CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

MEETING OF SEPTEMBER 16-17, 2015
BARSTOW, CALIFORNIA

ITEM: **7**

SUBJECT: **REVISED WASTE DISCHARGE REQUIREMENTS - BOARD ORDER NO. R6V-2015-PROPOSED FOR U.S. BORAX, INC., RIO TINTO MINERALS, CLEAN ENERGY FUELS COMPANY, BORON FACILITY, KERN COUNTY**

CHRONOLOGY:

June 24, 1976	Board adopted permit for the Boron Mine (Board Order No. 6-76-70)
June 14, 2006	Revised Waste Discharge Requirements – Adopted (Board Order No. R6V-2006-0025) and two amendments in 2013 and 2015 allowed facility expansions and retrofits.

ISSUE: Should the Water Board adopt Revised Waste Discharge Requirements to allow construction of Boric Acid Pond (BAP) 7, allow construction of Reclamation Pond (R-Pond) 7, and retrofit existing R-Ponds 1-6 to be compliant with the requirements of California Code of Regulations, title 27, at the Boron Mine?

DISCUSSION: U.S. Borax, Inc. (Discharger) owns and operates a borate mine, a sodium borate refinery, a boric acid plant, a spray dry process, and a zinc borate process. The borate mine, sodium borate refinery, boric acid plant, surface impoundments used for waste disposal, and ten inactive Waste Management Units are referred to as the Facility. The borate mine consists of an open-pit. The Facility is located in, Kern County.

Boric Acid Ponds (BAPs) 1 through 5 are approaching full capacity and BAP 6 is being dewatered to allow for repairs to be made to the liner system. Board Order No. R6V-2006-0025A2 allowed expansion of BAPs 1-5. The Discharger is proposing to construct BAP 7 for additional capacity of boric acid process waste discharges. Reclamation Ponds (R-Ponds) 1-6 are currently operating under an exemption from the Toxic Pits Cleanup Act (TPCA). The Discharger is

proposing to retrofit the existing R-Ponds 1-6 to discontinue the exemption from TPCA and construct a liner system in compliance with the requirements of California Code of Regulations, title 27. In order to accomplish this, the Discharger is also proposing to construct an additional R-Pond 7 so that R-Ponds 1-6 can be systematically taken out of service and the discharge can be routed to the proposed R-Pond 7. The WDRs are being revised to allow the construction of new BAP 7, new R-Pond 7, and retrofit existing R-Ponds 1-6. Water Board staff have evaluated the design and quality control plans and conclude the proposed expansion is protective of water quality.

Water Board staff has solicited comments from the Discharger and interested parties. Minor comments were received and addressed.

RECOMMENDATION: Adoption of Order as proposed.

ENCLOSURE	ITEM	BATE NUMBER
1	Board Order No. R6V-2015-PROP	**7-5**

ENCLOSURE 1

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

BOARD ORDER NO. R6V-2015-PROPOSED
WDID NO. 6B152004001

REVISED WASTE DISCHARGE REQUIREMENTS
FOR

U.S. BORAX, INC., RIO TINTO MINERALS, CLEAN ENERGY FUELS COMPANY, BORON FACILITY

_____Kern County_____

The California Regional Water Quality Control Board, Lahontan Region hereafter (Water Board), finds:

1. Discharger

U.S. Borax, Inc., a subsidiary of Rio Tinto Minerals, is the owner and operator of the U.S. Borax Mine. Mojave Cogeneration Company (MCC) was an independent energy producer operating a cogeneration plant that produced softener effluent and cooling tower blowdown that discharged to the waste management units within the US. Borax Mine facility. MCC has been decommissioned and is no longer discharging effluent and cooling tower blowdown. Clean Energy Fuels Company (CEFC) is an independent clean energy producer that operates a liquid natural gas plant which produces a cooling tower blowdown. U.S. Borax, Inc., Rio Tinto Minerals, and CEFC are hereinafter collectively referred to as the "Discharger." MCC is no longer considered a Discharger. On April 1, 2015, U.S. Borax, Inc. submitted a revised Report of Waste Discharge (RWD) proposing to construct and operate additional surface impoundments at the Boron Facility.

2. Reason for Action

Revised Waste Discharge Requirements (WDRs) are being issued for the continued operation of the existing waste management units (WMUs), the construction and operation of two additional surface impoundments, and the retrofit and operation of six existing ponds for reclassification as Group A surface impoundments pursuant to California Code of Regulations (CCR), title 27, section 22490.

U.S. Borax, Inc. is proposing to construct and operate one additional surface impoundment known as Boric Acid Pond (BAP) 7, one additional surface impoundment known as Reclamation Pond (R-Pond) 7, and retrofit six existing ponds known as R-Ponds 1-6 into surface impoundments compliant with the requirements of CCR, title 27. R-Ponds 1-6 have been operating pursuant to an exemption from the Toxic Pits Cleanup Act. However, over time the saturation

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percentage of the existing clay liners has incrementally increased. To be protective of water quality, this Order requires the Discharger to install a liner system for continued operation of R-Ponds 1-6, or discontinue use when the clay liner reaches 75 percent saturation. Construction and operation of the proposed surface impoundments allows additional discharge capacity while minimizing lateral environmental footprint. This Order also requires monitoring for leaks from the proposed surface impoundments and monitoring of soil moisture as a supplemental indicator of compliance with these WDRs and protection of water quality. WDRs are being revised to incorporate the additional surface impoundments and as part of an effort to periodically update WDRs in accordance with current regulations.

3. Discharge and Facility Description

U.S. Borax, Inc. owns and operates a borate mine, a sodium borate refinery and a boric acid plant three miles northwest of Boron, as shown in Attachment A of this Order. The borate mine, sodium borate refinery, boric acid plant, surface impoundments, and the existing inactive WMUs described below in Finding 10 are referred to as the Facility in this Order. The borate mine consists of an open-pit. The final mine pit is planned to reach two and one-half miles in diameter and 1,300 feet below ground surface (bgs). The sodium borate ore removed from the pit undergoes crushing, dissolving, and thickening which separates sodium borates from the gangue. Gangue is the insoluble material removed from the ore. The gangue material undergoes centrifugation/dewatering. The sodium borate undergoes crystallization, filtration/centrifugation, and drying in both the sodium borate refinery and the boric acid plant.

This Order regulates the discharge of the following mining, domestic and industrial wastes generated by or in connection with the above operations.

a. Process fluids, 6.0 million gallons per day (mgd), from the thickeners, crystallizers and sumps discharged to lined surface impoundments through steel and high density polyethylene (HDPE) piping and concrete-lined sumps and ditches.

b. Domestic wastewater, 0.027 mgd, from the plant and mine facilities discharged to unlined evaporation ponds.

c. Cooling tower blowdown, 0.200 mgd, generated by CEFC, accepted by U.S. Borax, Inc., and discharged to a surface impoundment or used for dust control.

d. Groundwater extracted during pump and treat operations discharged to lined surface impoundments.

e. Certain non-contact process effluents and Thickener No. 4 water used for dust control within the mine pit.

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The discharges to the gangue areas and on-site landfill area as cover soil are regulated under a separate Order (Board Order No. R6V-2010-0048).

4. Order History

On June 24, 1976, the Water Board adopted Board Order No. 6-76-70. Several revisions have been adopted since for expansions, updates, and closures of WMUs at the Facility. Most recently, amended WDRs, Board Order No. R6V-2006-0025A2 adopted February 11, 2015, allowed for the expansion of BAPs 1-5. This Order allows for the continued operation of BAP 1-6, and the construction of BAP 7.

Board Order No. 6-87-157 granted the first exemption from the requirements of the Toxic Pit Cleanup Act (TPCA). Several extensions to the TPCA exemption have been granted. Most recently, a 3-year TPCA exemption extension letter dated November 5, 2014, was signed by the Executive Officer allowing R-Ponds 1-6 to continue to operate until such time as the existing clay liners reach 75 percent (%) saturation. At that time, the R-Ponds must either be closed or retrofit to be compliant with the requirements of CCR, title 27. This Order allows for the construction, retrofit, and continued operation of R-Ponds 1-6, and the construction of R-Pond 7.

5. Site Geology

Geology beneath the Facility consists of the units described below.

a. Crystalline intrusive and metamorphic rocks form the basement rocks in the Boron area at a depth of 1,500 to 3,000 feet bgs.

b. The Lower Tropico Formation (FM) overlies the basement rocks and consists of coarse fluviatile rocks of arkosic composition up to 1,000 feet thick.

c. The Saddleback Basalt overlies the Lower Tropico FM and ranges from 20 to over 200 feet thick in a series of flows originating from numerous vents and fissures as well as from Saddleback Mountain.

d. The Upper Tropico FM overlies the Saddleback Basalt. The Upper Tropico FM contains the Kramer Beds, which consist of two lacustrine shale units up to 400 feet thick overlain by a water-bearing arkose unit that ranges from zero to 400 feet thick. The borax unit, mined and processed by the Discharger, lies between the two lacustrine shales.

e. Overlying the arkose unit of the Upper Tropico FM is Quaternary-age older and recent alluvium, which is 10 to 70 feet thick and covers most of the Boron region of the Mojave Desert.

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The major controlling structure in the strata beneath the Facility is the Western Borax Fault, which trends east-west across the southern boundary of the property. There are many branches of this fault present in the mine and surface impoundment areas. Vertical displacement of these faults is up to 400 feet. There are no known Holocene-age faults in or around the Facility.

6. Site Hydrogeology

Groundwater for local, domestic and commercial use is obtained from two distinct groundwater basins located north and southwest of the site in the Quaternary-aged older alluvium. Additional water is obtained from the Antelope Valley East Kern (AVEK) Water Agency. Groundwater beneath the surface impoundments at the site is found in the arkose member of the Kramer beds. Depth to water ranges from 155 to 210 feet bgs.

These water-bearing sediments are present in discontinuous, highly faulted blocks with wide variations in thickness and permeability. Transmissivity ranges from 2 to 364 gallons per day (gpd) per square foot and velocity from 0.4 to 91 feet per year. Three faults serve as major impediments, but do not completely restrict ground-water movement between fault blocks. Most monitoring wells in the area indicate confined conditions beneath the plant site. However, unconfined conditions occur in the vicinity of certain areas of the Facility, including Pond 6 and R-Ponds 1-7 (locations shown in Attachment B).

7. Site Surface Hydrology/Stormwater Runoff

No perennial surface water bodies occur on or within one mile of the site. The only surface flow is from stormwater runoff. Stormwater runoff from the site is collected in on-site flood control catchments (FCCs). These FCCs are shown in Attachment B. U.S. Borax retains all stormwater on site and is considered a zero discharge facility under the National Pollutant Discharge Elimination System industrial stormwater permit. The Discharger is proposing to relocate FCC 1 in order to construct the proposed R-Pond 7.

8. Groundwater Quality

Background groundwater quality beneath the site is highly variable. This variation is present both within specific monitoring wells and between different monitoring wells. Data from several wells indicate the average concentrations for arsenic range from 0.024 milligrams per liter (mg/L) to 0.14 mg/L; boron ranges from 0.9 mg/L to 400 mg/L; and total dissolved solids (TDS) range from 447 mg/L to 4,000 mg/L. Faults partially isolate several water bearing zones beneath the site. Differences in groundwater characteristics are caused by variations in the composition of soil and rock units in the aquifers beneath the site.

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Impacts to groundwater have occurred at the site. An improper seal of an exploratory shaft located beneath Former Pond 1 (shown in Attachment B) resulted in a release of processing fluids. Wastewater high in arsenic and TDS migrated into the vadose zone and groundwater. The affected groundwater is being remediated with a groundwater extraction system.

9. Waste Generating Processes

Wastewater is discharged to the surface impoundments shown on Attachment B or used for dust control as described in this Finding. Table 1 lists processes that are sources of wastewaters, approximate quantities generated, approximate effluent concentrations of certain constituents, and locations authorized for disposal or use of the wastewaters. These data are for the discharge of mining process wastewaters and for wastewater from CEFC that are regulated by this Order. The Facility's operations involve the use of chemical additives such as polymer dispersant, corrosion inhibitors, sulfuric acid, hydrochloric acid, hydrogen peroxide, hydrocarbons, ammonia, sodium hydroxide, sodium dithionite, and anti-scalants.

Table 1: Wastewater Sources, Approximate Quantities, Approximate Effluent Concentrations and Locations of Disposal or Use

Authorized Wastewater Sources	Approximate Quantity Generated	Approximate Effluent Concentrations	Location of disposal or Use
Sodium Borate Refinery, Sump 5 and Sump 15 Collection Wastewaters	3.0 mgd	As 78 mg/L B 7,500 mg/L	R-Ponds 1-7
Boric Acid Refinery	3.0 mgd	As 1-2 mg/L B 9,500 mg/L	BAPs 1-7
CEFC Cooling Tower Blowdown Water, Thickener No. 4 Wastewater, Mine Pit Dewatering Water, Non-Contact Non-Hazardous Process Wastewater	0.200 mgd	TDS 3,680 mg/L Cl 1000 mg/L Na 932 mg/L As 0.692 mg/L pH 7-10	R-Ponds 1-7, unpaved roadways, or mine final pit.
Domestic Wastewater	0.027 mgd		Domestic Wastewater Evaporation Ponds
Truck Wash and Laboratory Facilities	Small quantity not measured		R-Ponds 1-7

10. Waste Management Units

The Facility includes active and inactive surface impoundments designed for evaporation of water, collection of solids, and secondary recovery of sodium borates, as described in Table 2.

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Table 2: Classification of Waste Management Units

Waste Management Unit	Status	Classification
Former Ponds 1-5	Inactive	Group A
Former Ponds A-E (5 total)	Inactive	Group A
Pond 6	Active	Group A
R-Ponds 1-6	Active	Group A&B
R-Pond 7 (Proposed)	Active	Group A&B
BAPs 1-6	Active	Group A&B
BAP 7 (Proposed)	Active	Group A&B
Pit Ponds	Active	Group C
Domestic wastewater evaporation ponds		Unclassified
Final Mine Pit		Unclassified

Inactive Waste Management Units

Former Ponds 1-5 contain Group A solids, defined in CCR, title 27, section 22480, subdivision (b)(1), and evaporates from past discharges, but no longer receive waste discharges.

The Discharger has completed recovery of all borates from Former Ponds A-E. Former Ponds A-E have been filled with inert dry material and capped with compacted clay and shale; these ponds are being used as a drying pad for reprocessing borate tailings removed from R-Ponds 1-6, proposed R-Pond 7, and Former Ponds 1-5. Former Ponds A-E are equipped with a vadose zone monitoring system and are being used under the accepted closure plan.

R-Ponds

R-Ponds 1-6 contain, and proposed R-Pond 7 will contain, Group A and B mining waste, defined in CCR, title 27, section 22480, subdivision (b)(1) and (b)(2), respectively, from the sources described in Table 1. The R-Ponds also receive groundwater from the groundwater pump and treat operations at the Boron site, liquid from tailings in Former Pond 5, and stormwater runoff from Former Ponds 1, 2, 3, and Former Ponds A-E.

R-Ponds 1-6 were constructed with a compacted 15-inch-thick clay liner with a permeability of 1.9 $x10^{-9}$ centimeters per second (cm/sec). Subdrain systems installed below the clay liner of each pond are connected to leachate collection sumps. The existing structure is proposed to remain in place during retrofit activities.

As part of retrofit activities, the Discharger is proposing to construct a new surface impoundment, R-Pond 7, to contain Group A and B discharges while the remaining R-Ponds are systematically taken out of service for retrofit. The liner system of the proposed surface impoundment is proposed to be constructed in ascending order as follows:

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a. Compacted subgrade below the bottom liner, which is moisture conditioned and compacted to 90% of the maximum dry density per American Society for Testing and Materials (ASTM) Standard D1557;

b. A geosynthetic clay liner (GCL);

c. A secondary geonet leakage collection layer;

d. A secondary 60-mil HDPE geomembrane liner;

e. A primary geonet leakage collection layer; and

f. A primary 60-mil HDPE geomembrane liner.

Following construction of proposed R-Pond 7, the Discharger will systematically remove R-Ponds 1-6 from service, discharge to R-Pond 7, and commence retrofit activities in the footprint of the existing R-Ponds. This will be done by first removing the sacrificial sandy material that is currently on the upper portion of the liner that functions as a protectant for the clay layer during harvesting operations. Following clay subgrade preparation, the R-Ponds will be constructed using the liner system described above. Each of the R-Ponds is proposed to be constructed using a dual drainage system, so that each R-Pond will have an eastern and western primary leachate collection and recovery system (LCRS) and secondary LCRS. Each LCRS and secondary LCRS will be comprised of gravel enveloped by geotextile with HDPE liner with dual access pipes. Each finished R-Pond will be approximately 22 acres with approximately 200-acre feet of capacity.

<u>Boric Acid Ponds</u>

BAPs 1-7 consist of six active surface impoundments and one proposed surface impoundment. The proposed BAP 7 will be constructed similar to the existing BAPs using liners and leachate collections systems. The BAPs contain Group B mining waste effluent discharged from the BAP plant, liquid extracted from tailings in Pond 6, and Group A mining waste transferred from R-Ponds 1-7. BAPs 1-7 are permitted to contain Group A and B mining waste effluent. BAPs 1-4 cover approximately 32 acres each, with approximately 900- to 960-acre feet of capacity. BAP 5 is approximately 40 acres, with 1,600-acre feet of capacity. BAP 6 is approximately 34 acres, with 1,100-acre feet of capacity.

Processed wastes will be distributed between R-Ponds 1-7 and BAPs 1-7 to maintain total arsenic concentrations below 500 parts per million (ppm). This will prevent the formation of concentrations of arsenic in the ponds that exceed the criteria for restricted hazardous waste under the Hazardous Waste Control Law, California Health and Safety Code, Division 20, Chapter 6.5. When the total arsenic concentration in any surface impoundment approaches 500 ppm, effluent will either

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be diluted with incoming low arsenic effluent or transferred to a BAP Pond where insoluble arsenic compounds precipitate when they come into contact with BAP effluent.

The Discharger is proposing to construct BAP 7 with a liner system of GCL, a geonet leakage collection layer, a 60-mil HDPE geomembrane liner, and dual LCRS, but with an additional sand layer on the top with piping to remove head buildup on top of the liner. This is proposed to alleviate the head buildup resulting from the settlement of entrained silts and clays (gangue material) in the effluent waste stream. The Discharger is proposing to construct a large footprint but shallow system as an interim design, with room for a vertical expansion similar to the expansion activities currently being conducted on BAPs 1-5. During final design evaluation, the Discharger may either propose to construct BAP 7 in the manner described above or in the same dual-liner system as the proposed R-Pond construction. Regardless of the liner system, BAP 7 is proposed to be constructed to approximately 46 acres in size with approximately 760-acre feet of capacity. A final design is required to be submitted as part of this Order.

Pit Ponds

The Pit Ponds are located within the final mine pit and receive mining wastewater from Thickener No. 4, groundwater from the mine pit dewatering wells, and non-contact non-hazardous process liquids. Because of the high background values of the evaporate deposits in the final mine pit, groundwater beneath the pit area is highly mineralized. The above listed wastes allowed for disposal in the Pit Pond are classified as Group C mining waste when disposed to the Pit Pond.

11. Dust Control Areas

Fresh water, CEFC cooling tower blowdown, FCC stormwater, and higher quality mine dewatering water (containing less than 15,000 mg/L TDS) are used for dust control throughout the Facility. Mine Pit Pond water can be used for dust control on unpaved roads throughout the Facility if the water quality meets higher quality mine dewatering water conditions shown below. Thickener No. 4 water and low quality mine dewatering water (containing greater than 15,000 mg/L TDS) are used for dust control within the final mine pit. The application of water to the mine pit haul roads and working mine faces will use the minimum amount of water to control fugitive dust. The concentrations of selected constituents in water used for dust control are described in Table 3.

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Table 3: Concentration of Selected Constituents in Water Used for Dust Control

Constituent	Mine Pit Dewatering Well Water	Fresh Water (North/South Basin Groundwater and AVEK)	CEFC Cooling Tower Blowdown (proposed)	FCC Stormwater
TDS (ppm)	High Quality <15,000 Low Quality >15,000	<1,200	<3,000	<15,000
Cl (ppm)	<600	<500	<800	<1,500
Na (ppm)	<5,000	<400	<700	<5,000
As (ppm)	<54	<0.05	<0.6	<7.0
pH	<9.5	<9.0	<8.0	<9.5

12. Mining Waste Classification

Mining wastes received at the authorized disposal sites or used for dust control are classified as follows under CCR, title 27, sections 20200 and 22480.

a. Former Ponds 1-5 contains solid materials left over after evaporation of mining process effluent. This solid material is classified as Group A Mining Waste and has been or will be harvested before the waste management units are closed.

b. CEFC cooling tower blow down water, Sump 5 wastewater, Sump 15 wastewater, poor-quality groundwater, liquid extracted from tailings in Former Ponds 1-5 that are dewatered prior to harvesting, and mining waste from the sodium borate refinery are classified as Group A mining waste.

c. Mining waste from the Boric Acid refinery is classified as Group B mining waste.

d. Thickener No. 4 wastewater, mine pit dewatering water, and non-contact non-hazardous process wastewater are classified as Group C mining wastes.

13. Waste Management Unit and Dust Control Area Classification

The various WMUs and dust control areas at the Facility are classified as follows based on the classification of the mining waste deposited in the WMU or used for dust control:

a. Former Ponds 1-5 are classified as Group A mining waste piles. The contents of these piles will be harvested at a later time before being closed. The waste piles have been graded to prevent collection of surface water runoff.

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b. Pond 6 is classified as Group A mining waste surface impoundment.

c. R-Ponds 1-7 are classified as Group A mining waste surface impoundments, and accept the mining waste described in Finding 12.b., as well as Group A mining waste from other waste management units.

d. BAPs 1-7 are classified as Group A mining waste surface impoundments, and accept the mining waste described in Finding 12.c., as well as Group A mining waste from other waste management units.

e. Pit Ponds and the final mine pit are classified as Group C mining discharge locations for the purpose of dust control and can accept the material described in Finding 12.d.

f. Domestic wastewater evaporation ponds receive no mining waste and are unclassified WMUs.

14. Engineered Alternative to Prescriptive Standard for the Surface Impoundments

CCR, title 27, includes prescriptive standards for waste management unit construction and allows for engineered alternatives to such standards. The Discharger has proposed engineered alternatives to the CCR, title 27 prescriptive standards for the construction of the Group A & B surface impoundments. CCR, title 27, section 20080, subdivision (b), requires that alternatives shall only be approved where the Discharger demonstrates that: (1) the construction of the prescriptive standard is not feasible because it is unreasonably and unnecessarily burdensome and will cost substantially more than alternatives, which meet the criteria, or is impractical and will not promote attainment of applicable performance standards; and (2) there is a specific engineered alternative that is consistent with the performance goal of the prescriptive standard and affords equivalent protection against water quality impairments.

The prescriptive standard for a Group A surface impoundment is a double-lined system, with the outer layer comprised of a clay liner and the inner layer a clay or synthetic liner, with a leachate collection and removal system, and a hydraulic conductivity of $1x10^{-7}$ cm/sec. The Discharger proposes an engineered alternative for construction of the surface impoundments because construction of a prescriptive clay liner is not feasible at this Facility. Repeated wetting and drying cycles are expected to desiccate and crack the prescriptive compacted clay liner during typical operational conditions. Therefore, cracking would compromise the clay liner and not achieve the performance standard. Furthermore, the existing R-Ponds 1-6 are constructed with a clay liner and are approaching saturation of the liner. Continued operation of these surface impoundments requires additional liners to be protective of water quality.

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The engineered alternative for surface impoundments R-Ponds 1-7, includes from bottom to top, the existing layer of clay at R-Ponds 1-6 (a compacted subgrade will be used as the base layer at proposed R-Pond 7), a geosynthetic clay liner, and two layers of geonet and 60-mil HDPE to facilitate collection of leachate into the leachate collection system. The geosynthetic clay liner is comprised of a powdered sodium bentonite mat with backing of geotextiles on both sides to provide a hydraulic conductivity of $5x10^{-9}$ cm/sec, which is two orders of magnitude more stringent than prescriptive liner requirements. Furthermore, the surface impoundments will each be equipped with an eastern and western LCRS, which are lined sumps installed below the lowest portion of the eastern and western portions of the surface impoundments. Beneath each LCRS, a secondary lined sump will be installed as a secondary leak detection system. These allow for detection of the vertical migration of liquids and removal of a water sample for testing.

The engineered alternative for the surface impoundment BAP 7 includes, at minimum, from bottom to top, a geosynthetic clay liner with one layer of geonet and one layer of 60-mil HDPE to facilitate collection of leachate into the LCRS. The geosynthetic clay liner is comprised of a powdered sodium bentonite mat with backing of geotextiles on both sides to provide a hydraulic conductivity of $5x10^{-9}$ cm/sec, which is two orders of magnitude more stringent than prescriptive liner requirements. Furthermore, the surface impoundment will be equipped with an eastern and western LCRS installed below the lowest portion of the eastern and western portions of the surface impoundment. The Discharger is also proposing to have an over liner layer of sand with a drain system to facilitate dewatering of the slurry discharged to BAP 7 that will reduce the amount of head on the liner and act as a preliminary liquid removal system, which will be pumped and discharged within the BAPs.

Water Board staff has evaluated these proposed alternatives and has determined that these alternatives meet the CCR, title 27 requirements, is consistent with the performance goal of the prescriptive standards, and affords equivalent protection against water quality impairment.

15. <u>Action Leakage Rate</u>

The Discharger has requested that the Water Board allow an action leakage rate (ALR) of liquid through the upper liner of the surface impoundments into the leachate collection sumps. The respective ALRs are based on proposed design dimensions and design specifications of the surface impoundments and on a 1992, United States Environmental Protection Agency (USEPA) guidance document, *Action Leakage Rates for Leak Detection Systems, Supplemental Background Document for the Final Double Liners and Leak Detection Systems Rule for Hazardous Waste Landfills, Waste Piles, and Surface Impoundments*. The numerical ALRs are shown in Monitoring and Reporting Program No. R6V-2015-PROP (MRP), and are made part of this Order. The MRP includes requirements for

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monitoring and reporting leakage rates from the LCRS and the type of response actions the Discharger must take if applicable ALRs are exceeded.

16. Water Quality Protection Standard

The Water Quality Protection Standard (WQPS) consists of monitoring parameters, constituents of concern (COCs), concentration limits, monitoring points, and the point of compliance. The WQPS applies over the active life of the Facility, closure period, and the compliance period. The COCs, monitoring points, and point of compliance for groundwater and unsaturated zone monitoring are described in the MRP, which is attached to and made part of this Order. This Order includes a time schedule for the Discharger to propose concentration limits for all constituents of concern at all monitoring points. (See Order Provision V.H.)

17. Statistical Methods

Statistical analyses of groundwater monitoring data are necessary for the earliest possible detection of measurably significant evidence of a release of waste from the Facility. CCR, title 27, section 20415, subdivision (e)(7), requires statistical data analyses to determine when there is “measurably significant” evidence of a release from the WMU. MRP No. R6V-2015-PROP includes methods for statistical analyses. The monitoring parameters listed in MRP No. R6V-2015-PROP are believed to be the best indicators of a release from the Facility.

18. Detection Monitoring Program

Pursuant to CCR, title 27, sections 20385,20420, and 22500 the Discharger has proposed a detection monitoring program (DMP) for the Facility. The DMP for the Facility consists of monitoring: (1) the LCRS, (2) the secondary sumps (where applicable), (3) vadoze zone monitoring probes, and (4) groundwater monitoring wells for the presence of monitoring parameters and constituents of concern from the Facility. The program to monitor the LCRS, the secondary sumps, and water-bearing media for evidence of a release, as well as the monitoring frequency, is specified in MRP No. R6V-2015-PROP.

19. Evaluation Monitoring Program

An Evaluation Monitoring Program (EMP) may be required, pursuant to CCR, title 27, sections 20385 and 20425, in order to evaluate evidence of a release if detection monitoring and verification procedures indicate evidence of a release. The Discharger must monitor groundwater and the unsaturated zone to evaluate changes in water quality and/or physical parameters that indicate a release from the Facility. If during evaluation monitoring the Discharger confirms measurably significant evidence of a release, then the Discharger must submit an engineering feasibility study for a corrective action program within 180 days of determination pursuant to CCR, title 27, section 20425, and MRP No. R6V-2015-PROP.

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Evaluation monitoring may be initiated without statistical verification if there is significant physical evidence of a release from a surface impoundment. Physical evidence can include time-series plots, vegetation loss, soil discoloration, etc., pursuant to CCR, title 27, section 20425.

20. Corrective Action Program

A corrective action program (CAP) to remediate released wastes from the Facility may be required pursuant to CCR, title 27, sections 20385 and 20430, if results of an EMP prove the presence of a measurably significant release from the Facility.

Former Ponds 1, 2, and 3, and Former Ponds A-E are in corrective action due to identified releases. The physical locations of former surface impoundments are shown on Attachment B. The Discharger is operating a groundwater extraction system with monitoring to ensure capture of the plume as part of the corrective action activities. The Discharger is directed in this Order to continue remedial action and conduct further monitoring to characterize, define and update the rate of groundwater flow and extent of contaminant releases.

21. Closure and Post-Closure Maintenance

The Discharger submitted a revised Preliminary Closure and Post-Closure Maintenance Plan (PCPCMP) as part of the RWD dated September 25, 2001, in compliance with CCR, title 27, sections 20950 and 21769. This plan was prepared under the supervision of a Certified Engineering Geologist licensed in the State of California. The plan indicates that the borate material will be processed through the plant, as feasible, and the remaining solids and pond liners will be tested and closure will be in accordance with applicable regulations. This plan was deemed complete and accepted by the Water Board in Board Order 6-01-19. This Order requires that the Discharger update the PCPCMP to incorporate the additional surface impoundments and review the plan annually to determine if significant change in the operation of the facility warrants an update of the plan.

22. Financial Assurance

The Discharger has provided documentation that a financial assurance fund has been established for closure activities and post-closure maintenance. The financial demonstrations presented by the Discharger are in the form of a letter of credit. This Order requires the Discharger provide revised financial assurance mechanisms based on the revised PCPCMP; requires the Discharger to report the amount of money available in the fund as part of the annual report; and requires the Discharger to demonstrate in an annual report that the amount of financial assurance is adequate, or increase the amount of financial assurance, as appropriate.

PROPOSED

23. Waste Management Strategy

Section 13263.1 of the California Water Code (CWC) requires the Water Board to determine that the mining waste discharge is consistent with a waste management strategy which prevents pollution or contamination of waters of the State, particularly during mine expansion and after closure of any WMU for mining waste. Principle elements of this strategy include:

a. Updating operations in a timely manner to comply with new permit requirements;

b. Constructing new surface impoundments with liners and leachate collection and recovery systems;

c. Retrofitting existing surface impoundments to meet CCR, title 27 requirements;

d. Implementing a closure and post-closure maintenance plan to ensure the closed management units will not pollute waters of the State; and

e. Updating annually the waste management strategy and providing a report to the Water Board.

The Discharger submitted information including a schedule for surface impoundment harvest, retrofit, and closure in the RWD to produce a waste management plan and strategy. The project, as accepted by the Water Board, is consistent with a mining waste strategy that is designed to prevent the pollution of waters of the State.

24. Current and Past Cleanup Activities

a. Former Ponds 1, 2, and 3

Former Ponds 1, 2, and 3 were unlined and were taken out of service in 1975 after they were discovered to be leaking. Pollution of a portion of the localized Miocene aquifer and vadose zone release resulted from the leak. The original ore deposit discovery shaft (Suckow Discovery Shaft) is located beneath Former Pond 1. An improper seal of the shaft allowed contaminant migration into the vadose zone and groundwater. A perched groundwater mound was present beneath Former Ponds 1, 2, and 3. A series of groundwater extraction wells located about one-half mile southwest of Former Pond 1 pumped the impacted perched water to R-Ponds 1-6. Pumping of these wells was stopped in 1989 because a hydrogeologic study showed the perched groundwater mound was being expanded rather than

PROPOSED

intercepted. Contaminated groundwater in the localized Miocene aquifer is currently being mitigated with a groundwater extraction system.

b. Former Ponds A-E

Cleanup and Abatement Order No. 6-85-16 was issued in 1985, following discovery of overtopping of the clay liner at Former Ponds A-E. The spill caused a perched groundwater mound on a clay layer below the former ponds to a depth of 35 feet bgs that contained elevated concentrations of arsenic. Due to the low permeability of the soils beneath the former ponds, it was concluded that the perched water mound would be absorbed by the soils with attenuation of the heavy metals and never reach the aquifer at 150 feet. Cleanup and Abatement Order No. 6-85-16 was rescinded by Waste Discharge Requirements, Board Order No. 6-90-37, which incorporated corrective action requirements in the WDRs for the Facility. The Discharger continues to provide status reports on the condition of the heavy metals in the soil.

25. Lahontan Basin Plan

The Water Board adopted a *Water Quality Control Plan for the Lahontan Region* (Basin Plan) on March 31, 1995. This Order implements the Basin Plan.

26. Beneficial Groundwater Uses

The present and potential beneficial uses of the groundwaters of the Antelope Valley Groundwater Basin (Department of Water Resources Basin No. 6-44) as set forth and defined in the Basin Plan are:

a. Municipal and Domestic Supply (MUN);

b. Agricultural Supply (AGR);

c. Industrial Service Supply (IND); and

d. Freshwater Replenishment (FRSH).

27. Climate

The area typically has hot summers and mild winters. The annual average precipitation in the vicinity of the Facility is between 5.3 and 6.7 inches. The net evaporation rate for the area is approximately 112 inches annually (Western Regional Climate Center).

PROPOSED

28. Land Uses

The majority of land surrounding the Facility is open space and residential. Wells within a one-mile radius access groundwater for domestic supply.

29. Other Considerations and Requirements for Discharge

Pursuant to CWC, section 13241, the requirements of this Order take into consideration:

a. Past, present, and probable future beneficial uses of water.

This Order identifies existing groundwater quality and past, present, and probable future beneficial uses of water, as described in Finding Nos. 8, and 27, respectively. The proposed discharge will not adversely affect present or probable future beneficial uses of water including municipal and domestic supply, agricultural supply, industrial service supply, and freshwater replenishment, because the discharge is only authorized within lined surface impoundments and detection monitoring is required to ensure discharges do not reach groundwater.

b. Environmental characteristics of the hydrographic unit under consideration including the quality of water available thereto.

Finding Nos. 6 and 8 describe the environmental characteristics and quality of water available.

c. Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area.

The requirements of this Order will not affect groundwater quality. The Water Board will use its existing authority and these WDRs to ensure protection of water quality from these discharges.

d. Economic considerations.

Water Quality Objectives established in the Basin Plan for the Antelope Valley Groundwater Basin do not subject the Discharger to economic disadvantage as compared to other similar discharges in the Region. This Order will require the Discharger to submit proposals compliant with the requirements of CCR, title 27, and is reasonable.

e. The need for developing housing within the region.

The Discharger is not responsible for developing housing within the region. This Order provides for capacity to collect, store, and evaporate wastewater

PROPOSED

in surface impoundments.

f. The need to develop and use recycled water.

The Discharger does not propose the use of recycled water at this Facility.

30. California Environmental Quality Act (CEQA) Compliance

The Board of Supervisors of the County of Kern has certified, as required by Section 15090 of the State CEQA Guidelines, an Environmental Impact Report (EIR) for the Facility on January 9, 2004. The Water Board considered that EIR when it previously amended the WDRs in 2006. The U.S. Borax Life of Mine Project EIR evaluated the expansion of the existing surface mining operation and potential impacts from surface impoundments, but did not specify exact locations or capacity. Engineered design features that included construction of liner systems are required pursuant to this Order to mitigate potential water quality impacts to groundwater from operation of the BAPs and R-Ponds. The Water Board has reviewed the EIR and has concluded that a supplement or subsequent EIR is not required. No changes have occurred in the project or in the project area that would cause no impacts or increase the severity of impacts already considered. The expansion of the surface impoundments will be within the project area analyzed in the EIR, and there is no proposed change to the design features. Based on the analysis of the EIR and the engineered design features that include multiple liners, the Water Board finds that the project will not have a significant effect on water quality and will file a Notice of Determination within five days from the issuance of this Order.

31. Human Right to Water

It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to only be discharged to lined surface impoundments designed to protect human health and ensure that nearby wells are protected and water is safe for domestic use.

32. Technical and Monitoring Reports

The Discharger must submit technical and monitoring reports in compliance with this Order, and as described in MRP No. R6V-2015-PROP, which is attached to and made part of this Order.

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33. Notification of Interested Parties

The Water Board has notified the Discharger and all known interested parties and persons of its intent to issue revised WDRs for the Facility.

34. Right to Petition

Any person aggrieved by this action of the Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with CWC, section 13320, and CCR, title 23, sections 2050 et seq. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the internet at http://www.waterboards.ca.gov/public_notices/petitions/water_quality, or will be provided upon request.

35. Consideration of Comments

The Water Board, in a public meeting, heard and considered all comments pertaining to the discharges.

IT IS HEREBY ORDERED that the Discharger shall comply with the following:

I. RECEIVING WATER LIMITATIONS

The Discharger shall not cause the existing water quality to be degraded. Under no circumstances shall the Discharger cause the presence of the following substances or conditions in groundwaters of the Antelope Valley Groundwater Basin.

A. Bacteria – Groundwaters designated as MUN, the medium concentration of coliform organisms, over any seven-day period, must be less than 1.1 Most Probable Number per 100 milliliters (MPN/100 mL) in groundwaters.

B. Chemical Constituents – Groundwaters designated as MUN must not contain concentrations of chemical constituents in excess of the Maximum Contaminant Levels (MCL) or Secondary MCL (SMCL) based upon drinking water standards specified in the following provisions of CCR, title 22: Table 64431-A of section 64431 (Inorganic Chemicals), Table 64444-A of section 64444 (Organic Chemicals), Table 64449-A of section 64449 (SMCLs – Consumer Acceptance Contaminant Levels), and Table 64449-B of section 64449 (SMCLs – Consumer Acceptance Contaminant Level Ranges). This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

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Groundwaters designated as AGR must not contain concentrations of chemical constituents that adversely affect the water for beneficial uses (i.e., agricultural purposes).

Groundwaters must not contain concentrations of chemical constituents that adversely affect the water for beneficial uses.

C. Radioactivity – Groundwater designated MUN must not contain concentrations of radionuclides in excess of limits specified in CCR, title 22, section 64442, Table 64442, and section 64443, Table 64443, including future changes as the changes take effect.

D. Taste and Odors – Groundwaters must not contain taste or odor-producing substances in concentrations that cause a nuisance or that adversely affect beneficial uses. For groundwaters designated as MUN, at a minimum, concentrations must not exceed adopted Secondary MCLs as specified in CCR, title 22, Table 64449-A of section 64449 (Secondary MCLs – Consumer Acceptance Contaminant Level) and Table 64449-B of section 64449 (Secondary MCLs – Consumer Acceptance Contaminant Levels Ranges), including future changes as the changes take effect.

E. Color – Groundwaters must not contain color-producing substances from tracers in concentrations that cause a nuisance or that adversely affect beneficial uses.

F. Toxic Substances – Any presence of toxic substances in concentrations that individually, collectively, or cumulatively cause a detrimental physiological response in humans, plants, animals, or aquatic life is prohibited.

II. REQUIREMENTS AND PROHIBITIONS

A. General

1. The discharge must not cause or threaten to cause a condition of pollution or nuisance as defined in CWC, section 13050.

2. There must be no discharge, bypass, or diversion of wastewater from the collection, conveyance, or disposal facilities to adjacent land areas or surface waters.

3. Surface drainage within the surface impoundments must be contained within the surface impoundments. No material contained within the surface impoundments is to be discharged outside the surface impoundments, unless it is to a location approved by the Water Board Executive Officer. The discharge of wastewater other than to the authorized disposal sites specified in this Order is prohibited. The

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Discharger must either maintain a zero discharge Facility or must maintain a Storm Water Pollution Prevention Plan (SWPPP) and Monitoring Program and Reporting Requirements in accordance with State Water Board Order No. 2014-0057-DWQ, and future promulgated general stormwater permits.

4. All facilities used for the collection, conveyance, or disposal of waste must be adequately protected against overflow, washout, inundation, structural damage, or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 25 years, pursuant to CCR, title 27, section 22490, subdivision (h)(1)(A).

5. The discharge of any type of garbage, abandoned equipment, construction materials or other material not described in Finding 12 of this Order, to the authorized disposal locations in Finding 13 without prior approval from the Executive Officer is prohibited.

6. The discharge of restricted hazardous waste, per CCR, title 22, section 66260.10, into any wastewater drainage channel, sump, or surface impoundment, or generation of hazardous waste, per CCR, title 27, section 20164, due to evaporation is prohibited.

7. The WMUs are the only authorized disposal sites for the wastes described in Finding 12 and in the manner described in Finding 13. The authorized disposal sites and authorized dust control areas are located on land owned by U.S. Borax, Inc. Former Ponds 1-5 and Former Ponds A-E are authorized only as waste piles for drying process effluent evaporates.

8. The discharge of solid wastes, leachate, wastewater, or any other deleterious materials to the groundwaters of the Antelope Valley Groundwater Basin is prohibited.

9. The discharge of waste, except to the authorized surface impoundments and for dust control, is prohibited.

10. The discharge of waste, as defined in CWC, section 13050, subdivision (d), that causes a violation of any narrative Water Quality Objective (WQO) contained in the Basin Plan is prohibited.

11. Where any numeric or narrative WQO contained in the Basin Plan is already being violated, the discharge of waste that causes further degradation or pollution is prohibited.

12. The discharge must not cause any increase in the concentration of waste constituents in soil-pore gas, soil-pore liquid, soil, or other

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geologic materials outside of the surface impoundments if such waste constituents could migrate to waters of the State – in either liquid or gaseous phase – and cause a condition of nuisance, degradation, contamination, or pollution.

13. The integrity of the active and proposed surface impoundments must be maintained throughout the life of the waste management units and must not be diminished as a result of any maintenance operation.

14. The Discharger must maintain in good working order any facility, control system, or monitoring device installed to achieve compliance with this Order.

15. At closure, the Facility must be closed in accordance with a Final Closure Plan approved by the Water Board.

16. The Discharger must at all times maintain adequate and viable financial assurances acceptable to the Water Board Executive Officer for costs associated with closure and post-closure activities.

17. Discharge of waste into Former Ponds 1-5 and Former Ponds A-E is prohibited.

18. Dust control activities must be done in a manner so as to prevent ponding or run-off.

19. The Discharger must implement the Waste Management Strategy to prevent pollution to waters of the State.

B. Surface Impoundments

1. The proposed surface impoundments must be constructed as described in Finding 10, and in accordance with CCR, title 27 requirements.

2. The Discharger must install a liner system for continued operation of R-Ponds 1-6, or discontinue use when the clay liner reaches 75 percent saturation.

3. The vertical distance between the liquid surface elevation and the lowest point of a surface impoundment dike or the invert of an overflow structure shall not be less than 2.0 feet.

4. Within 90 days following completion of construction of any new or expanded surface impoundment, a technical report shall be submitted containing as-built drawings and a quality assurance/quality control

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construction report for any newly constructed surface impoundment. The report shall contain all field and laboratory data generated during construction of the surface impoundment. The report shall also contain certification, signed by a California registered civil engineer, that the surface impoundment was constructed and suitable for operation in accordance with CCR, title 27, for Group A and B mining waste.

5. The surface impoundments must be fenced to effectively exclude the public.

6. Processed wastes must be distributed between R-Ponds 1-7 and BAPs 1-7 to maintain total arsenic concentrations below 500 parts per million (ppm) to prevent the formation of concentrations of arsenic in the ponds that exceed the criteria for restricted hazardous waste under the Hazardous Waste Control Law, California Health and Safety Code, Division 20, Chapter 6.5. When the total arsenic concentration in any surface impoundment approaches 500 ppm, effluent must be distributed so arsenic precipitates and/or concentrations are lowered.

C. Detection Monitoring Program

The Discharger must maintain a Detection Monitoring Program as required in CCR, title 27, section 20420.

D. Evaluation Monitoring Program

The Discharger must perform an evaluation monitoring program (EMP) when there is measurably significant evidence of release as required in CCR, title 27, section 20385, subdivision (a)(2) or (3). The Discharger must maintain the EMP as long as there is measurably significant evidence of a release from the surface impoundment(s) as required in CCR, title 27, section 20425. The EMP must be utilized to delineate within 90 days of initiating an EMP the nature and extent of the release, as well as to develop, propose, and support corrective action measures to be implemented in a CAP.

E. Corrective Action Program

The Discharger shall continue the current CAP, and must institute an additional CAP as required in CCR, title 27, section 20430, following completion of the EMP, in response to measurably significant evidence of a release.

F. Electronic Submittal of Information

Pursuant to CCR, title 23, section 3890, the Discharger must submit reports, including soil, vapor, and water data, prepared for the purpose of subsurface

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investigation or remediation of a discharge of waste to land subject to CCR, title 27, electronically over the internet to the State Water Board's Geotracker system. This requirement is in addition to, and not superseded by, any other applicable reporting requirement.

III. WATER QUALITY MONITORING AND RESPONSE PROGRAMS

A. Water Quality Protection Standard

1. The Discharger must submit a revised RWD to the Water Board at least 140 days before initiating discharge of any new constituents of concern to the surface impoundments. Before a new discharge commences, the Discharger must estimate the concentration for such constituents within the wastewater stream and submit written statistical method(s) in order to detect a release of such constituents.

2. At any given time, the concentration limit for each monitoring parameter and constituent of concern must be equal to the background data set of that constituent. The background data set for each monitoring point/constituent pair should be comprised of at least eight data points, collected quarterly.

3. If the Discharger or Water Board Executive Officer determines that concentration limits were or are exceeded, the Discharger may immediately institute verification procedures upon such determination, as specified below (III.D), or submit an amended RWD within 90 days of such determination in order to establish an EMP. In the event of a release, unless the amended RWD (proposing an EMP) proposes and substantiates a longer period, the Discharger will only have 90 days, once the Water Board authorizes the initiation of the EMP, to complete the delineation, develop a suite of proposed corrective action measures, and submit a proposed CAP for adoption by the Water Board.

4. Monitoring wells and/or unsaturated zone samples must be used to obtain background data and to detect a release from the Facility.

B. Statistical Methods

1. The Discharger must use approved statistical data analysis methods to evaluate Point of Compliance groundwater data in order to determine measurably significant evidence of a release from the surface impoundments, as required by CCR, title 27, section 20415, subdivision (e). Analysis must be conducted in accordance with the statistical methods described in MRP No. R6V-2015-PROP.

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2. The Discharger must determine, within 45 days after completion of sampling, whether there is measurably significant evidence of a release from the surface impoundments at each Monitoring Point. The analysis must consider all monitoring parameters and constituents of concern. The Executive Officer may also make an independent finding that there is measurably significant evidence of a release or physical evidence of a release.

3. If there is measurably significant evidence of a release, the Discharger must immediately notify the Water Board by certified mail (see notification procedures contained in MRP No. R6V-2015-PROP). Subsequently, the Discharger may immediately initiate verification procedures as specified below in Section III.D., "Verification Procedures," whenever there is a determination by the Discharger or Executive Officer that there is measurably significant evidence of a release.

4. If the Discharger does not use verification procedures to evaluate evidence of a release, or there is confirmation that there is measurably significant evidence of a release, then the Discharger is required to submit, within 90 days of such a confirmation, an amended RWD in order to establish evaluation monitoring pursuant to subsection II.D., "Evaluation Monitoring Program" (see notification procedures contained in MRP No. R6V-2015-PROP section IV.B., "Unscheduled Reports to be Filed With the Water Board").

C. Physical Evidence of a Release

The Discharger must determine whether there is significant physical evidence of a release from the surface impoundments. Significant physical evidence may include unexplained volumetric changes in the surface impoundments, unexplained stress in biological communities, unexplained changes in soil characteristics, unexplained changes in soil moisture content, visible signs of leachate migration, unexplained water table mounding beneath or adjacent to the Facility, and/or any other change in the environment that could reasonably be expected to be the result of a release from the Facility (see Section IV.B., "Unscheduled Reports to be Filed With the Water Board," of MRP No. R6V-2015-PROP.

D. Verification Procedures

1. The Discharger must immediately initiate verification procedures, as specified below, whenever there is a determination by the Discharger or Executive Officer that there is evidence of a release. If the Discharger declines the opportunity to conduct verification procedures, the Discharger must submit a technical report, as described in Section

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III.E., below, under the heading "Technical Report Without Verification Procedures."

2. The verification procedures must only be performed for the constituent(s) that has shown a measurably significant evidence of a release and must be performed for those Monitoring Points at which a release is indicated.

3. The Discharger must either conduct a composite retest using data from the initial sampling event with all data obtained from the resampling event or must conduct a discrete retest in which only data obtained from the resampling event must be analyzed to verify evidence of a release, or must propose a pass 1-of-3 retesting approach using quarterly samples, as an engineered alternative.

4. The Discharger must report to the Water Board, by certified mail, the results of the verification procedure, as well as all concentration data collected for use in the retest, within seven days of the last laboratory analysis.

5. If the Discharger or Executive Officer verify evidence of a release, the Discharger is required to submit a technical report to the Water Board, pursuant to Water Code, section 13267, subdivision (b), within 90 days of such a determination that there is, or was, a release. The report must propose an evaluation monitoring program (see subsection, II.D., entitled, "Evaluation Monitoring Program"), or, make a demonstration to the Water Board that there is a source other than the Facility that caused evidence of a release (see notification procedures contained in MRP No. R6V-2015-PROP.

E. Technical Report Without Verification Procedures

If the Discharger chooses not to initiate verification procedures after there has been a determination made for evidence of a release or determines after verification procedures that there has been a release, the Discharger is required to submit, within 90 days of such confirmation, an amended RWD in order to establish an EMP or demonstrate to the Water Board that there is a source other than the surface impoundment that caused evidence of a release (see Section IV.B., "Unscheduled Reports to be Filed With the Water Board," of MRP No. R6V-2015-PROP.

F. Monitoring and Reporting

1. Pursuant to Water Code, section 13267, subdivision (b), the Discharger must comply with the MRP as established in the attached

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MRP No. R6V-2015-PROP, and as specified by the Executive Officer. The MRP may be modified by the Water Board Executive Officer.

2. The Discharger must comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made part of MRP No. R6V-2015-PROP.

IV. PROVISIONS

A. Rescission of WDRs

Board Order No. R6V-2006-0025 is hereby rescinded.

B. Standard Provisions

The Discharger must comply with the "Standard Provisions for Waste Discharge Requirements," dated September 1, 1994, in Attachment C, which is attached to and made part of this Order.

C. Claim of Copyright or Other Protection

Any and all reports and other documents submitted to the Lahontan Water Board pursuant to this request will need to be copied for some or all of the following reasons: 1) normal internal use of the document, including staff copies, record copies, copies for Board members and agenda packets, 2) any further proceedings of the Lahontan Water Board and the State Water Board, 3) any court proceeding that may involve the document, and 4) any copies requested by members of the public pursuant to the Public Records Act or other legal proceeding.

If the Discharger or its contractor(s) claims any copyright or other protection, the submittal must include a notice, and the notice will accompany all documents copied for the reasons stated above. If copyright protection for a submitted document is claimed, failure to expressly grant permission for the copying purposes stated above will render the document unusable for the Lahontan Water Board's purposes and will result in the document being returned to the Discharger as if the task had not been completed.

D. Closure Plan

The preliminary closure plans must be updated if there is a substantial change in operations or costs for closure. A report must be submitted annually indicating conformance with existing operations. This report may be included in the annual monitoring report as required in MRP No. R6V-2015-PROP. Pursuant to CWC, section 13264, final plans meeting the requirements of CCR, title 27, section 22510, must be submitted at least 140

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days prior to beginning any partial or final closure activities, or prior to discontinuing the use of the Facility for waste treatment, storage, or disposal. The final plans must be prepared by or under the supervision of either a California registered civil engineer or a certified engineering geologist and be in compliance with CCR, title 27, sections 21400 and 21410.

E. Modifications to the Facility

If the Discharger intends to expand the Facility or the capacity of the surface impoundments, a report must be filed **no later than 140 days prior** to the anticipated change, containing a detailed plan for Facility expansion. This plan must include, but is not limited to, a time schedule for studies, design, and other steps needed to provide additional capacity, and must be done in accordance with an accepted construction quality control plan.

V. TIME SCHEDULE

A. Final Design Plan

At least 90 days prior to construction of any new or expanded surface impoundment, the Discharger must submit design plans for the Facility in accordance with the requirements of CCR, title 27, section 22490 and accepted engineered alternatives, including a design capacity for containing the precipitation from a 25-year, 24-hour event; details of the Leachate Collection and Recovery Systems (LCRS); the unsaturated zone monitoring system; and the groundwater monitoring well locations, to be accepted by the Water Board's Executive Officer.

B. Sampling and Analysis Plan

At least 60 days prior to operation of the new surface impoundments, the Discharger must submit a revised Sampling and Analysis Plan to be accepted by the Water Board's Executive Officer, including procedures for sampling and analysis for the surface impoundments, LCRS, unsaturated zone monitoring system, and groundwater monitoring wells.

C. Final Geotechnical Study for R-Ponds 1-6

At least 60 days prior to construction of the retrofit for R-Ponds 1-6, the Discharger must submit a Final Geotechnical Study verifying that the assumptions in the Design Plan are appropriate. If the results of the Final Geotechnical Study find the assumptions in the Design Plan are not accurate, the Discharger must submit the results of the study with an amended design and construction report to address the variation in site characteristics.

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D. Final Construction Quality Assurance Report

Following the completion of construction of the new or expanded surface impoundments, and **at least 60 days** prior to discharge to the newly constructed surface impoundments, the final documentation required in CCR, title 27, section 20324, must be submitted to the Water Board for review and acceptance. This report must be submitted to the Water Board **no later than 90 days** after completion of construction activities. The report must be certified by a registered civil engineer or a certified engineering geologist. It must contain sufficient information and test results to verify that construction was in accordance with the submitted design plans and specifications and with the accepted engineered alternative to the prescriptive standards and performance goals of CCR, title 27.

E. Monitoring Systems Installation Report

No later than 180 days following completion of construction and **at least 60 days** prior to discharge from the new or expanded surface impoundments, the Discharger must submit a technical report discussing the installation of the monitoring systems for the proposed surface impoundments. The report shall summarize all work activities associated with the installation of the groundwater and vadose zone monitoring systems. The report must be certified by a California registered civil engineer or a California registered professional geologist. It must contain sufficient information to verify that the construction was in accordance with State and/or County standards.

F. Financial Assurance Documents

At least 60 days prior to discharge to the new or expanded surface impoundments, and yearly thereafter, the Discharger must submit Instruments of Financial Assurance acceptable to the Water Board and adequate to cover the costs of closure and post closure activities. An increase may be necessary due to inflation, a change in regulatory requirements, a change in the approved closure plan, or other unforeseen events.

G. Preliminary Closure and Post-Closure Maintenance Plan and Financial Assurance Instrument

At least 120 days prior to operation of the new surface impoundments, the Discharger must submit a revised PCPCMP incorporating the additional surface impoundments in accordance with the requirements in CCR, title 27, section 22510. The PCPCMP must include a cost estimate to implement the plan and a proposed financial assurance instrument meeting CCR, title 27, sections 22207 to 22212 and 22225 *et seq*. The PCPCMP and cost estimate to implement the plan must be prepared by, or under the supervision of, a

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California registered professional geologist or a California registered professional engineer.

H. Water Quality Protection Standard

No later than 760 days following construction (8 quarters of monitoring, plus 30 days to generate the Water Quality Protection Standard), the Discharger must propose for acceptance by the Water Board a list of monitoring parameters and constituents of concern for each new monitoring point for which a WQPS has not been established, including a data analysis method, and a revised Water Quality Protection Standard, which includes concentrations limits that define background water quality for all constituents of concern and for each Point of Compliance. The report must be certified by a California registered civil engineer or a California registered professional geologist.

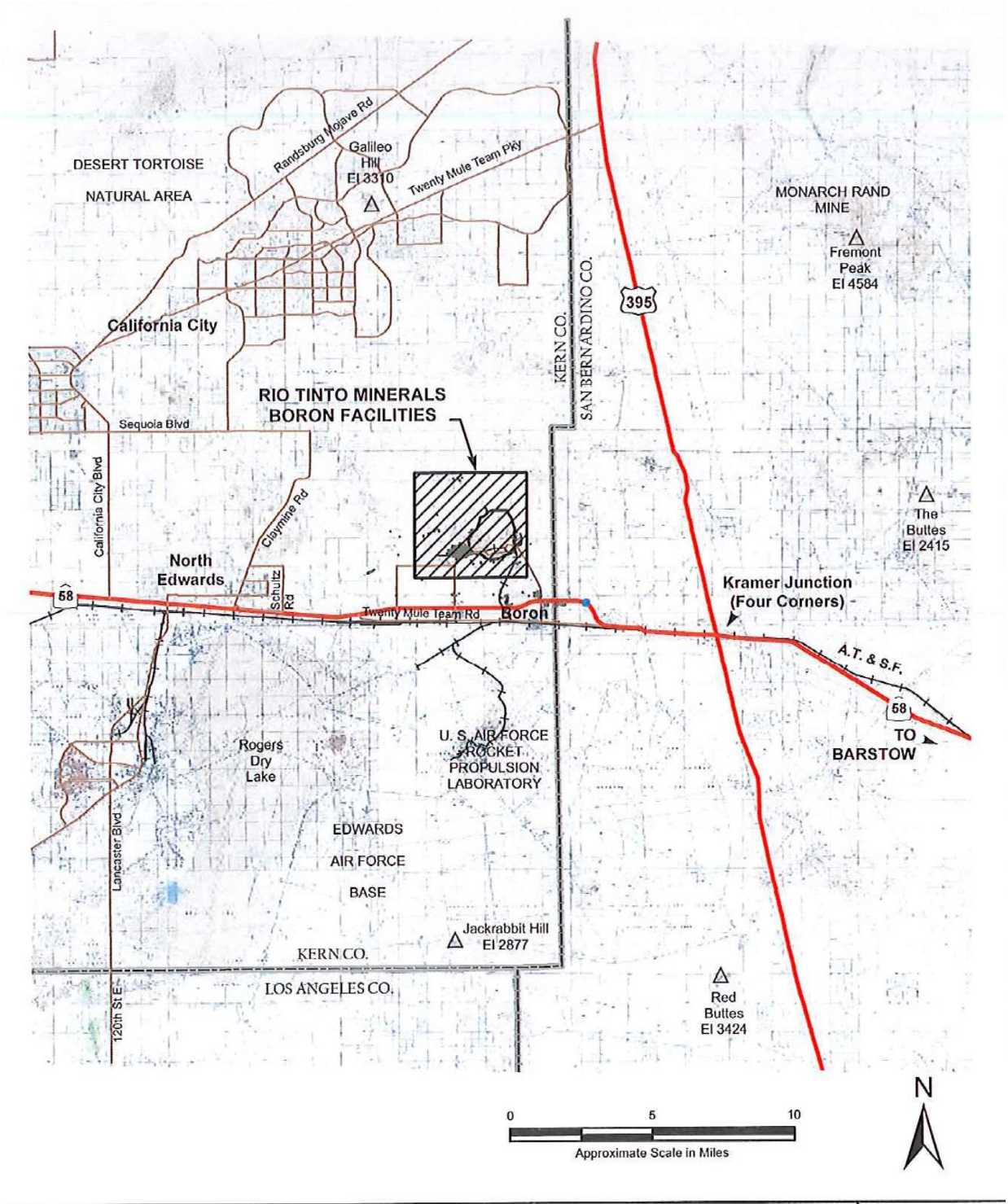
I, Patty Z. Kouyoumdjian, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on September 16, 2015.

_____
PATTY KOUYOUMDJIAN
EXECUTIVE OFFICER

Attachments: A. Rio Tinto Minerals Boron Facilities Location Map
B. Locations of Flood Control Catchments and Surface Impoundments
C. Standard Provisions for WDRs

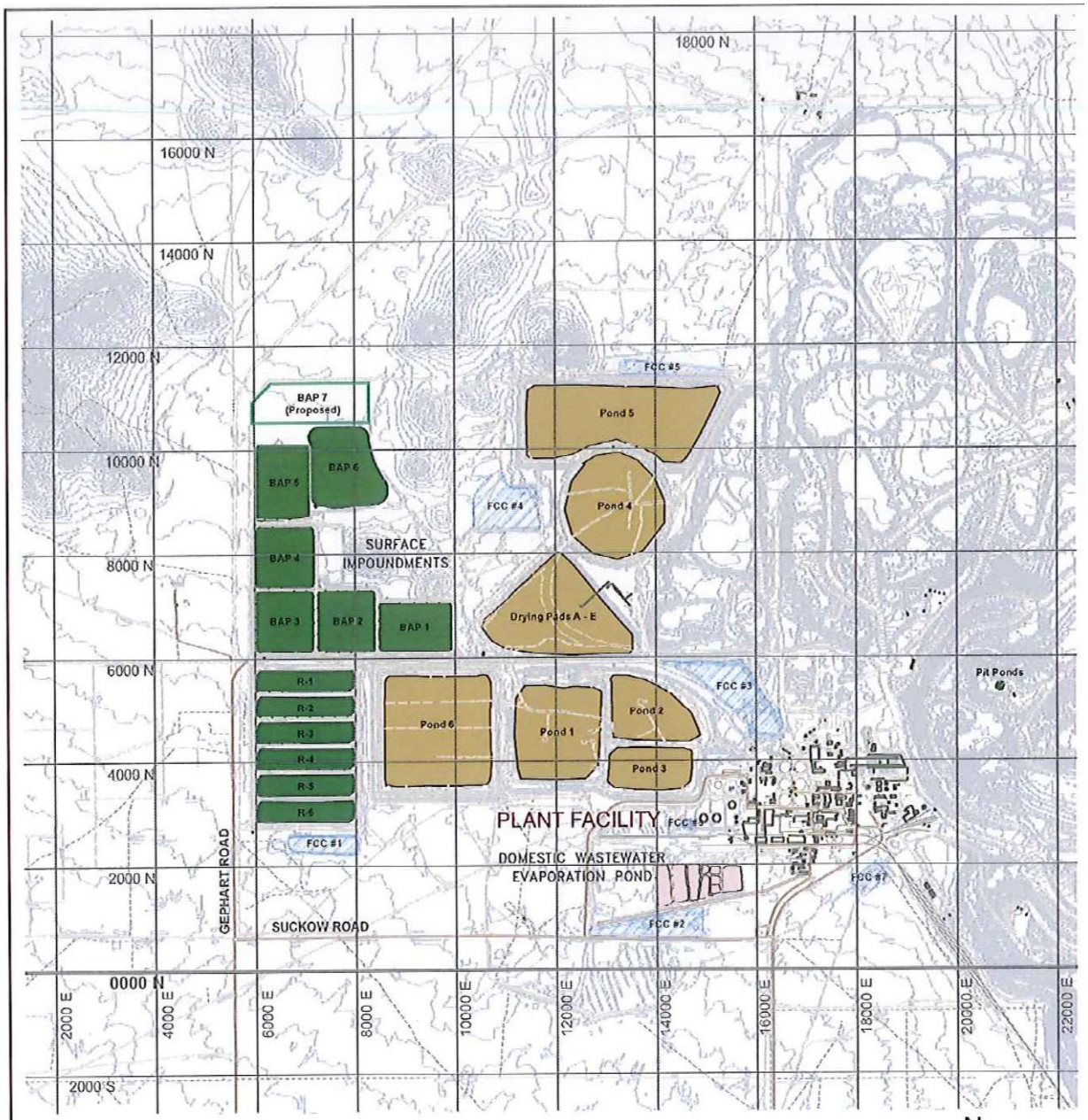
PROPOSED

ATTACHMENT A



RioTinto Rio Tinto Minerals Boron Operations 14486 Borax Road Boron, California 93516-2000	Scale: 1" = 5 miles Projection: Custom - Mine Date: February 20, 2015 Drawn: SLN	RIO TINTO MINERALS BORON FACILITIES LOCATION MAP	FIGURE 1 Folder: 2014 Annual Reports File: Fig1_SiteLocation_2014.mx

ATTACHMENT B



LEGEND

- ACTIVE SURFACE IMPOUNDMENT
- INACTIVE SURFACE IMPOUNDMENT
- PROPOSED SURFACE IMPOUNDMENT
- FLOOD CONTROL CATCHMENT
- DOMESTIC WASTEWATER EVAPORATION POND
- MINE GRID 0000 FT
- MINE GRID 2000 FT INTERVAL
- TOPOGRAPHY - C.I. = 5'

N

0 3,000
SCALE IN FEET

Rio Tinto

Rio Tinto Minerals
Boron Operations
14486 Borax Road
Boron, California 93516-2000

Scale: 1" = 3000 FT
Contour 5'
Projection: Custom - Mine
Date: March 25, 2015
Drawn: SLN

LOCATIONS OF FLOOD CONTROL CATCHMENTS AND SURFACE IMPOUNDMENTS

FIGURE 6

Folder: 2014 Annual Reports
File: Fig6_SIFCCLoc.mxd

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

STANDARD PROVISIONS
FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The Discharger shall permit Regional Board staff:

a. to enter upon premises in which an effluent source is located or in which any required records are kept;

b. to copy any records relating to the discharge or relating to compliance with the Waste Discharge Requirements (WDRs);

c. to inspect monitoring equipment or records; and

d. to sample any discharge.

2. Reporting Requirements

a. Pursuant to California Water Code 13267(b), the Discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.

b. Pursuant to California Water Code Section 13260 (c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board at least 120 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.

c. The Owners/Discharger of property subject to WDRs shall be considered to have a continuing responsibility for ensuring compliance with applicable WDRs in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the WDRs shall be reported to the Regional Board. Notification of applicable WDRs shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.

d. If a Discharger becomes aware that any information submitted to the Regional Board is incorrect, the Discharger shall immediately notify the Regional Board, in writing, and correct that information.

e. Reports required by the WDRs, and other information requested by the Regional Board, must be signed by a duly authorized representative of the Discharger. Under Section 13268 of the California Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1,000) for each day of violation.

f. If the Discharger becomes aware that their WDRs (or permit) are no longer needed (because the project will not be built or the discharge will cease) the Discharger shall notify the Regional Board in writing and request that their WDRs (or permit) be rescinded.

3. Right to Revise WDRs

The Regional Board reserves the privilege of changing all or any portion of the WDRs upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the WDRs may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and re-issuance, or modification.

5. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the WDRs which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the WDRs. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger, when necessary to achieve compliance with the conditions of the WDRs.

7. Waste Discharge Requirement Actions

The WDRs may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for waste discharge requirement modification, revocation and re-issuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the WDRs conditions.

8. Property Rights

The WDRs do not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

9. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the WDRs including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the WDRs shall be kept and maintained by the Discharger and be available at all times to operating personnel.

11. Severability

Provisions of the WDRs are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

12. Public Access

General public access shall be effectively excluded from treatment and disposal facilities.

13. Transfers

Providing there is no material change in the operation of the facility, this Order may be transferred to a new owner or operation. The owner/operator must request the transfer in writing and receive written approval from the Regional Board's Executive Officer.

14. Definitions

a. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.

b. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

15. Storm Protection

All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

MONITORING AND REPORTING PROGRAM NO. R6V-2015-(PROP)
WDID NO. 6B152004001

FOR

U.S. BORAX, INC., RIO TINTO MINERALS, CLEAN ENERGY FUELS COMPANY, BORON FACILITY

Kern County

I. WATER QUALITY PROTECTION STANDARD

A Water Quality Protection Standard (WQPS) is required by California Code of Regulations (CCR), title 27, section 20390 through 20410, to ensure the earliest possible detection of a release from the surface impoundments to the underlying soil, groundwater, and/or surface water. The WQPS shall consist of all constituents of concern, the concentration limit for each constituent of concern, the point of compliance, and all water quality monitoring points.

The Executive Officer shall review and approve the WQPS, or any modification thereto, for each monitored medium.

The WQPS shall:

a. Identify all distinct bodies of groundwater that could be affected in the event of a release from the surface impoundments. This list shall include all groundwater bearing zones.

b. Include a map showing the monitoring points and background monitoring points for the detection monitoring program. The map shall show the surface trace of each waste management unit's point of compliance (along the downgradient boundary of the Unit), in accordance with CCR, title 27, section 20405.

c. Evaluate the perennial direction(s) of groundwater movement within the groundwater bearing zones.

If subsequent sampling of the background monitoring point(s) indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to waste management activities at the site, the Discharger may request modification of the WQPS's concentration limits to provide season-specific concentration limits (background data sets) for each constituent of concern at each monitoring point.

PROPOSED

1. Constituents of Concern

The Constituents of Concern (COCs) include all the waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the surface impoundments. The COCs are listed in Attachment A, which are made part of this Monitoring and Reporting Program (MRP).

2. Monitoring Parameters

Monitoring parameters are COCs that provide a reliable indication of a release from the surface impoundments. The monitoring parameters are listed in Attachment A.

3. Concentration Limits

For naturally occurring COCs or non-naturally occurring COCs whose background data set (concentration limit) exceeds its Practical Quantitation Limit (PQL), the concentration threshold for each COC shall be determined as follows:

a. By calculation in accordance with a statistical method applied to the concentration limit (suite of background data) pursuant to CCR, title 27, section 20415; or

b. By an alternate statistical method acceptable to the Water Board Executive Officer in accordance with CCR, title 27, section 20415.

For non-naturally occurring COCs that do not have background values, the concentration threshold for each COC shall be taken as the method detection limit (MDL) of the analytical method used (e.g., United States Environmental Protection Agency (USEPA) Methods 8260 and 8270) in accordance with the Detection Monitoring Program. Concentration limits shall be updated by the Discharger at a frequency of no more than every two years and reported in the Annual Monitoring Summary Report for the respective reporting period.

4. Point of Compliance

The point of compliance for the WQPS is a vertical surface located at the hydraulically downgradient limit of the Facility that extends through the groundwater bearing zones underlying the Facility.

PROPOSED

II. MONITORING

The Discharger must comply with the Detection Monitoring Program (DMP) and Corrective Action Program (CAP) monitoring provisions contained in California Code of Regulations (CCR), title 27, section 20385 through 20430. The Discharger must monitor the wastewater effluent quality, surface impoundment wastewater, and the surface impoundments. All monitoring and inspecting activities must be documented. All monitoring systems for the surface impoundments must be installed and be operational prior to the discharge of wastes. All samples, with the exception of field parameters, are to be analyzed by a California state-certified laboratory. In addition to satisfying the monitoring requirements of CCR, title 27, sections 20385 through 20430, the Discharger must also perform the following monitoring in accordance with a Sampling and Analysis Plan, which includes quality assurance/quality control procedures.

A. Surface Impoundment Monitoring

Surface impoundments to be sampled include R-Ponds 1-7, BAPs 1-7, and the pit ponds. All wastewater samples collected under this MRP must be analyzed to determine the concentrations of constituents listed in Attachment A.

1. Wastewater Flow

The Discharger must:

a. Collect and analyze one sample of wastewater from the point of discharge to the surface impoundments and analyze for the constituents listed and at the frequency specified in Attachment A.

b. Record the average daily flow rate in million gallons per day (mgd) to each surface impoundment;

c. Record the volume of flow, in mgd, of wastewater flow to each surface impoundment;

d. Record the cumulative total of wastewater discharged in million gallons per month to each surface impoundment; and

e. Yearly, calibrate the wastewater flow meters.

2. Wastewater

A liquid grab sample from each of the surface impoundments must be collected from opposite the inlet, at a depth of one foot, in a

PROPOSED

quiescent surface area. A sample must be collected for each surface impoundment. If the surface impoundment is dry, then indicate that it is dry in the monitoring report. The samples must be analyzed to determine the concentrations of constituents described and at the same frequency as monitoring wells, as specified in Attachment A.

3. Dikes and Liners

a. Daily, each of the surface impoundment dikes and liners must be visually inspected to determine if there are any indications of loss of integrity. Should the inspection indicate that any unauthorized discharge has occurred, or may occur, the Water Board must be notified verbally within 24 hours, followed by confirmation in writing within 10 days.

b. Daily, measure and record the freeboard, as measured from the top of the lowest part of the dike to the wastewater surface in each surface impoundment. Observations and measurements must be recorded in a permanent log book kept onsite. If the surface impoundment is dry, then indicate that it is dry in the log book and monitoring report.

4. Leachate Collection and Recovery Sumps

The Discharger must conduct the following inspections and testing of the Leachate Collection and Recovery Sumps (LCRS):

a. Weekly, inspect the LCRS for the presence of liquids. The result of these inspections must be recorded in a permanent log book kept onsite.

i. The Discharger must record in the LCRS inspection log book the volume pumped, pumping rate, date, and discharge location of any liquid pumped from the LCRS.

ii. Upon detection of leachate in a previously dry LCRS that was dry during the prior week inspection (defined herein as an event), the Discharger shall immediately collect a grab sample of the leachate and shall analyze the grab samples of leachate for the constituents of concern identified in Attachment A. Quarterly thereafter, samples of the leachate in the LCRS must be sampled and analyzed for the constituents described and at the same frequency as monitoring wells, as specified in Attachment A.

PROPOSED

b. The Action Leakage Rates for the surface impoundments are shown in Table 1, Action Leakage Rates, below. The Action Leakage Rates for R-Ponds 1-7 and BAP 7 are based on the proposed areas of those surface impoundments, and on a 1992, USEPA guidance document, *Action Leakage Rates for Leak Detection Systems, Supplemental Background Document for the Final Double Liners and Leak Detection Systems Rule for Hazardous Waste Landfills, Waste Piles, and Surface Impoundments.* Per the USEPA guidance document, the action leakage rates account for the area of the surface impoundment, multiplied by a factor of 1,000 for the rate into the upper LCRS, and by a factor of 20 for the lower LCRS. The Action Leakage Rates for surface impoundments BAP 1-6 are based on the original design criteria for those surface impoundments.

TABLE 1. Action Leakage Rates

Surface Impoundment	Surface Area (Acres)	Upper LCRS Action Leakage Rate (gpd)	Lower Sump Action Leakage Rate (gpd)
R-Pond 1	21.7	21,700	434
R-Pond 2	21.8	21,800	436
R-Pond 3	21.5	21,500	430
R-Pond 4	21.7	21,700	434
R-Pond 5	21.5	21,500	430
R-Pond 6	21.5	21,500	430
R-Pond 7	21.6	21,600	432
BAP 1	32.1	15,000	600
BAP 2	32.1	15,000	600
BAP 3	32.1	15,000	600
BAP 4	32.2	15,000	600
BAP 5	39.3	15,000	600
BAP 6	33.5	15,000	600
BAP 7	45.6	45,600	912

gpd = gallons per day

c. If liquids are detected in the LCRS, the Discharger must respond as described in Table 2, Action and Response Levels for LCRS, below.

TABLE 2. Action and Response Levels for LCRS

Unit Flow Rate	Action/Response
Less than Action Leakage Rate	No action required. Record weekly flow rate and submit recorded flow rates with the next Semi-Annual Report.
Greater than or equal to the Action Leakage Rate	Notify the Water Board immediately (within 24 hours). Cease discharge to the affected surface impoundment and repair the liner.

PROPOSED

d. The LCRS must be tested in the event no leachate is indicated for a period of 12 months. If leachate is collected in the LCRS, it is inferred that the system is operating as designed.

Any liquid collected in the LCRS above the ALR for the surface impoundments is considered an adverse condition and the Water Board is to be notified immediately and a sample collected. The sample is to be tested for the monitoring parameters listed in Attachment A.

If any liquid is detected in an R-Pond 1-6 subdrain system and the sample results indicate the liquid is from an R-Pond, the Discharger must immediately discontinue discharge to the corresponding surface impoundment and place a pump in the LCRS sump to remove the leachate at the rate which the leachate is flowing into the sump. Discharge must not resume to the surface impoundment until the surface impoundment is repaired.

5. Unsaturated Zone Monitoring

a. Quarterly, the Discharger must monitor the unsaturated zone beneath the surface impoundments. The Discharger must check for moisture using moisture monitoring probes (or equivalent monitoring device) installed beneath and around the surface impoundments.

b. If moisture is detected above background limits, field verification testing must be performed and the Discharger must notify the Water Board and report a preliminary physical evidence of a release (see notification procedures below).

c. Annually, the Discharger must submit documentation of unsaturated zone monitoring instrument maintenance and performance checks, including quality assurance/quality controls.

B. Domestic Wastewater Evaporation Pond Monitoring

The domestic wastewater evaporation ponds receive sewage effluent from the plant septic system. The domestic wastewater evaporation ponds and groundwater monitoring wells are to be sampled annually for general minerals, phenols, volatile organic compounds (VOCs), chemical oxygen demand (COD), and oil and grease.

PROPOSED

1. Wastewater Flow

The Discharger must:

a. Record the volume of flow, in gallons per day, of wastewater flow to each evaporation pond; and

b. Yearly, calibrate the wastewater flow meters.

2. Dikes

a. Daily, each of the evaporation pond dikes must be visually inspected to determine if there are any indications of loss of integrity. Should the inspection indicate that any unauthorized discharge has occurred, or may occur, the Water Board must be notified verbally within 24 hours, followed by confirmation in writing in 10 days.

b. Weekly, measure and record the freeboard, as measured from the top of the lowest part of the dike to the wastewater surface in each evaporation pond. Observations and measurements must be recorded in a permanent log book kept onsite. If the evaporation pond is dry, then indicate that it is dry in the logbook and monitoring report.

C. Former Pond Monitoring

1. A network of horizontal and vertical moisture monitoring tubes are used to monitor the unsaturated zone near Former Ponds 4 and 5, Pond 6, and Former Ponds A-E. Moisture levels in the unsaturated zone surrounding the former ponds must be measured. Detection of any moisture levels above background limits requires further investigation for potential discharges.

2. The total volume and source of solid evaporated material (in cubic yards) discharged to Former Ponds A-E and the amounts recovered and disposed to the gangue waste pile is to be calculated monthly and reported on a semi-annual basis.

D. Dust Control Application Water

1. The water volume in mgd and source of water applied for dust control is to be calculated monthly and provided in the semi-annual reports.

PROPOSED

2. The dust control water supplied from each wastewater source is to be sampled and analyzed by a laboratory for the monitoring parameters specified in Attachment A on an annual basis and provided in the annual report.

E. Stormwater Catchment Requirements

U.S. Borax Boron Facility is considered a zero discharge facility under the Clean Water Act National Pollution Discharge Elimination System (NPDES) industrial stormwater program. Stormwater runoff is retained onsite in unlined flood control catchment (FCC) basins. The FCCs are to be sampled at least annually following a storm event with sufficient volume to collect a sample for the monitoring parameters listed in Attachment A and for nitrate as N.

F. Operation and Maintenance

A brief summary of any operational problems and maintenance activities must be submitted to the Water Board with each monitoring report for the U.S. Borax Boron mine facility operations. This summary must discuss:

1. Any modifications, additions, or major maintenance to the wastewater conveyance system or disposal facilities.

2. Any major problems occurring in the wastewater conveyance system or disposal facilities.

3. The calibration of any wastewater flow measuring devices.

G. Detection Monitoring and Corrective Action Program

Monitoring of the groundwater and unsaturated zone must be conducted in accordance with the DMP to provide the best assurance of the early detection of any new releases from the surface impoundments. Additionally, monitoring must be conducted to ensure compliance with the CAP.

1. Unsaturated Zone Monitoring

The unsaturated zone beneath the surface impoundments must be monitored in accordance with Section II.A.5 of this MRP. If moisture is detected above the background limits, field verification testing must be performed, and the Discharger must notify the Water Board and report physical evidence of a release (see notification procedures in Section IV.B., “Unscheduled Reports to be Filed with the Water Board”).

PROPOSED

a. Monitoring Points

The unsaturated zone monitoring program will consist of collection sumps located directly beneath the LCRS in each surface impoundment (where appropriate) and moisture monitoring probes.

b. Monitoring Parameters and Constituents of Concern

The monitoring parameters and COCs for unsaturated zone monitoring are those listed in this MRP, Attachment A.

c. Concentration Limits

The concentration limits for all non-naturally occurring constituents is the method detection limit. The Discharger must, in the WQPS, establish concentration limits that define background concentrations for all moisture limits, monitoring parameters, and COCs.

d. Calibration Documentation

Annually, the Discharger must submit documentation of instrument calibration and performance checks. Performance checks must be a comparison of quarterly results of the unsaturated zone monitoring network testing with earlier tests made under comparable conditions to verify proper operation of the equipment.

2. Groundwater Monitoring

a. Monitoring Points and Point of Compliance

The Point of Compliance, as defined in CCR, title 27, section 20405, subdivision (a), is “a vertical surface located at the hydraulically downgradient limit of the Unit that extends through the uppermost aquifer underlying the Unit.” Groundwater monitoring wells must be installed at monitoring points upgradient of the Facility and along the Point of Compliance as part of the DMP. The groundwater monitoring program consists of a system of wells established to adequately monitor groundwater beneath the Facility, per CCR, title 27, section 20415 for DMP as well as to monitor the effectiveness of the CAP per CCR, title 27, section 20430. The Discharger must collect background water quality data for the monitoring parameters and COCs listed

PROPOSED

in Attachment A. The Discharger must collect at least eight quarters of groundwater quality data at new monitoring points to determine background concentration limits for the monitoring parameters and COCs in any new groundwater monitoring wells installed to monitor the groundwater underlying the surface impoundments. The Discharger must submit a complete WQPS, which includes concentration limits that define background water quality for all COCs, and the Point of Compliance monitoring points. These data must be reported to the Water Board within 30 days following eight consecutive quarters of monitoring in the required WQPS.

The concentration threshold for each non-naturally occurring organic constituent that is not proven to have originated from a source other than the Facility is the laboratory method detection limit for that constituent.

b. Monitoring Parameters and Constituents of Concern

The monitoring parameters and COCs for the groundwater are those listed in this MRP, Attachment A. Additional groundwater samples must be collected and submitted for laboratory analyses at all monitoring points once every five years for all monitoring parameters and COCs listed in Appendix II of 40 CFR, Part 258.

Should any non-monitoring parameter COC exceed their respective statistical limit at a given monitoring point, that non-monitoring parameter COC will become a monitoring parameter.

c. Depth to Groundwater

Quarterly, and prior to sampling and purging semi-annually, the Discharger must measure and record the depth below the ground surface and elevation above mean sea level (msl) of the static groundwater surface in all groundwater monitoring wells. The Discharger shall use these measurements, which shall be accurate to the nearest 0.01 foot, to determine the groundwater surface map, pursuant to section II.G.2.e, “Aquifer Characteristics,” below, and the groundwater flow direction, pursuant to section II.G.2.e below, each quarter.

PROPOSED

d. Groundwater Sampling and Purging

The Discharger must collect samples from each groundwater monitoring well at a minimum frequency specified in Attachment A. The wells must be purged of at least three well volumes until temperature, electrical conductivity, and pH of extracted well water have stabilized to within +/- five (5) percent. Samples must be collected and analyzed using USEPA methods. The samples must be analyzed to determine the concentrations of parameters described in Attachment A. Groundwater must also be measured for:

i. Electrical conductivity in micromhos per centimeter (umhos/cm),

ii. pH (in pH units),

iii. Temperature (in either degrees Fahrenheit or degrees Centrigrade), and

iv. Turbidity (in nephelometric turbidity units [NTUs]).

e. Aquifer Characteristics

At least semi-annually, the most recent groundwater surface contours must be illustrated on an 8.5” x 11” or an 11” x 17” copy of a Facility plan, showing the locations of the surface impoundments and monitoring wells, as well as the parameters listed below in the Table – Aquifer Characteristics.

Table – Aquifer Characteristics

Parameter	Units
Depth to Groundwater	Feet below ground surface
Static Water Level	Feet above mean sea level
Slope of Groundwater Gradient	Feet/Feet
Direction of Groundwater Flow	Degrees from true North
Velocity of Groundwater Flow	Feet/Year

f. Semi-annually, the Discharger must calculate, record, and report the groundwater gradient, the direction of the gradient, and the velocity of groundwater flow.

g. Semi-annually, the Discharger must graph time-series plots of the analytical results from the groundwater monitoring at each monitoring point to show any trends in constituent

PROPOSED

concentrations through time. Time-series plots must also include, as horizontal lines, the constituents' maximum contaminant level (MCL) (if an MCL has been established), and the concentration threshold derived from the constituent's background data set (concentration limit) at that monitoring point.

h. Annually, water quality in monitoring wells utilized for groundwater monitoring of the Facility must be reported in the annual report in tabular and graphical form. Each table must summarize the historical and most recently detected constituent concentrations for all wells sampled, and compare these data to both the applicable concentration threshold and the MCL established for each monitoring parameter/COC. Each such graph must be plotted using raw data, and at a scale appropriate to show trends or variations in water quality. For graphs showing the trends of similar constituents (e.g., VOCs), the scale must be the same.

III. DATA ANALYSES

All data analyses methods (statistical and non-statistical) must meet the requirements of CCR, title 27, sections 20415, subdivisions (e)(8) and (9).

A. Statistical Data Analysis Method

In order to determine if any new releases have occurred from the Facility, evaluation of data will be conducted using statistical methods. For Detection Monitoring, the Discharger shall use statistical methods to analyze COCs and monitoring parameters that exhibit concentrations that equal or exceed their respective method detection limit in at least ten percent of applicable historical samples. The Discharger may propose and use any data analyses that meets the requirements of California Code of Regulations, title 27, section 20415, subdivision (e)(7). *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* (USEPA, 2009) or subsequent versions may also be used to select the statistical test to use for comparing detection monitoring data to background monitoring data.

The Discharger has established concentration limits for detection and evaluation of compliance with the CAP. The limits may be revised every two years, but may only be lowered.

PROPOSED

B. General Non-Statistical Data Analysis Methods

In order to determine if any new releases have occurred from the Facility, evaluation of data will also be conducted using non-statistical methods. Non-statistical analyses shall be as follows:

1. Physical Evidence

Physical evidence can include unexplained stress in biological communities such as vegetation loss, soil discoloration, or groundwater mounding. Each semi-annual and annual report must comment on such physical elements.

2. Time-Series Plots

Semi-annually and annually, the Discharger shall graph time-series plots of the historical and most recent analytical results from unsaturated zone and groundwater monitoring to show trends in constituent concentrations through time. Time-series plots must include the applicable MCL and both the mean and median of the WQPS for each respective constituent, or monitoring parameter. Time series plots are not required for parameters that have never been detected above their method detection limit (as specified by the applicable USEPA method) or if there are less than four quarters of data. Evidence of a release may include trends of increasing concentrations of one or more constituents over time.

IV. REPORTING REQUIREMENTS

The Discharger must comply with the following reporting requirements.

A. Scheduled Reports to be Filed with the Water Board

The following periodic reports must be submitted to the Water Board as specified below:

1. Semi-Annual and Annual Detection Monitoring Reports

Semi-annually and annually, monitoring data and reports must be submitted electronically to the Water Board by uploading to the State Water Board's Geotracker system, per the following schedule:

PROPOSED

Sampling and Reporting Frequency	Quarterly Period	Report Date Due
First Semi-Annual Report	January 1 – June 30	**July 30**
Second Semi-Annual Report	July 1 – December 31	**March 30**
Annual Report	January 1 – December 31	**March 30**

2. Semi-Annual Monitoring Reports

Each semi-annual report must include the following:

a. Results of sampling and laboratory analyses for each groundwater monitoring point, including statistical limits for each monitoring parameter and an identification of each sample that exceeds its respective statistical limit at any given monitoring point;

b. A description and graphical presentation of the velocity and direction of groundwater flow under/around the Facility, based upon water-level elevations taken during the collection of the water quality data submitted in the report;

c. A map and/or aerial photograph showing the locations of observation stations, monitoring points, and background monitoring points, and the Point of Compliance along the downgradient boundary of the Facility;

d. Surface impoundments monitoring, flow monitoring, effluent monitoring, and an evaluation of the effectiveness of the leachate monitoring and control facilities;

e. Data collected in accordance with the approved Monitoring and Reporting Plan and Sampling and Analysis Plan for the surface impoundments' unsaturated zone monitoring system and groundwater monitoring wells;

f. A letter transmitting the essential points of each report, including a discussion of any violations found since the last report was submitted and describing actions taken or planned for correcting those violations; and,

g. If the Discharger has previously submitted a detailed time schedule for correcting violations, a reference to the correspondence transmitting this schedule will be satisfactory. If no violations have occurred since the last submittal, this must be stated in the letter of transmittal.

PROPOSED

3. Annual Monitoring Reports

Annual Monitoring Reports must be submitted to the Water Board no later than **March 30** of each year. The annual report must be combined with the monitoring report for the last reporting period of that year. The reports must include the items described in the General Provisions for Monitoring and Reporting (Attachment B to this MRP), the information under Section IV.A.2., and the following information:

a. A list of all monitoring point/monitoring parameter pairs (pairs), by medium, that have exhibited a verified measurably significant increase, together with the respective date (for each) when that increase occurred. Any pairs that have shown an increase within that (prior) year shall be bolded-and-underlined. In addition, by medium, list any non-monitoring parameter COCs that, during testing that year (tested every five years), have exceeded their respective statistical limit and, as a result, have become monitoring parameters, together with the date when the transition occurred;

b. Time-series data plots of groundwater and unsaturated zone analysis including the information collected over the course of the monitoring period as well as available historical information. Time-series plots must also include appropriate MCL or concentration threshold established for each respective constituent that has not shown a verified release. For a pair that has a verified release indication, these plots must also include the cleanup goal;

c. Four maps, one for each quarterly monitoring period of the last reporting year, showing the groundwater elevation isocontours determined for that quarter, and showing the surface impoundments perimeters and the groundwater monitoring point and background monitoring point locations for each waste management unit, and including the surface trace of the Facility's point of compliance;

d. Graphical and tabular data for the monitoring data obtained for the previous calendar year (January – December). Each table must summarize the historical and most recently detected constituents concentrations for all locations sampled, and compare these data to both the given monitoring point/COC pair's respective statistical concentration limit and (if applicable) MCL, and be labeled appropriately. Each such graph must be plotted using raw data, and at a scale appropriate to show trends or variations in water quality. For graphs showing trends of similar constituents (e.g., volatile organic compounds), the scale must be the same;

PROPOSED

e. Calibration methods and any discrepancies of any meters used for field parameter evaluations after calibration is performed;

f. An evaluation of the effectiveness of the LCRS and unsaturated zone monitoring;

g. A brief chronological summary of dates of any operational problems and maintenance activities that may impact water quality at the site discussing at minimum:

   i. Any modifications or additions to the wastewater sump and concrete lined conveyance system, treatment facilities, or disposal facilities; with a map showing major mine roads and surface and subsurface piping locations;

   ii. Any major maintenance conducted on the wastewater conveyance system, treatment, or disposal facilities; and

   iii. Any major problems occurring with the wastewater conveyance system, treatment facilities, or disposal facilities.

h. An evaluation of corrective action activities. This should include a discussion of the status and effectiveness of the groundwater extraction program, estimates on the volume removed and disposal location, and information on new remediation techniques being studied for cleanup. The evaluation of corrective action activities should also include a map showing the extent of impacted groundwater (plume maps), and cross sections.

i. The compliance record and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the discharge requirements;

j. Evidence that adequate financial assurance for closure and post-closure maintenance activities is still in effect. Evidence may include a copy of the renewed financial instrument or a copy of the receipt for payment of the financial instrument. Evidence of adequate financial assurance must be signed by the Corporate Officer;

k. Evidence that the financial assurance amount is adequate or increase the amount of financial assurance by an appropriate amount if necessary, due to inflation, a change in the approved closure plan, or other unforeseen events; and,

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l. The Discharger must review the preliminary closure and post-closure maintenance plan annually to determine if significant changes in the operation of the Facility warrant an update to any of these plans. Changes to these plans must be submitted to the Water Board in the annual report.

4. Five-Year Non-Monitoring Parameter Constituent of Concern Monitoring Program

Pursuant to CCR, title 27, section 20420, subdivision (g), every five years the Discharger must sample for non-monitoring parameter COCs. Groundwater samples must be collected and submitted for laboratory analyses at all monitoring points once every five years for all monitoring parameters and COCs listed in Appendix II of 40 CFR, Part 258. Successive monitoring efforts must be carried out alternatively during January 1 through June 30 of one five-year sampling event and July 1 through December 31 of the next five-year sampling event, and every fifth year, thereafter. The five-year non-monitoring parameter COC sampling event must be reported no later than 45 days following the monitoring period. The last five-year sampling event occurred in third quarter, 2011. Therefore, the next five-year sampling event is scheduled to occur in first quarter, 2016.

B. Unscheduled Reports to be Filed With the Water Board

The following reports must be submitted to the Water Board as specified below:

1. Release from the Surface Impoundments

The Discharger must perform the procedures contained in this subsection whenever there is evidence of a release from the Facility.

a. Physical or Measurably Significant Evidence of a Release from the Surface Impoundments

The Discharger must immediately notify the Water Board verbally whenever a determination is made that there is physical or “measurably significant” evidence of a release from the surface impoundments. This verbal notification must be followed by written notification via certified mail within seven days of such determination. Upon such notification, the Discharger may initiate verification procedures or demonstrate that another source other than

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the surface impoundments caused evidence of a release (see below).

The notification must include the following information:

i. Surface impoundment(s) that may be the source of the release;

ii. General information including the date, time, location, and cause of the release;

iii. An estimate of the flow rate and volume of waste involved;

iv. A procedure for collecting samples and description of laboratory tests to be conducted;

v. Identification of any water body or water-bearing media affected or threatened;

vi. A summary of proposed actions; and,

vii. For a measurably significant evidence of a release – the monitoring parameters and/or COCs that are involved in the measurably significant evidence of a release from the surface impoundment(s); or

viii. For a physical evidence of a release – physical factors that indicate evidence of a release.

b. Other Source That May Cause Evidence of a Release From the Surface Impoundments

The Discharger may make a demonstration that a source other than the surface impoundments caused evidence of a release. For this case, the Discharger must notify the Water Board of the intention to make this demonstration. The notification must be sent to the Water Board by certified mail within seven days of determining physical or measurably significant evidence of a release.

2. Exceeding the Leakage Rate

Exceeding the Action Leakage Rate is an adverse condition. The Discharger must immediately notify the Water Board verbally within 24 hours whenever a determination is made that leakage into the

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LCRS exceeds the Action Leakage Rate. This verbal notification must be followed by written notification via certified mail within 7 days of such determination. This written notification must be followed by a technical report via certified mail within 30 days of such determination. The technical report must describe the actions taken to abate the adverse condition and must describe any proposed future actions to abate the adverse condition.

3. Evaluation Monitoring

The Discharger must, within 90 days of verifying a "measurably significant" release, submit a technical report pursuant to California Water Code section 13267, subdivision (b), proposing an Evaluation Monitoring Program (EMP) meeting the provisions of CCR, title 27, section 20420, subdivision (k)(5). If the Discharger decides not to conduct verification procedures, or decides not to make a demonstration that a source other than the surface impoundment is responsible for the release, the release will be considered verified.
The EMP must include the following information:

a. COC Concentrations – the maximum concentration of each COC at each Monitoring Point as determined during the most recent COC sampling event (i.e., under CCR, title 27, section 20420, subdivision (g) or (k)[1]). Any COC that exceeds its background limit is to be retested at that monitoring point. Should the results of the retest verify that the COC is above the background limit, then that COC will become a monitoring parameter at all monitoring points;

b. Proposed Monitoring System Changes – any proposed changes to the water quality monitoring systems at the surface impoundments necessary to meet the provisions of CCR, title 27, section 20425;

c. Proposed Monitoring Changes – any proposed additions or changes to the monitoring frequency, sampling and analytical procedures or methods, or statistical methods used at the Facility necessary to meet the provisions of CCR, title 27, section 20425; and,

d. Proposed Delineation Approach – a detailed description of the measures to be taken by the Discharger to assess the nature and extent of the release from the surface impoundments.

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4. Engineering Feasibility Study Report

Within 180 days of verifying the existence of a release, the Discharger must submit an Initial Engineering Feasibility Study report meeting CCR, title 27, section 20420, subdivision (k)(6), proposing corrective action measures that could be taken to achieve background concentrations for all constituents of concern involved in the release. This report will be the basis for a later expanded Engineering Feasibility Study, submitted under the Evaluation Monitoring Program, per CCR, title 27, section 20425, subdivision (b).

C. General Provisions

The Discharger must comply with Attachment B, "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made a part of this MRP.

D. Failure to Furnish Reports

Any person failing or refusing to furnish technical or monitoring reports or falsifying any information provided therein is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1,000) for each day of violation pursuant to California Water Code, section 13268.

E. Violations

If monitoring data indicate violation of WDRs, the Discharger must identify the violation and provide information indicating the cause of violation(s) and action taken or planned to bring the discharge into compliance.

F. Water Quality Protection Standard

No later than 760 days following beginning of operations, pursuant to California Water Code, section 13267, subdivision (b), the Discharger must submit for acceptance by the Water Board a proposed data analysis method and a proposed concentration limit (background data set) consisting of at least eight data points from an appropriate groundwater background data source for each COC at each new monitoring point for which a WQPS has not been established. The report must be certified by a registered civil engineer or a registered professional geologist.

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Ordered by: _____ Dated: September 16, 2015

PATTY Z. KOUYOUMDJIAN
EXECUTIVE OFFICER

Attachments: A. Table 1, Surface Impoundments Monitoring Parameters and Constituents of Concern
B. General Provisions for Monitoring and Reporting, September 1, 1994

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Attachment A

Surface Impoundments

Monitoring Parameters and Constituents of Concern

Parameter	Units	Monitoring Wells Monitoring and Reporting Frequency	Extraction Wells Monitoring and Reporting Frequency
Monitoring Parameters			
Arsenic	mg/L	Semi-Annually	Annually
Boron	mg/L	Semi-Annually	Annually
Total Dissolved Solids (TDS)	mg/L	Semi-Annually	Annually
Constituents of Concern			
Antimony	mg/L	Annually	3-years
Barium	mg/L	Annually	3-years
Bicarbonate	mg/L	Annually	3-years
Calcium	mg/L	Annually	3-years
Carbonate	mg/L	Annually	3-years
Chloride	mg/L	Annually	3-years
Fluoride	mg/L	Annually	3-years
Iron	mg/L	Annually	3-years
Lead	mg/L	Annually	3-years
Magnesium	mg/L	Annually	3-years
Manganese	mg/L	Annually	3-years
Mercury	mg/L	Annually	3-years
Potassium	mg/L	Annually	3-years
Silicon	mg/L	Annually	3-years
Sodium	mg/L	Annually	3-years
Sulfate	mg/L	Annually	3-years

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

GENERAL PROVISIONS
FOR MONITORING AND REPORTING

1. SAMPLING AND ANALYSIS

a. All analyses shall be performed in accordance with the current edition(s) of the following documents:

i. Standard Methods for the Examination of Water and Wastewater

ii. Methods for Chemical Analysis of Water and Wastes, EPA

b. All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board Executive Officer. Specific methods of analysis must be identified on each laboratory report.

c. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The methods used shall also be reported. If methods other than EPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board prior to use.

d. The Discharger shall establish chain-of-custody procedures to insure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage, and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.

e. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall insure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the permanent log book described in 2.b, below.

f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.

g. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.

2. OPERATIONAL REQUIREMENTS

a. Sample Results

Pursuant to California Water Code Section 13267(b), the Discharger shall maintain all sampling and analytical results including: strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

b. Operational Log

Pursuant to California Water Code Section 13267(b), an operation and maintenance log shall be maintained at the facility. All monitoring and reporting data shall be recorded in a permanent log book.

3. REPORTING

a. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and shall submit a timetable for correction.

b. Pursuant to California Water Code Section 13267(b), all sampling and analytical results shall be made available to the Regional Board upon request. Results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

c. The Discharger shall provide a brief summary of any operational problems and maintenance activities to the Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.

d. Monitoring reports shall be signed by:

i. In the case of a corporation, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;

ii. In the case of a partnership, by a general partner;

iii. In the case of a sole proprietorship,by the proprietor; or

iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

e. Monitoring reports are to include the following:

i. Name and telephone number of individual who can answer questions about the report.

ii. The Monitoring and Reporting Program Number.

iii. WDID Number.

f. Modifications

This Monitoring and Reporting Program may be modified at the discretion of the Regional Board Executive Officer.

4. NONCOMPLIANCE

Under Section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1,000) for each day of violation under Section 13268 of the Water Code.