



TN 37891

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September 18, 2006

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**VIA E-MAIL AND HAND DELIVERY**

Christopher Meyer  
Compliance Project Manager  
California Energy Commission  
1516 Ninth Street  
Sacramento, CA 95814

**Re: Bottle Rock Power Plant - 79-AFC- 4  
Responses to Data Requests**

Dear Mr. Meyer,

Enclosed, please find one original and 14 copies of Bottle Rock Power LLC's **Responses to Data Requests** for the Bottle Rock Power Plant ("BRPP"). As is detailed in Response #1, copies of the Dames & Moore Phase I and Phase II Environmental Site Assessments Report are submitted under separate cover due to the voluminous nature of the report. All other referenced attachments are included with the responses.

As always, if you have any questions regarding this Petition to Amend, please do not hesitate to contact me at (916) 447-0700.

Very truly yours,

  
John A. McKinsey

JAM:kjh

Enclosures

cc: Service List (attached)



**SERVICE LIST**  
**Bottle Rock Power Plant - 79-AFC-4**

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**PETITION TO AMEND FINAL DECISION TO RE-FIRE PLANT  
BOTTLE ROCK POWER PLANT  
79-AFC-4C**

**RESPONSES TO CEC DATA REQUESTS**

**I. WASTE**

**REQUEST #1: Please provide a copy of the Final Report, Decommissioning and Cleanup Cost Estimates, Bottle Rock Power Plant. This report summarizes the results of the Phase I and Phase II Environmental Site Assessments that were published on November 5, 1996.**

RESPONSE #1: The requested Phase I and Phase II Environmental Site Assessments Report is being provided under separate cover.

**II. SOIL AND WATER RESOURCES**

**BACKGROUND**

Bottle Rock Power, LLC (BRP) proposes to re-power the Bottle Rock Power Plant (BRPP) after more than 15 years of non-operation. Finding 11 of the Central Valley Regional Water Quality Control Board Order No. 99-091 states in part: The discharger has conducted both Phase I and Phase II Environmental Site Assessments at the power plant. Typical analytes (*sic*) detected above background include: . . . arsenic and mercury at various plant locations, and total petroleum hydrocarbon as diesel in soils from the former location of an underground storage tank. Elevated concentrations of boron in soil, likely a result of steam drift during plant operations have also been identified in areas adjacent to the power plant muffler.

In Section III,D,2,e,(2) - Hydrogen Sulfide abatement system changes, BRP proposes to install a new hot condensate pipeline. The 25-foot pipeline would be installed under the surface yard to the cooling tower which may disturb contaminated soil.

**REQUEST #2: Please provide a BRPP site plan showing the location of the proposed hot condensate pipeline and the location of any other soil disturbing activities planned during plant refurbishment.**

RESPONSE #2: Bottle Rock Power, LLC plans one (1) soil disturbing activity as part of refurbishing the Bottle Rock Power Plant for re-firing. The activity will provide the requisite trench for re-routing the hot condensate line so it can terminate in the cooling tower basin. This section of the hot condensate pipe must pass under the paved roadway that sets between the exiting concrete trench and the cooling tower.

**PETITION TO AMEND FINAL DECISION TO RE-FIRE PLANT**  
*Bottle Rock Power Plant (79-AFC-4C)*  
**Response to CEC Data Request**

The re-route pipeline is twelve inches in diameter. The applicable regulations mandate that the excavation must be at least twice the pipe diameter with respect to width and depth of the trench. Hence, the excavation will be approximately two feet wide by four feet deep by twenty feet long. The depth of four feet is necessary to accommodate the penetration of the existing hot condensate line through the existing concrete-lined trench. This new trench will yield approximately three cubic yards of excavated soil. See attached Drawing for pipeline and excavation perspective.

**REQUEST #3: Please provide descriptive text/plan that describes the construction best management practices for the testing, handling and disposal of contaminated soil if encountered for the proposed pipeline and any other soil disturbing activities.**

**RESPONSE #3:** BRP will comply with all applicable OSHA regulations for all activities, including the excavation activity, so as to provide the safest working environment for plant workers.

The soil subject to excavation is not expected to contain any contaminating constituents in excess of background or naturally occurring levels. Potential sources of contamination have been prevented from reaching the soil to be excavated due to the following:

- The cut and fill construction activities occurred before any contamination could occur from Plant operations.
- The cooling tower basin has been drained and inspected for any breaches in basin integrity and no breaches have been found. This condition of the cooling tower basin eliminates any potential contamination of the soil from direct exposure to steam condensate.
- Macadam has functioned as the impermeable barrier that has prevented any contamination of this soil from cooling tower drift.
- Consequently, potential pathways for contamination have been properly eliminated and thereby background levels of potential contaminants have been preserved to be whatever they are.

Background levels of potential contaminants notwithstanding, a random composite sample of the soil to be excavated will be analyzed to determine if any potential contaminants exceed Hazardous Waste Characterization limits expressed as TTLC. Special attention will be paid to arsenic and mercury as potential contaminants since these two elements are indigenous to geothermal steam.

If the soil analyses indicate that the soil contaminants exceed the hazardous waste characteristics for any Title 22 contaminant, the soil will be placed in the appropriate hazardous waste container, watered down for dust control, and the bin covered while awaiting transport. A waste profile will be created, a hazardous waste manifest completed, and then the contaminated soil will be transported by a permitted transporter to a secured Class I hazardous waste disposal site.

**PETITION TO AMEND FINAL DECISION TO RE-FIRE PLANT**  
**Bottle Rock Power Plant (79-AFC-4C)**  
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Also, if the soil is demonstrated to be hazardous, no remediation of the specific area will occur at this time. Such remediation will occur when the Plant is decommissioned.

If the soil analyses demonstrate that the soil is not contaminated, all excavated soil will be placed on plastic sheeting to prevent exposure to the adjacent surfaces so as to ensure ease of clean-up after the pipeline installation is completed. The overburden will be watered down during actual excavation activities to prevent fugitive dust emissions so as to comply with local Air Quality Management District rules. The overburden will be covered with plastic sheeting at the end of the workday to prevent fugitive dust overnight.

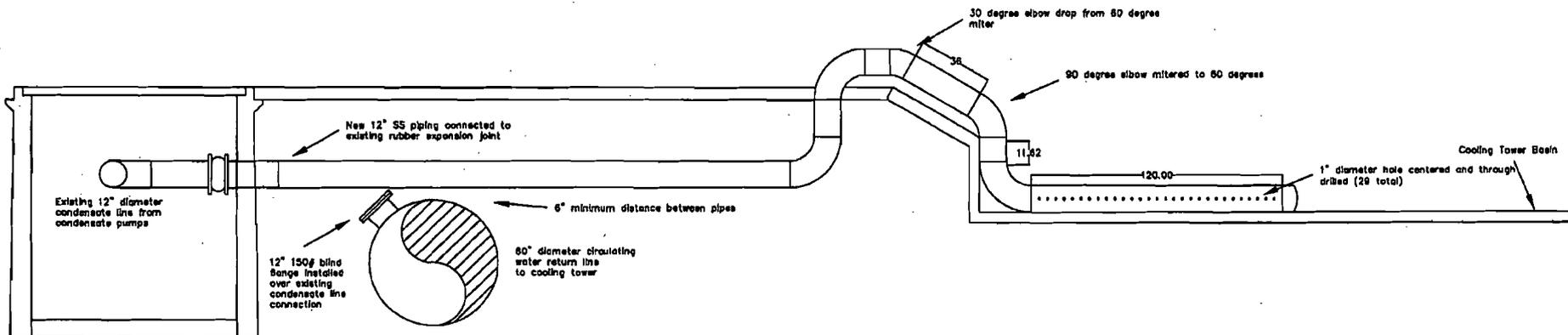
The appropriate sand and gravel will be packed around the pipe pursuant to established industrial standards. If the overburden soil analyses do not indicate hazardous characteristics, the excavated soil will be used to backfill the trench from whence it came with as much soil as practicable so as to completely fill the trench.

**REQUEST #4: Please describe the water source and estimated quantity that will be used during construction and for dust suppression for all new soil disturbing activities.**

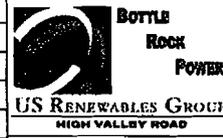
REQUEST #4: Any water used for dust control during the excavation activities will be supplied from the water well located at the Bottle Rock facility. This well is located away from the Plant and steamfield near the location of the original home of the leaseholder. The well water is very clean and meets or exceeds applicable domestic water criteria as demonstrated by the analysis report of this well water that is attached.

The estimated volume of well water that would be used for dust suppression during excavation activities should not exceed 250 gallons.

ATTACHMENT to RESPONSE #2



REVISIONS								REFERENCE DRAWINGS		BOTTLE ROCK POWER					
ZONE	REV	DESCRIPTION	DATE	DRN	DSGN	CHKD	APPD			CONDENSATE SPARGING SYSTEM		SIZE	FILE NAME:	DWG NO.	REV
												B	BRP-MECH-CT-SPG-001.DWG	BRP-MECH-CT-SPG-001	0
	0	PRELIMINARY DESIGN	08/05/06	LEB	LEB							SCALE NONE			SHEET 1 OF 1





ATTACHMENT to RESPONSE #4



*Helping Power Plants Run Better*

## Laboratory Analysis Report

**Date:** August 22, 2006

**Customer:** US Renewables

**Location:** Bottle Rock, GW1

**Date Sample Taken:** 08/8/06

**Identification of Sample(s):**  
A. PCSAM241

**Labwork Performed:**  
AMMONIA ANALYSIS  
ARSENIC, SILVER, AND SELENIUM BY IRIS  
INORGANIC ANALYSIS BY IRIS  
STANDARD WATER ANALYSIS



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### Water Analysis

Sample ID: A. PCSAM241

Sample ID A  
Date Obtained 7/8/2006

<u>Anions</u>	
p Alkalinity (mg/L as CaCO <sub>3</sub> )	0
m Alkalinity (mg/L as CaCO <sub>3</sub> )	128
Bromide (as Br <sup>-</sup> )	<0.1
Fluoride (mg/L as F <sup>-</sup> )	0.5
Chloride (mg/L as Cl <sup>-</sup> )	4.7
Silica (mg/L as SiO <sub>2</sub> )	29.1
Sulfate (mg/L as SO <sub>4</sub> <sup>2-</sup> )	3.8
Ortho-Phosphate (mg/L as PO <sub>4</sub> <sup>3-</sup> )	< 0.1
Total Phosphate (mg/L as PO <sub>4</sub> <sup>3-</sup> )	< 0.031
<u>Cations</u>	
Calcium (mg/L as Ca <sup>2+</sup> )	38.2
Magnesium (mg/L as Mg <sup>2+</sup> )	12.3
Calcium Hardness (mg/L as CaCO <sub>3</sub> )	95.5
Magnesium Hardness (mg/L as CaCO <sub>3</sub> )	50.4
Total Hardness (mg/L as CaCO <sub>3</sub> )	146
Ammonia (mg/L as NH <sub>3</sub> )	< 0.1
Iron, Total (mg/L as Fe)	0.005
Copper (mg/L as Cu)	< 0.005
Sodium (mg/L as Na <sup>+</sup> )	21.4
Potassium (mg/L as K <sup>+</sup> )	1.0
Barium (mg/L as Ba <sup>2+</sup> )	0.4
Strontium (mg/L as Sr <sup>2+</sup> )	0.5
Arsenic (mg/L as As)	< 0.010
<u>Miscellaneous</u>	
pH	6.8
Total Dissolved Solids (mg/L)	262
Conductivity (microsiemens)	340

An anion/cation balance performed on the sample was acceptable.

**PowerChem Technology**

Corporate Office | 775.267.2000 | P.O. Box 1527 | Minden, Nevada | 89423



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All water samples are analyzed for the additional elements listed below. If the analytical result is not listed in the main report, then the result was below the detection limit. The detection limits are:

<u>Element</u>	<u>Normal Detection Limit (ppm)</u>	<u>High Purity Detection Limit (ppm)</u>
Aluminum (Al)	0.1	0.005
Antimony (Sb)	0.1	0.010
Barium (Ba)	0.1	0.001
Cadmium (Cd)	0.1	0.001
Chromium (Cr)	0.1	0.001
Cobalt (Co)	0.1	0.001
Lead (Pb)	0.1	0.005
Manganese (Mn)	0.1	0.001
Molybdenum (Mo)	0.1	0.005
Nickel (Ni)	0.1	0.005
Phosphorus (P)	0.5	0.010
Potassium (K)	1.0	0.005
Strontium (Sr)	0.1	0.001
Titanium (Ti)	0.1	0.005
Vanadium (V)	0.1	0.005
Zinc (Zn)	0.1	0.001

High Purity analyses are usually performed only on specific boiler and RO waters.

**PowerChem Technology**

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**From:** "Hecox, Elizabeth" <eyhecox@stoel.com>  
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**Date:** 9/18/2006 3:26:11 PM  
**Subject:** Bottle Rock Power Plant 79-AFC-4

Attached hereto with regard to the above referenced matter, please find Bottle Rock Power LLC's Responses to Data Requests along with cover letter and attachments for filing. This original document will follow via hand delivery to the CEC. Should you have any questions, please contact our office at (916) 447-0700.

Thank you,

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