



Lahontan Regional Water Quality Control Board

November 7, 2017

WDID No. 6B152004001

TO: ATTACHED MAILING LIST

TENTATIVE AMENDED WASTE DISCHARGE REQUIREMENTS FOR BOARD ORDER NO. R6V-2015-0057-A1 FOR U.S. BORAX, INC., RIO TINTO MINERALS, CLEAN ENERGY FUELS COMPANY, BORON FACILITY, KERN COUNTY

Enclosed is the tentative Amended Waste Discharge Requirements for the above subject site. The California Regional Water Quality Control Board requests that you review the enclosed documents and provide us with your written comments no later than **December 7, 2017**. Comments received after that date cannot be given full consideration in preparation of the recommended Board Order to be presented to the Regional Board for adoption at the meeting scheduled in Apple Valley for **January 10, 2018**.

You can review the agenda 10 days before the meeting on our web site at: www.waterboards.ca.gov/lahontan and click on Regional Board, Agendas, for the January 2018 meeting. If you need further information regarding this meeting, please contact our office at (760) 241-6583.

If you need further information regarding this tentative Board Order, please contact Christina Guerra at (760) 241-7333.

Robin Coale
Office Technician

Enclosures (2): Comment Form
Tentative Board Order No. R6V-2015-0057-A1

cc: Mailing List

PETER C. PUMPHREY, CHAIR | PATTY Z. KOUYOUMDJIAN, EXECUTIVE OFFICER

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Notice
Submittal of Written Material for Regional Board Consideration

In order to ensure that the State of California Lahontan Regional Water Quality Control Board has the opportunity to fully study and consider written material, it is necessary to submit it at least ten (10) days before the Regional Board Meeting. Pursuant to Title 23 of the California Code of Regulations, Section 648.2, the Regional Board may refuse to admit written testimony into evidence unless the proponent can demonstrate why he or she was unable to submit the material on time or that compliance with the deadline would otherwise create a hardship. If any other party demonstrates prejudice resulting from admission of the written testimony, the Regional Board may refuse to admit it.

COMPLETE FORM AND RETURN

To: CA Regional Water Quality Control Board, Lahontan Region
15095 Amargosa Road Building 2, Suite 210
Victorville, CA 92394
ATTN: Jan Zimmerman

TENTATIVE AMENDED WASTE DISCHARGE REQUIREMENTS FOR BOARD ORDER NO. R6V-2015-0057-A1 FOR U.S. BORAX, INC., RIO TINTO MINERALS, CLEAN ENERGY FUELS COMPANY, BORON FACILITY, KERN COUNTY

_____ We concur with proposed requirements

_____ We concur; comments attached

_____ We do not concur; comments attached

_____ (Sign)

_____ (Type or print name)

_____ (Organization)

_____ (Address)

_____ (City and State)

_____ (Telephone)

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**BOARD ORDER NO. R6V-2015-0057-A1
WDID NO. 6B152004001**

**AMENDED 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

On August 2, 2017, and August 23, 2017, U.S. Borax, Inc. submitted information that collectively constitutes a complete amended Report of Waste Discharge (RWD) to support a proposed amendment to Waste Discharge Requirements (WDRs), Board Order No. R6V-2015-0057. U.S. Borax, Inc., a subsidiary of Rio Tinto Minerals, owns and operates the U.S. Borax Mine in Boron, California. Clean Energy Fuels Company (CEFC) is an independent clean energy producer that operates a liquid natural gas plant which produces cooling tower blowdown. U.S. Borax, Inc., Rio Tinto Minerals, and CEFC are hereinafter collectively referred to as the "Discharger." The Discharger submitted an amended RWD for proposed changes in waste discharges to incorporate additional engineered alternative liner systems for Boric Acid Pond 7 (BAP 7) and future boric acid surface impoundments at the Boron Facility.

2. Reasons for Action

The Discharger is proposing additional engineered alternative liner systems for BAP 7 and future boric acid surface impoundments that are easier to construct, more economically feasible, and still protective of water quality, including compliance with the requirements of California Code of Regulations (CCR), title 27. Board Order No. R6V-2015-0057, Finding 10, describes the accepted engineered alternative liner systems for the Group A and B surface impoundments known as BAPs 1 through 7. Board Order No. R6V-2015-0057 is being amended to allow the Discharger to construct additional engineered alternative liner systems for BAP 7 and for future boric acid surface impoundments.

3. California Environmental Quality Act Compliance

This amendment to Board Order No. R6V-2015-0057 is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with CCR, title 23, section 15301. The amendment consists of permitting an existing facility with no expansion of use beyond that which is

already existing, and therefore, fits within the Class 1 exemption. No exceptions to the exemptions, as set forth in CCR, title 14, section 15300.2, have been identified.

4. Notice to Interested Parties and Public

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

5. Consideration of Comments

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

IT IS HEREBY ORDERED that Waste Discharge Requirements, Board Order No. R6V-2015-0057 is amended by the following modifications:

1. Amend the "Boric Acid Ponds" portion of Finding No. 10 to read as follows, all other language in Finding No. 10 will remain unmodified:

Boric Acid Ponds

BAPs 1-7 consists 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 collection 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 are approximately 32 acres each, with approximately 900- to 960-acre feet of capacity. BAP 6 is approximately 34 acres, with 1,100-acre feet of capacity. The Discharger is proposing to construct a large footprint, but shallow system, as an interim design for BAP 7 with room for a vertical expansion similar to the expansion activities conducted on BAPs 1-5.

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 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.

In 2015, the Discharger proposed to construct BAP 7 with a liner system of geosynthetic clay liner (GCL), a geonet leakage collection layer, a 60-mil high density polyethylene (HDPE) geomembrane liner, and dual leachate collection and

recovery system (LCRS), but with an additional sand layer on the top with piping to remove head buildup on the 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.

In August 2017, the Discharger submitted a proposal for additional engineered alternative liner systems for BAP 7 and future boric acid surface impoundments. Proposed Liner System Alternative 1 is a GCL, a 60-mil HDPE drain liner geomembrane, and an 80-mil HDPE (single sided textured, with textured side facing up). Proposed Liner System Alternative 2 is a GCL, 60-mil smooth HDPE geomembrane, a geonet, and an 80-mil HDPE geomembrane (single sided texture, with textured side facing up). The Discharger proposes these additional engineered alternative liner systems due to a number of factors including ease of construction and economic feasibility. These proposed engineered alternative liner systems are protective of water quality and are in compliance with the requirements of CCR, title 27.

This Board Order approves the following proposed engineered alternative liner systems for BAP 7 and future boric acid surface impoundments: 1) GCL, a geonet leakage collection layer, a 60-mil HDPE geomembrane liner, and dual LCRS with an additional sand layer on the top with piping to remove head buildup on the top of the liner; 2) GCL, a geonet leakage collection layer, a 60-mil HDPE geomembrane liner, a geonet leakage collection layer, and a 60-mil HDPE geomembrane liner (the R-Pond liner system); 3) GCL, a 60-mil HDPE drain liner geomembrane, and an 80-mil HDPE (single sided texture, with textured side facing up); and 4) GCL, a 60-mil smooth HDPE geomembrane, a geonet, and an 80-mil HDPE geomembrane (single sided texture, with textured side facing up).

During final design evaluation, the Discharger may propose to construct BAP 7 and future boric acid surface impoundments in the manner described by any of the above proposed engineered alternatives. Regardless of the liner system, BAP 7 is proposed to be constructed to approximately 43 acres in size with approximately 793-acre feet of capacity. A final design is required to be submitted as part of this Order.

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 January 10, 2018.

**PATTY Z. KOUYOUMDJIAN
EXECUTIVE OFFICER**