



California Energy Commission

DOCKETED
79-AFC-4C

TN # 70304

APR. 15 2013

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April 15, 2013

VIA EMAIL

The Honorable Karen Douglas, Presiding Member
The Honorable Robert B. Weisenmiller, Associate Member
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

**Re: Bottle Rock Power Plant (79-AFC-4C and 12-CAI-04)
Decommissioning Estimate**

Dear Commissioners:

On behalf of Bottle Rock Power, LLC ("Bottle Rock"), enclosed herein for docketing please find a report prepared by Plant Reclamation entitled "Bottle Rock Power Plant Decommissioning Estimate" (the Report). This Report relates to and satisfies the Committee's February 6, 2013 Decision Sustaining Complaint Against Bottle Rock. (See Committee's Order at Item #6, p. 8 wherein the Committee required "an engineering study establishing the costs of decommissioning the Bottle Rock Power Plant"), and complies with Bottle Rock's notification to the Commission that the study would be provided by April 15, 2013 for use in acting upon Bottle Rock's amendment application.

Please do not hesitate to contact John McKinsey or me should you have any questions regarding the enclosed document.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "KT Castanos".

Kristen T. Castaños

KTC:jmw

Enclosure

cc: Proof of Service List



Plant Reclamation

912 Harbour Way South
Richmond, California 94804
Tel 510.233.6552
Fax 510.237.6739

15 April 2013

Please find enclosed the Bottle Rock Power Decommissioning Report as requested per Purchase Order number 1303014. Please contact me with any questions or concerns regarding this report.

Sincerely,

Fred Glueck

Bottle Rock Power Plant Decommissioning Estimate



Reclamation Fred Glueck

We are California Licensed Contractors #518628 and conform to all rules and regulations, both Federal and State, pertaining to same. We are bondable and have available in excess of ten million dollars (\$10,000,000.00) in liability insurance and compensation insurance as required by law.



Power Plant Entrance



Power Plant

Major Tasks

This estimate provides a cost break out for the following categories of decommissioning and reclamation activities:

1. Removal of above grade power production equipment:

- * Low pressure steam turbine and associated components
- * Condenser
- * Generator
- * Circulating water pumps and motors
- * Gas extraction equipment
- * Lubricating oil components
- * Valves, piping, pumps and motors
- * Cooling tower and cooling tower pump basin equipment
- * Switch gear
- * Rock muffler system
- * Switch yard
- * Stretford system
- * Miscellaneous piping, buildings and equipment

2. Remove all above grade foundations and footings to upgrade.

3. Backfill cooling tower basin, circulating water pump basin and turbine/generator building basement to grade, pipe trench and all other pits and trenches associated with the scope of work as described.

4. De-contaminate Stretford system prior to demolishing and recycling.

5. Designate scrap value and possible resale value for turbine/generator equipment.

Assumptions

The removal of the above grade assets as identified in item number 1 above is predicated on the following assumptions:

1. Owner to supply water for fire safety and dust control.
2. Owner to be responsible to provide power to turbine building in order to facilitate the use of the overhead crane and lighting systems.
3. All structures in the work scope to be removed to top of grade or bottom of pits and basins except for the turbine building, the office building, the stand by generator building and the fire protection building.
4. All concrete rubble and non- hazardous debris generated during dismantling can be placed in the pits, voids and basins located in the work zone.
5. Backfill of pits, voids and basins will be performed with the use of onsite borrow source material. Import of fill material is not included. No engineering of the backfill, testing or compaction is included. Backfill will be placed at 90% placement criteria, not in engineered lifts.
6. Contractor will obtain CalOsha and Air Quality permits. All other permits and authorizations will be the responsibility of the owner. The modification of the SWPP is not included in the proposal that will be responsibility of owner.
7. Owner will be responsible for isolation of all utilities. Owner will drain all lines and make the site safe for dismantling work. Contractor will assist in the decontamination of the Stretford system for dismantling and recycling purposes.
8. All hazardous waste testing, sampling, profiling, transportation and disposal costs will be the responsibility of the owner. Contractor will assist in the handling and loading of materials created during the dismantling work for Owners account.
9. All salvage material to become property of Owner. Owner to be responsible for the sale, transportation, preparation and loading of the materials. If contractor is still onsite during the handling and sale of said materials, contractor will provide those services to owner on a cost reimbursable basis. If assets are delegated to contractor, credit will be given towards the cost of the work by contractor.
10. Estimate does not include costs for grading and re-surfacing of site, only backfill of pits, voids and basins is included.
11. The work scope does not include removal of the turbine deck, the vertical concrete support columns or any other structural member. The process equipment and attachment brackets will be removed and all building utilities such as electrical and fire protection will not be removed.
12. Building repairs not included in this estimate.



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Time frame

The project time frames and budget estimates are predicated on a single mobilization by the contractor, therefore Bottle Rock Power or those who use this report must not presume that the project can be performed on a pick and choose as you desire method. The budget estimates are identified by area for cost allocation purposes only. Multiple phases of work could be occurring at concurrent times based on weather and man power availability and should not be confused for modifications in the budget estimates. Only a single site mobilization and de-mobilization is included in the budget estimate.

The project time frame is estimated to be approximately 6 to 8 months. Work would occur Monday through Thursday 10 to 12 hours per day.

Tasks broken down

The breakdown below is based on the work to be performed located at the production facility site and is identified by task, the estimated salvage recovery value in 2013 dollars and the backfill costs associated with the work area. The work areas are defined as listed below:

I. Turbine/Generator Building:

- a. Remove all interior equipment as identified
- b. Backfill basement to 4 inches below grade
- c. Salvage value as scrap of turbine/generator equipment
- d. Potential resale value of turbine/generator as usable equipment



Turbine Generator



Turbine Generator (top)



Support Equipment

2. **Cooling Tower and Circulating Water Pump Equipment**
 - a. **Remove cooling tower**
 - b. **Backfill cooling tower and pump basins to 4 inches below grade**
 - c. **Salvage value as scrap of circulating pump equipment**



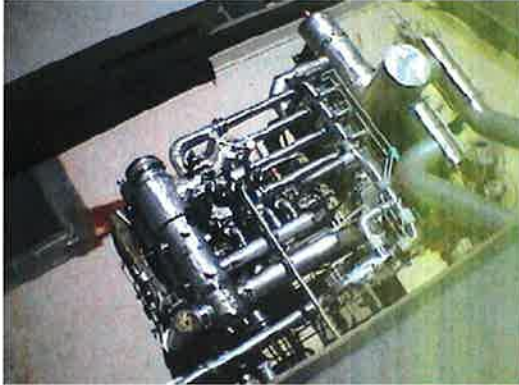
Cooling Tower

3. **Stretford System**
 - a. **Decontaminate Stretford equipment for dismantling**
 - b. **Salvage value as scrap of Stretford equipment**



Stretford Equipment

4. Pipe trenches and miscellaneous structures, gas extraction and rock muffler
 - a. Remove piping in trench and remove miscellaneous structures
 - b. Backfill pipe trench to 4 inches below grade
 - c. Salvage value as scrap of pipe and miscellaneous materials



Gas Handling System



Steam Separator and Stacking System

Itemized Cost Breakdown

Below is an itemized cost breakdown by work zone for the project. The detail of calculation is included in the appendix. The components included in the cost analysis include; labor, equipment, overhead, subsistence, room, permits, rentals, mobilization and de-mobilization and profit.

Work Area	Work Duration (in weeks)	Removal Cost	Backfill Cost
T/G Building	15	\$ 607,950.00	\$ 185,000.00
Rock Muffler	4	\$ 162,120.00	\$ 5,250.00
RM Piping to T/G	1	\$ 40,530.00	N/A
Stretford	3	\$ 121,590.00	N/A
Stretford Decon.	3	\$ 175,000.00	N/A
Pipe Trench	1	\$ 40,530.00	\$ 18,750.00
Cooling Tower	4	\$ 162,120.00	\$ 112,500.00
C/T Pump Basin	2	\$ 81,060.00	\$ 140,000.00
Gas Plant	3	\$ 121,590.00	N/A
TOTAL:	33 Weeks	\$ 1,512,490.00	\$ 361,500.00

Salvage values have been predicated on total salvage recovery generated for the dismantling project.

Estimates are for the salvage material to be placed on site for the owner. No preparation, sizing, loading or transportation costs by contractor are included in the cost recovery of the salvage materials. Pricing is estimated in April 2013 dollar values. Actual prices will be dependent upon the material grading and value at time of sale by owner.

Estimated recovery values are as follows:

Material	Type	Rate	Value
Stainless Steel	304L, 316 and 321	570,000 lbs @ \$0.75/lb.	\$ 382,500.00
Mixed Copper	est. recovery rate - 30%	350,000 lbs @ \$2.00/lb.	\$ 200,000.00
Scrap Steel	Mixed grades of Fe	660,000lbs @ \$0.125/lb.	\$ 82,500.00
TOTAL:			\$ 655,000.00

The potential does exist to sell the turbine generator equipment as usable equipment under current market demand. In an "as-is, where-is" basis, the potential market value for the equipment is approximately \$ 1,000,000.00 plus or minus 25%.

Hazardous Waste

Below is a list of four probable hazardous waste or material streams from facility operations. Included is the number of loads generated from that waste stream as well as the cost for the transportation and disposal on those waste streams.

What is not known at this time is the actual waste characterization on those waste streams for the true disposal costs. Also these estimates are not included in the dismantling costs listed above nor are the State of California Board of Equalization fees and the State Hazardous Materials Disposal fees are not included, they will be calculated on actual costs incurred.

The four probable waste streams are:

Probable Waste Streams	Amount (by load)	Costs
Cooling Tower Debris	150	\$ 450,000.00
Stretford Waste	10	\$ 30,000.00
Waste Oil	2	\$ 5,000.00
Rock Muffler	20	\$ 70,000.00
TOTAL:		\$ 555,000.00



APPENDIX A

The budget as provided above has been developed based on the following general cost allocations.

Labor is based on a crew of 8-10 men which includes: supervision, equipment operators and dismantling technicians.

The weekly crew cost includes: wages and benefits, transportation, room and board and subsistence.

The weekly labor cost is approximately: \$35,000.00 per week.

Contractor owned equipment included in the budget is identified below:

- Hydraulic excavator w/hydraulic steel cutting shear.
- Hydraulic excavator w/concrete breaking hammer.
- Hydraulic excavator w/thumb & bucket.
- Hydraulic excavator w/material handling grapple.
- Skid steer loader w/ grapple bucket.

Rental equipment:

- Compactor.
- Backhoe.
- Dump trucks.

Outside services:

- Crane and rigging included in the weekly equipment budget.

The weekly equipment budget is approximately: \$16,000.00 per week.

Other outside service costs are for environmental decontamination:

- Stretford decontamination is approximately: \$175,000.00
(does not include T & D).

The weekly labor and equipment costs above include contractor: overhead, profit, materials and supplies. As listed in the specific conditions above, permit fees are not included in the budget except Air Quality and CalOsha permits.

The final component to be added to the above cost items is the mobilization and demobilization cost for the equipment which is estimated at: \$17,000.00.



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If the weekly costs are extended out as broken out the budget is derived as follows:

Item	Quantity	Cost	Extended Cost
Labor	33 weeks	\$ 35,000.00	\$ 1,155,000.00
Equipment	33 weeks	\$ 16,000.00	\$ 528,000.00
Mob/Demob	1	\$ 17,000.00	\$ 17,000.00
Stretford Decon	1	\$ 175,000.00	\$ 175,000.00
TOTAL:			\$ 1,875,000.00

Project sequencing would be scheduled as follows:

Week 1: Mobilization and set up.

Week 2-15: Remove Cooling Tower, Rock Muffler, Gas Plant, Cooling Tower Pump Basin, Decon Stretford, Remove Stretford and backfill Pits and Basins.

Week 16-30: Remove equipment in Turbine Building and backfill Turbine Building.

Week 31-33: Complete site cleanup and demobilization.





BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
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**IN THE MATTER OF THE
COMPLAINT AGAINST THE
BOTTLE ROCK GEOTHERMAL POWER PLANT**

**Docket No. 12-CAI-04
PROOF OF SERVICE
(REVISED 3/4/2013)**

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***After docketing, the Docket Unit will
provide a copy to the persons listed below.
Do not send copies of documents to these
persons unless specifically directed to do so.***

KAREN DOUGLAS
Commissioner and Presiding Member

ROBERT B. WEISENMILLER
Chair and Associate Member

Paul Kramer
Chief Hearing Adviser

Galen Lemei
Adviser to Presiding Member

Jennifer Nelson
Adviser to Presiding Member

Sekita Grant
Adviser to Associate Member

Eileen Allen
Commissioners' Technical
Adviser for Facility Siting

DECLARATION OF SERVICE

I, Judith M. Warmuth, declare that on April 15, 2013, I served and filed the attached Letter to Hon. Karen Douglas and Hon. Robert Weisenmiller enclosing the Decommissioning Estimate Report. This document is accompanied by the most recent Proof of Service, which I copied from the web page for this project at:

<http://www.energy.ca.gov/sitingcases/bottlerock/index.html>.

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service) and to the Commission's Docket Unit, as appropriate, in the following manner:

(Check one)

For service to all other parties and filing with the Docket Unit at the Energy Commission:

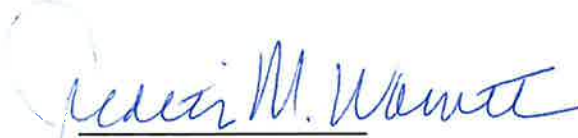
I e-mailed the document to all e-mail addresses on the Service List above and personally delivered it or deposited it in the US mail with first class postage to those parties noted above as "hard copy required";

OR

Instead of e-mailing the document, I personally delivered it or deposited it in the US mail with first class postage to all of the persons on the Service List for whom a mailing address is given.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that I am over the age of 18 years.

Dated April 15, 2013



Judith M. Warmuth