**
Attachment C—CLAY AND HEAVY MINERAL SEPARATION **AREAS**
Attachment D—SAND SEPARATION **AREA**
Attachment E—GROUNDWATER **CONDITIONS**
Attachment F—PH CONDITIONS
Attachment G—PHASE 2 CLAY DRYING POND **LOCATION**
Attachment H—CONCEPTUAL DESIGN OF PHASE 2 CLAY DRYING BED **PONDS**

Standard Provisions and Reporting Requirements for Non-Hazardous Discharges of Waste Regulated under Subtitle D and/or Title 27, December 2015 Edition (SPRRs or Standard Provisions)

Information Sheet

Monitoring and Reporting Program R5-2025-0042 (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.

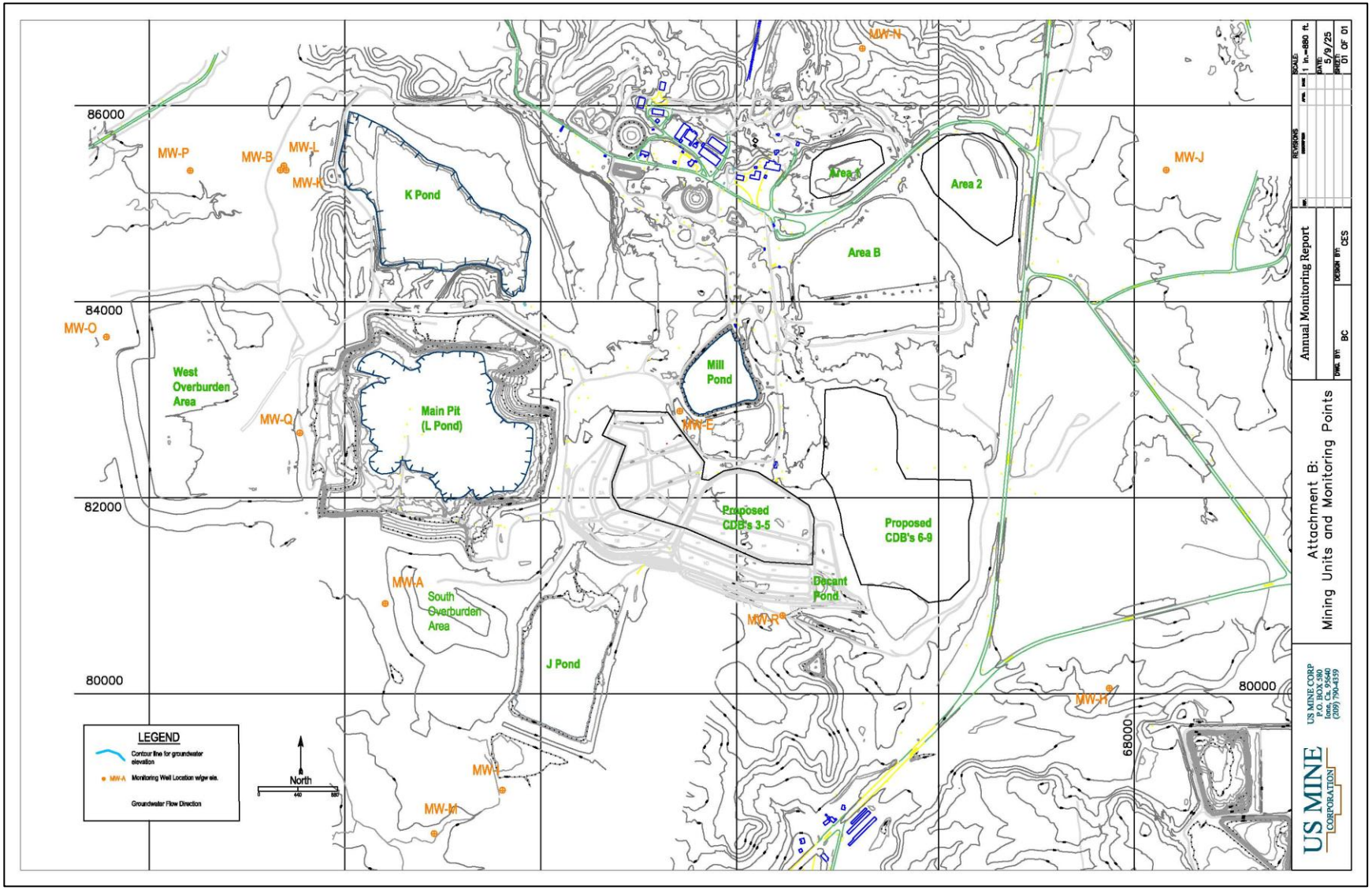
## ADMINISTRATIVE REVIEW

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

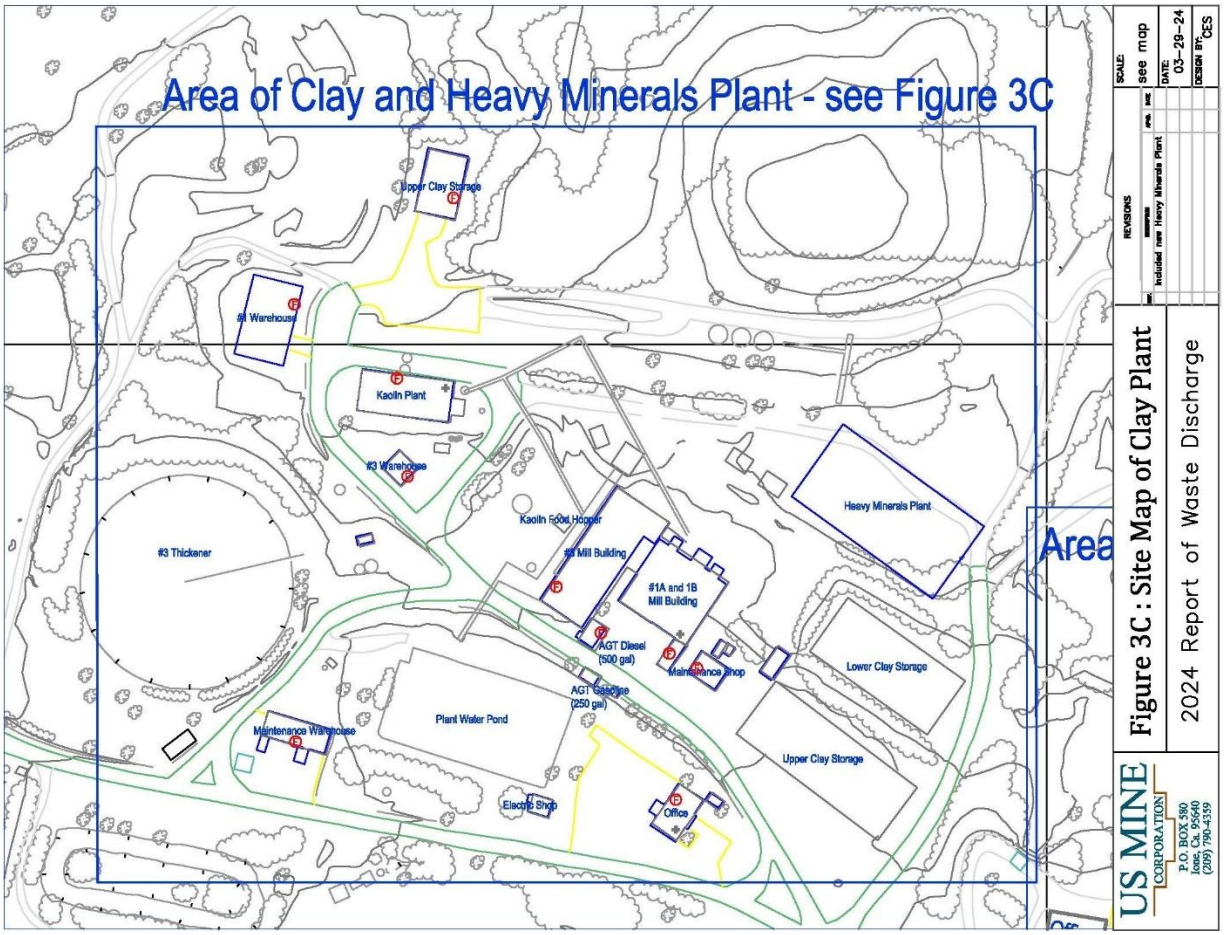

Attachment A: Facility Location. Drawing Reference: 2024 ROWD.

## ATTACHMENT B—MINING UNITS AND MONITORING POINTS




Attachment B: Mining Units and Monitoring Points. Drawing Reference: 2024 Annual Monitoring Report.

# ATTACHMENT C—CLAY AND HEAVY MINERAL SEPARATION AREAS




Attachment C: Clay and Heavy Mineral Processing Infrastructure. Drawing Reference: 2024 ROWD.

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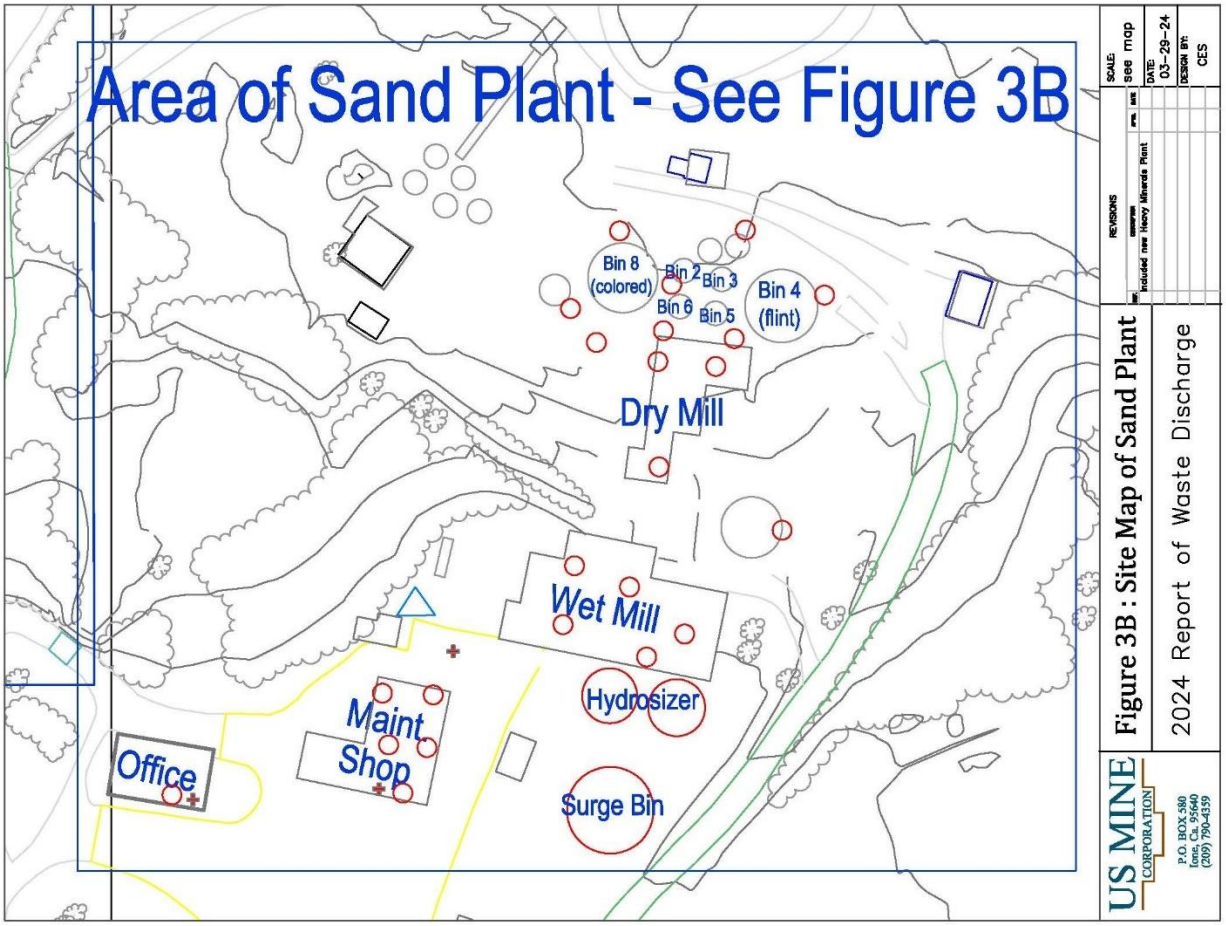
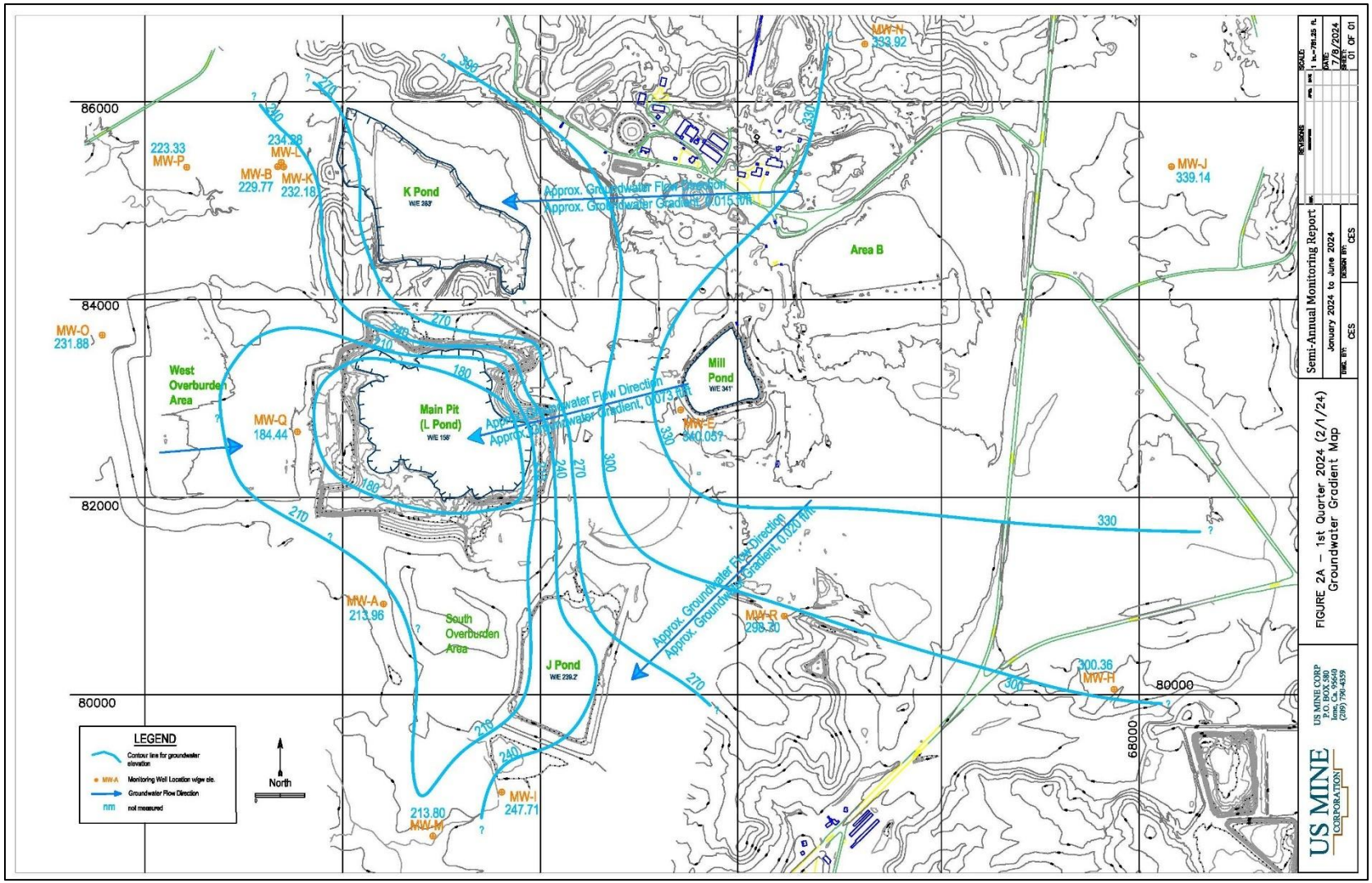
## ATTACHMENT D—SAND SEPARATION AREA



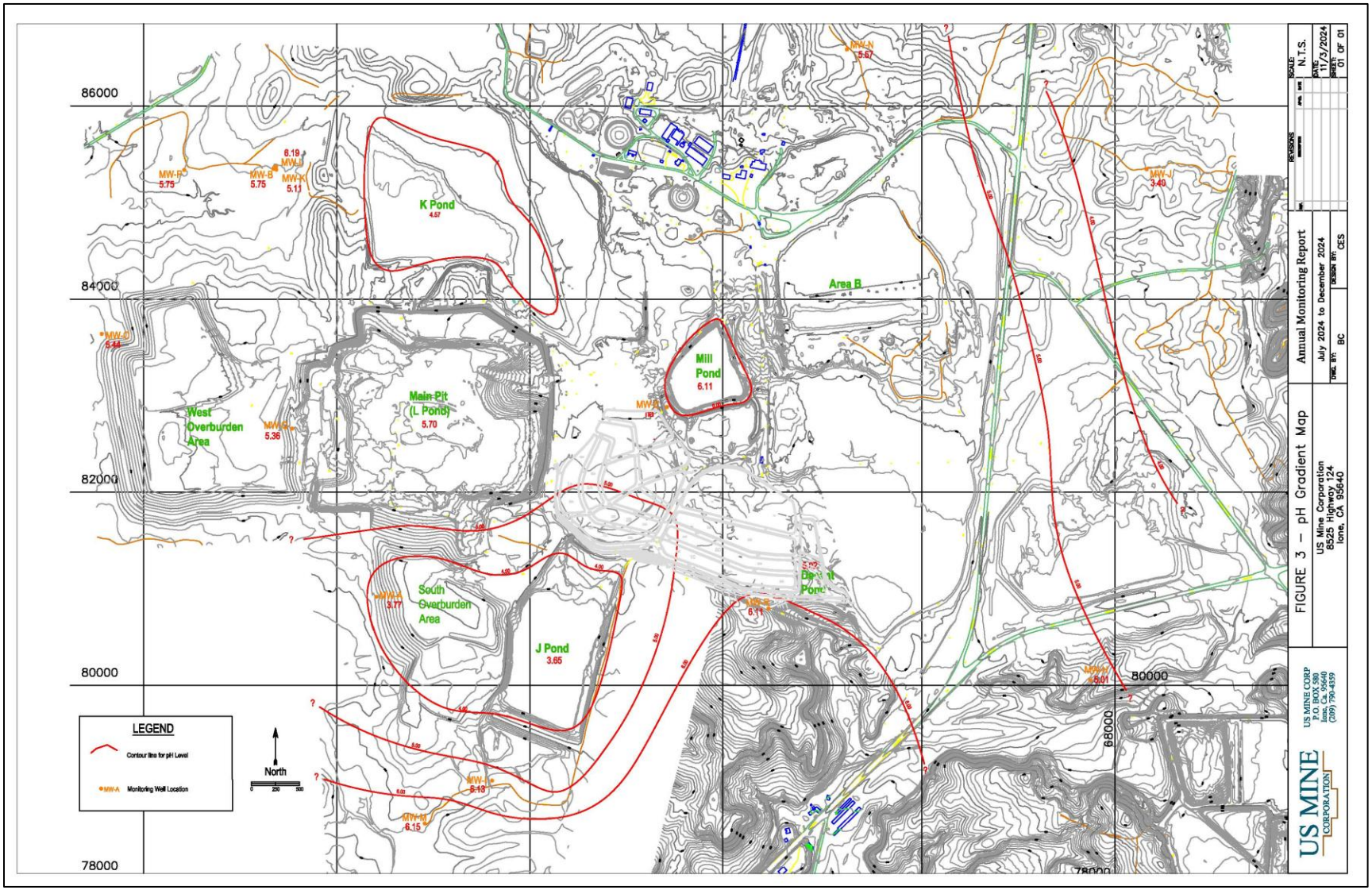

Attachment D: Sand separation infrastructure. Drawing Reference: 2024 ROWD.

# ATTACHMENT E—GROUNDWATER CONDITIONS



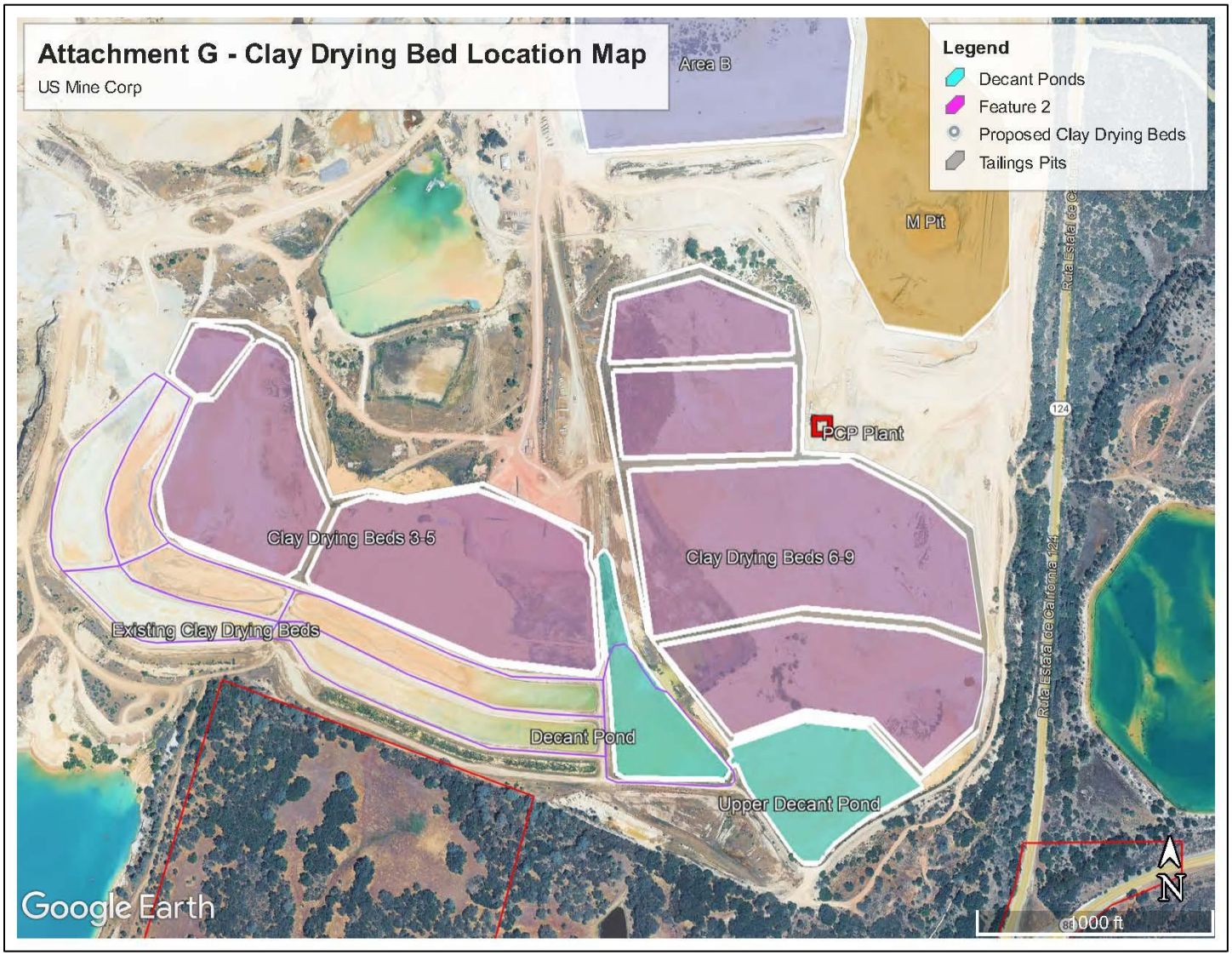

Attachment E: Groundwater contours and direction in September 2024. Drawing source: 2024 Annual Monitoring Report.

# ATTACHMENT F—PH CONDITIONS



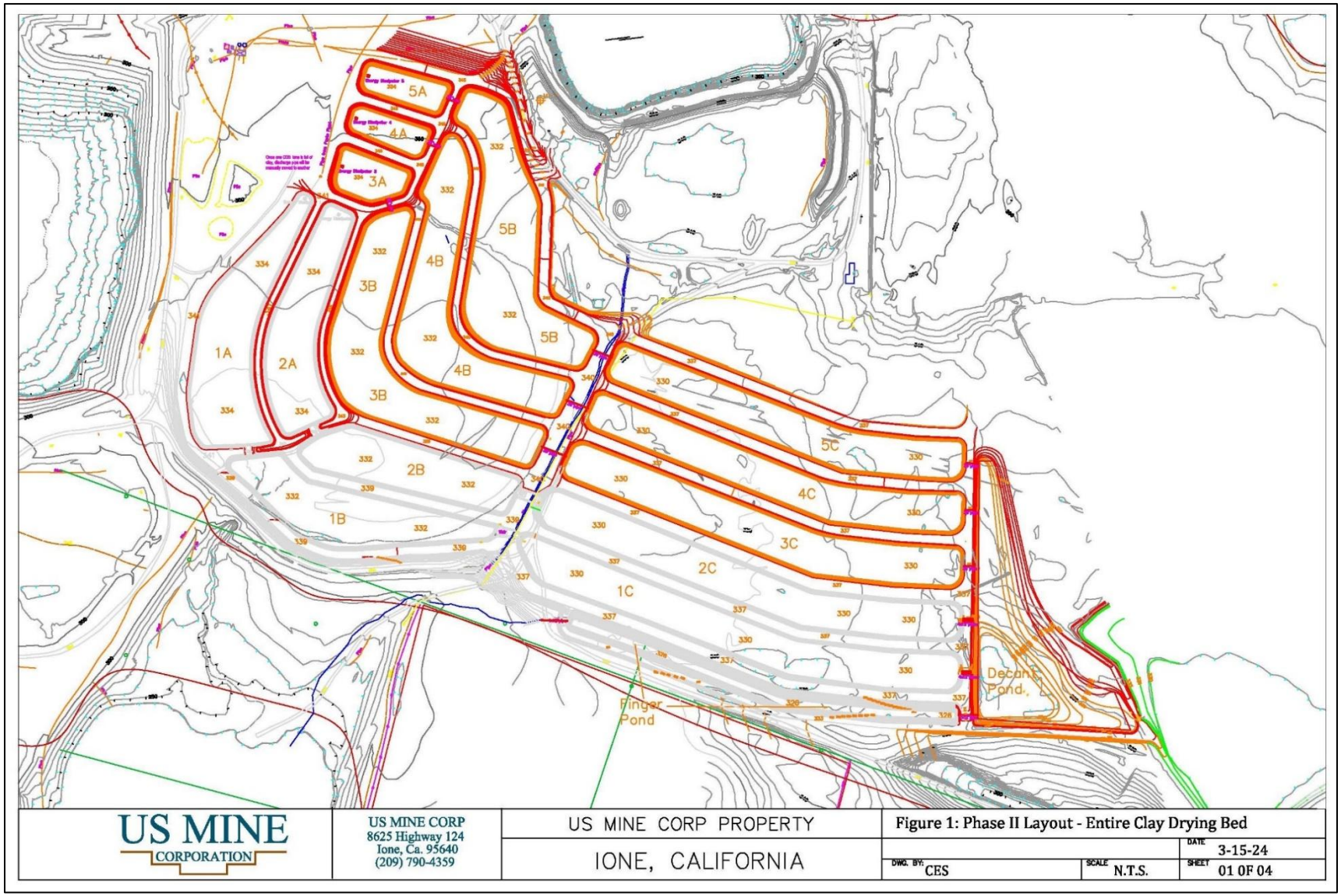

Attachment F: Groundwater and pond water pH conditions in September 2024: Drawing Reference: 2024 Annual Monitoring Report.

## ATTACHMENT G—PHASE 2 CLAY DRYING POND LOCATION



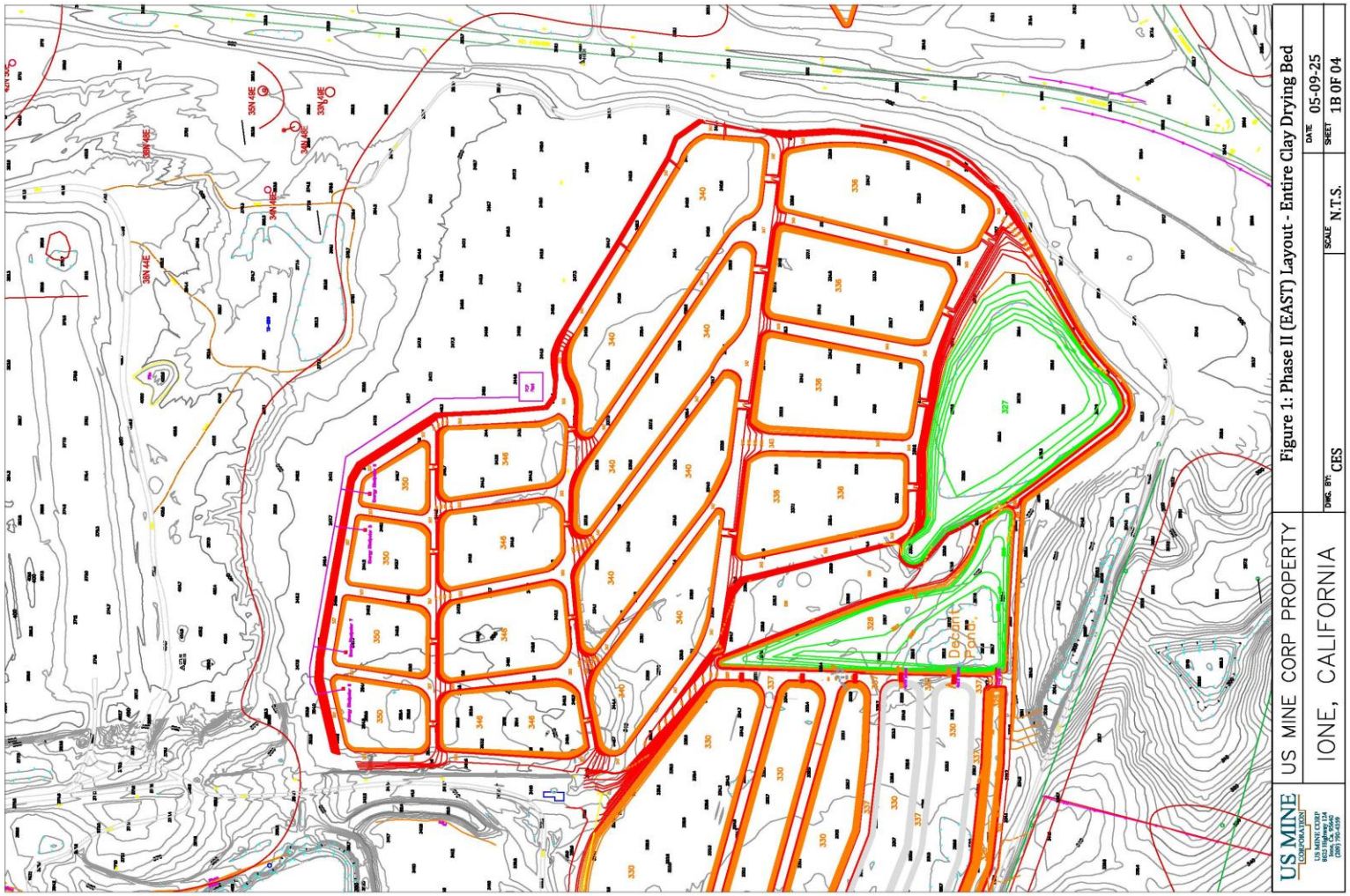

Attachment G: The location of proposed Phase II Clay Drying Ponds. Drawing Reference: 2024 ROWD.

## ATTACHMENT H—CONCEPTUAL DESIGN OF PHASE 2 CLAY DRYING BED PONDS




Attachment H: Conceptual design drawing of proposedPhase 2 Clay Drying Bed CDB Ponds 3-5. Drawing Reference: 2024 ROWD.

## ATTACHMENT H CONTINUED—C CONCEPTUAL DESIGN OF PHASE 2 CLAY DRYING BED PONDS




Attachment I continued: Conceptual design drawing of proposedPhase II Clay Drying Bed CDB Ponds 6-9. Drawing Reference: Response to Comments.

# 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)]. 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 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 the 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 MU'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. MU 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 side gradient 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 25

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

WASTE DISCHARGE REQUIREMENTS ORDER R5-2025-0042
FOR
US MINE CORPORATION
US MINE CORPORATION IONE PLANT
AMADOR COUNTY

# INFORMATION SHEET

US Mine Corporation (Discharger or US Mine) owns and operates the US Mine Corporation Ione Plant about one mile south of Ione in Amador County. The Facility encompasses approximately 3,570 -acre property of which 402 acres have been mined, constructed, or reclaimed. Mining activities are currently confined to the portion of the property located south of Ione, west of California Highway 124, and north of California Highway 88. The property is owned by the Discharger and comprised of Assessor's Parcel Numbers (APNs) 05-130-012, -033, -034, -051; 05-150-007, -008; 05-160-003, -004, -009, -010, -012, -014, -015; 05-190-021.

US Mine is mining Ione Formation and separating sand, clay, and heavy minerals into saleable products. The Facility active mining units consist of mining pits, current and future clay settling ponds, former mining pit Pond L of which a part is being repurposed for discharge of thickened clay tailings if needed, and several process water surface impoundments.

Pursuant to California Code of Regulations Title 27 (Title 27) this Waste Discharge Requirements (WDR) revision of Order R5-2010-0038 includes the following changes to the Discharger's mining, processing, and waste discharge processes:

- The inclusion of the new pre-concentration plant (PCP) and heavy minerals concentration (HMC) facility to the processing circuit;
- The proposal for construction of Phase 2 of clay recovery CDB pond system (CDB Ponds 3-9 and Upper Decant Pond);
- The reclassification of 50 acres of former mining pit Pond L to an active tailings pond.

The Order provides discharge requirements and specifications for these processes at the Facility and is accompanied by Monitoring and Reporting Program R5-2025-0042.