DOCKETED

Docket Number:	79-AFC-04C
Project Title:	Compliance - Application for Certification of DWR Bottlerock Geothermal Project
TN #:	201441
Document Title:	Commission Decision on the Petition to Amend the Conditions of Certification for the Bottle Rock Geothermal Power Plant
Description:	Includes complilation of all project conditions.
Filer:	Cody Goldthrite
Organization:	California Energy Commission
Submitter Role:	Committee
Submission Date:	12/16/2013 11:04:19 AM
Docketed Date:	12/16/2013

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

IN THE MATTER OF THE
BOTTLE ROCK GEOTHERMAL
POWER PLANT AMENDMENT

DOCKET NO. 79-AFC-04C
ORDER NO. 13-1211-3

COMMISSION DECISION ON THE PETITION TO AMEND THE CONDITIONS OF CERTIFICATION FOR THE BOTTLE ROCK GEOTHERMAL POWER PLANT

December 2013

Publication CEC-800-2013-003-CMF

COMMISSION DECISION ON THE PETITION TO AMEND THE CONDITIONS OF CERTIFICATION FOR THE BOTTLE ROCK GEOTHERMAL POWER PLANT

INTRODUCTION

This proceeding primarily relates to two Conditions of Certification applicable to the Bottle Rock Geothermal Power Plant project, imposed in 2001 when a change of ownership of the project was approved. One required a $10 Million environmental impairment insurance policy. The other required a $5 Million bond to secure the proper closure of the project facilities subject to Energy Commission jurisdiction.[1] The project's current owner, Bottle Rock Power, LLC (BRP), has petitioned to amend the Conditions of Certification to remove the bond and insurance requirements and to modernize conditions relating to planning for the eventual closure of the facility (Ex. 1).

In 2012, BRP cancelled the closure bond. The condition requiring the bond did so by referring to provisions in a contract between BRP's predecessor and the Department of Water Resources (DWR), the project's original owner and developer. BRP apparently assumed that it could remove the bond and insurance requirements by amending the contract. Intervenor David Coleman filed a complaint alleging that the termination of the bond violated the Conditions of Certification (Docket 12-CAI-04). The Energy Commission appointed a Committee to consider the complaint. The Committee conducted hearings and ruled that the Commission's bond requirement was unaffected by the contract amendment and remained in effect. (Docket 12-CAI-04, TN 69413.) The Committee's decision stayed reinstatement of the bond if BRP filed a timely petition for amendment, which BRP did file on March 8, 2013.[2] (Ex. 1.)

The Committee appointed to consider BRP's amendment petition conducted a site visit and public meeting on May 31, 2013. Information was exchanged among the parties via data requests and data responses. On September 6 2013, Commission staff published its analysis of the petition. (Ex. 100.) On October 4, 2013, the Commission staff held a public workshop to discuss its analysis with the parties and public and on October 28, 2013, staff published revisions to its analysis and responses to comments. (Ex. 101.)

[1] The facility that converts geothermal steam to electricity is permitted by the Energy Commission. The steam fields and wells which extract the steam from below ground are not within the Energy Commission's jurisdiction and are permitted by Lake County. See Public Resources Code § 25120, which excludes "[e]xploratory, development, and production wells, resource transmission lines, and other related facilities used in connection with a geothermal exploratory project or a geothermal field development project" from the definition of "thermal powerplant."

[2] BRP also appealed the Complaint Committee's decision to the full Energy Commission. Consideration of the appeal has been stayed pending the completion of this amendment proceeding. (Docket 12-CAI-04, TN 70091.)

In addition to BRP and Commission staff, the parties in this matter are Intervenor David Coleman, Intervenor Friends of Cobb Mountain, and the project site's owner, V.V. & J. Coleman LLC.

The Committee conducted a Hearing on November 18, 2013, in Cobb, California, near the project site. Testimony was presented, documentary evidence accepted, and public comment[3] received. The Committee issued its Presiding Member's Proposed Decision on November 27, 2013. The proposed decision was considered by the full Energy Commission at its December 11, 2013 business meeting.

DISCUSSION

Bond requirement

BRP requests removal of the closure bond requirement imposed at the time of the sale of the project by DWR. It asserts that the circumstances surrounding the project have changed. The project was inoperative when sold. Following the investment of in excess of $100 Million, the project is again operating, albeit at lower capacities than originally projected (10 Megawatts vs. 55 Megawatts). BRP plans to spend more than $30 Million to expand the steam source and generating capacity under Lake County permits and supply power under a power purchase agreement extending until 2032. In BRP's view, this stability reduces the likelihood of imminent closure. Further, BRP believes tying up $5 Million, or the $2.7 Million recommended by staff, in a bond is an inefficient use of finite capital. (Ex. 1, pp. 4-5; Ex. 20, pp. 6-7. RT 139—142.[4])

Staff and Intervenors Coleman and Friends of Cobb Mountain counter that the uncertainty of the steam source remains. Any assertion of improved financial condition on BRP's part should not be considered because BRP has failed to provide any information about its financial condition beyond BRP general manager Brian Harms' general statement that "on an annual basis we have approximately neutral cash flow, which means my operating expenses are approximately equal right now, because of my present output, to my operating income."[5] They argue that BRP bears the burden of proof because it is seeking to change the status quo and that BRP has failed to meet its burden. (RT 145:13—146:2, 151:13-17, 153:10—154:11.)

The question before us is not whether to impose a financial assurance requirement in the first instance; that decision was made in 2001. We must decide whether BRP has

[3] From Randall Fung, Hamilton Hess, Linda Fung, Robert Stark, Sharon Matzinger, John Hess, Kelly Fletcher, Gail Weiss, Gladdys Gransford, Gerri Finn, Joan Moss, Ronald Fidge

[4] RT refers to the Reporter's Transcript of the Committee hearing of November 18, 2013. The reference is to the page of the transcript and lines; e.g., 86:2-10 refers to page 86, lines 2 through 10, in the transcript. Exhibits are delineated by "Ex." followed by the Exhibit Number. Page numbers for Exhibits which are not paginated refer to the number of the page within the PDF file.

[5] RT 31:7-11

met its burden to show that removal of the condition is appropriate. We find that it has not.

We are hopeful that the proposed steam field improvements will significantly increase the project's electrical output. It remains prudent, however, to plan for the eventual closure of the project and provide resources to assure that a proper closure can be achieved.

Having decided that the financial assurance requirement should remain in effect does not, however, prevent a review of the proper amount of the assurance. The contract between DWR and BRP's predecessor which defined the requirement also required a triennial review of the costs of closure and revision of the bond amount as necessary. That review is long overdue.

BRP cites the expense of maintaining a bond. We are not wedded to a surety bond as the sole method of providing financial assurances. Thus we have modified Condition of Certification **COM-16**—the codification of the requirement—to allow for alternative methods such as a trust fund at a financial institution, subject to the Commission's Compliance Project Manager's approval of the method and financial entity as providing equivalent protection to that of a surety bond.

Bond Amount

The amount of the bond is related to the expected expenses of the closure work. BRP requests that the costs be reduced by the revenue expected to come from the sale or recycling of materials and equipment removed from the site during closure. With one exception, the parties agree about the cost of the closure activities, accepting the cost estimates in the July 2013 Decommissioning Report (Ex. 7, Attachment A). The exception is that staff believes the importation of additional fill materials may be necessary to fill in the voids left from the removal of the cooling tower and Stretford unit; BRP asserts that sufficient materials are stockpiled on site and no importation is required. Staff estimates that it will cost $185,000 to import the fill.

The parties also disagree about two factors affecting the calculation of the financial assurance amount—the appropriate credit to give for resale or scrap value and whether a contingency factor should be added.

Additional Fill

The amount of imported fill materials was discussed extensively during the November 18 hearing. There appears to be some confusion of assumptions regarding the need for imported fill. Staff at one point thought that the rubble from demolition of the turbine building was intended to serve as fill. Upon hearing that the turbine building would not be demolished staff assumed that a substitute source was required. BRP asserts that its closure plans do not include filling the basement of the turbine building, which staff

believed would require a significant amount of fill. BRP further asserts that there are sufficient waste materials resulting from the project's construction stored on site. Staff admitted that it had not assessed the available materials on site.

At the conclusion of the discussion, staff concluded that its remaining uncertainty about whether adequate fill existed on site could be addressed by the contingency component of its estimate; it is unnecessary to have both a fill component and a contingency component. (RT 61:7—72:21.)

Based upon the discussion above, we find it unnecessary to budget for the importation of fill.

Resale/Scrap Credit

The amount of revenue that will result from selling or recycling as scrap the materials and equipment removed during closure is characterized as speculative by staff. It does not believe that Decommissioning Report (Ex. 7, Attachment A) accounted for the corrosive effects of the geothermal steam on the ability to reuse removed equipment such as the steam turbine, the costs of decontaminating equipment and scrap materials prior to reuse or recycling, or the complexities of removing materials from this somewhat remote site which raise transportation costs. Staff therefore recommends that no credit be given. (Ex. 101, p. 3.)

BRP asserts that the staff-cited factors were included in the estimated resale and scrap revenue value of $1,265,000. (RT 56:19—57:18.)

The parties do agree that the scrap value is greater than zero. We agree. Due to the level of uncertainty around the full credit recommended by BRP, we believe it is prudent to credit one-half of the amount claimed by BRP. We encourage BRP and the parties to more fully explore the factors that affect the scrap and resale values in the next triennial review of the closure costs (in 2016) so that we can have greater confidence in the accuracy of the estimate.

Contingency Factor

Staff recommends that BRP's closure cost estimate be increased to include a contingency factor of 25 percent. (Ex. 101, p. 3.) We note that a 25 percent contingency was expressly required by the sale contract between DWR and BRP's predecessor. (Docket 12-CAI-04, TN 69109, PDF p. 17)

BRP objects to the contingency in any amount, asserting that the estimated costs of closure are sufficiently predictable and that the work is sufficiently certain in scope that additional costs are unlikely. (RT 25:2-9.) We disagree. Contingency funds exist to protect against unpredictable costs. The additional protection against running short of money before closure is completed is appropriate. BRP has not provided compelling testimony or argument to support removing this existing requirement.

While unwilling to remove the 25 percent contingency, we are willing to phase it in over time. Therefore, Condition **COM-16** is revised to provide for the gradual increase of the contingency from zero percent in years 0 and 1 following approval of this decision to 5 percent in year 2, 10 percent in year 3, 15 percent in year 4, 20 percent in year 5, and 25 percent in year 6 and thereafter.

Final Assurance Amount

Applying the factors discussed above, we set the initial financial assurance amount at $1,341,500. The following table summarizes the positions of staff and BRP, and our conclusion.[6]

Financial Assurance Comparison

Description	CEC Staff's Estimates	Plant Owner's Estimates	Commission Decision's Estimates
Removal	1,062,500	1,062,500	1,062,500
Backfill	276,500	276,500	276,500
Other	80,000	80,000	80,000
HazMat Waste Disposal	555,000	555,000	555,000
Subtotal [a]	**1,974,000**	**1,974,000**	**1,974,000**
Salvage Credit [b]	0	-1,265,000	-632,500
Import Rubble Required for Site Infill [c]	185,000	0	0
Subtotal	**2,159,000**	**709,000**	**1,341,500**[a]
25 percent Contingency	539,750	n/a	335,375[b]
Total Required for Closure Bond	**$2,698,750**	**$709,000**	**$1,676,875**[c]

a. Initial financial assurance amount
b. Contingency phased in over years 2 – 6 following approval of amendment
c. Financial assurance amount in year 6 and following

Insurance requirement

While initially seeking to remove the environmental impairment insurance requirement, BRP now agrees to continue to provide the required $10 million policy. (Reporter's Transcript for the 5-31-13 Informational Hearing, 52:4-24; RT 89:17-23.) That requirement is memorialized in condition **COM-16**. Staff's proposed condition stipulated that the $10 Million coverage limit would be "exclusive of legal defense costs." BRP requested that the stipulation be removed. Our review of the previous expression of the requirement in the contract between DWR and BRP's predecessor finds no such

[6] In its initial analysis, staff recommended a bond of $4.13 Million. In consideration of comments on that initial analysis, staff revised its recommendation downward to the figures shown in the table.

stipulation.[7] Our intention is to memorialize the previous requirement as it was written, not to modify it. We therefore remove the stipulation.

Revised Compliance Conditions of Certification

The amendment petition requested that the project's compliance conditions be modernized to reflect provisions imposed upon recent projects. (Ex. 1, p. 5.) Commission staff proposed amended conditions in its analysis of the petition. BRP and staff disagree about several specific provisions in those conditions, however, discussed below.

Incident Reporting

Proposed Condition **COM-13** provides that an initial report of an incident of specified types be made within one hour and a detailed report submitted in seven days. BRP objects to those deadlines as unrealistically short given its staffing levels and the need to first focus on responding to the incident. BRP proposes a 24 hour deadline for the initial report with ten business days to complete the final report. We agree that one hour is too short and instead adopt a standard of as soon as feasible but no later than 12 hours for the initial report and ten business days for the detailed report.

BRP requests that potential "property damage off-site" be removed from the list of reportable incidents. We decline to do so as our regulatory interests include the effects that our licensees have beyond their facility boundaries.

Triennial Closure Plan Assumptions

Proposed Condition **COM-15** establishes the procedures and standards for the triennial review of the closure plans and costs. BRP objects to two stipulations applied to the cost estimate.

First, BRP objects to Stipulation 2 which requires "facility closure costs [calculated] at a time in the facility's projected life span when the mode and scope of facility operation would make permanent closure the most expensive."

Stipulation 2 appears to address a variation in the costs due to closure occurring when the facility is in a state that complicates or increases closure efforts or when labor, material, or other costs have temporarily peaked. It requires a great deal of speculation. To the extent that timing affects cost, it is best accounted for as a contingency. As we have determined to continue the 25 percent contingency requirement, no more effort in this regard is necessary.

Second, BRP objects to Stipulation 4 which states that there should be "no use of salvage value to offset closure costs."

[7] The sample insurance binder attached to the Purchase Agreement says "defense within the limits," suggesting that legal defense costs are included within the policy limits. (Docket 12-CAI-04, TN 69109, PDF p. 65.)

Regarding salvage value, above we determine that some amount of credit is appropriate. While we discount the amount sought by BRP due to uncertainty, we do not deny its applicability to some extent. We encourage a more robust analysis in the next review of closure costs. Stipulation 4 is inconsistent with that direction.

Accordingly, both Stipulations are removed from Condition **COM-15**.

Clarification and Recompilation of Conditions

As part of its scheduling order, the Committee directed Commission staff to compile a complete set of the project's existing Conditions of Certification. The compilation is intended to provide a single source so that parties and the public no longer need not locate and reconcile the various amendments approved over the years. Staff filed the compilation on September 6, 2013 (TN 200475) and proposed minor clarifying modifications in its prehearing statement (TN 20116). No party or member of the public has objected to the compilation as modified. We adopt them, further modified to include the changes approved in this decision. That final compilation is contained in Appendix B, which we adopt by this Decision.

Public Comments

Public comments were in favor of retaining a closure bond.

The comments also raised questions and concerns about the operation of the project, including the potential for spills in to nearby waterways, releases of H_2S, whether appropriate air monitoring equipment is being used for the protection of the project workforce and the community, and the public health effects of the project. While not related to the subject of the amendment before us, they bear review. We therefore direct Commission Compliance Staff to consider and, to the extent they deem appropriate, investigate the matters raised in the comments.

FINDINGS OF FACT

The Energy Commission finds as follows:

1. Following the 2001 approval of a change of ownership petition, the owner of the Bottle Rock Geothermal Power Plant project was required to maintain a $10 Million environmental impairment insurance policy and a $5 Million closure bond. The current owner, BRP, petitioned to amend the Conditions of Certification to remove those requirements.
2. BRP has subsequently agreed to continue the insurance policy in force.
3. The 2001 condition requiring the closure bond required the periodic review and adjustment of the bond amount to reflect current costs of closure. It also specified

that the estimated cost be increased by 25 percent for purposes of setting the bond amount.

4. The Committee appointed to consider the amendment petition conducted a hearing on November 18, 2013, at Cobb, California near the project site.
5. On November 27, 2013, the Committee published its proposed decision recommending approval of the petition as specified herein.

CONCLUSIONS OF LAW

The Energy Commission concludes as follows:

1. After review of the Decommissioning Report prepared for BRP, staff's analysis, the testimony and argument of the parties, and public comments, the appropriate amount of the initial closure bond or other financial assurance is $1,341,500, as discussed above and shown in the Financial Assurance Comparison table.
2. It is prudent to retain the 25 percent contingency increment from the original condition to allow for unexpected events and costs (contingencies). Rather than require the increment immediately, we provide that it be phased in over years 2 through 6 following adoption of this decision.
3. The petition meets all the filing criteria of Title 20, subsection 1769(a)(1) of the California Code of Regulations, concerning post-certification project modifications.
4. The modifications will not change the findings in the Energy Commission's Final Decision, pursuant to Title 20, section 1755, of the California Code of Regulations because the changes made by this amendment update the closure financial assurance amount as required by a previously adopted Condition of Certification and make minor changes to other conditions regarding reporting requirements, none of which will result in a physical change in the environment.
5. The facility will remain in compliance with all applicable laws, ordinances, regulations, and standards.
6. There has been a substantial change in circumstances since the Energy Commission certification, thus justifying the changes, and some changes are based on information that was not available to the parties prior to Energy Commission certification. The private agreement between DWR and a previous project owner which was used to define to two requirements regarding closure planning and financial assurances was amended to remove those provisions, necessitating that they be restated and clarified to avoid confusion. In addition, a periodic review of the proper amount of closure assurances was overdue.

7. Approval of the amendments is beneficial in that the Conditions of Certification are updated to include current compliance provisions and requirements and to consolidate the various amendments over time into a single set of conditions, the financial assurance and environmental impairment insurance requirements are precisely stated in a condition rather than by reference to a private contract, and the periodic review of the proper amount of the financial assurance has taken place. Title 20, subsection 1769(a)(3)(C).

ORDERS

The Energy Commission therefore orders as follows:

1. The Conditions of Certification for the project are amended in their entirety to read as provided on Appendix B, attached hereto.
2. This Decision and Orders are adopted, issued, effective, and final on the date this Decision is docketed.
3. Reconsideration of this Decision is governed by Public Resources Code, section 25530.
4. Judicial review of this Decision is governed by Public Resources Code, section 25531

IT IS SO ORDERED

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Decision duly and regularly adopted at a meeting of the California Energy Commission held on December 11, 2013.

AYE: Weisenmiller, Douglas, Hochschild, McAllister, Scott
NAY: None
ABSENT: None
ABSTAIN: None

Dated: December 11, 2013, at Sacramento, California.

Original Signed By:

_____
Harriet Kallemeyn
Secretariat
California Energy Commission

Exhibit List

Docket: 79-AFC-04C
Project Title: Compliance - Application for Certification of DWR Bottlerock Geothermal Project
Generated On: 11/27/2013 3:06:20 PM

Exhibit Number	Document Title and Description	Disposition
1	TN # 69879 **Bottle Rock Power, LLC's Petition to Amend** Bottle Rock Power, LLC's Petition to Amend	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
2	TN # 69915 **Bottle Rock Power LLC's Compliance with the Committee's Decision Sustaining Complaint Against Bottle Rock Power, LLC** Bottle Rock Power LLC's Compliance with the Committee's Decision Sustaining Complaint Against Bottle Rock Power, LLC	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
3	TN # 70304 **Bottle Rock Power's Letter to CEC's Karen Douglas and Robert Weisenmiller re Decommissioning Estimate** Bottle Rock Power's Letter to CEC's Karen Douglas and Robert Weisenmiller re Decommissioning Estimate	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
4	TN # 71018 **Bottle Rock Power, LLC's response to Staff's Issues Identification Report** Bottle Rock Power, LLC's response to Staff's Issues Identification Report	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
5	TN # 71455 **Bottle Rock Power LLP's Letter to CEC's Karen Douglas and Robert Weisenmiller re Request for Extension of Stay of Filing of Surety Bond** Bottle Rock Power LLP's Letter to CEC's Karen Douglas and Robert Weisenmiller re Request for Extension of Stay of Filing of Surety Bond	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
6	TN # 71652 **Bottle Rock Power, LLC's Objections to Staff's Data Requests, Set 1 (No.1-5)** Bottle Rock Power, LLC's Objections to Staff's Data Requests, Set 1 (No.1-5)	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
7	TN # 200053 **Bottle Rock Power, LLC's Response to Staff's Data Requests, Set 1**	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
8	TN # 200146 **Bottle Rock Geothermal Power Plant (BRPP) Petition to Amend Status Report No. 1**	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.

Exhibit Number	Document Title and Description	Disposition
9	TN # 200630 **Applicant's Status Report (Sept. 27, 2013)** Status Report	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
10	TN # 200714 **Bottle Rock Power, LLC's Initial Comments on Staff Assessment**	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
11	TN # 200826 **Bottle Rock Power, LLC's Updated Status Report**	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
12	TN # 200785 **Letter from Congressman Thompson re Proposed Amendment to Compliance Conditions of Certification Relating to Financial Assurance**	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
13	TN # 200834 **Bottle Rock Power, LLC's Comments on Staff Assessment**	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
14	TN # 201128 **01-10-13 County of Lake's Comments and Exhibits Regarding Bottle Rock Complaint**	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
15	TN # 201127 **12-28-12 Bottle Rock's Correspondence and Attachments One (Settlement Agreement) and Two (Lease Agreement)**	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
16	TN # 201148 **BRPS Use Permit Bonds** Project Owner's Proposed Exhibit for Hearing (11/18 /2013)	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
17	TN # 201139 **County of Lake Use Permits and Time Extensions** Project Owner's Proposed Exhibit for Hearing (11/18 /2013)	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
18	TN # 201155 **Direct Written Testimony of Brian Harms** Bottle Rock's Proposed Exhibit for Hearing	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
19	TN # 201154 **Direct Written Testimony of Robert Francisco** Bottle Rock's Proposed Exhibit for Hearing	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
20	TN # 201165 **BRPP Prehearing Statement** Applicant's Prehearing Statement	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
21	TN # 201214 **BRP's Proposed Exhibit 21** Transcript Excerpts of Sutter Power Plant Evidentiary Hearing (97-AFC-2)	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
22	TN # 201215 **BRP's Proposed Exhibit 22** Excerpts from Sutter Power Plant Project Final Decision (97-AFC-2)	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
23	TN # 201216 **BRP's Proposed Exhibit 23** Excerpt from SEGS Final Decision (89-AFC-1)	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
24	TN # 201217 **BRP's Proposed Exhibit 24** Excerpts from Beacon Solar Energy Project Final	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.

Exhibit Number	Document Title and Description Decision (08-AFC-2)	Disposition
25	TN # 201218 **BRP's Proposed Exhibit 25** Excerpts from Various Commission Decisions on AFCs	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
26	TN # 201222 **Bottle Rock's Rebuttal Testimony and Revised Prehearing Statement and Exhibit List** Bottle Rock's Rebuttal Testimony and Revised Prehearing Statement and Exhibit List	Offered by Applicant (Bottle Rock Power, LLC); Admitted on 11/18/2013.
100	TN # 200419 **Staff Analysis of Proposed Modifications to the Compliance Conditions of Certification (formerly the general provisions)**	Offered by Commission Staff (Staff); Admitted on 11/18/2013.
101	TN # 201062 **Staff Response to Comments Received Regarding Staff's Analysis of the Bottle Rock Geothermal Power Plant-BRPP Petition to Amend**	Offered by Commission Staff (Staff); Admitted on 11/18/2013.
102	TN # 201156 **Caltrans Project Development Procedure Manual, Chapter 20, Project Development Cost Estimates**	Offered by Commission Staff (Staff); Admitted on 11/18/2013.
103	TN # 201157 **Caltrans Project Development Procedure Manual, Appendix AA, Cost Estimates**	Offered by Commission Staff (Staff); Admitted on 11/18/2013.
200	TN # 51637 **Letter to T. King - Managing Director USRG Management** Letter to T. King - Managing Director USRG Management	Offered by Intervenor (David Coleman and Friends of Cobb Mountain); Admitted on 11/18/2013.
201	TN # 53427 **September 24th Letter to Brian Harms from Bob James** September 24th Letter to Brian Harms from Bob James	Offered by Intervenor (David Coleman and Friends of Cobb Mountain); Admitted on 11/18/2013.
202	TN # 201166 **Intervenors' David Coleman and Friends of Cobb Mountain Pre-Hearing Statement** Intervenors' David Coleman and Friends of Cobb Mountain Pre-Hearing Statement	Offered by Intervenor (David Coleman and Friends of Cobb Mountain); Admitted on 11/18/2013.
203	TN # 201224 **Intervenors' David Coleman and Friends of Cobb Mountain's Revised Pre-Hearing Statement** Pre-Hearing Statement	Offered by Intervenor (David Coleman and Friends of Cobb Mountain); Admitted on 11/18/2013.

Appendix B

RESTATED AND REVISED CONDITIONS OF CERTIFICATION

FOR

BOTTLE ROCK GEOTHERMAL POWER PLANT

79-AFC-4C

DECEMBER 2013

TABLE OF CONTENTS

INTRODUCTION

The project's Compliance Conditions of Certification, including a Compliance Monitoring Plan (Compliance Plan), are established as required by Public Resources Code section 25532. The Compliance Plan provides a means for assuring that the facility is constructed, operated, and closed in compliance with public health and safety, environmental, all other applicable laws, ordinances, regulations, and standards (LORS), and the conditions adopted by the Energy Commission and specified in the written Decision on the Bottle Rock Geothermal Power Plant's Application for Certification or otherwise required by law.

The Compliance Plan is composed of elements that:

- set forth the duties and responsibilities of the compliance project manager (CPM), the project owner or operator (project owner), delegate agencies, and others;
- set forth the requirements for handling confidential records and maintaining the compliance record;
- state procedures for settling disputes and making post-certification changes;
- state the requirements for periodic compliance reports and other administrative procedures that are necessary to verify the compliance status for all Energy Commission approved conditions of certification;
- establish contingency planning, facility non-operation protocols, and closure requirements; and
- establish a tracking method for the technical area conditions of certification that contain measures required to mitigate potentially adverse project impacts associated with construction, operation, and closure below a level of significance; each technical condition of certification also includes one or more verification provisions that describe the means of assuring that the condition has been satisfied.

DEFINITIONS

The following terms and definitions help determine when various conditions of certification are implemented.

Project Certification

Project certification occurs on the day the Energy Commission dockets its Final Decision after adopting it at a publically noticed Business Meeting or hearing. At that time, all Energy Commission conditions of certification become binding on the project owner and the proposed facility.

Site Assessment and Project Initiation Activities

Many of the Energy Commission's conditions of certification require compliance submittals and CPM approvals prior to starting construction. The below-listed site assessment and project initiation activities may commence or completed prior to the

start of construction, subject to the CPM's approval of the specific site assessment or project initiation activities.

Site assessment and project initiation activities include the following, but only to the extent the activities are minimally disruptive to soil and vegetation and will not affect listed or special-status species or other sensitive resources:

1. the installation of environmental monitoring equipment;
2. a minimally invasive soil or geological investigation;
3. a topographical survey;
4. any other study or investigation to determine the environmental acceptability or feasibility of the use of the site for any particular facility; and
5. any minimally invasive work to provide safe access to the site for any of the purposes specified in 1-4, above.

Site Mobilization and Construction

When a condition of certification requires the project owner to take an action or obtain CPM approval prior to the start of construction, or within a period of time relative to the start of construction, that action must be taken, or approval obtained, prior to any site mobilization or construction activities, as defined below.

Site mobilization and construction activities are those necessary to provide site access for construction mobilization, facility installation, and closure including both temporary and permanent equipment and structures, as determined by the CPM.

Site mobilization and construction activities include, but are not limited to:

1. ground disturbance activities like grading, boring, trenching, leveling, mechanical clearing, grubbing and scraping;
2. site preparation activities, such as access roads, temporary fencing, trailer and utility installation, construction equipment installation and storage, equipment and supply laydown areas, borrow and fill sites, temporary parking facilities, and chemical spraying and controlled burns; and
3. permanent installation activities for all facility and linear structures, including access roads, fencing, utilities, parking facilities, equipment storage, mitigation and landscaping activities, and other installations, as applicable.

System Commissioning and Decommissioning

Commissioning activities are designed to test the functionality of a facility's installed components and systems to ensure safe and reliable operation. Although decommissioning is often synonymous with facility closure, specific decommissioning activities also systematically test the removal of such systems to ensure a facility's safe closure. For compliance monitoring purposes, commissioning examples include interface connection and utility pre-testing, "cold" and "hot" electrical testing, system

pressurization and optimization tests, grid synchronization, and combustion turbine "first fire". Decommissioning activity examples include utility shut down, system depressurization, structure removal and site reclamation.

Start of Commercial Operation

For compliance monitoring purposes, "commercial operation" or "operation" begins once commissioning activities are complete, the certificate of occupancy has been issued, and the power plant has reached reliable steady-state electrical production. At the start of commercial operation, plant control is usually transferred from the construction manager to the plant operations manager. Operation activities can include a steady state of electrical production, or, for "peaker plants," a seasonal or on-demand operational regime to meet peak load demands.

Non-Operation and Closure

Non-operation is time-limited and can encompass part or all of a facility. Non-operation can be a planned event, usually for minor equipment maintenance or repair, or unplanned, usually the result of unanticipated events or emergencies.

Closure is a facility shutdown with no intent to restart operation. It may also be the cumulative result of unsuccessful efforts to re-start over an increasingly lengthy period of non-operation, condemned by inadequate means and/or lack of a viable plan. Facility closures can occur due to a variety of factors, including, but not limited to, irreparable damage and/or functional or economic obsolescence.

ROLES AND RESPONSIBILITIES

Provided below is a generalized description of the compliance roles and responsibilities for Energy Commission staff (staff) and the project owner for the construction and operation of the Bottle Rock Geothermal Power Plant.

Compliance Project Manager Responsibilities

The CPM's compliance monitoring and project oversight responsibilities include:

1. ensuring that the design, construction, operation, and closure of the project facilities are in compliance with the terms and conditions of the Decision;
2. resolving complaints;
3. processing post-certification project amendments for changes to the project description, conditions of certification, ownership or operational control, and requests for extension of the deadline for the start of construction (see **COM-10** for instructions on filing a Petition to Amend or to extend a construction start date);
4. documenting and tracking compliance filings; and
5. ensuring that compliance files are maintained and accessible.

The CPM is the central contact person for the Energy Commission during project pre-construction, construction, emergency response, operation, and closure. The CPM will

consult with the appropriate responsible parties when handling compliance issues, disputes, complaints, and amendments.

All project compliance submittals are submitted to the CPM for processing. Where a submittal requires CPM approval, the approval will involve appropriate Energy Commission technical staff and management. All submittals must include searchable electronic versions (.pdf, MS Word, or equivalent files).

Project Compliance Meetings

The CPM usually schedules project compliance meetings prior to the projected construction, operation or decommissioning start dates. These meetings are used to assist the Energy Commission and the project owner's technical staff in the status review of all required conditions of certification, and take proper action if outstanding conditions remain. In addition, these meetings ensure, to the extent possible, that the Energy Commission's conditions of certification do not delay project initiation due to last-minute unforeseen issues or a compliance oversight. Project initiation meetings held during the certification process must be publicly noticed unless they are confined to administrative issues and processes.

Energy Commission Record

The Energy Commission maintains the following documents and information as public records, in either the Compliance files or Dockets files, for the life of the project (or other period as specified):

1. all documents demonstrating compliance with any legal requirements relating to the construction, operation or closure of the facility;
2. all Monthly and Annual Compliance Reports filed by the project owner;
3. all project-related complaints of alleged noncompliance filed with the Energy Commission; and
4. all petitions for project or condition of certification changes and the resulting staff or Energy Commission action.

CBO Delegation and Agency Cooperation

Under the California Building Code Standards, while monitoring project construction and operation, staff acts as, and has the authority of, the Chief Building Official (CBO). Staff may delegate some CBO responsibility to either an independent third-party contractor or a local building official. However, staff retains CBO authority when selecting a delegate CBO, including the interpretation and enforcement of state and local codes, and the use of discretion, as necessary, in implementing the various codes and standards.

Energy Commission staff may also seek the cooperation of state, regional, and local agencies that have an interest in public and worker health and safety and environmental quality when conducting project monitoring.

Project Owner Responsibilities

The project owner is responsible for ensuring that all conditions of certification in the Bottle Rock Geothermal Power Plant Decision are satisfied. The project owner will submit all compliance submittals to the CPM for processing unless the conditions specify another recipient. The compliance conditions regarding post-certification changes specify measures that the project owner must take when modifying the project's design, operation, or performance requirements, or to transfer ownership or operational control. Failure to comply with any of the conditions of certification may result in a correction order, an administrative fine, certification revocation, or any combination thereof, as appropriate. A summary of the compliance conditions of certification are included as Compliance Table 1 at the conclusion of this section.

COMPLIANCE ENFORCEMENT

The Energy Commission's legal authority to enforce the terms and conditions of its Decision are specified in Public Resources Code sections 25534 and 25900. The Energy Commission may amend or revoke a project certification and may impose a civil penalty for any significant failure to comply with the terms or conditions of the Decision. The Energy Commission's actions and fine assessments would take into account the specific circumstances of the incident(s).

Periodic Compliance Reporting

Many of the conditions of certification require submittals in the Monthly and/or Annual Compliance Reports. All compliance submittals assist the CPM in tracking project activities and monitoring compliance with the terms and conditions of the Bottle Rock Geothermal Project Decision. During construction, the project owner or an authorized agent will submit compliance reports on a monthly basis. During operation, compliance reports are submitted annually. These reports and the requirements for an accompanying compliance matrix are described below.

Noncompliance Complaint Procedures

Any person or agency may file a complaint alleging noncompliance with the conditions of certification. Such a complaint will be subject to review by the Energy Commission pursuant to Title 20, California Code of Regulations, section 1237, but, in many instances, the issue(s) can be resolved by using an informal dispute resolution process. Both the informal and formal complaint procedures, as described in current state law and regulations, are summarized below. Energy Commission staff will follow these provisions unless superseded by future law or regulations. The California Office of Administrative Law provides on-line access to the California Code of Regulations at http://www.oal.ca.gov/.

Informal Dispute Resolution Process

The following informal process is designed to resolve code and compliance interpretation disputes stemming from the project's conditions of certifications and other LORS. The project owner, the Energy Commission, or any other party, including members of the public, may initiate the informal dispute resolution process. Disputes

may pertain to actions or decisions made by any party, including the Energy Commission's delegate agents.

This process may precede the formal complaint and investigation procedure specified in Title 20, California Code of Regulations, section 1237, but is not intended to be a prerequisite or substitute for it. This informal procedure may not be used to change the terms and conditions of certification in the Decision, although the agreed-upon resolution may result in a project owner proposing an amendment. The informal dispute resolution process encourages all parties to openly discuss the conflict and reach a mutually agreeable solution. If a dispute cannot be resolved, then the matter must be brought before the full Energy Commission for consideration via the complaint and investigation procedure specified in Title 20, California Code of Regulations, section 1237.

Request for Informal Investigation

Any individual, group, or agency may request the CPM conduct an informal investigation of alleged noncompliance with the Energy Commission's conditions of certification. Upon receipt of an informal investigation request, the CPM will promptly provide both verbal and written notification to the project owner of the allegation(s), along with all known and relevant information of the alleged noncompliance. The CPM will evaluate the request and, if the CPM determines that further investigation is necessary, will ask the project owner to promptly conduct a formal inquiry into the matter and provide within seven days a written report of the investigation results, along with corrective measures proposed or undertaken. Depending on the urgency of the matter, the CPM may conduct a site visit and/or request that the project owner provide an initial verbal report within 48 hours.

Request for Informal Meeting

In the event that either the requesting party or Energy Commission staff are not satisfied with the project owner's investigative report or corrective measures, either party may submit a written request to the CPM for a meeting with the project owner. The request shall be made within 14 days of the project owner's filing of the required investigative report. Upon receipt of such a request, the CPM will attempt to:

1. immediately schedule a meeting with the requesting party and the project owner, to be held at a mutually convenient time and place;

2. secure the attendance of appropriate Energy Commission staff and staff of any other agencies with expertise in the subject area of concern, as necessary; and

3. conduct the meeting in an informal and objective manner so as to encourage the voluntary settlement of the dispute in a fair and equitable manner.

After the meeting, the CPM will promptly prepare and distribute copies to all parties, and to the project file, of a summary memorandum that fairly and accurately identifies the positions of all parties and any understandings reached. If no agreement was reached, the CPM will direct the complainant to the formal complaint process provided under Title 20, California Code of Regulations, section 1237.

Formal Dispute Resolution Procedure

Any person may file a complaint with the Energy Commission's Dockets Unit alleging noncompliance with a Commission Decision adopted pursuant to Public Resources Code section 25500. Requirements for complaint filings and a description of how complaints are processed are provided in Title 20, California Code of Regulations, section 1237.

Post-Certification Changes to the Energy Commission Decision

The project owner must petition the Energy Commission pursuant to Title 20, California Code of Regulations, section 1769, to modify the design, operation, or performance requirements of the project and/or the linear facilities, or to transfer ownership or operational control of the facility. It is the responsibility of the project owner to contact the CPM to determine if a proposed project change should be considered a project modification pursuant to section 1769. Implementation of a project modification without first securing Energy Commission approval may result in an enforcement action including civil penalties in accordance with Public Resources Code, section 25534.

Below is a summary of the criteria for determining the type of approval process required, reflecting the provisions of Title 20, California Code of Regulations, section 1769, at the time this Compliance Plan was drafted. If the Energy Commission modifies this regulation, the language in effect at the time of the requested change shall apply. Upon request, the CPM can provide sample formats of these submittals.

Amendment

The project owner shall submit a Petition to Amend the Energy Commission Decision, pursuant to Title 20, California Code of Regulations, section 1769(a), when proposing modifications to the design, operation, or performance requirements of the project and/or the linear facilities. If a proposed modification results in an added, changed, or deleted condition of certification, or makes changes causing noncompliance with any applicable LORS, the petition will be processed as a formal amendment to the Decision, triggering public notification of the proposal, public review of the Energy Commission staff's analysis, and consideration of approval by the full Energy Commission.

Change of Ownership and/or Operational Control

Change of ownership or operational control also requires that the project owner file a petition pursuant to section 1769(b). This process requires public notice and approval by the full Commission. The petition shall be in the form of a legal brief and fulfill the requirements of section 1769(b).

Staff-Approved Project Modification

Modifications that do not result in additions, deletions, or changes to the conditions of certification, that are compliant with the applicable LORS, and that will not have significant environmental impacts, may be authorized by the CPM as a staff-approved project modification pursuant to section 1769(a)(2). Once the CPM files a Notice of Determination of the proposed project modifications, any person may file an objection to the CPM's determination within 14 days of service on the grounds that the modification does not meet the criteria of section 1769(a)(2). If there is a valid objection to the CPM's determination, the petition must be processed as a formal amendment to the Decision

and must be considered for approval by the full Commission at a publically noticed Business Meeting or hearing.

Verification Change

Each condition of certification (except for the compliance conditions) has one or more means of verifying the project owner's compliance with the provisions of the condition. These verifications specify the actions and deadlines by which a project owner demonstrates compliance with the Energy Commission-adopted conditions. A verification may be modified by the CPM without requesting a Decision amendment if the change does not conflict with any condition of certification, does not violate any LORS, and provides an effective alternative means of verification.

Emergency Response Contingency Planning and Incident Reporting

To protect public health and safety and environmental quality, the conditions of certification include contingency planning and incident reporting requirements to ensure compliance with necessary health and safety practices. A well-drafted contingency plan avoids or limits potential hazards and impacts resulting from serious incidents involving personal injury, hazardous spills, flood, fire, explosions or other catastrophic events and ensures a comprehensive timely response. All such incidents must be reported immediately to the CPM and documented. These requirements are designed to build from "lessons learned," limit the hazards and impacts, anticipate and prevent recurrence, and provide for the safe and secure shutdown and re-start of the facility.

Facility Closure

The Energy Commission cannot reasonably foresee all potential circumstances in existence when a facility permanently closes. Therefore, the closure conditions provided herein must be flexible to address circumstances that may exist at some future time. Most importantly, facility closure must be consistent with all applicable Energy Commission conditions of certification and the LORS in effect at that time.

Although a non-operational facility may intend to resume operations, if it remains non-operational for longer than one year, unless the project owner can present a viable plan to resume operation, the Energy Commission can conclude that closure is imminent and direct the project owner to commence closure procedures. Should the project owner effectively abandon a facility, the Energy Commission can access the required financial assurance funds to begin closure, but the owner remains liable for all associated costs.

COMPLIANCE CONDITIONS OF CERTIFICATION

COM-1: Unrestricted Access

The project owner must take all steps necessary to ensure that the CPM, responsible Energy Commission staff, and delegated agencies or consultants have unrestricted access to the facility site, related facilities, project-related staff, and the records maintained on-site to facilitate audits, surveys, inspections, and general or closure-related site visits. Although the CPM will normally schedule site visits on dates and times agreeable to the project owner, the CPM reserves the right to make unannounced

visits at any time, whether such visits are by the CPM in person or through representatives from Energy Commission staff, delegated agencies, or consultants.

COM-2: Compliance Record

The project owner must maintain electronic copies of all project files and submittals on-site, or at an alternative site approved by the CPM, for the initiation, operational life and closure of the project. The files shall also contain at least one hard copy of:

1. the facility's Applications for Certification;
2. all amendment petitions and Energy Commission orders;
3. all site-related environmental impact and survey documentation;
4. all appraisals, assessments, and studies for the project;
5. all finalized original and amended structural plans and "as-built" drawings for the entire project;
6. all citations, warnings, violations, or corrective actions applicable to the project, and
7. the most current versions of any plans, manuals and training documentation required by the conditions of certification or applicable LORS.

Energy Commission staff and delegate agencies must, upon request to the project owner, be given unrestricted access to the files maintained pursuant to this condition.

COM-3: Compliance Verification Submittals

Verification lead times associated with the start of construction or closure may require that compliance filings be submitted during project initiation, especially if these activities are planned to commence shortly after certification. The verification procedures, unlike the conditions, may be modified as necessary by the CPM.

The project owner or authorized agent is required to submit a cover letter for all compliance submittals and correspondence pertaining to compliance matters. The subject line must identify the project AFC number, the appropriate condition(s) of certification number(s), and a brief description of the submittal's subject matter. When submitting supplementary or corrected information, the date of the previous submittal and the applicable condition(s) of certification must be referenced. Submittals not required by a condition of certification must include a statement such as: "This submittal is for informational purposes only and is not required by a specific condition of certification."

All reports and plans required by the project's conditions of certification must be submitted in a searchable electronic format (.pdf, MS Word, or Excel, etc.) and include standard formatting elements such as a table of contents, identifying by title and page number, each section, table, graphic, exhibit, or addendum. All report and/or plan graphics and maps must be adequately scaled and must include a key with descriptive labels, directional headings, a bar scale, and the most recent revision date.

The project owner is responsible for the content and delivery of all verification submittals to the CPM, whether the actions required by the verification were satisfied by the project owner or an agent of the project owner. All submittals must be accompanied by an

electronic copy on an electronic storage medium, or by e-mail, as agreed upon by the CPM. If hardcopy submittals are required, please address as follows:

Bottle Rock Geothermal Power Project
(79-AFC-4C)
Compliance Project Manager
California Energy Commission
1516 Ninth Street (MS-2000)
Sacramento, CA 95814

COM-4: Project Initiation Compliance Matrix and Tasks Prior to Construction

Prior to commencing construction activities, the project owner must submit to the CPM a compliance matrix including only those conditions that must be fulfilled before the initiating construction activities. The matrix will be included with the project owner's first compliance submittal or prior to the first project initiation meeting, whichever comes first, and will be submitted in a format similar to the description below.

Site mobilization and construction activities will not start until all of the following occur: submittal of the project initiation compliance matrix and compliance verifications pertaining to all project initiation and construction conditions of certification, and the CPM has issued an authorization to construct letter to the project owner. The deadlines for submitting various compliance verifications to the CPM allow sufficient staff time to review and comment on, and if necessary, allow the project owner to revise the submittal in a timely manner. These procedures help ensure that the project commences according to schedule. Failure to submit required compliance documents by the specified deadlines may result in delayed authorizations to commence various stages of the project.

If the project owner anticipates site mobilization immediately following project certification, it may be necessary for the project owner to file compliance submittals prior to project certification. In these instances, compliance verifications can be submitted in advance of the required deadlines and the anticipated authorizations to start construction. *The project owner must understand, and acknowledge in writing with each submittal, that submitting compliance verifications prior to these authorizations is at the owner's own risk*. Any approval by Energy Commission staff prior to project certification is subject to change based upon the Commission Decision, and early staff compliance approvals do not imply that the Energy Commission will certify the project.

COM-5: Compliance Matrix

The project owner must submit a compliance matrix to the CPM with each Monthly and Annual Compliance Report. The compliance matrix provides the CPM with the status of all conditions of certification in a spreadsheet format. The compliance matrix must identify:

1. the technical area (e.g., biological resources, facility design, etc.);
2. the condition number;
3. a brief description of the verification action or submittal required by the condition;

4. the date the submittal is required (e.g., sixty (60) days prior to construction, after final inspection, etc.);

5. the expected or actual submittal date;

6. the date a submittal or action was approved by the Chief Building Official (CBO), CPM, or delegate agency, if applicable;

7. the compliance status of each condition (e.g., “not started,” “in progress,” or “completed” (include the date); and

8. if the condition was amended, the updated language and the date the amendment was proposed or approved.

The CPM can provide a template for the compliance matrix upon request.

COM-6: Monthly Compliance Report/Key Event List

The first Monthly Compliance Report is due one month following the docketing of the project’s Decision unless otherwise agreed to by the CPM. The first Monthly Compliance Report will include the AFC number and an initial list of dates for each of the events identified on the Key Events List. The Key Events List form is found at the end of the Compliance Conditions section.

During project initiation, construction or closure the project owner or authorized agent will submit an electronic searchable version of the Monthly Compliance Report within ten (10) days after the end of each reporting month, unless otherwise specified by the CPM. Monthly Compliance Reports will be clearly identified for the month being reported. The searchable electronic copy may be filed on an electronic storage medium or by e-mail, subject to CPM approval. The compliance verification submittal condition provides guidance on report production standards, and the Monthly Compliance Report will contain, at a minimum:

1. a summary of the current project status, a revised/updated schedule if there are significant delays, and an explanation of any significant changes to the schedule;

2. documents required by specific conditions to be submitted along with the Monthly Compliance Report; each of these items must be identified in the transmittal letter, as well as the conditions they satisfy, and submitted as attachments to the Monthly Compliance Report;

3. an initial, and thereafter updated, compliance matrix showing the status of all conditions of certification;

4. a list of conditions that have been satisfied during the reporting period, and a description or reference to the actions that satisfied the condition;

5. a list of any submittal deadlines that were missed, accompanied by an explanation and an estimate of when the information will be provided;

6. a cumulative listing of any approved changes to the conditions of certification;

7. a listing of any filings submitted to, or permits issued by, other governmental agencies during the month;

8. a projection of project compliance activities scheduled during the next two months; the project owner must notify the CPM as soon as any changes are made to the project construction schedule that would affect compliance with conditions of certification;

9. a listing of the month's additions to the on-site compliance file; and

10. a listing of complaints, notices of violation, official warnings, and citations received during the month; a description of the actions taken to date to resolve the issues; and the status of any unresolved actions.

COM-7: Annual Compliance Report

After construction is complete, the project owner must submit searchable electronic Annual Compliance Reports instead of Monthly Compliance Reports. Annual Compliance Reports are due for each year of commercial operation, and may be required for a specified period after decommissioning to monitor closure compliance, unless otherwise specified by the CPM. The searchable electronic copy may be filed on an electronic storage medium or by e-mail, subject to CPM approval. Each Annual Compliance Report must include the AFC number, identify the reporting period, and contain the following:

1. an updated compliance matrix showing the status of all conditions of certification (fully satisfied conditions do not need to be included in the matrix after completion is confirmed);

2. a summary of the current project status and an explanation of any significant changes to the facility's status during the year;

3. documents required by specific conditions to be submitted along with the Annual Compliance Report; each of these items must be identified in the transmittal letter with the condition it satisfies and submitted as an attachment to the Annual Compliance Report;

4. a cumulative listing of all post-certification changes approved by the Energy Commission or the CPM;

5. an explanation for any submittal deadlines that were missed, accompanied by an estimate of when the information will be provided;

6. a listing of filings submitted to, or permits issued by, other governmental agencies during the year;

7. a projection of project compliance activities scheduled during the next year;

8. a listing of the year's additions to the on-site compliance file;

9. an evaluation of the Site Contingency Plan, including amendments and plan updates; and

10. a listing of complaints, notices of violation, official warnings, and citations received during the year, a description of how the issues were resolved, and the status of any unresolved matters.

COM-8: Confidential Information

Any information that the project owner designates as confidential must be submitted to the Energy Commission's Executive Director with an application for confidentiality pursuant to Title 20, California Code of Regulations, section 2505 (a). Any information deemed confidential pursuant to the regulations will remain undisclosed as provided for in Title 20, California Code of Regulations, section 2501.

COM-9: Annual Energy Facility Compliance Fee

Pursuant to the provisions of Section 25806(b) of the Public Resources Code, the project owner is required to pay an annually adjusted compliance fee. Current compliance fee information is available on the Energy Commission's website http://www.energy.ca.gov/siting/filing_fees.html. The project owner may also contact the CPM for the current fee information. The initial payment is due on the date the Energy Commission dockets its final Decision. All subsequent payments are due by July 1st of each year in which the facility retains its certification.

COM-10: Amendments, Ownership Changes, Staff-Approved Project Modifications, and Verification Changes

The project owner must petition the Energy Commission pursuant to Title 20, California Code of Regulations, section 1769, to modify the design, operation, or performance requirements of the project or linear facilities, or to transfer ownership or operational control of the facility. *It is the project owner's responsibility to contact the CPM to determine if a proposed project modification triggers section 1769 requirements*. The CPM will determine whether staff approval will be sufficient or whether Commission approval will be necessary based upon whether the proposed modifications result in a changed, added, or deleted conditions of certification or conflict with any applicable LORS. Section 1769 details the required content for a Petition to Amend an Energy Commission Decision. The only change that can be requested by means of a letter to the CPM is a request to change the verification method of a condition of certification.

Implementation of a project modification without first securing Energy Commission, or Energy Commission staff approval, may result in an enforcement action including civil penalties in accordance with section 25534 of the Public Resources Code. If the Energy Commission's rules regarding amendments are revised, the rules in effect at the time the change is requested shall apply.

COM-11: Reporting of Complaints, Notices, and Citations

Prior to the start of construction or decommissioning, the project owner must send a letter to property owners within one (1) mile of the project, notifying them of a telephone number to contact project representatives with questions, complaints, or concerns. If the

telephone is not staffed twenty-four (24) hours per day, it must include automatic answering with a date and time stamp recording.

The project owner will respond to all recorded complaints within twenty-four (24) hours. The project site will post the telephone number on-site and make it easily visible to passersby during construction, operation and closure. The project owner will provide the contact information to the CPM who will post it on the Energy Commission's web page at http://www.energy.ca.gov/sitingcases/bottlerock/. The project owner must report any contact system disruption or change to the CPM promptly.

Within ten (10) days of receipt, the project owner must notify the CPM of any complaints (including noise and lighting), official notices, warnings, citations, court orders or fines. Copies and all relevant information must also be included in the Monthly or Annual Compliance Reports. Complaints must be logged and numbered and must be recorded on the complaint form (Attachment A) at the end of the Compliance Plan.

COM-12: Emergency Response Site Contingency Plan

No less than sixty (60) days prior to the start of commercial operation, (or other date agreed to by the CPM) the project owner must submit for CPM review and approval, an Emergency Response Site Contingency Plan (Contingency Plan). The Contingency Plan must evidence a facility's coordinated emergency response and recovery preparedness for a series of reasonably foreseeable emergency events. The CPM may require Contingency Plan updates over the life of the facility. Contingency Plan elements include, but are not limited to:

1. a site-specific list and direct contact information for persons, agencies, and responders to be notified for an unanticipated event;

2. a detailed and labeled facility map, including all fences and gates, the windsock location (if applicable), the on- and off-site assembly areas, and the main roads and highways near the site;

3. a detailed and labeled map of population centers, sensitive receptors, and the nearest emergency response facilities;

4. a description of the on-site, first response and backup emergency alert and communication systems, site-specific emergency response protocols, and procedures for maintaining the facility's contingency response capabilities, including a detailed map of interior and exterior evacuation routes, and the planned location(s) of all permanent safety equipment;

5. an organizational chart including the name, contact information, and first aid/emergency response certification(s) and renewal date(s) for all personnel regularly on-site;

6. a brief description of reasonably foreseeable site-specific incidents and accident sequences (on- and off-site), including response procedures and protocols and site security measures to maintain twenty-four hour site security;

7. procedures for maintaining contingency response capabilities; and

8. the procedures and implementation sequence for the safe and secure shutdown of all non-critical equipment and removal of hazardous materials and waste (see also specific conditions of certification for the technical areas of Public Health, Solid Waste Management, and Safety).

COM-13: Incident Reporting Requirements

As soon as is feasible, but within no more than 12 hours, the project owner must notify the CPM or compliance office manager (COM), by telephone *and* e-mail, of any incident at the power plant or appurtenant facilities that results or could result in any of the following:

1. reduction in the facility's ability to respond to dispatch (excluding forced outages caused by protective equipment or other typically encountered shutdown events);
2. health and safety impacts on the surrounding population;
3. property damage off-site;
4. response by off-site emergency response agencies;
5. serious on-site injury;
6. serious environmental damage; or
7. emergency reporting to any federal, state, or local agency.

The notice must describe the circumstances, status, and expected duration of the incident. If warranted, as soon as it is safe and feasible, the project owner must implement the safe shutdown of any non-critical equipment and removal of any hazardous materials and waste that pose a threat to public health and safety and to environmental quality (also, see specific conditions of certification for the technical areas pertaining to Air Quality; Public Health, Solid Waste Management and Safety.

Within ten (10) business days of the incident, the project owner must submit to the CPM a detailed incident report, which includes, as appropriate, the following information:

1. a brief description of the incident, including its date, time, and location;
2. a description of cause of the incident, or likely causes if it is still under investigation;
3. the location of any off-site impacts;
4. description of any resultant impacts;
5. a description of emergency response actions associated with the incident;
6. identification of responding agencies;
7. identification of emergency notifications made to other federal, state, and/or local agencies;
8. identification of any hazardous materials released and an estimate of the quantity released;

9. a description of any injuries, fatalities, or property damage that occurred as a result of the incident;
10. fines or violations assessed or being processed by other agencies;
11. name, phone number, and e-mail address of the appropriate facility contact person having knowledge of the event; and
12. corrective actions to prevent a recurrence of the incident.

The project owner must maintain all incident report records for the life of the project, including closure, and must provide copies of all relevant data within 24 hours of a CPM request until Energy Commission certification is revoked or cancelled.

COM-14: Non-Operation

If the facility ceases operation temporarily, either planned or unplanned, for longer than one (1) week, but less than three (3) months (or other CPM-approved dates), the project owner must notify the CPM, interested agencies and nearby property owners. Notice of planned non-operation must be given at least two (2) weeks prior to the scheduled date. Notice of unplanned non-operation must be provided no later than one (1) week after non-operation begins.

For any non-operation, a Repair/Restoration Plan for conducting the activities necessary to restore the facility to availability and reliable and/or improved performance must be submitted to the CPM within one (1) week after notice of non-operation is given. If non-operation is due to an unplanned incident, temporary repairs and/or corrective actions may be undertaken before the Repair/Restoration Plan is submitted. The Repair/Restoration Plan must include:

1. identification of operational and non-operational components of the plant;
2. a detailed description of the repair or restoration activities;
3. a proposed schedule for completing the repair or restoration activities;
4. an assessment of whether or not the proposed activities would require changing, adding, or deleting any conditions of certification or would cause noncompliance with any applicable LORS; and
5. planned activities during non-operation, including any measures to ensure continued compliance with all conditions of certification and LORS;

Written updates to the CPM for non-operational periods, until operation resumes, will include:

1. progress relative to the schedule;
2. developments that delayed or advanced progress or that may delay or advance future progress;
3. any public, agency or media comments or complaints; and

4. projected date for the resumption of operation.

During non-operation, all applicable conditions of certification and reporting requirements remain in effect. If, after one (1) year from the date of the project owner's last report of productive Repair/Restoration Plan work, the facility does not resume operation or does not provide a plan to resume operation, the Executive Director may assign suspended status to the facility and recommend commencement of permanent closure activities. Within ninety (90) days of the Executive Director's determination, the project owner must do one of the following:

1. If the facility has a closure plan, the project owner will update, submit for CPM approval, and initiate the closure activities in the approved plan.

2. If the facility does not have a closure plan, the project owner must submit one consistent with the requirements in this Compliance Plan, for CPM review and approval.

COM-15: Closure Planning

To ensure that a facility's closure and long-term maintenance do not pose a threat to public health and safety or to environmental quality, the project owner must coordinate with the Energy Commission to plan and prepare for eventual permanent closure.

A. Provisional Closure Plan and Estimate of Permanent Closure Costs
To assure adequate facility closure, the project owner must submit a Provisional Closure Plan and Cost Estimate (Provisional Closure Plan), for CPM review and approval. The project owner must submit the Provisional Closure Plan within three years after the Commission's decision and every three years thereafter (2016 and 2019 respectively). Costs estimated within the Provisional Closure Plan must consider all applicable final closure plan requirements delineated below, including interim and post-closure site maintenance, and reflect:

1. all relevant operation, maintenance, and administrative costs for all reclamation, including indirect costs, insurance coverage, and inflation; and

2. the use of an independent third party to carry out the permanent closure.

A closure/decommissioning services consultant should prepare the Provisional Plan, and must provide for a phased closure process, including but not be limited to:

1. comprehensive scope of work and itemized budget;
2. closure plan development costs;
3. dismantling and demolition;
4. recycling and site clean-up;
5. mitigation and monitoring direct, indirect, and cumulative impacts;
6. site remediation and/or restoration;
7. interim operation monitoring and maintenance, including long-term equipment replacement costs; and
8. contingencies.

The project owner must include an updated Provisional Plan in every third-year Annual Compliance Report for CPM review and approval. Each Provisional Plan update must reflect the most current regulatory standards, best management practices, applicable LORS, and an updated facility closure cost estimate.

B. Final Closure Plan

Three (3) years prior to initiating a permanent facility closure, the project owner must submit for CPM review and approval, a Final Closure Plan (Final Plan), Final Plan contents include, but are not limited to:

1. a statement of specific Final Closure Plan objectives;
2. a statement of qualifications and resumes of the technical experts proposed to conduct the closure activities, with detailed descriptions of previous power plant closure experience;
3. identification of any facility-related installations not part of the Energy Commission certification, designation of responsible parties, and an explanation of what will be done with the installations after closure;
4. a comprehensive scope of work and itemized budget for permanent plant closure, with a description and explanation of methods to be used, broken down by phases, including, but not limited to:
    a. dismantling and demolition;
    b. recycling and site clean-up;
    c. impact mitigation and monitoring;
    d. site remediation and/or restoration; and
    e. contingencies.
5. a revised/updated cost estimate for all closure activities, by phases, including site monitoring and maintenance costs, and replacement of equipment;
6. a schedule projecting all phases of closure activities for the power plant site and all appurtenances constructed as part of the Energy Commission-licensed project;
7. an electronic submittal package of all relevant plans, drawings, risk assessments, and maintenance schedules and/or reports, including an above- and below-ground infrastructure inventory map and registered engineer's or delegate CBO's assessment of demolishing the facility; additionally, for any facility that permanently ceased operation prior to submitting a Final Closure Plan and for which only minimal or no maintenance has been done since, a comprehensive condition report focused on identifying potential hazards;
8. all information additionally required by the facility's conditions of certification applicable to plant closure;
9. an equipment disposition plan, including:
    a. recycling and disposal methods for equipment and materials; and
    b. identification and justification for any equipment and materials that will remain on-site after closure;

10. a site disposition plan, including but not limited to:
    a. proposed rehabilitation, restoration, and/or remediation procedures, as required by the conditions of certification and applicable LORS,
    b. long-term site maintenance activities, and
    c. anticipated future land-use options after closure;
11. identification and assessment of all potential direct, indirect, and cumulative impacts and proposal of mitigation measures to reduce significant adverse impacts to a less-than-significant level; potential impacts to be considered shall include, but not be limited to:
    a. traffic
    b. noise and vibration
    c. soil erosion
    d. air quality degradation
    e. solid waste
    f. hazardous materials
    g. waste water discharges
    h. contaminated soil
12. identification of all current conditions of certification, LORS, federal, state, regional and local planning efforts applicable to the facility, and proposed strategies for achieving and maintaining compliance;
13. updated mailing list or listserv of all responsible agencies, potentially interested parties, and property owners within one (1) mile of the facility;
14. identification of alternatives to plant closure and assessment of the feasibility and environmental impacts of these; and
15. description of and schedule for security measures and safe shutdown of all non-critical equipment and removal of hazardous materials and waste (see conditions of certification for Public Health, Solid Waste Management and Safety).

If a CPM-approved Final Closure Plan is not initiated within one (1) year of its approval date, it must be updated and re-submitted to the CPM for supplementary review and approval. If a project owner initiates but then suspends closure activities, and the suspension continues for longer than one (1) year, or subsequently abandons the facility, the Energy Commission may access the required financial assurance funds to complete the closure. The project owner remains liable for all costs of contingency planning and closure.

COM-16: Closure Financial Assurances

A. Financial Assurance Mechanism: Surety Bond

The project owner must provide financial assurances to the Energy Commission, guaranteeing adequate and readily available funds to finance interim operation, and facility closure, as needed. The financial assurances shall be in the form of an irrevocable closure surety bond and standby trust fund. The standby trust fund shall have as its Beneficiary the California State Energy Resources Conservation and Development Commission. Alternatively, a trust account, letter of credit, restricted

bank account or other mechanism may be used if the mechanism and its provisions, including the institution involved, are approved by the CPM as providing an equivalent level of financial assurance. The surety bond or substitute mechanism must guarantee the project owner's performance of closure, as specified in the Provisional Closure Plan.

Within thirty (30) days following Energy Commission approval of the March 8, 2013 Petition to Amend, the project owner must establish and provide evidence of establishment of the surety bond or alternate financial assurances to the CPM. The financial assurance shall initially be $1,341,500.

Within sixty (60) days of CPM approval of each triennial Provisional Closure Plan prepared pursuant to **COM-15**, the financial assurance amount shall be adjusted to reflect any change in estimated costs, and the project owner must submit for CEP review and approval all documentation of the adjustment.

In the years 2015 and thereafter, the initially established financial assurances and any subsequently adjusted financial assurances shall be adjusted no later than November 30th of each year by multiplying the estimated costs by following contingency factors to yield the required financial assurance amount:

Year	Contingency Factor
2015	1.05
2016	1.10
2017	1.15
2018	1.20
2019 and thereafter	1.25

The project owner shall report the current value of the financial assurances in the Annual Compliance Report.

Using the financial assurances to implement closure may not fully satisfy the project owner's obligations under these conditions.

Provisions from the California Bond and Undertaking Law, as well as other statutory and case law may be applicable.

B. Environmental Impairment Insurance:

In conjunction with submittal of the triannual provisional or final cost estimate update, the project owner must demonstrate to the Energy Commission financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from facility operations or closure. The project owner will have and maintain environmental impairment liability coverage for sudden accidental occurrences in the amount of at least $10 million per occurrence.

BRP must demonstrate the required environmental liability coverage by having environmental impairment insurance. At a minimum, the insurer must be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states. BRP must provide a copy of the

insurance policy with original signatures. The liability endorsement(s) must also contain original signatures and must be submitted to the CPM. If the insurance policy is scheduled to be cancelled, BRP must submit a notice of the upcoming cancellation to the CPM at least 90 days before cancellation of the policy. If the policy is otherwise cancelled, BRP must immediately notify the CPM.

REFERENCES

BRP 2012. Bottle Rock Geothermal Power Plant (79-ARC-04C): Coleman Complaint Proceeding Amended Agreement and Release of Liability and Amended BRP Lease December 28, 2012, (Docket # 12-CAI-04, TN# 68987).

BRP 2013a. Bottle Rock Power, LLC's Direct Testimony, Exhibit List, and Prehearing Statement Related to the January 22, 2013 Committee Hearing. January 4, 2013 (Docket 12-CAI-04 TN# 69025)

BRP 2013b. BRP LLC's Petition to Amend, March 8, 2013 (TN #69879). BRP 2013c. Bottle Rock Power Plant Decommissioning Estimate, April 15, 2013 (TN #70304).

BRP 2013d. Project Owner's Response to Staff's Issues Identification Report, May 29, 2012 (TN #71018).

BRP 2013e. BRP, LLC's Objections to Staff's Data Requests, Set 1 (#1-5), July 18, 2013 (TN #71652).

BRP 2013f. BRP, LLC's Objections and Responses to Data Requests, Set 1(#1-5) and Amended Decommissioning Estimate, July 28, 2013 (TN #200053).

CEC 1979a. Bottle Rock Geothermal Project, Final Staff Assessment and California Energy Commission's Decision. Adopted November 5, 1980.

CEC 1979b. Bottle Rock Geothermal Project, Draft Environmental Impact Report. State Clearinghouse No. 78112070.

CEC 1983. Revised Compliance Monitoring Report for DWR Bottle Rock Geothermal Project (aka BRPP General Provisions and Conditions of Certification Appendix E to 1980 Decision). March 23, 1983.

CEC 1993. Energy Commission's Order Approving Modified and Reduced Environmental Monitoring during the Suspension of Operations. Order No. 93-0426-02, adopted April 26, 1993.

CEC 1997. Energy Commission's Order Approving Extension of Reduced Monitoring during Suspended Operations. Order No. 97-1203-1(a), adopted December 3, 1997.

CEC 1998. Energy Commission's Order the Closure of Coldwater Creek Geothermal Power Plant (CCPA No. 1). Order No. 98-0715-03, adopted July 15, 1998. (P800-98-002).

CEC 2001. Energy Commission's Order Approving Ownership Transfer. Order No. 01-0530-07, adopted May 30, 2001 (TN# 20552).

CEC 2005. Energy Commission's Order Approving an Extension of the Environmental Monitoring Program During Suspended Operations. Order No. 05-0511-03, adopted May 11, 2005.

CEC 2006. Energy Commission's Order Approving the Change of Ownership, The Restart of Operation After Suspension and 11 Facility Design Changes. Order No. 06-1231-12, adopted December 13, 2006 (TN #38646).

CEC 2007. California Geothermal Energy Collaborative:…Geothermal Permitting Guide. Public Interest Energy Research Program, Blaydes & Associates, April 2007 (CEC-500-2007-027).

CEC 2013a. California Energy Commission, Complaint Against Bottle Rock Geothermal Project, Hearing Transcript. January 22, 2013 (Docket # 12-CAI-04, TN #2916).

CEC 2013b. Energy Commission's Decision Sustaining Complaint Against Bottle Rock Power, LLC. February 6, 2013 (TN #69413).

CEC 2013c. Bottle Rock Geothermal Project Amendment (79-ARC-4C) Issues Identification Report. May 30, 2013 (TN #71023).

CEC 2013d. Notice of Public Meeting and Committee Conference, May 31, 2013.

CEC 2013e. BRP Committee Scheduling Order and Revised PTA Schedule, June 28, 2013 (TN #71458).

CEC 2013f. Energy Commission Staff Formal Data Request Set 1 (#1-5) for the BRP, LLC PTA. June 28, 2013 (TN #71652).

CEC 2013g. Energy Commission Order Extending the Stay of Surety Bond Requirement, adopted July 2, 2013 (Docket # 12-CAI-04 TN #71512).

Colman, David. 2012. Compliant Regarding BRP, LLC's noncompliance with a Decision of the California Energy Commission. Filed October 11, 2012 (Docket # 12-CAI-04, TN# 67659).

ESA 1997. Environmental Science Associates. The Central California Power Agency No. 1 (CCPA No. 1) Coldwater Creek Geothermal Project Draft Conceptual Restoration Plan, August 6, 1997.

Lake 2008. Lake County Environmental Protection Guidelines – Article 64. Section 21-64 and Chapter 10 Geothermal Resources of the Lake County General Plan (Attachment 2) County Policy GR 2.23 Final Closure and Reclamation of Geothermal Operations. http://www.co.lake.ca.us/Assets/CDD/2008+General+Plan+Final+Version/2008+General+Plan+Docs/Chapter+10+-+Geothermal.pdf

Lake 2013. Use Permit Conditions and Bond Requirements for BRP, LLC Use Permits 85-27 and 09-01, submitted January 10, 2013 (Docket 12-CAI-04 TN #69110 or TN# 69025).

COMPLAINT LOG NUMBER:_____ DOCKET NUMBER:_____

PROJECT NAME:_____

COMPLAINANT INFORMATION

NAME:_____ PHONE NUMBER:_____

ADDRESS:_____

DATE COMPLAINT RECEIVED:_____ TIME COMPLAINT RECEIVED:_____

COMPLAINT RECEIVED BY: _____ ☐ TELEPHONE ☐ IN WRITING (COPY ATTACHED)

DATE OF FIRST OCCURRENCE:_____

DESCRIPTION OF COMPLAINT (INCLUDING DATES, FREQUENCY, AND DURATION):_____

_____

_____

FINDINGS OF INVESTIGATION BY PLANT PERSONNEL:_____

_____

_____

DOES COMPLAINT RELATE TO VIOLATION OF A CEC REQUIREMENT? ☐ YES ☐ NO

DATE COMPLAINANT CONTACTED TO DISCUSS FINDINGS:_____

DESCRIPTION OF CORRECTIVE MEASURES TAKEN OR OTHER COMPLAINT RESOLUTION:_____

_____

_____

DOES COMPLAINANT AGREE WITH PROPOSED RESOLUTION? ☐ YES ☐ NO

IF NOT, EXPLAIN:_____

_____

NOISE

INITIAL NOISE LEVELS AT 3 FEET FROM NOISE SOURCE: _____DBA DATE: _____

INITIAL NOISE LEVELS AT COMPLAINANT'S PROPERTY: _____DBA DATE: _____

FINAL NOISE LEVELS AT 3 FEET FROM NOISE SOURCE: _____DBA DATE: _____

FINAL NOISE LEVELS AT COMPLAINANT'S PROPERTY: _____DBA DATE: _____

CORRECTIVE ACTION

IF CORRECTIVE ACTION NECESSARY, DATE COMPLETED:_____

DATE FIRST LETTER SENT TO COMPLAINANT (COPY ATTACHED):_____

DATE FINAL LETTER SENT TO COMPLAINANT (COPY ATTACHED):_____

OTHER RELEVANT INFORMATION:_____

_____

"This information is certified to be correct."

PLANT MANAGER SIGNATURE: _____ DATE:

KEY EVENTS LIST

PROJECT: _____

DOCKET #: _____

COMPLIANCE PROJECT MANAGER: _____

EVENT DESCRIPTION	DATE
Certification Date	
Obtain Site Control	
On-line Date	
POWER PLANT SITE ACTIVITIES	
Start Site Assessment/Pre-construction	
Start Site Mobilization/Construction	
Begin Pouring Major Foundation Concrete	
Begin Installation of Major Equipment	
Completion of Installation of Major Equipment	
First Combustion of Gas Turbine	
Obtain Building Occupation Permit	
Start Commercial Operation	
Complete All Construction	
TRANSMISSION LINE ACTIVITIES	
Start T/L Construction	
Synchronization with Grid and Interconnection	
Complete T/L Construction	
FUEL SUPPLY LINE ACTIVITIES	
Start Gas Pipeline Construction and Interconnection	
Complete Gas Pipeline Construction	
WATER SUPPLY LINE ACTIVITIES	
Start Water Supply Line Construction	
Complete Water Supply Line Construction	

SECTION 1: AIR QUALITY

1-1 The LCAQMD shall perform all duties and functions normally conducted by the APCD District and shall have authority to issue a Permit to Operate, collect the permit fees, levy fines, order correction of operational or mechanical procedures or functions, and perform compliance tests. The established LCAQMD appeal procedures shall apply for all contested LCAQMD actions.

Verification: The project owner shall summarize in an annual compliance report any interactions with the LCAQMD. The project owner shall immediately inform the CEC CPM and ARB in writing of any formal appeals filed with the LCAQMD.

1-2 The project owner shall comply with the requirements specified in the "Modified Determination of Compliance," dated February 22, 1982, with modifications in the LCAQMD Authority to Construct for the Bottle Rock Power Plant (Permit # 80-034A) as amended and with the conditions of the Authorities to Construct listed below The project owner shall comply with the LCAQMD requirements for initiating commercial operation upon commencing renewed commercial operation of the Bottle Rock Power Plant.

- A/C 2006-20 Mechanical Liquid Seal Ring Vacuum Pump Addition
- A/C 2006-21 Stretford Process Equipment Modifications
- A/C 2006-22 Sulfur Cake Process, Spare Vacuum Filter Addition
- A/C 2006-23 Mercury Scrubber Addition
- A/C 2006-24 Condensate H2S Abatement System Modifications
- A/C 2006-25 Automated Supervisory Control System Modifications
- A/C 2006-26 Steam Transmission Line Modifications

Verification: The project owner shall annually request a letter from the LCAQMD verifying the status of the project owner's compliance with the conditions of each Authority to Construct and the modified Determination of Compliance. The project owner shall provide the CEC CPM with a copy of this letter in the annual compliance report. In addition, the project owner shall provide a copy of all quarterly reports and testing/monitoring summary reports submitted to the LCAQMD.

DOC CONDITIONS

District Permit # A/C 80-034A, Modified Determination of Compliance

DOC-1 Hydrogen sulfide (H2S) emissions from the Bottle Rock Power Plant (BRPP) shall be limited to a maximum of five (5) pounds per hour during power plant generation and all possible generation outages. All untreated steam or condensate shall be returned to a treatment or reinjection point to ensure this level of emissions is maintained.

DOC-2 The atmospheric emissions control system (AECS) described in the AFC and revision to the AFC, April 18, 1980, shall be utilized. The system as described, which constitutes the best available control technology, shall consist of the following concurrently available major components:

a) A surface condenser to facilitate the partitioning of H2S into the non condensable gas phase;

b) A Stretford unit as specified in the AFC to reduce the H2S concentration in the non condensable gases to 10 parts per million by volume (ppmv) or less;

c) Secondary condensate treatment which includes sufficient hydrogen peroxide (H2O2) and catalyst injection and reaction time to ensure the power plant will comply with the emission limitation specified in Condition **DOC-1**;

d) A turbine by-pass system sufficiently sized to accept 100 percent of full steam flow during generating outages so that the power plant emission control system can be utilized to treat steam normally stacked during the outage.

e) The air emissions control system specified above shall be properly winterized.

f) If a solids removal system is necessary as a result of solids formation in the condensate, such facility shall be incorporated into the system.

g) In the event of Bottle Rock generation loss, an alternate source of power to enable the continued use of the air emissions control system specified above shall be available.

h) A stand by generator capable of sustaining station power and the Emergency Stacking System shall be available and fueled with low sulfur fuel of 0.5 percent or less for use in case of concurrent transmission line and generator failure.

DOC-3 The major components of the air emissions control system, Stretford, Turbine by-pass, and condensate abatement shall incorporate a design to enable a 99 percent availability excluding scheduled maintenance on these individual major components. If such design criteria cannot be established, abatement systems shall be retrofitted as necessary to achieve performance at this level.

DOC-4 Upon failure of H2S abatement equipment, the project owner shall curtail to a level necessary to comply with the five (5) lbs/hr H2S emissions limitation or provide for a mechanism allowing an immediate determination of prevailing atmospheric conditions to enable the LCAPCO to make a decision as to whether it is acceptable to continue operation at a higher emissions level.

DOC-5 The cooling tower shall have a guaranteed drift rate of no more than 0.00002 as described in the AFC.

DOC-6 The off-gas vent to the atmosphere shall be used only during legitimate emergencies and to enable the cold start-up of the power plant turbine. Steam flows shall not exceed 25,000 lbs/hr to the power plant during direct venting of untreated non condensable gases in the steam. The turbine by-pass shall be used if possible to avoid direct venting into the atmosphere of undiluted non-condensables. The LCAQMD shall be notified when cold start-ups in excess of 5 lbs H2S/hr are to occur and may cancel such activity if deemed necessary.

DOC-7 The project owner shall install alarms and switches on the following units to ensure immediate corrective action is initiated to prevent outages and potential stacking. Alarm/trip conditions noted with an asterisk have a separate alert and trip alarm function and those alarm/trip conditions without an asterisk are coincident alarm/trip functions:

Turbine Generator Unit –

1. Excessive vibration switch, alarm and trip;
2. Lateral motion switch on the turbine shaft, alarm and trip;
3.* High lube oil temperature switch, alarm and trip;
4.* Low lube oil pressure switch with indicating light in control room;
5.* Low lube oil sump level switch, alarm;
6. Over-speed switch, alarm and trip;
7.* High hydrogen gas temperature and low purity hydrogen alarm and trip;
8.* Seal oil level switch and alarm;
9.* Differential pressure switch to prevent low differential pressure between the seal oil and hydrogen pressure, alarm and trip;
10.* Generator moisture detector and alarm;
11.* Vacuum switch to prevent low vacuum in the seal oil detaining tank, alarm and trip;
12.*Turbine bearing metal temperature alarm and trip.

Condensers -

1.* Pressure switch to prevent condenser pressures from exceeding design levels, alarm and trip;
2.* Condensate level switches to start and stop pump, prevent excessively high condensate levels in hot well;
3.* High or low condensate levels alarms.

Cooling Towers -

1.*Float switches and indicators to start and stop the pump in the cooling tower overflow basin and provide alarms;
2. Vibration switches and alarms on each cooling tower fan.

Electrical System -

1. Generator differential current trip and alarm;
2. Generator over-current trip and alarm;
3. Generator ground fault trip and alarm;
4. Generator anti-motoring trip and alarm;
5. Generator field ground trip and alarm;
6.* Generator stator over temperature alarm and trip;
7. Loss of excitation trip and alarm;
8. System negative phase sequence trip and alarm;

9. Transformer differential current trip and alarm;
10. Transformer over-current trip and alarm;
11. Transformer ground fault trip and alarm;
12. Transformer sudden pressure trip and alarm;
13.* Transformer winding temperature alarm;
14.* Transformer oil temperature alarm.

DOC-8 The LCAQMD shall be notified within one hour following any power plant outage or malfunction resulting in emissions in excess of five (5) pounds per hour H2S at (707) 263-7000, or a number to be provided by the LCAQMD. The project owner shall maintain a log of power plant outages along with explanations for the outages and malfunctions. In the event that power plant outages recur because of equipment malfunctions that are not indicated by alarms, the project owner shall retrofit alarms on the malfunctioning equipment as possible. The log shall be available for inspection upon the request of the staffs of the LCAQMD, ARB, CEC, and EPA.

DOC-9 The power plant abatement system shall have an operator on site at all times. The operator must be able to immediately take necessary corrective action in the event of power plant outage or equipment malfunction in order to meet the conditions of this Determination of Compliance. The project owner shall provide a telephone number at which the Bottle Rock operator or a representative can be reached to ensure LCAQMD entry for inspection purposes within one (1) hour of notification. If for considerations of safety, the project owner cannot comply with such a specific request, the project owner shall forward in writing within one week a letter explaining the reasons entry within one hour could not be allowed the LCAQMD staff.

DOC-10 The project owner‘s approved-for-construction drawings or other drawings acceptable to the LCAPCO of the Stretford unit, turbine bypass, and secondary abatement (condensate treatment) system shall be submitted to the LCAQMD and CEC for comment and review at the earliest possible date and in time for such drawings to be commented upon and modified if necessary. The project owner shall not be required to submit proprietary information unless specifically requested by the LCAPCO pursuant to Section 91010, Title 17, California Administrative Code.

DOC-11 The project owner shall submit to the LCAQMD, ARB, and CEC the results of the pilot test program performed by Bechtel National, Inc., no later than February 1, 1982, or within one month before the finishing of final design of the hydrogen peroxide/catalyst abatement system.

DOC-12 Although the applicant is to be licensed upon the use of BACT as described in Condition **DOC-2**, the project owner may use other means to comply provided the LCAQMD, ARB and CEC are provided performance data indicating the other means are capable of achieving the same emissions limitations and reliability as those defined in Condition DOC-2. Any such changes shall be decided at a properly noticed public hearing to be convened jointly by the LCAQMD and CEC, no later than two years prior to anticipated power plant

operation at which the ARB and all intervenors shall be invited to participate. The LCAQMD concurrence upon any changes must be given.

DOC-13 The access road from Bottle Rock Road to the power plant shall be paved to ensure that the generation of fugitive particulate matter is minimized.

DOC-14 Within sixty (60) days after initial power production, the project owner shall demonstrate that the applicable emissions limitations are being maintained during normal power plant operations. The project owner shall submit a detailed performance test plan to the LCAQMD at least thirty (30) days prior to such tests. Such plans shall also be designed to determine the particulate emissions rate and components of particulate emitted. The project owner's proposed test plan must receive LCAQMD and CEC staff approval before such tests may be conducted to determine compliance.

The ARB shall arbitrate difference if concurrence on a test procedure can not be reached between CEC, the project owner and the LCAQMD and recommend a binding procedure. Safe sampling access and ports to enable the LCAQMD to gather samples from the freshly treated condensate, cooling tower stack and treated gas from the Stretford system shall be provided.

DOC-15 Reports shall be issued quarterly to the LCAQMD detailing: a) hours of operation, b) any periods for which abatement equipment malfunctioned and the action taken; c) chemicals utilized for treatment of condensate; d) periods of scheduled and unscheduled outages and the reasons for such outages; and e) summary of the output of continuous emissions monitors with explanations of any irregularities.

DOC-16 Within ninety (90) days after commercial operation the project owner shall file with the LCAQMD an application for a Permit to Operate together with all appropriate information to ensure compliance with the certification and submit permit fees.

DOC-17 The project owner shall take all reasonable measures to comply with a any future air emittent or ambient standard or guideline adopted for present non criteria pollutants (i.e., mercury, boron, arsenic, radon- 222, etc.) by responsible State or Federal agencies and/or comply with guidelines established as part of the project owner's certification by the California Energy Commission.

DOC-18 The project owner shall promptly fund reasonable studies or tests as required by the LCAPCO to ascertain the impact of BRPP when operating, specifically at the residence located approximately 1,900 ft east of the Francisco pad, should the resident in good faith file complaints with the LCAPCO indicating the air quality is worsening or becoming a nuisance or unhealthful as a result of Bottle Rock's operation. These studies shall include, but not be limited to, monitoring at the residence to determine H2S levels and particulate or other components which are believed or known to be in geothermal steam, tracer tests or source tests. Such studies shall be approved by the LCAPCO prior to initiation. Reasonable mitigation steps shall be applied upon request of the

LCAPCO to attempt to remedy any unlawful impacts caused by the Bottle Rock power plant upon the residence.

DOC-19 The incoming steam to the power plant shall be analyzed quarterly and reported to the CEC and LCAQMD for radon-222 and its daughters, mercury, arsenic, silica, boron, benzene, ammonia, and total suspended solids for the first two years of operation. The results of these tests shall be reviewed by the LCAPCO to determine if thereafter annual testing will suffice. The project owner may join with the steam supplier in performing such tests. Results of any tests performed upon the cooling tower sludge shall also be forwarded to the LCAQMD.

DOC-20 H2S emissions shall be monitored continuously by measuring total volume flow rates and H2S concentrations at the following locations: a) incoming steam; b) outlet of the Stretford unit; and c) in the treated condensate. A log of such monitoring shall be maintained and be made available to LCAQMD staff upon request. The devices must have accuracies of +1 ppm, provide measurements at least every 15 minutes, and be accessible to LCAQMD staff. Flow rate measuring devices must have accuracies of +5 percent at 40 to 100 percent of the total flow rate and calibrations must be performed at least quarterly. Calibration records must be made available to LCAQMD staff upon request. Monitoring shall be required pursuant to Section 42303 of the California Health and Safety Code. In the event that acceptable continuous monitors are not available,

The project owner shall conduct testing no less than once every thirty (30) days to ensure the efficiencies of the H2S abatement systems are being maintained. The testing procedure used to determine compliance must be approved by the LCAPCO. A log of such testing shall be maintained and be available to LCAQMD staff upon request. The project owner shall on an annual basis after the date of the decision submit for approval by the LCAQMD, CEC and ARB a summary of the project owner's efforts to develop, research, let for contract to research, or let for contract to implement use of equipment, that is to be a likely candidate for a continuous condensate and noncondensable gas monitor for hydrogen sulfide.

In either case, a summary of the monitoring and/or testing shall be forwarded to the LCAQMD every three (3) months.

DOC-21 The project owner shall, at the request of the APCO, install, operate and maintain an on-site meteorological station capable of determining wind direction, wind speed, standard deviation of the direction, and temperature. Such data shall be furnished to the LCAQMD on a monthly basis in an hourly/day format and quarterly in a summary format acceptable to the APCO.

DOC-22 Compliance monitoring shall be conducted for a minimum one (1) year period before initial operation and one (1) year period after initial operation. Constituents to be monitored include arsenic, boron, mercury, radon-222, benzene, silica, and particulates in addition to H2S. Constituents shall be measured both as suspended aerosols and fall-out. Monthly composite

samples of fall-out shall be collected using a wet/dry collector. Constituents other than H2S may be measured every sixth day, per the ARB particulate sampling schedule. The project owner, CEC, and LCAQMD shall agree upon methods used in sampling and analysis. At the end of the indicated period, the monitoring program will be reviewed by the APCO and the feasibility and necessity for continuance determined. The site for such monitoring shall be in the Cobb Valley area unless the project owner and the LCAQMD agree upon a mutually acceptable alternative site. If the project owner enters into a combined effort with other developers or an alternative monitoring program acceptable to the LCAQMD and CEC, this condition shall not be exercised.

DOC-23 Added condition resulting from modification 1982 Modified Determination of Compliance.

A) Regarding secondary abatement:

LCAQMD shall incorporate into the Bottle Rock Power Plant construction the ability to control the pH of treated condensate, provide for the oxidation of H2S utilizing H2O2, ensure a residence time of 75 or more seconds, and incorporate the ability to add on a catalyst injection capability to the secondary system should operating experience show such is necessary. Chemical storage capacity shall be as specified in the AFC amendments and no less than one weeks supply shall remain on-site at all times. Alternatively, DWR the project owner can provide information acceptable to the LCAQMD and ARB establishing pH adjustment and control is not necessary at the Bottle Rock Power Plant or provide temporary facilities (portable) for the injection of NaOH during power plant start-ups until the question of pH control can be resolved.

Required Future Reports & Documents:

The project owner shall forward the Bechtel H2S Oxidation Study final report immediately upon its being finalized. And, no less than two months prior to initiating construction of the condensate abatement system, a detail design of the condensate abatement system shall be submitted formally in writing to the LCAQMD to enable compliance with these DOC requirements to be established by the LCAQMD.

B) Regarding the turbine by-pass to power plant main condenser system:

The project owner shall incorporate reliable and proven valves, noise attenuation of the valving, and desuperheating of by-passed steam/or account for in the design of the system, the ability to successfully by-pass 100 percent of the steam load.

Required Future Reports & Documents:

The project owner shall submit to the LCAQMD within 60 days a report detailing at a minimum:

(1) The selection of the turbine by-pass valves, the operating experience with the selected valves, and the specific reason the valve design

selected was chosen. To the extent possible, this report shall address the material presented in the Gibbs & Hill report on the subject.

(2) The design features incorporated and/or operating experience to ensure that the absence of desuperheating ability will not adversely affect the operation of the turbine by-pass or power plant emissions control system.

The project owner shall within sixty days prior to installation of the by-pass system provide detailed engineering drawings and a description in writing of the operation procedure for the turbine by-pass to power plant condenser system. The design shall incorporate the ability to by-pass during start-up and partial curtailment as well as total turbine failure.

The project owner, prior to operation of Bottle Rock shall with the steam supplier enter into an agreement detailing the responsibilities for operations of the turbine by-pass and emergency stacking abatement systems. Also, the interface between the stacking system controls shall be delineated by the steam supplier and the project owner and approved by the LCAQMD. A copy of the agreement shall be filed with the LCAQMD no less than 60 days prior to initial power plant operation.

District Permit # A/C 2006-20, Mechanical Liquid Seal Ring Vacuum Pump Addition

AC20-1 This Authority to Construct is to modify the existing non-condensable gas removal system, air emissions control system (AECS), and to blind flange the auxiliary steam non-condensable gas vent; all other permits, associated conditions, and limitations are not modified. The permitted modification is described in the application for modification and evaluated in the analysis accompanying this permit issuance. Equipment utilized and/or modified which is significantly different than that described in the permit application is subject to permit application and review. A permit to operate application shall be made within one year of initial operation, and the subject permit shall be incorporated into the general permit for the power plant.

AC20-2 The gas ejectors shall remain operable and available for use in the event of failure of the mechanical vacuum pump.

AC20-3 All drain or discharge seal water shall be directed to the rich condensate collection and disposal system.

AC20-4 This permit does not modify or make less restrictive any emission limitation, reporting, and/or monitoring/testing requirements that presently exist for this facility.

AC20-5 The applicant shall provide the District, no less than 30 days subsequent to the installation and operation of the herein authorized modification, with as-built drawings for the modification, including Non- Condensable line(s) and AECS showing gas flow, and rich condensate collection and disposal method (reinjection or reflashing in the condenser).

AC20-6 The operator shall provide safe access for representatives of the District, ARB, or EPA to inspect, review records, or collect samples as approved by the APCO, from this facility. Should the plant be secured by locks or gates, the District shall be provided keys, combinations of other means to gain immediate access for purpose of testing or inspection.

District Permit # A/C 2006-21, Stretford Process Equipment Modifications

AC21-1 This Authority to Construct is for the addition of a 10 inch diameter skimming pipe on the Delay Tank between the existing 6 inch skimming lines, the addition of two (2) Oxidizer Tank air spargers operated by the air blowers, and all necessary piping and valves at the Bottle Rock Power Plant Stretford H2S Treatment system; all other permits, associated conditions, and limitations are not modified, except as explicitly approved. The permitted modification is described in the application for modification and evaluated in the analysis accompanying this permit issuance. Equipment utilized and/or modified which is significantly different than that described in the permit application is subject to permit application and review. A permit to operate application shall be made within one year of initial operation, and the subject permit shall be incorporated into the general permit for the power plant. The installation and operation of the modification shall not hinder the operation of the existing plant systems or inhibit emission limit compliance, as operated under A/C 80-034A.

AC21-2 The ability to return the H2S gas treatment components of the AECS operation to the pre-modification operation shall be retained. The project owner shall notify the District upon completion of tile modifications to arrange for an inspection.

AC21-3 Within 30 days after the installation of the skimming lines and air sparging head are completed and operational, the permit holder shall submit a set of “as built” drawing(s) detailing the Stretford/Peabody H2S abatement system.

AC21-4 This permit does not modify or make less restrictive any emission limitation, reporting, and/or monitoring/testing requirements that that presently exist for this facility.

AC21-5 The operator shall provide safe access for representatives of the District, ARB, or EPA to inspect, review records, or collect samples as approved by the APCO, from this facility. Should the plant be secured by locks or gates, the District shall be provided keys, combinations or other means to gain immediate access for purpose of testing or inspection.

District Permit # A/C 2006-22, Sulfur Cake Process, Spare Vacuum Filter Addition

AC22-1 This Authority to Construct is for the addition of a second rotating vacuum drum (Bird Filter) for optional use, and removal of a sulfur melter; all other permits, associated conditions, and limitations are not modified herein. The permitted modification is described in the application for modification and

evaluated in the analysis accompanying this permit issuance. Equipment utilized and/or modified which is significantly different than that described in the permit application is subject to permit application and review. A permit to operate application shall be made within one year of operation, and the permit to operate may be incorporated into the general permit for the power plant.

AC22-2 The applicant shall provide the District, no less than 30 days subsequent to installation of the herein authorized modification, with as-built drawings for the modification.

AC22-3 This permit does not modify or make less restrictive any emission limitation, reporting, and/or monitoring/testing requirements that presently exist for this facility.

AC22-4 The operator shall provide safe access for representatives of the District, ARB, or EPA to inspect, review records, or collect samples as approved by the APCO, from this facility. Should the plant be secured by locks or gates, the District shall be provided keys, combinations or other means to gain immediate access for purpose of testing or inspection.

District Permit # A/C 2006-23, Mercury Scrubber Addition

AC23-1 This Authority to Construct is for the installation of up to two mercury scrubber vessels and necessary modifications to the existing noncondensable H2S gas treatment system at the Bottle Rock Power Plant to be inserted downstream of the water knockout and upstream of the delay tank. The permitted modification is described in the application for modification and evaluated in the analysis accompanying this permit issuance. Equipment utilized and/or modified which is significantly different than that described in the permit application is subject to permit application and review. A permit to operate application shall be made within one year of initial operation of installed components, and the subject permit shall be incorporated into the general permit for the power plant. If the second scrubber unit is not yet installed after one year, the A/C may be renewed.

AC23-2 The project owner shall install and maintain sampling ports on the influent and effluent sides for each mercury scrubber and measure and report measured efficiency of mercury scrubbing to the AQMD upon reaching 20 megawatts of generation, but no later than within the first year of initial operation. A log shall be maintained of unit maintenance to include dates of media changes and the reason for change out, any events of plugging, and all coincident mercury measurements made in sulfur product. The log shall be forwarded quarterly to the AQMD, or provided upon request.

AC23-3 All drain water discharged shall be directed to the rich condensate collection line.

AC23-4 Equipment shall be operated within supplier/manufacturers specifications. A local gauge indicating pressure drop across the unit shall be incorporated into the installation. Additionally, the project owner shall continuously monitor the

scrubbers for pressure loss utilizing the DCS measurements prior to the delay tank and on the backside of the mechanical pumps, and incorporate alert and maintenance action warning levels prior to generation unit trip due to overpressure or back pressure of scrubbing media.

AC23-5 The project owner shall notify the District upon completion of installation of the mercury scrubber(s) to arrange for an inspection, and enable source testing to be performed.

AC23-6 This permit does not modify or make loss restrictive any emission limitation, reporting, and/or monitoring/testing requirements that presently exist for this facility.

AC23-7 The project owner shall provide the District, no less than 60 days subsequent to installation of the herein authorized modification, with as-built drawings for the modification, including sample port locations.

District Permit # A/C 2006-24, Condensate H2S Abatement System Modifications

AC24-1 This permit is for refinements to the existing condensate piping and valving servicing the Bottle Rock Geothermal Power Plant and permanent addition of the iron chelate chemical injection system; all other permits, associated conditions, and limitations are not modified herein. The permitted modification is described in the application for modification and evaluated in the analysis accompanying this permit issuance. Equipment utilized and/or modified which is significantly different than that described in the permit application is subject to permit application and review. A permit to operate application, containing operating scenarios and contingency actions, shall be made within one year of initial operation, and the permit to operate may be incorporated into the general permit for the power plant. A performance plan consistent with rule 655 is recommended. The condensate reroute and iron chelate addition modifications shall be installed in a manner so as to minimize emissions from the facility by extending the contact time with oxygenated cooling tower basin waters to the maximum extent and consistent with documentation in the application and permit review issuance. Injection of iron chelated catalyst at the cooling tower basin or within the cooling tower circulating water shall be incorporated.

AC24-2 The permit holder shall properly install and maintain a properly sized, winterized condensate (cooling tower working water, condensate reroute valving and piping) H2S abatement system modification incorporating the availability of an iron chelate (Fe•HEDTA) catalyst, hydrogen peroxide, and other additives as approved by the APCO, to achieve an overall emissions rate specified in A/C 80-034A.

AC24-3 BRPC shall cause to be performed tests that establish compliance with permit emissions limitations under anticipated plant and AECS components operating scenarios, consistent with existing facility AQMD permits and the DOC. This shall include cooling tower stack source testing as described in Appendix 2 of

the permit reviews and the DOC. Planned operating scenarios shall be described in writing, include required emission testing protocols, and be provided the APCO a minimum of two weeks prior to any operational tests or scheduled source testing. To the extent possible, operating scenarios shall identify measurable parameters that can indicate compliance, or the lack thereof to be correlated with cooling tower stack emissions testing.

A source test plan consistent with the facility permit requirements to determine H2S emissions, for any operating scenario of more than one week duration, shall be provided two weeks prior to testing the scenario. Source tests plans shall be approved by the AQMD prior to testing. Required cooling tower stack source testing can be delayed and H2O2 addition presumed unnecessary, unless requested by the APCO, provided all of the following are met: 1) AECS components are available, supplied and operable; 2) the cooling tower basin water has excess available dissolved oxygen and the hot well condensate is directed to the cooling tower basin; 3) incoming steam is 450 ppmw H2S or less; 4) the Fe•HEDTA concentration is 5 ppm or greater in the working water; and 5) delivered steam to tire plant does not exceed 150,000 lbs/hr.

AC24-4 The applicant shall provide the District, no less than 30 days subsequent to installation and operation of the herein authorized modification, with as-built drawings for the modification, detailing the condensate and cooling tower portions of the facility associated with secondary H2S abatement. The submittal shall identify in detail the selected operational scenario, approved by the APCO (based on testing performed under Condition 3) to be utilized at the facility. This shall include flow routing of cooling tower working water, hot well condensate flow rate and routing, reinjection rate (H2S rich and normal). Fe•HEDTA and all chemical feed injection rate(s) and location(s), arid factors effecting contract times of dissolved H2S in aerated working waters or with H2O2.

AC24-5 Except as specified in Condition 2 this permit does not modify or make less restrictive any emission limitation, reporting, and/or monitoring/ testing requirements that presently exist for this facility.

AC24-6 The operator shall provide safe access for representatives of the District, ARB, or EPA to inspect, review records, or collect samples as approved by the APCO, from this facility. Should the plant be secured by locks or gates, the District shall be provided keys, combinations or other means to gain immediate access for purpose of testing or inspection.

District Permit # A/C 2006-25, Automated Supervisory Control System Modification

AC25-1 This Authority to Construct is for the replacement of the existing control systems of the power plant and steam field with a unitized automated control and reporting system, “Distributed Control System” (DCS), including several levels of redundancies, backup processors, backup power for well head automated valves, and central controls for all power plant, steam field, and abatement system operations; all other permits, associated conditions, and

limitations are not modified herein. The permitted modification is described in the application for modification and evaluated in the analysis accompanying this permit issuance. Equipment utilized and/or modified which is significantly different than that described in the permit application is subject to permit application and review. A permit to operate application shall be made within one year of operation, and the permit to operate may be incorporated into the general permit for the power plant.

AC25-2 Stretford Tail gas monitor output shall be recorded on a continuous paper strip chart recorder or an APCO approved equivalent device.

AC25-3 Condition 7 of the existing geothermal power plant authority to construct permit (A/C 80-034A) shall apply to the herein-permitted modification, and requirements contained therein for alerts, preventative maintenance, action, and reporting shall be incorporated into the DCS.

AC25-4 The applicant shall provide the District, no less than 30 days subsequent to reaching sustained plant production with the herein authorized modification, with a description, detailing location and type of instruments, processors, actuated valves, identifying alerts, action levels and failure levels that would trigger failure of the AECS or the need to utilize the emergency steam stacking (ESS) system.

AC25-5 This permit does not modify or make less restrictive any emission limitation, reporting, and/or monitoring/testing requirements that presently exist for this facility.

AC25-6 The operator shall provide safe access for representatives of the District, ARB, or EPA to inspect, review records, or collect samples as approved by the APCO, from this facility. Should the plant be secured by locks or gates, the District shall be provided keys, combinations or other means to gain immediate access for purpose of testing or inspection.

District Permit # A/C 2006-26, Steam Transmission Line Modification

AC26-1 This Authority to Construct is to modify the existing geothermal fluid (steam) transmission pipeline, steam wash, and emergency steam stacking system servicing the Bottle Rock Power Plant; all other permits, associated conditions, and limitations are not modified. The permitted modification is described in the application and evaluated in the analysis accompanying this permit issuance. The pipeline shall be constructed and operated in a manner to not increase steam stacking during scheduled and unscheduled power generation or transmission line outages or during power plant startups and shutdowns of the unit. Equipment utilized and/or modified which is significantly different than that described in the permit application is subject to permit application and review. A permit to operate application shall be made within one year of initial operation, and the subject permit shall be incorporated into the general permit for the power plant.

AC26-2 Pipeline cleanout, testing and startup emissions shall be consistent with the submitted project application and minimized to the extent feasible. The operator shall provide the District 72 hours advance notice of scheduled cleanout and testing operations and obtain prior APCO approval for the date and time of emissions release or obtain a variance.

AC26-3 All drain water discharged shall be directed to the rich condensate collection and disposal line.

AC26-4 This permit does not modify or make less restrictive any emission limitation, reporting, and/or monitoring/testing requirements that presently exist for this facility.

AC26-5 The applicant shall provide the District, no less than 30 days subsequent to installation of the herein authorized modification, with as-built drawings for the modification, including all steam or gas vent locations.

AC26-6 The operator shall provide safe access to sampling ports that enable representatives of the LCAQMD, ARB, or EPA to collect samples, as approved by the APCO, from the steam stacking muffler, condensate collection basins, or any point release of steam, gas, or emissions to the ambient air.

1-3 The project owner shall use atmospheric emissions control systems as specified by the LCAQMD Authority to Construct for the Bottle Rock Power Plant (Permit # 80-034A) and approved by the CEC CPM. The emissions control systems shall include a Stretford H2S abatement system, a secondary H2S treatment system utilizing iron chelate and/or hydrogen peroxide injected into hot condensate, and an emergency steam turbine bypass system for outages.

Verification: The project owner shall submit copies of the proposed permit application and written approval from the LCAQMD with the CEC CPM prior to beginning construction of any H2S emission abatement system.

1-4 The project owner shall submit approved-for-construction drawings of the power plant secondary H2S control system to the CEC CPM only if requested by the CEC CPM.

Verification: If requested, such drawings shall be submitted by the project owner to the CEC CPM at least 30 days prior to commencing construction of the system.

1-5 Modified DOC Conditions **DOC-14** and **DOC-20** require submittal of a detailed test plan for testing the performance of the Bottle Rock plant H2S emissions abatement systems at normal full load operation. If continuous H2S monitors are available (determined by LCAQMD and ARB), the project owner shall ensure that the detailed plan includes the following test parameters: (1) the test data shall reflect a minimum of 80 percent of the gross electricity generating capacity and (2), in the event that at least 30 days of qualifying data could not be obtained during the 90-day test period specified in the 1982 Modified DOC (**DOC-14**), the project owner shall continue to collect test data until the required information has

been obtained. The application for a Permit to Operate shall be filed as specified in 1982 Modified DOC Condition **DOC-16** and need only include the results of the performance test conducted during the initial 90 days of commercial operation.

Verification: The project owner shall provide the CEC CPM with a copy of the detailed plan submitted to the LCAQMD for review and approval and a copy of the plan as approved. In addition, if the test period extends beyond the initial 90 days after commercial operation, the project owner shall file a supplementary report with the CEC CPM and the LCAQMD which reflects all the results of the performance test.

1-6 The project owner shall, if requested by the LCAQMD, operate and maintain an on-site meteorological station capable of determining wind direction, wind speed, and temperature and provide resultant data to the LCAQMD.

Verification: The project owner shall furnish proof of installation and maintenance of the meteorological station and submission of the data there from in a form acceptable to the LCAQMD. The submittals shall be noted in periodic compliance reports filed with the CEC CPM.

1-7 The project owner shall participate in Geysers' Air Monitoring Program (GAMP) III for the life of the program.

Verification: The project owner shall submit in the Annual Compliance Report a statement describing project owner's participation in GAMP.

1-8 The project owner shall maintain all existing Authorities to Construct (ATCs) and Permits to Operate (PTOs) required under Lake County Air Quality Management District (LCAQMD) regulations.

Verification: The project owner shall submit in the Annual Compliance Report to the CEC CPM appropriate confirmation from the LCAQMD that all ATCs and PTOs are current and active under the terms and Conditions of LCAQMD Rules and Regulations.

The project owner shall also include in this report a statement identifying any complaints and actions of resolution for air quality for the Bottle Rock facility.

The project owner shall submit an Annual Compliance Report for each calendar year no later than February 15th, of the year following the reporting year.

REFERENCES

CARB (California Air Resources Board). 2006. Attainment and Area Designations Maps / State and National. October 2006.

LCAPCD (Lake County Air Pollution Control District). 1980. Determination of Compliance (DOC), DWR/Bottle Rock Geothermal Power Plant. September 24, 1982.

LCAPCD (Lake County Air Pollution Control District). 1982. Modified Determination of Compliance (DOC), DWR/Bottle Rock Geothermal Power Plant. February 22, 1982.

LCAQMD (Lake County Air Quality Management District). 2006a. Permitting Review for Bottle Rock Power Corporation. August 30, 2006.

SECTION 2: PUBLIC HEALTH

2-1. The project owner shall conduct quarterly sampling and analysis for radon- 222 concentrations in noncondensible gases entering the power plant. An outline of the current California Department of Health Services Radiologic Health Section (CDHS/RHS) minimal requirements for monitoring and reporting on radon-222 follows:

- The facility must be sampled at least quarterly.
- The sampling and analysis methods must be shown to be accurate by comparison to known standards supplied by an acceptable source (e.g.,EPA). This "standard comparison" or "calibration" shall be run with each set of samples counted unless it is shown that the counting system is sufficiently stable. If calibration is unnecessary for each run, then calibration shall be required at least once per year.
- Each power production unit must be sampled such that the instantaneous radon-222 emission rate (Ci/sec) to the environment is accurately determined.

  This radon-222 monitoring program will be conducted for at least the first three years of commercial operation. If monitoring results indicate that the radon-222 release for the Bottle Rock facility is well within applicable standards, the program may be modified, reduced in scope, or eliminated, provided the approval of CDHS/RHS is obtained by the project owner. As new information and techniques become available, with concurrence of the project owner and CDHS/RHS, changes may be made to the program or the methods employed in monitoring radon-222.

Verification: Approximately 10 percent of samples will be taken in duplicate, with the duplicate sample sent to the CDHS Sanitation and Radiation Laboratory in Berkeley for cross-check analysis as a quality control on the project owner's laboratory analyses.

The project owner will provide annual reports to CDHS/RHS discussing each point above. All results shall include the standard deviation associated with the counting error. Sources of error in the sampling procedure and emission calculation shall be discussed.

The report shall also indicate the maximum dose due to emissions calculated at the site boundary, and to the resident nearest the location of maximum radon- 222 concentration, and the resultant expected population dose. (These dose calculations may follow a simplified methodology established by CDHS/RHS.)

Annual reports shall be maintained by CDHS/RHS and be available to the CEC and the public on request. CDHS/RHS shall report annually the results of the radon-222 monitoring program to the CEC. This report shall include, at a minimum, data concerning average and high values of radon-222 emissions and incidences of the 3.0 pCi/l and 6.0 pCi/l level exceedances (see 2-2. and 2-3. below).

If the program is modified, reduced in scope, or eliminated, The project owner shall send a copy of CDHS/RHS approval to the CEC CPM.

2-2. **I**f the radon-222 concentration exceeds 3.0 picocuries per liter (pCi/l) in the cooling tower exhaust, the project owner must inform the CDHS/RHS and CEC CPM with a special report within 30 days of confirming an exceedance.

Verification: The project owner shall provide a written report to CDHS/RHS and CEC CPM of sample results within 30 days of confirming an exceedance of 3.0 (pCi/l) radon-222 in the cooling tower exhaust. Confirmation includes the reanalysis of the sample by the project owner or another qualified laboratory. Confirmation of sample results must be accomplished in the most expedient manner possible. The procedures used shall be the same as the normal analysis but may include sending samples to CDHS/RHS and/or outside qualified laboratories for analysis. The confirmation of a sample should take less than five calendar days. The project owner shall notify the CEC of corrective actions taken.

2-3. If the radon-222 concentrations exceed 6.0 pCi/l in the cooling tower exhaust, the project owner shall notify the CDHS/RHS and the CEC by email or telephone within 24 hours of confirmation of the sample result.

Verification: The project owner shall notify CDHS/RHS and the CEC within 24 hours of confirming the sample results. (See 2-2. above for confirmation requirements.) The project owner shall notify the CEC of corrective actions taken.

2-4. The project owner shall obtain baseline ambient air measurements for benzene, silica, mercury, arsenic, ammonia, and vanadium in accordance with the following requirements. These requirements may be accommodated as a part of any established regional data-gathering program acceptable to LCAPCO and CEC staff.

- Measurements shall be made in the populated areas in Cobb Valley downwind of the power plant, to be determined by LCAPCO, CEC staff, and the project owner. Sampling will be performed for at least one year prior to commercial operation.
- Mercury will be measured in the particulate and vapor state.
- Benzene will be measured in the vapor state.
- Particulate measurements for silica, arsenic, mercury, and vanadium will be made using a sampler for inhalable particulates. Elemental analyses may be performed using particle induced X-ray emission (PIXE) techniques, atomic absorption or neutron activation techniques. Particulate samples will be collected every sixth day on the same schedule as the California Air Resources Board (CARB) statewide hi-vol particulate monitoring.
- Mercury vapor measurements will be made by trapping the vapor and subsequent laboratory analysis. The schedule for mercury vapor sampling may differ from the particulate sampling depending on the exact method used. Ammonia will be measured in the gaseous state concurrently with hydrogen sulfide. If a uniform ratio exists between ammonia and hydrogen sulfide, ambient hydrogen sulfide data can be used to estimate ammonia concentrations.

Ammonia measurements will be performed using a continuous N0-N02 analyzer retrofitted with a high temperature converter designed for ammonia determination.

Measurement methods other than those specified above may be proposed and used by the project owner pre-approved by the CEC staff.

Verification: A sampling plan consistent with the above sampling requirements will be prepared by the project owner for approval by the CEC staff and LCAPCD, in consultation with the CARB, and CDHS, 120 days before monitoring begins. The project owner shall provide the LCAPCD, CARB, and CEC with quarterly reports summarizing the monitoring results.

2-5. The project owner and CEC staff, in consultation with CARB and CDHS, will agree upon significant levels of regulated and nonregulated pollutants applicable in the operational monitoring program. (Significant levels for regulated pollutants will be revised only if there is change in federal or state air quality standards.)

Verification: CEC staff shall prepare a report on the agreed upon levels for pollutants. This report will be filed with CEC CPM.

2-6. For the first two years of operation, the project owner shall analyze the incoming steam to the power plant for mercury, arsenic, silica, boron, benzene, and ammonia. These components shall be monitored every quarter.

Verification: The project owner shall submit the monitoring program plan to LCAPCD, CEC CPM, and CARB. LCAPCD shall review the plans for adequacy. The project owner shall submit test results to the LCAPCD and the CEC on a quarterly basis. After two years, the LCAPCD shall determine if annual testing for the above-mentioned steam constituents is sufficient. The project owner may join with the steam supplier in performing such tests.

2-7. In the second year of commercial operation, the project owner shall perform a mass balance measurement for mercury and arsenic.

Verification: The project owner will prepare a report on the mass balance measurements and calculations. The project owner shall send the report to the CDHS and CEC CPM within 30 days after completing the measurements. The program results will be evaluated by CEC CPM and CDHS to determine requirements, if any, for continuation of a mass balance measurement program.

2-8. New well steam analysis will be performed by the project owner when new steam supply wells are added to guarantee that combined power plant emission (the sum of base line, power plant contributions and new well contributions) do not change significantly (+20 percent). Methodology for this analysis will be the same as in 2-6. above.

Verification: The project owner shall send the new well steam analysis to the CEC within 30 days after the sampling.

2-9. The project owner shall conduct ambient air monitoring for arsenic, boron, mercury, benzene, and silica for one year after initial operation, as outlined in LCAPCD's Determination of Compliance, Condition 22. At the end of the indicated period, LCAPCD will review the monitoring program and determine the feasibility and necessity for continuing the program. If the project owner enters into a combined monitoring program with other developers that is acceptable to the LCAPCD and CEC, this requirement would be satisfied.

Verification: The project owner shall submit the monitoring plan to LCAPCO, CEC, and CARB for approval at least six months prior to start-up of the program. The project owner shall provide the LCAPCO, CARB, and CEC CPM with quarterly reports summarizing the monitoring results.

2-10 The project owner shall develop and implement a Cooling Water Management Plan to ensure that the potential for bacterial growth in cooling water is kept to a minimum. The Plan shall be consistent with either staff's "Cooling Water Management Program Guidelines" or with the Cooling Technology Institute's "Best Practices for Control of Legionella" guidelines but in either case, the Plan must include sampling and testing for the presence of Legionella bacteria at least every six months. After two years of power plant operations, the project owner may ask the CEC CPM to re-evaluate and revise the Legionella bacteria testing requirement.

Verification: At least 60 days prior to the restart of cooling tower operations, the Cooling Water Management Plan shall be provided to the CEC CPM for review and approval.

SECTION 3: SOCIOECONOMIC/AESTHETICS

3-1 The project owner shall prepare a detailed visual impacts mitigation plan. The plan will discuss the specific steps to be undertaken in order to carry out the mitigation measures identified in the Draft EIR (page 142). This plan may be submitted as a part of the biological resource mitigation plan. If this is done, the joint plan must be identified as such and must specify how the measures are intended to mitigate the visual disturbances of the project. In addition to onsite impacts, the visual impacts mitigation plan shall include measures for the visual disturbances associated with the access roads and transmission lines.

Verification: The project owner shall submit the visual impacts mitigation plan to the CEC CPM by January 16, 1981 for review and approval. The CEC staff, in consultation with the Lake County Planning Department, shall review the plan.

3-2. The project owner shall not begin construction activities without CEC approval of the visual impacts mitigation plan. The project owner shall implement the mitigation measures identified in the approved plan. The project owner shall also implement any subsequent mitigation measures which may be approved by the CEC CPM in the event that measures included in the approved visual impacts mitigation plan are not sufficient to alleviate the visual disturbances.

Verification: The project owner shall submit an annual report to the CEC CPM demonstrating compliance with the applicable requirements of the visual impacts mitigation plan, including any subsequent amendments.

SECTION 4: CULTURAL RESOURCES

4-1. The project owner shall develop and implement a systematic archaeological recovery program for site CA-LAK-610, in consultation with CEC staff prior to any construction activity. The program shall include the development of an archaeological research design, site mapping, and a site transect for sampling. The program shall also provide for the analysis and curation of recovered artifacts.

Verification: The project owner shall provide the CEC CPM with a copy of the archaeological recovery program plan.

4-2. The project owner shall arrange for the presence of a qualified archaeologist to advise the project owner of the significance of any cultural resource which may be discovered during the stripping of vegetation and top soil from the plant site and related facilities.

The archaeologist shall conform to on-site safety procedures, as directed by the project owner.

Verification: The presence of the archaeologist shall be noted in the monthly Construction Progress Report provided the CEC CPM.

4-3. If previously unidentified cultural resource sites are discovered or unearthed during construction, work in the immediate area will be halted until the archaeologist evaluates the significance of the resource. If the resource is determined to be significant, the project owner shall promptly notify the CEC CPM of the resource discovery and work stoppage. Representatives of the project owner, the CEC CPM, and the Anthropology Lab at Sonoma State University shall meet with the project owner's archaeologist within one working day of the notification to discuss the possible mitigation measures. Pending resolution of this matter, construction activity in the resource area shall remain stopped.

Verification: The project owner shall notify the CEC CPM within one working day of the resource discovery and the work stoppage.

4-4. The project owner shall ensure that construction personnel are instructed to avoid all contact with flagged or fenced sites and to avoid disturbance of any other historic or archaeological material.

Verification: Prior to the start of construction activities, the project owner shall provide the CEC CPM with a statement verifying compliance.

4-5. Project owner shall ensure that the existing fence on the north side of site CA-LAK-609 is maintained.

Verification: A statement verifying compliance shall be provided in each Annual Compliance Report filed with the CEC CPM.

SECTION: 5 BIOLOGICAL RESOURCES

5-1.a. The project owner shall have a qualified botanist identify, map, and field mark populations of Napa lomatium (*Lomatium repostum*) and Brandegee's eriastrum (*Eriastrum brandegeeae*) in the vicinity of the power plant, transmission lines, and access roads prior to new ground disturbing activities related to power plant and ancillary facility operation and maintenance. Power plant employees, as well as other individuals conducting business on behalf of the project owner, where the work performed is in close proximity to any marked populations, shall be alerted to avoid those populations. No disturbance shall occur to these populations.

Verification: The project owner shall include the results of field marking activities as well as what was done to alert appropriate individuals involved with the project and incorporate this into the BRMMSR. (See 5-3.i. below)

5-1.b. The project owner shall prepare a revised detailed Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) which includes mitigation measures with their implementing methodologies, and submit it to the CEC CPM for review and approval in consultation with the California Department of Fish and Game (CDFG). The project owner shall implement the approved biological resources mitigation and monitoring measures specified in the approved BRMIMP.

Verification: The project owner shall submit the plan to the CEC CPM for review and approval 45 calendar days before the start of electrical power production.

5-1c Deleted (Commission Order # 06-1213-12)

5-1d Deleted (Commission Order # 06-1213-12)

5-1.e. The project owner shall develop procedural guidelines describing erosion control measures for earthmoving activities that could take place during operation and maintenance for the months of November, December, January, February, and March. The CEC CPM will review the plan for adequacy and provide a determination of acceptability within 21 calendar days of receipt. The plan must be approved prior to allowing earthmoving activities during these months. If earthmoving activities are planned from April to November, best management practices acceptable to the CEC CPM for this normally drier period shall be described in the procedural guidelines specified above and incorporated into the BRMIMP (See 5-1.b. above)

Verification: The project owner shall incorporate the procedural guidelines describing the erosion control measures into the BRMIMP after approval by the CEC CPM.

5-1.f. Annually, in April, the project owner shall inspect all previously disturbed areas for soil erosion impacts and shall take corrective action wherever necessary and report to the CEC CPM on this until permanent vegetation and/or successful soil stabilization, as determined by the CEC CPM, is established. At the time soil

stabilization has been judged successful by the project owner, the CEC CPM may be contacted to consider terminating or appropriately modifying aspects of this mitigation and monitoring requirement.

Verification: The project owner shall submit to the CEC CPM in the BRMMSR the results of the monitoring and an explanation that verifies compliance with this condition. (See 5-3.i. below)

5-1g Deleted (Commission Order # 06-1213-12)

5-1h Deleted (Commission Order # 06-1213-12)

5-2. One year prior to power plant deactivation, the project owner shall include in the decommissioning plan a biological resources element identifying mitigation measures.

Verification: The project owner shall submit the biological resources element of the decommissioning plan to the CEC CPM for a determination in consultation with CDFG of adequacy and acceptability.

5-3.a. If, based on quarterly visual inspections by a qualified individual(s) provided by the project owner, or information provided by other sources indicating that project related drift or emissions may be affecting vegetation in the vicinity of the project, the project owner shall resume annual soil/duff monitoring and leaf tissue analysis to determine boron levels. The monitoring protocol employed shall be approved by the CEC CPM.

Verification: The project owner shall include the results and a discussion of the year's required monitoring in the BRMMSR. (See 5-3.i. below)

5-3.b. The project owner shall continue surface water sampling at the following 5 sites: Kelsey Creek immediately upstream of the confluence with Alder Creek; Kelsey Creek 500 feet downstream of its confluence with High Valley Creek; Alder Creek immediately upstream of its confluence with Kelsey Creek; High Valley Creek immediately upstream of its confluence with Kelsey Creek; and Kelsey Creek near Kelseyville.

Sampling shall be conducted in April, July, and October of each year.

Protocol: Each surface water sample shall be analyzed for boron, sodium, sulfate, calcium-magnesium hardness, Ph, alkalinity, settlable solids, nonfilterable residue, turbidity, specific electrical conductivity, magnesium, calcium, copper, iron, lead, manganese, and zinc.

As determined necessary by the CEC CPM, based on water quality sampling results and consultation with the CDFG, the project owner shall, during April, July and October, collect and identify bottom-dwelling organisms from at least one square meter of stream-bed at each site and make special trace metal determinations for copper, iron, manganese, lead and zinc.

Verification: The project owner shall include the results and a discussion of the year's monitoring in the BRMMSR (See 5-3.i. below)

5-3.c. The project owner shall continue groundwater sampling at the following five sites: Nance Spring, Union Oil Spring, Coleman Well, Jadiker Spring and Francisco Well.

Sampling shall be conducted in April, July, and October of each year.

Protocol: Each groundwater sample shall be analyzed for boron, sodium, sulfate, calcium-magnesium hardness, pH, alkalinity, non-filterable residue, specific electrical conductivity, copper, iron, manganese, lead and zinc.

Verification: The project owner shall include the results and a discussion of the year's monitoring in the BRMMSR (See 5-3.i. below)

5-3.d. The project owner shall replace and maintain the nest boxes as originally prescribed, and maintain wildlife water basins in working condition. Wildlife use of these habitat improvement projects shall be monitored biennially using the same methodology that has been used in the past and thoroughly described in the BRMMSP. (See 5-3.i. below)

Verification: The project owner shall include the results and a discussion of the biennial monitoring in the BRMMSR (See 5-3.i. below)

5-3.e Deleted (Commission Order # 06-1213-12)

5-3. f Deleted (Commission Order # 06-1213-12)

5-3.g Deleted (Commission Order # 06-1213-12)

5-3.h. The project owner shall monitor erosion on an on-going basis during the rainy season. Inspections shall include all cut and fill slopes and other disturbed areas. Erosion problems shall be immediately repaired.

If temporary repairs are necessary during the rainy season, the project owner shall complete permanent repairs to those erosion problems by October 10th of each year.

Verification: The project owner shall submit to the CEC CPM by August 15th of each year an annual report which includes results of erosion monitoring when erosion problems are discovered. This report will describe the problems discussed and action taken to correct the problems.

During years when no erosion problems occur, and no corrective action is required, a brief discussion may be included and submitted in the December 15th annual report. (See 5-3.i. below)

5-3.i. A Biological Resources Mitigation and Monitoring Status Report (BRMMSR) shall be prepared to provide the results of the previous year's monitoring. This report

shall be submitted by December 15th each year. The report will collate and summarize all monitoring results including methodologies used to satisfy conditions 5-3.a. through 5-3.h. The project owner shall include in the BRMMSR appropriate maps of suitable scale with a detailed discussion of the current status of all mitigation and monitoring actions.

Verification: The project owner shall submit to the CEC CPM by December 15th, of each year, an annual BRMMSR which verifies compliance with the Biological Resource Conditions of Certification.

Upon reasonable notice the CEC CPM, Lake County staff, the Regional Water Quality Control Board staff, and the California Department of Fish and Game (CDFG) staff, shall be granted access for inspections.

5-3.j. If any specific mitigation measure or monitoring program is determined to be ineffective, or if the CEC CPM receives any submittal, complaints, or other information from the project owner, other agencies, or the public, that indicates one or more significant impacts are occurring on the leasehold subject to CEC jurisdiction, the project owner shall undertake actions to correct or reverse these impacts with advice and consent from the CEC CPM.

Verification: The project owner in consultation with CEC CPM will take action to correct the problem. If the problem cannot be resolved, the compliance monitoring dispute resolution process will be utilized.

5-4 Deleted (Commission Order # 06-1213-12)

REFERENCES

BRPC 2003. Bottle Rock Power Plant and Steamfield Annual Compliance Monitoring Report -2002. Prepared by EGS Inc for Bottle Rock Power Corporation. June 2003.

BRPC 2006. Bottle Rock Power Plant and Steam Field Annual Compliance Monitoring Report -2005. Prepared by EGS Inc for Bottle Rock Power Corporation. February 2006.

CNDDB. 2006. California Department of Fish and Game. Natural Diversity Data Base. 1416 9th St., 12th Floor, Sacramento, CA 95814. (916) 324-3812. Version July, 29, 2006.

DWR 1993. Vegetative Response to Geothermal Drift at the Bottle Rock Geothermal Power Plant 1984-1992. State of California, The Resources Agency, Department of Water Resources, Northern District. Technical Information Record. May 1993.

DWR 1994. Annual Compliance Monitoring Report for the Bottle Rock Geothermal Power Plant January 1, 1994 – December 31, 1994. State of California, The Resources Agency, Department of Water Resources, Northern District.

Karfiol, R.C., and L.E. McMillan, eds. 1983. Geysers-Calistoga KGRA-ARM Program 1981-1982 annual report. 2 vols.

McMillan, L.E. (Ed.) 1985. Geysers-Calistoga KGRA-ARM Program 1982-1983 annual report. 2 vols.

Suess, R.E. 2006 Record of Conversation, Ronald E. Suess, JD. President – Bottle Rock Power Corporation. 1275 4th Street, No. 105, Santa Rosa, CA 95404. 707-541-0976.

SECTION 6: WATER QUALITY/WATER RESOURCES

6-1. Project owner shall, during any period of suspension, utilize no new surface water as the source for any maintenance or other necessary activity without first notifying and obtaining the required authorization from the appropriate federal, state, county or local agencies.

Verification: 90 days prior to proposed use of surface water, the project owner shall file statements with the CEC CPM, the Water Resources Control Board, the Central Valley Regional Water Quality Control Board (CVRWQCB), and all other agencies having regulating jurisdiction over such water use, identifying the source(s), estimated amounts of use, and the method of obtaining such water. Additionally, the project owner shall provide the CEC CPM copies of all agency responses and permits necessary for surface water use requests.

6-2. Project owner shall maintain on file the Spill Contingency and Containment Plan (SCCP) originally required by the CVRWQCB.

Verification: Project owner shall notify the CEC CPM of the file location of the SCCP. Project owner shall comply with all applicable monitoring conditions described in CVRWQCB's Waste Discharge Requirement Order No. 76-202 and any amendments thereto.

6-3. Project owner shall adequately maintain the previously constructed impermeable spill collection-containment system to preclude discharges of toxic hazardous waste and materials from the power plant pad.

Verification: Project owner shall submit annually to the CVRWQCB and to the CEC CPM, via the Annual Compliance Report, a record of maintenance and corrective measures to the spill containment system.

6-4. Project owner shall, during any period of suspension, maintain and operate the domestic waste water septic tank, holding tank, pumps and control system as originally designed to discharge the limited amounts of effluent into the steam suppliers condensate reinjection system.

Verification: Project owner shall submit annually to the CVRWQCB and to the CEC CPM via the Annual Compliance Report, a record of maintenance and operation of the domestic waste water disposal system.

6-5. Project owner shall maintain quarterly records of the volume of water pumped from the on-site supply well.

Verification: Project owner shall include in the annual compliance report, supply records of water pumpage from the on-site water well.

6-6. To minimize the effects of contaminated storm water runoff discharges from the paved plant site areas to surface waters, project owner shall discharge all such waters to the condensate reinjection well(s), limited only by the capacity of the

existing sump pumps or the capacity of the reinjection well(s) to accept such discharges.

Note: During high rainfall periods when the runoff from the paved plant area is discharging to the High Valley Creek watershed, the impacts of such discharges will be minimized due to the diluting effects of runoff from the remainder of the watershed.

Verification: Project owner shall submit annually to the CEC CPM a record of maintenance and operation of the drainage sump pump discharge to the injection well(s).

SECTION 7: GEOTECHNICAL/SEISMIC HAZARDS

7-1. The project owner will assign to the project one or more qualified geotechnical engineers to monitor compliance with design intent in geotechnical matters, to provide consultation during design and construction of the project, to make professional geotechnical judgments concerning actual site conditions and to recommend field changes to the responsible civil engineer. The responsibilities of the geotechnical engineer will include:

- o Review of earthwork quality control tests (including compaction tests);
- o Reporting to the responsible civil engineer any geologic conditions which differ from those predicted on the basis of the engineering, geology, and soils engineering reports and any site earthwork which does not comply with the approved grading plans and change orders;
- o Preparation, in accordance with UBC 7015, of a Soils Grading report with his approval that the site is adequate for the intended use; and
- o Other duties (such as monitoring on-site or near-site ground-water levels) as appropriate.

Verification: The project owner shall notify the CEC CPM prior to beginning construction of the geotechnical engineer's name and registration number.

7-2. The project owner will assign to the project a qualified certified engineering geologist who will be present as needed during all phases of site excavation and grading to evaluate site geologic conditions and geologic safety. Responsibilities of the engineering geologist will include:

- o Collection during site excavation and trading of information relative to site geology and geologic safety, including inspection and monitoring of drill logs and drill cores;
- o Preparation of a detailed permanent geologic map or log of all final excavated surfaces (including walls and floors of the foundations of the turbine generator building, cooling tower, and other permanent structures);
- o Reporting to the responsible civil or geotechnical engineer any geologic conditions which differ from those predicted in the Engineering Geology Report; and
- o Preparation, in accordance with requirements of UBC Section 7015, of a Geologic Grading Report, with approval that the site is adequate for the intended use as affected by geologic conditions.

Verification: The project owner shall notify the CEC CPM prior to beginning construction of the certified engineering geologist's name and certification number

7-3. Should adverse site conditions warranting substantial changes in facility design or other mitigation measures be discovered during site excavation and grading,

the project owner's evaluation of these conditions shall be signed and stamped by a certified engineering geologist, and any plans setting forth the substantial changes (change orders) shall be signed and stamped by the responsible registered civil engineer, who shall also verify that the change orders conform with the terms and conditions of the certificate. The project owner shall not proceed with any earthwork in the affected area (except that necessary to protect persons, property, and the environment) based on proposed change orders until the change orders are accepted by CEC staff.

As soon as possible after the project owner confirms the presence of any adverse site conditions which may require substantial changes, the project owner's civil engineer or geotechnical engineer shall notify the CEC CPM and shall submit to the CEC CPM the new geotechnical information upon which the necessary change orders will be based.

As soon as possible after the project owner has developed change orders for such hazardous or adverse geologic conditions, the project owner will submit two copies of such change orders to the CEC CPM for determination of their acceptability.

Discovery of adverse site conditions which will warrant only minor changes in facility design or other mitigation measures need not be reported by the project owner to the CEC CPM. Such new geotechnical information will be reflected in the as-graded and as-built plans. The project owner will maintain the as-built and as-graded plan files for the life of the project. CEC staff will have access to these files.

"Substantial changes are those changes requiring an alteration in design concept and preparation of new design calculations.

Verification: CEC staff will review the proposed change orders and the geotechnical information on which they are based to determine that they conform with the terms and conditions of the certificate. Unless the project owner is notified otherwise within 30 days of receipt by CEC CPM of any change order, the project owner's proposed change orders will be deemed acceptable to CEC staff. CEC staff, or its agents, shall give the project owner reasonable notice (at least 24 hours) prior to unscheduled inspections of site earthwork, unless an imminent hazard requires more immediate inspection.

SECTION 8: SOILS

8-1. The project owner will adhere to the objectives of the above Water Quality Control Plan (Basin Plan) concerning turbidity and sedimentation related to construction projects.

Verification: Immediately following any new construction activity turbine roll, the project owner will file a statement with the Central Valley Regional Water Quality Control Board (CVRWQCB) stipulating the methods employed by the project owner to comply with the above requirement.

8-2 Deleted (Commission Order # 06-1213-12)

8-3 Deleted (Commission Order # 06-1213-12)

8-4. Prior to decommissioning of the power plant, the project owner shall prepare site restoration plans and submit them to the CEC CPM for review and approval at least six months prior to scheduled decommissioning.

Verification: At least six months prior to scheduled decommissioning, the project owner shall submit site restoration plans to the CEC CPM for review and approval.

SECTION 9: CIVIL ENGINEERING

9-1. At least 30 days prior to submittal of proposed Grading Plans, the project owner shall notify the CEC that the plans will be filed on or about a certain date. At least 60 days prior to intended start of site excavation and grading, the project owner will simultaneously submit proposed Grading Plans to the CEC CPM and the CBO for review. The CBO will, within 25 days of Grading Plan submittal, file concurrently with the project owner and the CEC CPM, a compliance letter containing the County's review comments.

Verification: The CEC CPM will, within 50 days of receipt by CEC CPM of the project owner's proposed Grading Plans, file a compliance letter to notify the project owner if the plans are acceptable to CEC staff, or, if not, of the CEC staff recommendations. Should the CEC CPM fail to file the compliance letter within 50 days, the project owner may deem its proposed Grading Plans acceptable to CEC staff.

9-2. Upon submittal by the project owner to the CEC CPM of adequate quality assurance/quality control procedures for inspectors of earthwork and grading, CEC staff may delegate to the project owner responsibility for determining that such work conforms with UBC 79 CBSC 2001 or other requirements of the certificate.

Should CEC staff delegate earthwork inspections to the project owner, the project owner will certify that any designated inspectors have the authority to: (a) stop excavation or grading in areas where adverse site conditions are discovered or where earthwork does not conform with the approved grading plans or change orders; and (b) require that changes or remedial work be performed to reestablish conformance or to achieve the design intent.

Verification: The CEC CPM will notify the project owner when the quality assurance/quality control procedures have been determined to be adequate. The CEC staff or its agents, may, upon reasonable notice to the project owner, inspect the site at any time to verify conformance of site earthwork with approved plans and change orders and/or to evaluate newly discovered adverse site conditions.

9-3. The project owner shall keep the CEC CPM informed regarding the status of construction hrough monthly construction status reports.

Verification: The project owner shall submit monthly construction reports to the CEC CPM until the start of commercial operation.

9-4. The project owner will notify the CEC CPM when site earthwork is ready for final inspection and, upon completion of the rough grading work and at the final completion of the work, will file with the CEC CPM, two copies of the As-Graded Grading Plan, Soils Engineering Report, and Geologic Grading Report per UBC Section 7015 CBSC 2001. The project owner's responsible civil engineer shall certify on the As-Graded Grading Plan that site earthwork was done in accordance with the final approved grading plan (including change orders) and satisfies the design intent.

Upon completion of site earthwork, the project owner will prepare and maintain as a public record for the life of the project the As-Graded Grading Plans. CEC staff and its agents shall have access to these filed documents. The project owner will not begin construction of any structure or foundation until notified by the CEC that site earthwork is acceptable to CEC staff.

Verification: The CEC staff may review the As-Graded Grading Plans and accompanying Soils Grading Report and Geologic Grading Report and may conduct a final inspection of site earthwork to verify that site earthwork complies with the accepted final grading plan. If the CEC CPM does not notify the CBO otherwise within 10 days of submittal of the final As-Graded Grading Plan and supplementary reports, the CBO may deem these documents and site earthwork acceptable to CEC staff.

9-5. The project owner shall prepare and submit a reclamation plan to the CEC staff to restore the site to its original condition as nearly as practicable.

Verification: At least six months prior to decommissioning of the facility, the project owner shall submit its reclamation plan to the CEC CPM for review and approval.

SECTION 10: STRUCTURAL ENGINEERING

10-1. The project owner shall design and construct the Bottle Rock Geothermal Power Plant and its related facilities to be in conformance with applicable laws, ordinances, standards, and practices and with the information, criteria. And methods set forth in the following documents:

- o Bottle Rock AFC, Section IV.D. (entitled, "Seismic Performance Criteria," revised May 22, 1980), Appendix A (Part III, entitled, "Structural Design and Construction Policy," revised May 22, 1980, and Appendix B (entitled, "A Report on Geysers Power Plants," by Dr. Haresh C. Shah, dated May 1980).

- The project owner will use the Applied Technology Council "Tentative Provisions Applicant's responses (dated November 5, 1979) to Staff Interrogatories.

- The project owner will use the Applied Technology Council "Tentative Provisions Record of telephone conversation, Gaylon Lee (CEC) and Dale Martfeld (DOER), July 21, 1980.

- Applicable Findings and Conclusions regarding Structural Engineering of the Joint Prehearing Conference Statement of the Commission Staff and the Applicant dated August 29, 1980.

In case of discrepancies between various criteria, laws, ordinances, and standards, the most conservative requirement will be used. For the turbine generator building, turbine generator pedestal, cooling tower, and Stretford absorber columns, the project owner will clearly demonstrate through design calculations and drawings that the proposed final plans and specifications are based on and conform with design criteria and methods required by the certificate or that any nonconformance is justified.

Upon submittal by the project owner to the CEC CPM of adequate quality assurance/quality control procedures for review and checking of final design plans and specifications for the proposed structure and equipment, CEC staff may delegate to the project owner responsibility for determining that the proposed final plans and specifications comply with CBSC 2001 or other requirements of the certificate.

The Lake County CBO shall review and comment on compliance of proposed plans and specifications with requirements (primarily CBSC 2001) of County Ordinance 2473. The CEC staff or its agent shall review the project owner's proposed design criteria and methods, preliminary and final plans and specifications, and upon request, may review proposed procurement specifications to determine that the proposed design or design approach conforms with terms and conditions of the certificate (other than County requirement) or, if not, that any nonconformance is justified.

If the project owner's proposed design criteria or methods, final plans and specifications, and procurement specifications are not acceptable to the CEC

staff, the design documents shall be modified by the project owner until substantial compliance is attained.

The project owner shall not begin construction of any structure or foundation for which final plans and specifications have not been accepted by CEC CPM. At least 30 days prior to submittal of any design documents, the project owner will notify the CBO and CPM of the intended submittal date.

The project owner will furnish two sets of preliminary plans and specifications to both the CEC CPM and to the Lake County Chief Building Official (CBO) for review and comment concurrently with the Applicant's staff review process.

The project owner will simultaneously submit two complete sets of final structural designs, plans, and specifications for each structure and structure foundation to the CBO at least 75 days prior to the intended date of bid opening.

Verification: The project owner's design engineer(s) shall sign and/or stamp all proposed final plans and specifications, and shall certify in writing that to his personal knowledge:

- The proposed final plans and specifications are consistent with the applicable referenced criteria and with any other applicable terms and conditions of the certificates and were developed using design criteria and methods accepted by CEC staff, and
- The utility's procurement specifications for components purchased from a vendor, comply with the referenced criteria and with any other applicable terms and conditions of the certificate.

The final plans and specifications will reflect the inclusion of approved criteria, assumptions, and methods used to develop the design, and for the turbine-generator building, cooling tower, and Stretford absorber column, shall include design calculations.

The CBO will within 50 days of submittal of both preliminary and final plans and specifications by the project owner, file concurrently with the project owner and the CEC CPM, a compliance letter containing the county's review comments.

The CPM will, within 70 days of receipt by CEC of the project owner's proposed final plans and specifications, file a compliance letter to notify the project owner if the proposed plans and specifications are acceptable to CEC staff or, if not, what changes are recommended by CEC staff. Should the CPM fail to file a compliance letter within 70 days, the project owner may deem its proposed final plans and specifications acceptable to CEC.

Final plans are defined as the plans upon which construction will be based (e.g., used for bid purposes).

10-2. The project owner shall establish and maintain as public records files following documents:

- A summary of concrete strength tests;
- Copies of concrete pour sign-off sheets;
- Bolt torque inspection reports;
- Weld (yield) inspection sheets; and
- As-built drawings for the construction of civil and architectural work (changes approved by the CEC CPM shall be identified on the As-built drawings). CEC staff and its agents shall have access to these filed documents.

Verification: The project owner shall notify the CEC CPM when the documents are available and their location.

10-3. The project owner shall keep CEC CPM informed regarding the status of construction.

Verification: The project owner shall submit monthly construction progress reports to the CEC CPM until the start of commercial operation.

10-4. The project owner will notify the CEC CPM upon completion of each major structure or component.

Verification: Upon notification by the project owner of completed construction for each major structure or component, CEC staff or its agent may perform final site inspection to determine that the finished work is accurately represented by the as-built plans and specifications and conforms with the approved final plans, specifications, and change orders.

The project owner's responsible civil engineer shall certify in writing to the CEC that the finished work for each major structure or component is accurately depicted in the as-built plans and that it conforms with accepted final plans, specifications, and change orders.

10-5. The project owner will file with the CEC CPM or its designated agent substantial design changes to the final plans as required by CBSC 2001. "Substantial changes" include all changes requiring an alteration in design concept and preparation of new design plans consistent with the AFC conditions of certification. Minor changes shall be reflected in the "as-built" drawings submitted after construction.

Verification: The project owner shall submit two (2) sets of the revised drawings, specifications, and calculations to the CEC CPM or its designated agent for review at least 30 days prior to the intended start of construction on a proposed change order or corrective measure, and will notify the CEC CPM or its designated agent at least 15 days in advance of the intended filing. Within 30 days of receipt by CEC CPM, the project owner's proposed change order or corrected measure will be deemed approved unless the CEC CPM notifies the project owner otherwise.

10-6. Inspection shall be performed in accordance with Chapters 3 and 70 of the Uniform Building Code (1979 edition). The CEC CPM or its designated agent may delegate responsibility for special and continuous inspections to the project

owner as provided in the CBSC 2001. The CEC CPM or its designated agent, may upon reasonable notice, inspect the construction at any time.

The project owner will provide, through its Construction Office, a staff of field engineers and inspectors to monitor conformance with the accepted final plans, specifications, and change orders. These field engineers and inspectors will be present on site at all times to monitor construction activities.

Upon submittal by the project owner to the CEC CPM of adequate quality assurance/quality control procedures for inspection of construction work, CEC staff may delegate to the project owner responsibility for determining that construction work conforms with CBSC 2001 or other requirements of the certificate.

Should the CEC delegate responsibility for inspections to the project owner, the project owner shall certify that the designated inspectors have the authority to:

- Stop construction work which does not conform with approved plans, specifications, and change orders;
- Require changes or remedial work to reestablish conformance; and
- Report substantial nonconformance to the CEC or its designated agent as soon as discovered.

Should the project owner propose substantial corrective measures for any nonconforming construction work, the project owner's responsible engineer shall sign and stamp the proposed corrective plan, and specifications shall certify that they conform with the applicable criteria. Any nonconformance shall be justified by the project owner.

Any proposed substantial corrective measures shall be reviewed by the CEC or its designated agent to determine that they conform with the applicable criteria or with the design intent.

Upon request by the project owner's responsible engineer, selected fabricated materials shall be inspected for compliance with contract specification, either in the supplier's shops or on site, by the utility's Engineering Quality Control Inspection Group. The test requirements shall be described in the project owner's contract specification or referenced standards.

Verification: The project owner's responsible engineer shall certify in writing to the CEC that the finished work for each major structure or component is accurately depicted in the "as-built" plans and that it conforms with accepted final plans, specifications, and change orders.

If substantial nonconforming work is discovered by any of the project owner's quality control engineers or inspectors, designated inspector, or by CEC staff or its agent; the discoverer will immediately notify the CEC CPM of the nonconformance.

SECTION 11: SOLID WASTE MANAGEMENT

11-1. The project owner shall obtain a hazardous waste generator identification number from the Department of Toxic Substances Control prior to generating any hazardous waste during construction and operations

Verification: The project owner shall keep a copy of the identification number letter on file at the project site.

11-2. The only Stretford process waste is sulfur cake with some entrained process chemicals. The project owner shall ensure that the sulfur cake is properly stored in an appropriate container and removed periodically to be sold or disposed at a site approved for such wastes.

Verification: The project owner shall submit final design plans and "As-Built" drawings to the Lake County CB0 incorporating these design features. In addition, the project owner shall each month submit completed hazardous waste manifests to the Department of Toxic Substances Control under the California Environmental Protection Agency in compliance with Section 66262.20 of Title 22, CCR

11-3. Deleted (Commission Order # 06-1213-12)

11-4. If a secondary treatment system is used to abate H2S emissions, the plant may produce additional hazardous wastes. To ensure that these wastes are properly disposed, the project owner shall submit its secondary abatement waste disposal plans, if secondary abatement is required, to the CEC for review.

Verification: The plans shall be submitted as soon as the project owner determines secondary abatement is required, but no later than 120 days prior to operation of the secondary abatement system.

11-5. If hazardous wastes, including Stretford sulfur effluent, are stored on site for more than 90 days, the project owner shall obtain a determination from the Department of Toxic Substances Control that the requirements of a Hazardous Waste Facility Permit have been satisfied.

Verification: The project owner shall notify the CEC CPM if it files an in-lieu application with the Department of Toxic Substances Control for the operation of a Hazardous Waste Facility.

11-6. The project owner shall obtain a hazardous waste generator identification number from the Department of Toxic Substances Control prior to generating any hazardous waste during construction and operations

Verification: The project shall keep its copy of the identification number on file at the project site and notify the CPM via the relevant Monthly Compliance Report of its receipt

11-7 Upon becoming aware of any impending waste management-related enforcement action by any local, state, or federal authority, the project owner shall notify the CPM of any such action taken or proposed to be taken against the

project itself, or against any waste hauler or disposal facility or treatment operator with which the owner contracts.

Verification: The project owner shall notify the CEC CPM in writing within 10 days of becoming aware of an impending enforcement action. The CPM shall notify the project owner of any changes that will be required in the manner in which project-related wastes are managed.

11-8 The project owner shall ensure that the cooling tower sludge is tested pursuant to Title 22, California Code of Regulations, section 66262.10 and report the findings to the CPM.

Verification: The project shall include the results of sludge testing in a report provided to the CEC CPM. If four consecutive tests show that the sludge is nonhazardous, the project owner may apply to the CPM to discontinue testing.

SECTION 12: SAFETY

12-1. The project owner shall certify that Stretford system pressure vessels and liquid petroleum gas tanks have been designed, constructed and installed in accordance with Title 8, California Code of Regulations (CCR) and the Tri-Services Manual and anchored to resist a force of an ELF of 0.5w.

Verification: The project owner will prepare and submit to the CEC CPM a certificate of compliance stamped by a registered civil, mechanical or industrial engineer prior to commercial operation.

12-2. The project owner shall certify that Stretford system tanks have been designed, constructed and installed in accordance with American Petroleum Institute (API) Standard 650 and the Tri-Services Manual and anchored to resist a force of an ELF of 0.5w.

Verification: The project owner will prepare and submit to the CEC CPM a certificate of compliance stamped by a registered civil, mechanical or industrial engineer prior to commercial operation.

12-3. The project owner shall certify that lube oil storage tanks are designed and constructed according to Article 145, Title 8,CCR and anchored to resist a force of an ELF of 0.5w.

Verification: The project owner will prepare and submit a certificate stamped by a registered civil, mechanical or industrial engineer prior to commercial operation.

12-4. The project owner shall certify that all storage bins and cylinder anchorages for flammable and hazardous substances are designed and constructed to resist a force of an ELF of 0.5W.

Verification: The project owner will prepare and submit a certificate of compliance stamped by a registered civil, mechanical, or industrial engineer prior to commercial operation.

12-5. The project owner shall certify that hydrogen and oxygen systems are installed according to Articles 138 and 139, Title 8, CCR.

Verification: The project owner will prepare and submit a certificate of compliance stamped by a registered civil, mechanical or industrial engineer prior to commercial operation.

12-6. The project owner shall certify that ammonia and C02 gas are stored according to Articles 107 and 76, Title 8, CCR.

Verification: The project owner will prepare and submit a certificate of compliance stamped by a registered civil, mechanical or industrial engineer prior to commercial operation.

12-7. The project owner shall certify that design and construction are in reasonable conformance with the applicable fire safety codes and standards listed above.

Verification: The project owner shall submit to the CEC CPM such certification from a registered fire safety engineer or the project owner's fire insurance company in a compliance report prior to commercial operation.

12-8. Project owner shall continue to abide by an approved accident prevention program in accordance with the provisions of Section 3203 et seq. of Title 8, CCR. (These sections include chemical handling & storage and provisions for hazardous materials and airborne contaminant exposure based on Section 5155, Title 8, CCR.)

Verification: Project owner shall notify the CEC CPM of any changes to the approved accident prevention program and provide verification of California Occupational Safety and Health Administration's (Cal/OSHA) approval of said changes.

12-9. Project owner shall request California Department of Occupational Safety and Health Administration (Cal/DOSHA) to conduct on-site safety inspections during any the suspension of operations immediately following any complaint.

Verification: During any suspension, the project owner shall notify the CEC CPM in writing in the event of a violation that could involve DOSHA action, and the necessary corrective action.

12-10. During any suspension period, the project owner shall remove from the plant site, all chemicals, solvents and lubricants, except those essential to maintain the plant, and those only in reasonably required quantities.

Verification: Within 90 days of suspending operations the project owner shall submit the following to the CEC CPM:

(1) a list of all hazardous chemicals and the quantities that are to remain on site during any suspension period, and

(2) the signature of the responsible Plant Manager certifying compliance with this condition.

Within 90 days of receipt of the list and the Plant Manager's verification, the CEC CPM will conduct a site visit.

SECTION 13: TRANSMISSION LINE SAFETY AND NUISANCE

13-1. The project owner shall file a "Notice of Construction or Alteration" form with the Federal Aviation Administration if it is anticipated that construction would result in a transmission line tower or any appurtenance being more than 200 feet in height above the ground level per 14 CFR, Part 77.

Verification: The project owner shall forward a copy of any such filing to the CEC CPM.

13-2. The project owner shall construct, operate, and maintain the transmission lines in accordance with Title 14, California Administrative Code, Sections 1254 -1256, and Public Resources Code, Sections 4292 - 4296.

Verification: Within 30 days after completion of construction, the project owner shall submit a statement from a responsible engineer to the California Department of Forestry and the CEC CPM indicating that the transmission line has been constructed in accordance with applicable requirements. The project owner shall also inspect the transmission line annually to ensure that the line maintains required clearances especially during the fire season. In the event that noncompliance is determined by the CDF, the CDF shall require the project owner to take measures necessary to correct the noncompliance. If the project owner's corrective measures are unsatisfactory in the opinion of the CDF, the CDF shall inform the CEC CPM and shall recommend a course of action.

13-3. The project owner shall ensure that, regardless of location or ownership, all ungrounded metallic fences longer than 150 feet within the right-of-way shall be grounded following the PG&E procedures outlined in the PG&E Drawing 020607, sheets 1 through 5 of 5.

Verification: Within 30 days after completion of transmission line construction, the project owner shall file a statement verifying compliance.

13-4. In the event of complaints regarding induced currents from vehicles, portable objects, large metallic roofs, fences, gutters, or other objects, the project owner shall investigate and take all reasonable measures at its own expense to correct the problem for valid complaints, provided that (a) the object is located outside the right-of-way, or (b) the object is within the right-of-way and existed prior to right-of-way acquisition.

For objects constructed, installed, or otherwise placed within the right-of-way after right-of-way acquisition, the project owner shall notify the owner of the object that it should be grounded. In this case, grounding is the responsibility of the property owner. The project owner shall advise the property owner of this responsibility in writing prior to signing the right-of-way agreement.

Verification: The project owner shall maintain a record of activities related to this paragraph. These records shall be made available to authorized staff upon request.

13-5. The project owner shall ensure that the design and construction of the transmission line satisfies or exceeds both the requirements of CPUC General Order 95 and the terms and conditions of CEC certification. The project owner shall receive CEC approval for a waiver of any General Order 95 requirements. The project owner shall also receive CEC approval for any of the following significant changes in transmission line design:

- Any change in conductor size from 1,113 kcmil.
- Any tower configuration other than as proposed in the AFC.
- Change to the number of circuits.
- Change to the voltage level of line.
- Changes in normal or emergency conductor capacity greater than 15 percent.
- Change in termination point.
- Change in route length.
- Changes to the route right-or-way width.

Verification: Within 30 days following completion of the transmission line, the project owner shall submit to the CEC CPM a statement signed by a California registered electrical engineer which verifies compliance with the requirements of CPUC General Order 95 and with the terms and conditions of CEC certification.

13-6. On-site worker safety inspections may be conducted by the California Division of Occupational Safety and Health (CAL/DOSH) during construction and operation of the transmission line or when an employee complaint has been received. The project owner shall notify the CEC CPM in writing in the event of a violation and shall indicate if such violation may delay the transmission line construction schedule.

Verification: The project owner shall maintain records of CAL/Dosh inspections and shall make them available to authorized staff upon request. CAL/DOSH will notify the CEC CPM of alleged violation(s) and recommended course of action in writing within seven days of such determination.

13-7. The project owner shall make every reasonable effort to locate and correct at the project owner's expense, on a case-by-case basis, all causes of radio interference and television interference attributed to the transmission line facilities, including, if necessary, the modification of receivers and the furnishing and installation of antennas. In addition, the project owner shall take reasonable care to prevent the conductors from being scratched or abraded.

Verification: The project owner shall maintain records of complaints and corrective action and shall make these records available to authorized staff.

13-8 The project owner shall provide the following Notice to the Cal-ISO prior to synchronizing the facility with the California transmission system:

1. At least on week prior to synchronization the facility with the grid for testing, provide the Cal-ISO a letter stating the proposed date of synchronization; and

2. At least one business day prior to synchronizing the facility with the grid for testing, provide telephone notification to the ISO Outage Coordination Department.

Verification: The project owner shall provide copies of the Cal-ISO letter to the CEC CPM when it is sent to the Cal-ISO one week prior to initial synchronization with the grid. The project owner shall contact the Cal-ISO Outage Coordination Department, Monday through Friday, between the hours of 0700 and 1530 at (916) 351-2300 at least one business day prior to synchronizing the facility with the grid for testing. A report of conversation with the Cal-ISO shall be provided electronically to the CEC CPM one day before synchronizing the facility with the California transmission system for the first time.

SECTION 14: TRANSMISSION LINE ENGINEERING

(Compliance requirements are included in **Section 13: Transmission Line Safety and Nuisance**)

SECTION 15: TRANSMISSION LINE BIOLOGICAL RESOURCES

(Compliance requirements are included in **Section 5: Biological Resources**)

SECTION 16: NOISE

16-1. Project owner shall comply with Lake County's noise ordinance, which is 55 dBA Ld and 45 dBA Ln at any point beyond the property line of the source. In the event the Lake County or the project owner receives public complaints of any noise, project owner and Lake County (if requested by the complainant) agree to promptly conduct an investigation to determine the extent of the problem. Project owner shall take reasonable measures to resolve the complaints.

Protocol: Within 10 days of a request by Lake County or the CEC CPM, project owner shall conduct noise surveys at the sensitive receptors registering complaints and at the facility property line nearest the complaining receptors. Surveys shall be conducted, when possible, under circumstances similar to those when the complaints were perceived. The survey should be reported in terms of L_{eq} and L_z at levels x=10, 50, and 90.

Verification: Project owner shall promptly forward to Lake County the survey results, the mitigation measures applied to resolve the problem and the results of these efforts. Lake County shall advise the CEC CPM of any continuing noncompliance conditions.

16-2. Within 90 days after the plant reaches its rated power generation capacity and construction is complete, the project owner shall conduct a noise survey at 500 feet from the generating station or at a point acceptable to DWR, CEC CPM, and Lake County. The survey will cover a 24 hour period with results reported in terms of Lx (x = 10, 50, and 90), LeqZ and Ldn levels.

The project owner shall prepare a report of the survey that will be used to determine the plant's conformance with county standards. In the event that county standards are being exceeded, the report shall also contain a mitigation plan and a schedule to correct the noncompliance. No additional noise surveys of off-site operational noise are required unless the public registers complaints or the noise from the project is suspected of increasing due to a change in the operation of the facility.

Verification: Within 30 days of the noise survey the project owner shall submit its report to Lake County.

16-3. Within 90 days after the start of commercial operation, the project owner shall prepare a noise survey report for the noise hazardous areas in the facility. The survey shall be conducted by a qualified person in accordance with the provisions of Title 8, CCR, Article 105. The survey results will be used to determine the magnitude of employee noise exposure. If employee complaints of excessive noise arise during the life of the project, CAL/DOSH, Department of Industrial Relations shall make a compliance determination.

Verification: The project owner shall notify CAL/DOSH and the CEC CPM of the availability of the report.

LIST OF ACRONYMS

AECS	Air Emissions Control System
AECS	Atmospheric Emissions Control System
AFC	Application for Certification
APCD	Air Pollution Control District
APCO	Air Pollution Control Officer
API	American Petroleum Institute
ARB	Air Resources Board
ATCs	Authorities to Construct
BACT	Best Available Control Technology
BRMIMP	Biological Resources Mitigation Implementation and Monitoring Plan
BRMMSR	Biological Resources Mitigation and Monitoring Status Report
BRPP	Bottle Rock Power Plant
CAL/DOSH	California Division of Occupational Safety and Health
CAL/OSHA	California Occupational Health and Safety Administration
Cal-ISO	California Independent System Operator
CARB	California Air Resources Board (aka ARB)
CBO	Chief Building Official
CBSC	California Building Standards Code
CCR	California Code of Regulations
CDF	California Department of Forestry
CDFG	California Department of Fish and Game
CDHS/RHS	California Department of Health Services Radiologic Health Section
CEC	California Energy Commission
Ci/sec	curie per second
C02	carbon dioxide
CPM	Compliance Project Manager
CPUC	California Public Utilities Commission
CVRWQCB	Central Valley Regional Water Quality Control Board
dBA	Decibel(dB) (dBA) A-Weighted Sound Level
DCS	Distributed Control System
DOC	Determination of Compliance
DWR	California Department of Water Resources
ELF	equivalent lateral force
EPA	Environmental Protection Agency
ESS	emergency steam stacking system
Fe•HEDTA	iron hydroxyethyl ethylenediamine triacetic acid
GAMP	Geysers' Air Monitoring Program
H2O2	hydrogen peroxide

H2S	hydrogen sulfide
Kcmil	thousands of circular mils
lbs/hr	pounds per hour
LCAPCO	Lake County Air Pollution Control Officer
LCAQMD	Lake County Air Quality Management District
L_d	A-weighted noise level during the day
L_{eq}	equivalent noise level
NaOH	sodium hydroxide
PG&E	Pacific Gas & Electric
pH	potential Hydrogen
ppm	parts per million
ppmv	parts per million by volume
ppmw	parts per million by weight
PTOs	Permits to Operate
UBC	Uniform Building Code

Appendix C

Proof of Service List

Docket: 79-AFC-04C
Project Title: Compliance - Application for Certification of DWR Bottlerock Geothermal Project
Generated On: 12/13/2013 1:04:02 PM

Applicant

Brian Harms, General Manager
Bottle Rock Power, LLC
7385 High Valley Road, P.O. Box 326
Cobb, CA 95426
bharms@bottlerockpower.com

Applicant Representative

John A. McKinsey
Locke Lord, LLP
500 Capitol Mall, Suite 1800
Sacramento, CA 95814
jmckinsey@lockelord.com

Kristen T. Castaños
Stoel Rives, LLP
500 Capitol Mall, Suite 1600
Sacramento, CA 95814
ktcastanos@stoel.com

Intervenor

David Coleman
3733 Canon Avenue
Oakland, CA 94602
redandcurly@yahoo.com

Hamilton Hess
Friends of Cobb Mountain
255 Ursuline Road
Santa Rosa, CA 95403
Hesshab@aol.com

Intervenor Representative

Donald B. Mooney, Counsel for David Coleman and Friends of Cobb Mountain
129 C Street, #2
Davis, CA 95616
dbmooney@dcn.org

Mark Peterson, Counsel for Project Landowner, V.V & J. Coleman LLC,
Counsel for Project Landowner, V.V & J. Coleman LLC
Diepenbrock Elkin LLP
500 Capitol Mall, Suite 2200
Sacramento, CA 95814
mpeterson@diepenbrock.com

Commission Staff

Camille Remy Obad, Compliance Project Manager
California Energy Commission
Siting, Transmission & Environmental Protection Division, 1516 Ninth Street, MS-2000
Sacramento, CA 95814
camille.remy-obad@energy.ca.gov

efiling archive
California Energy Commission
Sacramento, CA
efilingPOSarchive@energy.ca.gov

Kevin W. Bell, Staff Counsel
Calfornia Energy Commission
Office of the Chief Counsel, 1516 Ninth Street, MS-14
Sacramento, CA 95814
kevin.w.bell@energy.ca.gov

Richard Ratliff, Staff Counsel
California Energy Commission
Office of the Chief Counsel, 1516 Ninth Street, MS-14
Sacramento, CA 95814
dick.ratliff@energy.ca.gov

Committee

Eileen Allen, Commissioners' Technical Adviser for Facility Siting
California Energy Commission
Sacramento, CA

Eli Harland, Adviser to Commissioner Douglas
California Energy Commission
Sacramento, CA

JANEA A. SCOTT, Associate Member, Commissioner
California Energy Commission
Sacramento, CA

Jennifer Nelson, Adviser to Commissioner Douglas
California Energy Commission
Sacramento, CA

Jim Bartridge, Adviser to Commissioner Scott
California Energy Commission
Sacramento, CA

KAREN DOUGLAS, Presiding Member, Commissioner
California Energy Commission
Sacramento, CA

Lezlie Kimura Szeto, Adviser to Commissioner Scott
California Energy Commission
Sacramento, CA

Paul Kramer, Chief Hearing Officer
California Energy Commission
Sacramento, CA

Public Adviser

Alana Mathews, Public Adviser
California Energy Commission
Public Advisers Office, 1516 Ninth Street, MS-12
Sacramento, CA 95814
publicadviser@energy.ca.gov

Public Agency

California ISO
Folsom, CA
e-recipient@caiso.com

Douglas Gearhart, Air Pollution Control Officer
Lake County AQMD
885 Lakeport Boulevard
Lakeport, CA 95453
dougg@lcaqmd.net

Elizabeth Johnson, Geothermal Officer
Department of Conservation, Division of Oil, Gas, & Geothermal Resources
801 K Street, MS 20-20
Sacramento, CA 95814
ljohnson@consrv.ca.gov

John Dunnigan, Senior Staff Counsel
Department of Water Resources
1416 Ninth Street, Room 1104
Sacramento, CA 95814
jdunniga@water.ca.gov

Richard Coel
Lake County Community Development Department-Planning Division
255 North Forbes Street
Lakeport, CA 95453
richard.coel@lakecountyca.gov

Will Evans
Lake County Community Development Department-Planning Division
255 North Forbes Street
Lakeport, CA 95453
will.evans@lakecountyca.gov