

**Appendix A**

**REVISED TENTATIVE CAO AMENDMENT**

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

**REVISED TENTATIVE ORDER**

**AMENDMENT OF CLEANUP AND ABATEMENT ORDER NOS. 98-004 AND R2-2003-0028 AND RECISSION OF WASTE DISCHARGE REQUIRMENTS (ORDER NO. 92-105) FOR:**

***ALCOA CONSTRUCTION SYSTEMS, INC., ALCOA PROPERTIES, INC., AP CONSTRUCTION SYSTEMS, INC., CHALLENGE DEVELOPMENTS, INC., DR. COLLIN MBANUGO, F.M. SMITH AND EVELYN ELLIS SMITH, LEONA CHEMICAL COMPANY, OCEAN INDUSTRIES, INC., REALTY SYNDICATE, RIDGEMONT DEVELOPMENT, INC., WATT HOUSING CORPORATION, WATT INDUSTRIES OAKLAND, WATT RESIDENTIAL, INC.***

**for the property located at**

***END OF MCDONELL AVENUE  
OAKLAND, ALAMEDA COUNTY***

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Water Board), finds that:

1. **Prior Water Board Orders:** The Leona Heights Sulfur Mine is an inactive pyrite mine in the Oakland Hills (Figure 1). The Water Board adopted a Cleanup and Abatement Order on January 30, 1998 (CAO Order No. 98-004) which requires remediation of the site, which contains exposed mine waste (also referred to as tailings) that degrade the water quality and impact beneficial uses of Leona Creek (Figures 2 and 3). That order was amended with Order R2-2003-0028 on April 14, 2003 to add a discharger, the current property owner, Dr. Collin Mbanugo, and to modify the compliance schedule. This Order further amends Order Nos. 98-004 and R2-2003-0028 for the reasons listed in Finding 2. This Amendment does not rescind Order No. 98-004 or Order No. R2-2003-0028.

The Water Board adopted Waste Discharge Requirements (WDRs) in 1992 (Order No. 92-105). Alcoa, Alcoa Construction Systems, Inc. (ACS) and Challenge Developments, Inc. (CDI) filed petitions to the State Water Resources Control Board (State Board) for review. The State Board found insufficient evidence to hold Alcoa liable as the alter ego of CDI or ACS. The State Board upheld the Water Board's inclusion of CDI and ACS as dischargers and found that both should be considered primarily liable. This Amendment rescinds Order No. 92-105. The water quality requirements of the CAO Order No. 98-004

and its amendments, including this Amendment, will supersede the requirements of Order No. 92-105.

2. **Reasons for Amendment:** This Amendment will accomplish the following objectives:
  - a) Modify Compliance Dates: This Amendment establishes new compliance dates for corrective actions that were required in Order Nos. 92-105, 98-004, and R2-2003-0028, but which have not been implemented or completed.
  - b) Clarify Cleanup Requirements: This Amendment clarifies the tasks that are necessary for the Dischargers to successfully implement an approved Corrective Action Plan (CAP). Specifically, before the CAP can be implemented, the Dischargers must submit complete permit applications to regulatory agencies with jurisdiction over various aspects of the project. Because these permits must be obtained in order to implement the CAP, we consider the submittal of complete and acceptable permit application packages to be part of the scope of tasks required by this Amendment and previous Orders. The Dischargers must obtain all permits required to comply with this Amendment.
  - c) Incorporate Requirements for Creek Restoration: Restoration of the Leona Creek streambed is a necessary element of the mine remediation project. Given the site's steep topography, the long-term stability of corrective actions in and adjacent to the streambed are critical to maintaining the beneficial effects on water quality from the corrective actions. Therefore, this Amendment clarifies the requirements related to creek restoration that are necessary to comply with Order Nos. 98-004 and R2-2003-0028.
  - d) Name Additional Discharger: Ocean Industries, Inc. is a successor in interest to Watt Industries, a Discharger named in Order 98-004. Ocean Industries, Inc. has participated in the formulation of the remedial action plan that this Amendment requires the Dischargers to execute. Ocean Industries, Inc. is therefore named a Discharger in this Amendment.
  - e) Rescission of Waste Discharge Requirements: All water quality requirements will be administered via the CAO as amended. WDR Order No. 92-105 is therefore no longer necessary and will be rescinded.
3. **Applicability and Extension of Existing Orders:** Several orders have already been issued by the Water Board to parties legally responsible for environmental remediation at the site. These orders require those responsible parties to perform cleanup actions and to submit technical and monitoring reports. These orders include CAO 98-004 and R2-2003-0028. The obligations contained in this Amendment supersede and replace those

contained in prior orders. However, the prior orders remain in effect for enforcement purposes; the Water Board and/or State Board may take enforcement actions (including, but not limited to, issuing administrative civil liability complaints) against responsible parties that have not complied with directives contained in previously issued orders.

4. **CEQA:** This action is an amendment of an order to enforce the laws and regulations administered by the Water Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA). (Cal. Code Regs., tit. 14, § 15321.) In addition, this CAO contemplates restoration and rehabilitation of an existing facility, activities exempt from CEQA. (*Id.* at § 15301.) The CAO is an action taken by a regulatory agency as authorized by state law to assure the maintenance, restoration, and enhancement of a natural resource and the environment. (*Id.* at §§ 15307 and 15308.) There are no exceptions to these categorical exemptions; there is no reasonable possibility that this action will have a significant effect on the environment due to unusual circumstances. (Cal. Code Regs., tit. 14, § 15300.2.).
5. **Notification:** The Water Board has notified the Dischargers and all interested agencies and persons of its intent under California Water Code Section 13304 to amend site cleanup requirements for the discharge, and has provided them with an opportunity to submit their written comments.
6. **Public Hearing:** The Water Board, at a public meeting, heard and considered all comments pertaining to this discharge.

**IT IS HEREBY ORDERED** that Order No. 92-105 is rescinded. It is further ordered, pursuant to Section 13304 of the California Water Code, that Order Nos. 98-004 and R2-2003-0028 shall be amended as follows:

On page 4 of 98-004, to Finding 8.B, add:

**8. Ocean Industries, Inc.:**

On October 7, 1980, Caballo Hills Development Company (the former name of Ridgemont Development Company) acquired the mine site. Caballo Hills Development Company was formed pursuant to a Partnership Agreement involving Watt Industries, Inc., as a 50% general partner. Caballo Hills Development Company changed its name to Ridgemont Development Company on January 20, 1981. Watt Industries Inc., changed its name to Ocean Industries in 1993. Therefore, Ocean Industries, Inc. is added to the list of Dischargers named in this Amendment.

Effective March 2, 1992, Watt Residential, Inc. assigned its entire partnership interest in Ridgemont Development Company to Watt Industries/Oakland, Inc., the sole remaining party in connection with the dissolution of Ridgemont Development Company. By operation of law, as the sole remaining partner, Watt Industries/Oakland, Inc. (now known as Ridgemont Development, Inc.) succeeded to the ownership of the assets of Ridgemont Development Company, including the real property on which the mine is located. Ridgemont Development, Inc. sold the property at issue to Dr. Mbanugo in 2001.

On page 5 of Order No. 98-004 replace B.2 under Remedial Measures; and on page 2 of R2-2003-0028 replace 2.b. under Amended or Deleted Remedial Measures with:

2.

I. **Mine Remediation and Creek Restoration Designs:** The Dischargers shall submit 100% designs for remediation (i.e., isolation and stabilization) of the mine tailings, and 90% designs for the restoration of Leona Creek that are acceptable to the Executive Officer.

- a. **Remedial Design Plan:** Submit a 100% design plan for the portions of the project involving stabilization of the mine tailings piles. The proposed plan shall provide for the prevention of further erosion of the mine tailings, and shall encapsulate the mine tailings in a manner as to best isolate the mining waste from stormwater runoff and contact with groundwater. Previously approved plans may be revised and resubmitted, provided that:
- i. The design plans incorporate all requirements of all regulatory permits that are required for project implementation; and
  - ii. The design plans address requirements listed in the Water Board's July 5, 2006 *Conditional Approval of the Revised Summary Design Report and Construction Documents* (Appendix A).

COMPLIANCE DATE: September 15, 2013

- b. **Creek Restoration Design Plan:** Submit a 90% design plan for creek restoration that provides details and specifications for field implementation of creek restoration actions. This design plan must also be included in any application for a Section 401 Water Quality Certification. It is understood that certain details of the creek restoration must be designed on-site during construction to address unknowns with respect to bedrock geology.

COMPLIANCE DATE: September 15, 2013

- II. **Applications for Permits:** The Dischargers must submit complete and acceptable applications, including all supporting documents and any associated fees, as required for all permits and agency agreements needed to implement the mine remediation and creek restoration projects. These include, *but may not be limited to*:
- a. A Creek Protection Permit from the City of Oakland;
  - b. Encroachment, Grading, and/or Building Permits from the City of Oakland;
  - c. A Tree Removal/Protection Plan to the City of Oakland;
  - d. A technical memo in support of a CEQA determination to City of Oakland (the lead agency) and other responsible agencies, including the biological justification;
  - e. A Section 404 Permit from the US Army Corps of Engineers;
  - f. Biological information and technical documents to the US Army Corp of Engineers, to support consultation with US Fish and Wildlife Service regarding the Endangered Species Act;
  - g. A Section 401 Water Quality Certification from the Water Board; and
  - h. A Lake and Streambed Alteration Agreement from the California Department of Fish and Wildlife (formerly Fish and Game), and if appropriate, an Incidental Take Permit.

If an agency requests additional information or documentation, the Dischargers must fully respond to the request within the time allotted by the agency and inform the Water Board of any such time frames.

COMPLIANCE DATE: November 15, 2013

- III. **Implementation of Mine Remediation and Creek Restoration Designs:** Upon receiving permits and authorization from the appropriate agencies, the Dischargers must implement the designs from Remedial Measure B.1 of the CAO. Remediation construction activities must occur and be completed during the 2014 dry season. A professional engineer familiar with the approved creek restoration design must be on site to direct construction.

COMPLIANCE DATE: September 30, 2014

- IV. **Recordation of Deed Restriction:** The current landowner must submit a report, acceptable to the Executive Officer, documenting that the deed restriction has been duly signed by all parties and has been recorded with the appropriate County Recorder. The report shall include a copy of the recorded deed restriction.

COMPLIANCE DATE: 180 Days after completion of construction

On Page 5 of Order No. 98-004 Replace B.3 under Remedial Measures; and on page 2 of R2-2003-0028 replace 2.c. under Amended or Deleted Remedial Measures with:

3. **Monitoring and Maintenance Plans:** The Dischargers must submit plans, acceptable to the Executive Officer, detailing how the site will be monitored and maintained to ensure water quality improves and the remedial and creek restoration infrastructure is stable. In addition to a water quality monitoring plan, the Dischargers must submit a plan for the Project Designer to examine the site after significant rain events, as it is expected that rocks within and adjacent to the streambed might move in response to high flows, and rocks may need to be repositioned to maintain stability. The plans must include:
- a. A proposed list of monitoring parameters and a plan for monitoring them in the creek;
  - b. Periodic inspections of the capped mine tailings piles;
  - c. Monitoring of the geomorphic integrity of the restored channel, including bed and banks;
  - d. Monitoring the successful establishment of the banks adjacent to the restored creek channel; and
  - e. Monitoring of the stability of the capped mine tailings, and hillsides above the banks of the restored channel.

COMPLIANCE DATE: October 30, 2014

I, Bruce H. Wolfe, 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, San Francisco Bay Region, on \_\_\_\_\_.

\_\_\_\_\_  
Bruce H. Wolfe  
Executive Officer

=====  
FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ORDER MAY SUBJECT  
YOU TO ENFORCEMENT ACTION, INCLUDING BUT NOT LIMITED TO: IMPOSITION  
OF ADMINISTRATIVE CIVIL LIABILITY UNDER WATER CODE SECTIONS 13268 OR  
13350, OR REFERRAL TO THE ATTORNEY GENERAL FOR INJUNCTIVE RELIEF OR  
CIVIL OR CRIMINAL LIABILITY  
=====

Attachments:

- Figure 1. Site Location
- Figure 2. Leona Creek, headwaters on mine property
- Figure 3. Leona Creek, discoloration from acidophilic bacteria
- Water Board Letter, *Conditional Approval of the Revised Summary Design Report and Construction Documents* (July 5, 2006)



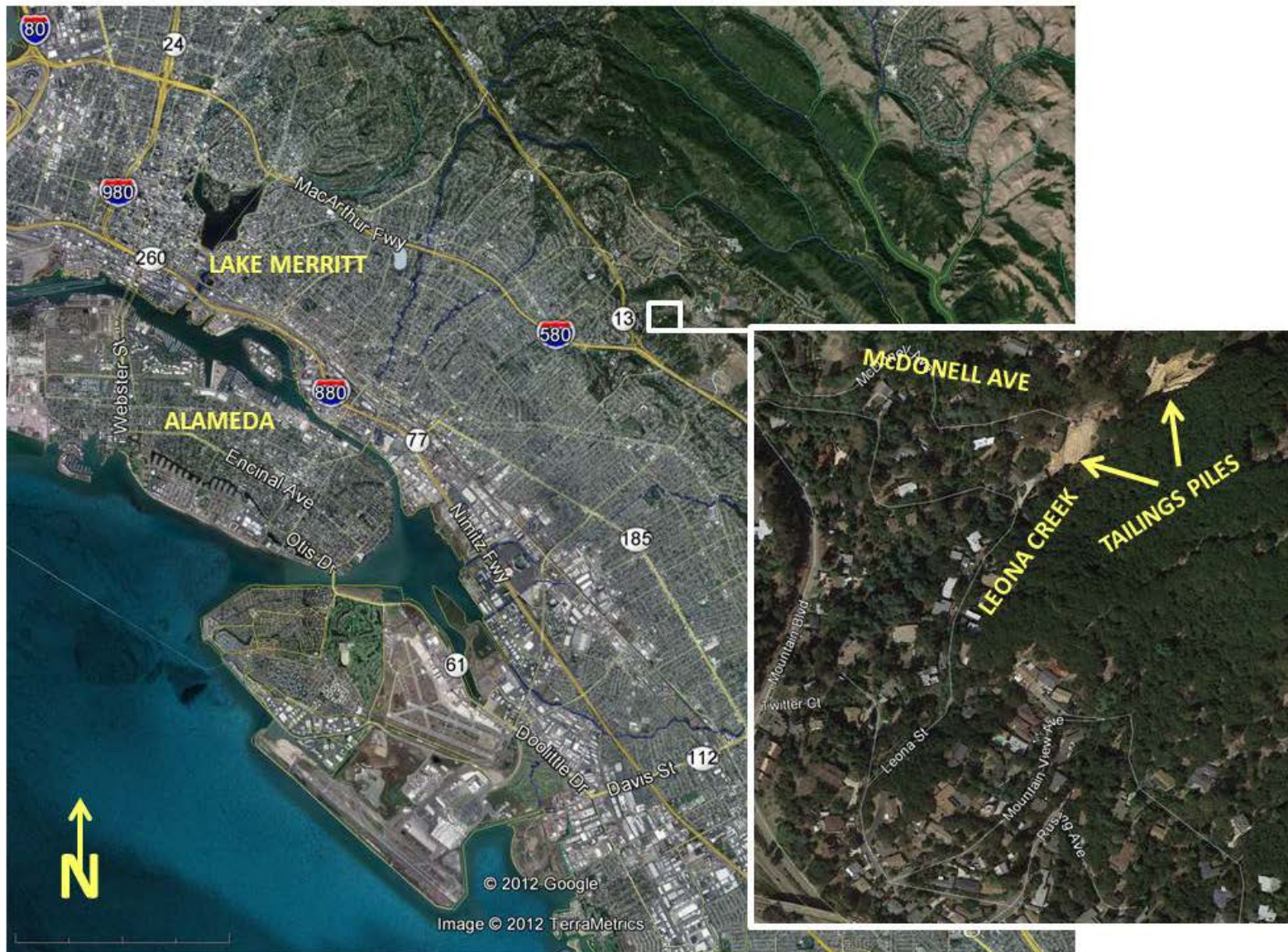


Figure 1. Site location





Figure 2. Leona Creek, headwaters on mine property





**Figure 3. Leona Creek, discoloration from acidophilic bacteria**



# California Regional Water Quality Control Board

## San Francisco Bay Region



Linda S. Adams  
Secretary for  
Environmental Protection

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<http://www.waterboards.ca.gov/sanfranciscobay>

Arnold Schwarzenegger  
Governor

Date: JUL 05 2006  
File No. 2199.9279 (KER)

Leona Heights Sulfur Mine  
Attn: Dr. Collin Mbanugo  
3300 Webster Street, Suite 900  
Oakland, CA 94609

**Subject: Conditional Approval of Revised Summary Design Report and Construction Documents, Leona Heights Sulfur Mine, Oakland, Alameda County**

Dear Dr. Mbanugo:

This letter approves the technical report entitled "*Revised Summary Design Report and Construction Documents*" that was submitted by Moju Environmental Technologies on April 11, 2006. Final regulatory approval of the subject report is made on the condition that the minor design concerns discussed below are addressed and incorporated into the project during implementation. The Design Report was submitted to comply with Cleanup and Abatement Order (CAO) No. R2-2003-0028 and our December 16, 2005 letter to you. Although the report is acceptable on its technical merit as a corrective action plan, Water Board staff wish to note that the report was received more than three months after its due date of December 31, 2005.

This letter also acknowledges receipt of your application package to the Water Board for a Section 401 Water Quality Certification permit. The permit application package, which was also submitted on April 11, 2006, is complete and Water Board staff are currently evaluating your permit request.

*Comments and Requested Revisions*

The revised corrective action plan significantly improves the previous (March 2004) design in terms of its approach to restore the creek to a more natural appearance and function. Water Board staff are generally pleased with the overall design of the proposed corrective actions; however, we wish to have the following concerns addressed:

1. We question whether the proposed diameter of the HDPE subdrain piping (4" diameter for perforated portions, 6" diameter for solid piping) is adequate to transmit the volume of water that can be expected to accumulate along the bedrock/waste rock interface. Please explain how these pipe sizes were selected and submit documentation to justify the adequacy of the 4" and 6" pipe sizes.

*Preserving, enhancing, and restoring the San Francisco Bay Area's waters for over 50 years*

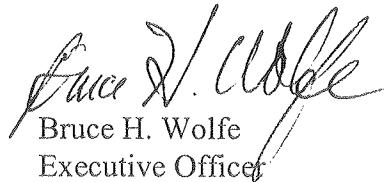
2. The inset drawing on Drawing C6 (Detail A) depicts the HDPE liner overlapping in the bottom of the bench drain. To minimize the potential for leakage from the bench drains, the HDPE liner sheets will need to be seam-welded or should overlap at some point other than in the bottom of the drain.
3. We request that you provide us samples of the geotextile materials selected for the cap: 200-mil w/ 807 NW-NP Geocomposite Drain (above 60-mil HDPE barrier) and the Geotextile NW-NP 12-oz (below HDPE barrier).

Addressing these concerns will not necessitate further revision and re-submittal of the Design Report. However, we request that you respond to the above concerns in a brief letter report no later than July 20, 2006.

This request for technical information is made pursuant to *Water Code Section 13267*, which allows the Board to require technical reports and information from persons whose activities may have and impact on water quality. This is a formal request for information.

If you have any questions, please contact Keith Roberson at (510) 622-2404 or by email at [KRoberson@waterboards.ca.gov](mailto:KRoberson@waterboards.ca.gov).

Sincerely,



Bruce H. Wolfe  
Executive Officer

cc: Mailing List

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