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# Russell City Energy Center

(01-AFC-7C)

## Amendment No. 4



Submitted by  
**Russell City Energy Company, LLC**  
**November 2012**

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# Executive Summary

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Russell City Energy Company, LLC, as project owner, petitions the California Energy Commission (CEC or Commission) to amend the certification for the Russell City Energy Center (RCEC) (01-AFC-7, issued September 11, 2002 and amended October 3, 2007), hereinafter "Decision." This Amendment includes the following components:

- Various non-substantive administrative changes to the Air Quality Conditions of Certification to clarify certain terms concerning monitoring and test methods and timing for initial source testing and to conform to the conditions in the Authority to Construct (ATC) air permit issued by the Bay Area Air Quality Management District (BAAQMD);
- Modification of Condition of Certification VIS-2 (onsite landscaping) to allow planting in the first optimal planting season following commercial operation;
- Deletion of Condition of Certification VIS-9 (trailside improvements) because the condition is not feasible and is no longer necessary; and
- Modification of Condition of Certification VIS-10 to provide alternative offsite visual enhancement measures.

Section 1.0 provides an overview of the Amendment and a review of the ownership of the project. Section 2.0 provides a complete description of the proposed modifications and the necessity for the proposed changes. Section 3.0 assesses the potential environmental effects of the proposed changes, the project's continued compliance with all laws, ordinances, regulations and standards, and the consistency of the changes with the Commission Decision certifying the facility. This assessment indicates that adoption of the Amendment will not result in any significant, unmitigated adverse environmental impacts. The project will continue to comply with all applicable laws, ordinances, regulations and standards. The findings and conclusions contained in the Commission Decision of October 3, 2007 amending certification of the RCEC are still applicable to the project.

The proposed changes to the relevant Conditions of Certification are included in Section 6.0 of the Amendment.

# 1.0 Introduction

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## 1.1 Overview

The Russell City Energy Center project (“RCEC”) is an approximately 600 megawatt natural gas-fired, combined cycle electric generating facility located in the City of Hayward in Alameda County. This project was certified by the California Energy Commission (“CEC” or “Commission”) in September 2002,<sup>1</sup> and received an amended approval in October 2007,<sup>2</sup> hereinafter “Decision.” A petition to extend commencement of construction deadline by one year, from September 10, 2007 to September 10, 2008 was approved on August 29, 2007, and a petition to extend commencement of construction deadline by two years, from September 10, 2008 to September 10, 2010 was approved on July 30, 2008. On August 11, 2010, the Commission approved Amendment No. 2,<sup>3</sup> which, among other things, made modifications to the Air Quality Conditions of Certification to conform with the project’s federal Prevention of Significant Deterioration (PSD) permit and enable the renewal of the Authority to Construct issued by the Bay Area Air Quality Management District (BAAQMD).<sup>4</sup> Construction of RCEC began September 2010.

By this amendment Russell City Energy Company, LLC, petitions the Commission to amend the certification for the project as follows:

- Modify certain Air Quality Conditions of Certification to make certain non-substantive clarifications and administrative amendments to provisions governing monitoring and initial source testing and to conform with the corresponding conditions in the Authority to Construct air permit issued by BAAQMD;
- Modification of Condition of Certification VIS-2 for onsite landscaping to allow planting in the first optimal planting season following commercial operation;
- Deletion of Condition of Certification VIS-9 (trailside improvements) because the condition is not feasible and is no longer necessary; and
- Modification of Condition of Certification VIS-10 to provide alternative offsite visual enhancement measures.

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<sup>1</sup> California Energy Commission. 2002. Commission Decision, Russell City Energy Center, (01-AFC-7), Alameda County. California Energy Commission, Sacramento, California. September 11, 2002.

<sup>2</sup> California Energy Commission. 2007. Commission Decision, Russell City Energy Center, Petition for Amendment to Application for Certification (01-AFC-7C), Alameda County. California Energy Commission, Sacramento, California. October 3, 2007.

<sup>3</sup> California Energy Commission. 2010. Order Amending the Energy Commission Decision, Russell City Energy Center, Petition for Amendment No. 2 (01-AFC-07C), Alameda County. California Energy Commission, Sacramento, California. August 11, 2010.

<sup>4</sup> A third amendment to the Commission’s decision was also approved on July 9, 2012. The order approving Amendment No. 3 allowed the addition of additional areas for construction laydown and parking. Except for certain Air Quality Conditions of Certifications, Amendment No. 3 and this Amendment do not address similar issues or affect any of the same Conditions for Certification.

This Amendment contains all of the information that is required pursuant to the Siting Regulations (California Code of Regulations [CCR] Title 20, Section 1769, Post Certification Amendments and Changes). The information necessary to fulfill the requirements of Section 1769 is contained in Sections 1.0 through 6.0 as summarized in Table 1 below.

**TABLE 1**  
Informational Requirements for Post-Certification Amendments and Changes

<b>Section 1769 Requirement</b>	<b>Section of Petition Fulfilling Requirement</b>
(A) A complete description of the proposed modifications, including new language for any conditions that will be affected	Section 2.0—Proposed modifications Sections 6.0—Proposed changes to conditions of certification
(B) A discussion of the necessity for the proposed modifications	Section 2.0
(C) If the modification is based on information that was known by the petitioner during the certification proceeding, an explanation why the issue was not raised at that time	Section 2.3
(D) If the modification is based on new information that changes or undermines the assumptions, rationale, findings, or other bases of the final decision, an explanation of why the change should be permitted	Sections 3.3
(E) An analysis of the impacts the modification may have on the environment and proposed measures to mitigate any significant adverse impacts	Section 3.0
(F) A discussion of the impact of the modification on the facility's ability to comply with applicable laws, ordinances, regulations, and standards;	Section 3.3
(G) A discussion of how the modification affects the public	Section 4.0
(H) A list of property owners potentially affected by the modification	Section 5.1
(I) A discussion of the potential effect on nearby property owners, the public and the parties in the application proceedings.	Section 5.2

## 1.2 Ownership of Russell City Energy Company, LLC

Russell City Energy Company, LLC, is jointly owned by Calpine Russell City, LLC (a wholly owned indirect subsidiary of Calpine Corporation) (65 percent) and Aircraft Services Corporation (a wholly owned indirect subsidiary of General Electric Capital Corporation) (35 percent).

## 1.3 Summary of Environmental Impacts

The Siting Regulations require that an analysis be conducted to address the potential impacts the proposed project change may have on the environment and proposed measures to mitigate any potentially significant adverse impacts (Title 20, CCR, Section 1769 [a][1][E]). The regulations also require a discussion of the impact of the proposed change on the facility's ability to comply with applicable laws, ordinances, regulations and standards ("LORS") (Title 20, CCR Section 1769 [1][a][F]).

Section 3.0 of this Amendment includes a discussion of the potential environmental impacts associated with the modifications to the Air Quality Conditions of Certification and Visual Resources Condition of Certification for onsite landscaping (VIS-2), as well as a discussion of the consistency of the modification with LORS. Section 3.0 concludes that there would be no significant environmental impacts associated with implementing the actions specified in this Amendment and that the project as modified would comply with all applicable LORS.

- Clarifications and amendments to the Air Quality Conditions of Certification will have no significant adverse impact on the environment because these changes are all minor and non-substantive in nature and do not modify any currently licensed limits on emissions.
- Changes to Condition of Certification VIS-2 for onsite landscaping will not impact the environment. The revision to the condition for onsite landscaping changes the timeframe for onsite planting to a more optimal season when climatic conditions will favor new growth and when onsite construction activities will not harm newly planted trees and vegetation. The onsite landscaping installed during the optimal planting season will maximize the survival and success of the planted trees and vegetation.
- Deletion of Condition of Certification VIS-9 will not impact the environment. The trailside improvements described in this condition had been proposed in 2002 because the project at the location certified in 2002 would have blocked the view of Mt. Diablo from the Hayward Shoreline Interpretative Center. However, subsequent to the 2002 Decision, the project owner relocated the project to a location which no longer blocked views of Mt. Diablo from the Center. Therefore, these mitigation measures are no longer necessary.
- Changes to the Visual Resources Condition of Certification for offsite visual enhancement measures will not impact the environment. The proposed revision to VIS-10 would require the project owner to convey approximately 26 acres of shoreline land to the East Bay Regional Park District (EBRPD) to be integrated into the EBRPD system of shoreline parks and to be maintained permanently as open space and habitat.
- The dedication of land does not involve any physical change to the environment, therefore there is no possibility of any significant adverse environmental impact. In addition, there is a specific categorical exemption under CEQA for the transfer of ownership of interests in land in order to preserve open space and habitat. (14 CCR 15325; Public Resources Code

Sections 21083, 21084.) Therefore, it can be seen with certainty that this revision to VIS-10 will have no significant adverse effect on the environment.

## 2.0 Description of Project Changes

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This section includes a complete description of the proposed project changes consistent with the Siting Regulations (Title 20, CCR, Section 1769 [a][1][A]).

### 2.1 Changes to Air Quality Conditions of Certification

This Amendment requests various changes to the Air Quality Conditions of Certification. These changes address certain monitoring and testing requirements and reflect certain non-substantive clarifications and amendments of those requirements.

The ATC permit for the project was originally issued on November 1, 2007. Due to delays associated with issuance of the PSD permit for the project, construction did not commence during the initial two-year period for which the ATC was effective. Accordingly, the RCEC project owner applied for a renewal of its ATC and concurrently sought amendment of the Air Quality Conditions of Certification to reflect the more current “Best available Control Technology” limits imposed by the PSD permit. The Commission processed the amendment request and, on August 11, 2010, approved Amendment No. 2 to the project’s certification. BAAQMD then renewed the ATC on November 10, 2010 (expired October 31, 2011), incorporating the Air Quality Condition of Amendment No. 2.<sup>5</sup> RCEC subsequently commenced construction and the ATC was renewed again on October 26, 2011.<sup>6</sup>

This Amendment requests certain non-substantive changes to the Air Quality Conditions of Certification to clarify certain monitoring and testing requirements, but makes no change to any of the applicable emissions limits. The RCEC project owner is concurrently requesting that the BAAQMD modify the currently effective ATC permit conditions so they would conform to the amended Conditions of Certification. Additional changes are requested to extend the timing for conducting initial source testing, make certain corrections to permit language and otherwise assure consistency between the Air Quality Conditions of Certification and conditions of the ATC. The modifications being proposed by this Amendment do not affect the quantities of emissions permitted.

For example, the project owner is seeking an increase in the deadline for conducting source testing from 60 or 90 days (as the case may be) to 120 days from startup, which is considered to be first fire, because the timing sequence for commissioning activities is such that the project will not be finished with the work necessary to perform source testing within 90 days of first fire. Therefore, extending the source testing deadline to 120 days from startup

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<sup>5</sup> For a description of the process followed by BAAQMD in renewing the ATC as a ministerial permit that incorporates the Air Quality Conditions of Certification imposed by the Commission’s certification, see *In the Matter of the Appeal of Californians for Renewable Energy, Inc., from the renewal of an Authority to Construct for the Russell City Energy Center*, Order Denying Fee Waiver Request, Denying Application for Leave to Intervene, Denying Motion to Strike Document and /or Continue Hearing; and Dismissing Appeal for Lack of Jurisdiction, BAAQMD Hearing Board, Mar. 3, 2011; available at: <http://www.baaqmd.gov/~media/Files/Board%20of%20Directors/Hearing%20Board/3607%20Final%20Order.ashx?la=en>.

<sup>6</sup> The BAAQMD website provides the latest ATC permits for RCEC, and is available at <http://www.baaqmd.gov/Divisions/Engineering/Public-Notices-on-Permits/2011/102611-15487/Russell-City-Energy-Center.aspx>

allows the project to safely complete the necessary commissioning activities and results in no additional emissions or environmental impacts.

Changes to the Air Quality Conditions of Certification are provided in Section 6.1.

## 2.2 Changes to the Time Allowed for Installation of Onsite Landscaping (VIS-2)

VIS-2 provides the conditions for onsite landscaping. Onsite landscaping must be completed by the start of commercial operation, and the planting must occur during the optimal planting season. Under the current schedule for commercial operation, this condition would require trees to be planted near major project structures, such as the cooling towers, in the fall of 2012, even though such structures may still be under construction during this period. This situation is problematic for two reasons. First, installation of the type of trees necessary to screen the project from view to the greatest extent possible will impede construction efforts of nearby major equipment and structures, potentially affecting the safety of construction workers. Second, because of the ongoing construction nearby the onsite landscaping, trees installed prior to commercial operation are likely to be disturbed or injured from construction activities and therefore require replacement.

Accordingly, this Amendment would modify VIS-2 to allow onsite landscaping to be completed by the first optimal season following commercial operation. The Amendment also clarifies that the optimal season for planting occurs in the Spring (March through June) and Fall (September through November).

Modifications to VIS-2 are provided in Section 6.2.

## 2.3 Deletion of Condition VIS-9

When the project was originally licensed in 2002, it was then sited at a location where “it would substantially block the view of Mt. Diablo from the Hayward Shoreline Interpretive Center.” (RCEC FSA, 2002, p. 4.11-18) To mitigate for blocking the view of Mt. Diablo from the Interpretive Center, the project owner agreed to “install benches, an information kiosk, information panels, and free-of-charge viewsopes at two nearby locations on the Shoreline trail where views toward Mt. Diablo would not be affected by the project.” (*Id.* at 4.11-19).

Subsequent to the 2002 Decision, the project owner relocated the project. This relocation was approved by the Commission’s Decision on Amendment No. 2 in 2007. At this new location, the project no longer blocked views of Mt. Diablo from the observation deck of the Interpretive Center. (FSA, 2007, 4.12-6)

Despite the fact that mitigation for view blockage was no longer necessary and no longer legally required to mitigate for view blockage, the project owner agreed to continue to provide these trailside improvements, assuming the cooperation of the Hayward Area Recreation and Parks District (HARD). Unfortunately, HARD has declined to enter into an agreement for the project owner to provide these improvements. In a letter dated November 3, 2010, HARD presented to the project owner a proposal and budget for the

installation of these amenities. Throughout the first and second quarters of 2011, The project owner worked diligently with HARD staff to negotiate an agreement pursuant to which the project owner and HARD would work together, in accordance with the budget specified therein, to design and install such trailside amenities. Both the budget and the trailside amenities contemplated by the agreement were consistent with HARD's letter of November 3, 2010.

HARD staff presented the agreement to its Board for approval at a regular meeting on June 13, 2011. However, the Board declined to bring the agreement to a vote for approval. Following more than a year of subsequent discussions and exchange of information between the project owner and HARD, the agreement was again brought before the Board for approval at its regular meeting of August 27, 2012. Again, the Board declined to adopt the agreement.

Without HARD's consent, Condition VIS-9 is not feasible. Because this Condition is not feasible and because the Condition is not necessary to mitigate the impacts that were contemplated in the 2002 Decision when the Project was located at a different location, Condition VIS-9 should be deleted.

## 2.4 Changes to the Conditions for Offsite Visual Enhancement (VIS-10)

Condition VIS-10 was first adopted by the Commission in the 2002 decision that approved the project. Although, the project site was subsequently relocated and thereby reduced the potential visual impacts, VIS-10 was carried forward to the 2007 Commission Decision that approved the new project location.

Following the 2007 decision, the project owner initiated the process of designing the requirement to plant trees along the west side of the warehouses and industrial complexes that face the shoreline south of the project site. Part of the process of planning for the planting of trees involved contacting individual property owners to obtain permission to plant the trees and to obtain the cooperation of the landowners to maintain the trees. During this process, the project owner discovered that it would be infeasible to plant trees on many parcels for the following reasons:

- Several landowners refused to allow trees to be planted on their property;
- One landowner would only allow the planting of juniper trees, a species not compatible with adjacent marshlands;
- One landowner would allow a limited number of trees to be planted, as long they did not block views from his property; and
- Several parcels had pipelines running underneath the areas where trees were to be planted, raising concerns that the trees' roots could damage the pipes.

As a result of the physical limitations of these sites, the underground pipes and the objections of property owners, the project owner has determined that it is not feasible to plant trees along the sides of these warehouses and industrial complexes. Therefore, the

project owner proposes to amend VIS-10 to provide an alternative form of offsite visual enhancement. We propose to modify VIS-10 to require that the project owner convey to the EBRPD 26 acres of land to the south of the project site. This land is along the shoreline, adjacent to other EBRPD land and very near the warehouses where the trees will be planted. By this conveyance, the project owner will allow EBRPD to add a very valuable area of open space and marshland to the EBRPD system, for the permanent and long-term enjoyment by the public. As part of the revision to VIS-10, the property owner also proposes to contribute to an endowment for the long-term maintenance of this land. The legal Description of the land is set forth in Attachment "A" to the Amendment.

It should be noted that the original project site licensed in 2002 would have impacted certain seasonal wetlands. Therefore, the 2002 Commission Decision approving the project required the project owner to dedicate this land to EBRPD as habitat mitigation. (2002 RCEC Decision, Condition BIO-10.) However, when the site was relocated, the project no longer impacted seasonal wetlands and habitat mitigation was no longer required. BIO-10 was deleted from the 2007 Commission Decision approving the project at its new location.

Although the Commission's Conditions of Certification no longer require the project owner to convey the 26 acres of land to the EBRPD, the project owner intends to voluntarily convey this land, along with an appropriate endowment. The parcel will contribute to preserving and enhancing the coastal salt-marsh ecosystem in the proposed project area, benefit the long-term management goals of EBRPD, preserve open space along the shoreline and protect the viewshed from future development. The conveyance of this land and the endowment will be a substantially greater contribution to the visual enhancement of the offsite project vicinity than the mere planting of trees next to the warehouses.

## 2.5 Necessity of Proposed Changes

The Siting Regulations require a discussion of the necessity for the proposed revision to the RCEC project and whether the modification is based on information known by the petitioner during the certification proceeding (Title 20, CCR, Sections 1769 [a][1][B], and [C]).

### Air Quality

Changes to the Air Quality Conditions of Certification are necessary to make minor non-substantive clarifications in certain monitoring and testing requirements and assure consistency between the project's CEC license and the conditions of the ATC permit. Certain administrative changes, e.g., clarification that certain emissions limits are to be applied as an hourly average, are needed to specify how monitoring and testing for compliance with the applicable emissions limits will be conducted. The necessity for these proposed changes could not be anticipated at the time when Amendment No. 2 was approved by the Commission because the need for clarification did not arise until the data acquisition system (DAS) that will be used to monitor compliance with applicable requirements was being designed and its programming logic established by the construction contractor and equipment vendors. Other changes, such as the need for additional time to complete source testing, were not known until the sequencing of the commissioning process was established by the construction contractor.

RCEC did not know at the time of approval of Amendment No. 2 that certain administrative amendments to the Air Quality Conditions of Certification would be needed to clarify certain monitoring and testing requirements and assure consistency with the corresponding conditions of the ATC.

### **Visual Resources**

Changes to the Visual Resources Condition of Certification for onsite landscaping are necessary to remove potential conflicts between construction activities and the planting of vegetation, allowing for the safety of construction workers and the survival of planted vegetation.

Deletion of Condition VIS-9 is necessary to remove a condition that is no longer necessary or feasible.

Modification of VIS-10 is necessary because tree planting along the warehouses is not feasible.

Regarding VIS-9, the project owner did not know at the time of approval of Amendment 2 that HARD would decline to enter into an agreement that would allow construction of the trailside improvements paid by the project owner.

Finally, regarding VIS-10 the project owner did not know at the time of Approval of Amendment 2 that it would not be feasible to plant trees along the side of warehouses and industrial facilities offsite.

## 3.0 Environmental Analysis of Proposed Project Changes and Consistency with LORS

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The proposed project changes are evaluated below according to the type of change. The following sections describe the impacts of each of the changes on the Air Quality Conditions of Certification and the implementation of onsite landscaping.

Within each of the following sections, an environmental analysis for each of the 14 different discipline areas addresses whether there are any significant potential changes to environmental impacts of the project that are a result of the Amendment. Each section includes an environmental analysis. The environmental disciplines are addressed, as follows:

- 3.1 Air Quality
- 3.2 Biological Resources
- 3.3 Cultural Resources
- 3.4 Geology and Paleontology
- 3.5 Hazardous Materials Management
- 3.6 Land Use
- 3.7 Noise and Vibration
- 3.8 Public Health
- 3.9 Socioeconomics
- 3.10 Soil and Water Resources
- 3.11 Traffic and Transportation
- 3.12 Visual Resources
- 3.13 Waste Management
- 3.14 Worker Safety and Fire Protection

At the end of this section, the Amendment addresses the consistency of the proposed changes to the Air Quality and Visual Resources Conditions of Certification with LORS.

### 3.1 Air Quality Conditions of Certification

#### 3.1.1 Air Quality

None of the changes to the Air Quality Conditions of Certification will have a significant effect on air quality. The changes proposed to these conditions do not affect the levels of emission permitted for the project or significantly affect the project operator's duty to test RCEC emissions. Rather, the changes are all administrative in nature and reflect needed clarifications to specify how monitoring and testing will be conducted to demonstrate compliance with applicable emissions limits.

Additionally, the project owner is requesting that the Commission and BAAQMD change the time allowed for the project to complete source testing from 60 or 90 days (depending on

the condition) from startup to 120 days from startup. This change will not significantly affect air emissions as it does not result in an increase or decrease in the emissions permitted for the project. The requested change only provides the project sufficient time to finish activities necessary to perform an accurate source test and will not have a significant impact on air quality.

Other changes reflect clerical amendments intended to clarify the requirements, eliminate redundancy and assure consistency with the conditions of both the ATC, as well as the PSD permit. None of these changes will have any significant impact on air quality or any other environmental impacts.

### **3.1.2 Biological Resources**

The proposed changes to the Air Quality Conditions of Certification proposed in this Amendment will not cause any adverse impacts to biological resources.

### **3.1.3 Cultural Resources**

The proposed changes to the Air Quality Conditions of Certification proposed in this Amendment will not have any effect on cultural resources in the area of the plant site.

### **3.1.4 Geology and Paleontology**

The proposed changes to the Air Quality Conditions of Certification will not have any effect on geological resources or paleontological resources.

### **3.1.5 Hazardous Materials Management**

This Amendment's proposed modifications to the Air Quality Conditions of Certification will not result in changes to the chemical inventory and quantities of chemicals for the project set forth in Appendix C of the Hazardous Materials section of the Commission Decision. Therefore, the proposed changes to the Air Quality Conditions of Certification will not result in changes to any Hazardous Materials Management conditions, findings or conclusions of the Commission Decision.

### **3.1.6 Land Use**

The proposed changes to the Air Quality Conditions of Certification will not result in changes to the Decision's conditions, findings or conclusions regarding land use.

### **3.1.7 Noise and Vibration**

The proposed changes to the Air Quality Conditions of Certification will not result in changes to the Decision's conditions, findings or conclusions regarding noise.

### **3.1.8 Public Health**

The proposed changes to the Air Quality Conditions of Certification will not change the public health analysis previously conducted because all the emission limits will be equal to the existing permit limits.

### **3.1.9 Socioeconomics**

The proposed changes to the Air Quality Conditions of Certification will have no effect on socioeconomics.

### **3.1.10 Soil and Water Resources**

The proposed changes to the Air Quality Conditions of Certification will not impact soil and water resources.

### **3.1.11 Traffic and Transportation**

The proposed changes to the Air Quality Conditions of Certification will not impact traffic.

### **3.1.12 Visual Resources**

The proposed changes to the Air Quality Conditions of Certification will not impact visual resources.

### **3.1.13 Waste Management**

The proposed changes to the Air Quality Conditions of Certification will not change or impact waste management practices or the types or quantities of waste generated by the construction or operation of the project.

### **3.1.14 Worker Safety and Fire Protection**

The proposed changes to the Air Quality Conditions of Certification will not result in any impacts different than those analyzed by the CEC during certification, and the proposed changes do not affect the Commission Decision's conditions, findings or conclusions regarding worker safety and fire protection.

## **3.2 Changes to Onsite Landscaping Conditions**

This Amendment modifies the onsite landscaping Condition of Certification (VIS-2) to allow planting to occur during the first optimal planting season following commercial operation of the project, versus completing onsite planting during an optimal planting season prior to the start of commercial operation. This proposal creates only a brief delay for the installation of onsite landscaping and results in no change to the landscaping ultimately completed for the project. Accordingly, the proposed changes to VIS-2 will not change the Decision's analyses of the various environmental impact discipline areas.

### **3.2.1 Air Quality**

A brief delay for the planting of onsite landscaping will not cause any adverse impacts to air quality.

### **3.2.2 Biological Resources**

The changes to the timing allowed to complete onsite landscaping will not cause any adverse impacts to biological resources. The proposed change does not impact the type or quantity of plants planned for the site, and therefore the requested delay will not involve

changes to the Decision's conditions, findings and conclusions for biological resource impacts.

### **3.2.3 Cultural Resources**

The changes to the timing for planting onsite landscaping will not result in new ground disturbing activities or ground disturbance in areas not previously considered for construction. Therefore, this change will not affect cultural resources differently than as described in the Commission Decision and will not change the Decision's conditions, findings or conclusions regarding cultural resources.

### **3.2.4 Geology and Paleontology**

A delay of the time allowed to complete onsite landscaping will not result in new ground disturbing activities, and will not result in changes to the Decision's conditions, findings or conclusions regarding geological resources or paleontological resources.

### **3.2.5 Hazardous Materials Management**

The proposed change of the time allowed to complete onsite landscaping will have no effect on hazardous materials management.

### **3.2.6 Land Use**

The proposed change of the time allowed to complete onsite landscaping will have no effect on land use.

### **3.2.7 Noise and Vibration**

The proposed change of the time allowed to complete onsite landscaping will have no effect on noise.

### **3.2.8 Public Health**

The proposed change of the time allowed to complete onsite landscaping will have no effect on public health.

### **3.2.9 Socioeconomics**

The proposed change of the time allowed to complete onsite landscaping will have no impact on socioeconomics.

### **3.2.10 Soil and Water Resources**

The proposed change of the time allowed to complete onsite landscaping will not result in changes to the infrastructure needed to water landscaping or the quantity of water needed for onsite plants. Therefore, this Amendment will not result in changes to the Commission Decision's conditions, findings or conclusions regarding soil and water resources.

### 3.2.11 Traffic and Transportation

The proposed change of the time allowed to complete onsite landscaping will have no traffic or transportation impacts.

### 3.2.12 Visual Resources

The proposed change of the time allowed to complete onsite landscaping causes only a brief delay to the installation of onsite landscaping, and therefore it will not result in changes to the Commission Decision's conditions, findings or conclusions regarding visual resources. One reason for this proposed change is to increase the likelihood that trees planted will become established and survive beyond the commercial operation date. This proposal effectively improves visual resources in the vicinity of the plant by ensuring that trees planted are healthy and survive well beyond the commercial operation date for the project. Therefore, the Amendment's changes to VIS-2 will not have a significant adverse impact to visual resources.

### 3.2.13 Waste Management

The proposed change of the time allowed to complete onsite landscaping will not change or impact waste management practices or the types or quantities of waste generated by the construction or operation of the project.

### 3.2.14 Worker Safety and Fire Protection

The proposed change to the timing for planting onsite landscaping will not result in any negative impacts to worker safety. In fact, delaying planting until after commercial operation improves worker safety by keeping the construction site clear of impediments until after construction of major structures is completed. Therefore, the Amendment's onsite landscaping proposed change does not affect the Commission Decision's conditions, findings or conclusions regarding worker safety and fire protection.

## 3.3 Changes to Condition VIS-9 and VIS-10

Deletion of Condition of Certification VIS-9 will not impact the environment. The trailside improvements described in this condition had been proposed in 2002 because the project at the location certified in 2002 would have blocked the view of Mt. Diablo from the Hayward Shoreline Interpretative Center. However, subsequent to the 2002 Decision, the project owner relocated the project to a location which no longer blocked views of Mt. Diablo from the Center. Therefore, these mitigation measures are no longer necessary to mitigate impacts to visual resources.

Changes to the Condition of Certification VIS-10 for offsite visual enhancement measures will not impact the environment. The proposed revision to VIS-10 would require the project owner to convey approximately 26 acres of shoreline land to the East Bay Regional Park District to be integrated into the EBRPD system of shoreline parks and to be maintained permanently as open space and habitat.

The dedication of land does not involve any physical change to the environment, therefore there is no possibility of any significant adverse environmental impact. In addition, there is

a specific categorical exemption under CEQA for the transfer of ownership of interests in land in order to preserve open space and habitat. (14 CCR 15325; Public Resources Code Sections 21083, 21084.) Therefore, it can be seen with certainty that this revision to VIS-10 will have no significant adverse effect on the environment.

### 3.4 Consistency of Amendment with the Certification and LORS

The Siting Regulations require a discussion of the consistency of the proposed project revisions with the applicable laws, ordinances, regulations, and standards (LORS) and whether the modifications are based upon new information that changes or undermines the assumptions, rationale, findings, or other bases of the final decision (Title 14, CCR Section 1769 [a][1][D]). If the project is no longer consistent with the certification, the petition for project change must provide an explanation for why the modification should be permitted.

This Amendment is consistent with all applicable LORS and is not based on new information that changes or undermines any bases for the final decision. The changes proposed for the Air Quality conditions are being made to clarify how the project owner will demonstrate compliance with applicable emissions limits and assure consistency between the Air Quality Conditions of Certification and the corresponding conditions of the ATC and PSD permit. Accordingly, such changes are consistent with LORS. The changes to the visual resource conditions do not conflict with any applicable LORS.

The findings and conclusions contained in the Commission Decision for the project are still applicable to the project as modified.

## 4.0 Potential Effects on the Public

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This section discusses the potential effects on the public that may result from the modifications proposed in this request for approval, per the Siting Regulations (Title 20, CCR, Section 1769[a][1][G]).

The modifications proposed in this Amendment will not affect the public or local economy, and therefore this Amendment poses no significant adverse effects on the public.

Specifically, the changes to the Air Quality Conditions of Certification involve minor clerical amendments to certain monitoring and testing requirements and to assure consistency between the Conditions of Certification and the ATC permit. There will be no change in air emissions, and therefore there are no potential effects on the public that would result from this part of the Amendment.

This Amendment proposes only a brief delay for the completion of onsite landscaping until after commercial operation of the project. The purpose of such a delay is to ensure that the landscaping installed survives and does not impede ongoing RCEC construction efforts. By allowing a brief delay for onsite landscaping, the public is benefitted because the chance of survival of the trees planted, and therefore the visual impacts of the project, is improved.

This Amendment deletes Condition VIS-9. The trailside improvements specified in this condition were intended to mitigate of the project when it was located on its original site. At this location, the project would have blocked views of Mt. Diablo from the Hayward Shoreline Interpretative Center. However, when the project site was relocated it no longer blocked this view. Therefore, the trailside improvements intended to mitigate this impact are no longer necessary.

This Amendment replaces a requirement in VIS-10 that the project owner plant trees on private property along the west side of the warehouses and industrial park complexes that face the shoreline south of the project site, with a requirement that the project owner convey to EBRPD 26 acres of shoreline open space that can be integrated into the shoreline park system for permanent use and enjoyment of the public. Therefore, this Amendment will have a beneficial impact on the public.

# 5.0 List of Property Owners and Potential Effects on Property Owners

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## 5.1 List of Property Owners

In accordance with the Siting Regulations (Title 20, CCR, Section 1769[a][1][H]), the project owner shall provide the Compliance Project Manager for the project a list of all property owners whose property is located within 500 feet of the project.

## 5.2 Potential Effects on Property Owners

This section addresses potential effects of the project changes proposed in this Amendment on nearby property owners, the public, and parties in the application proceeding, per the Siting Regulations (Title 20, CCR, Section 1769 [a][1][I]).

As described in this Amendment, there would be no significant adverse environmental impacts from the adoption of changes to the Air Quality Conditions of Certification or from a delay for the timeframe for planting onsite landscaping. Therefore, no significant adverse effects on property owners would result from the adoption of the changes proposed in this Amendment. Deletion of Condition VIS-2 will have no effect on property owners because no physical changes will result from the deletion of this condition. Finally, modifying VIS-10 to require conveyance of 26 acres of open space land will not have any adverse effect on property owners because the conveyance of land will not result in any physical change in the land.

# 6.0 Proposed Changes to Conditions of Certification

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## 6.1 Amendments to Air Quality Conditions of Certification

### AIR DISTRICT CONDITIONS OF CERTIFICATION

#### Permit Conditions

##### (A) Definitions:

<b>Clock</b> Hour:	Any continuous 60-minute period beginning on the hour
Calendar Day:	Any continuous 24-hour period beginning at 12:00 AM or 0000 hours.
Year:	Any consecutive twelve-month period of time
Heat Input:	<b>All heat</b> inputs refer to the heat input at the higher heating value (HHV) of the fuel, in BTU/scf.
Firing Hours:	Period of time during which fuel is flowing to a unit, measured in minutes.
MM BTU:	million British thermal units
Gas Turbine Warm and Hot Start-up Mode:	The lesser of the first 180 minutes of continuous fuel flow to the gas turbine after fuel flow is initiated or the period of time from gas turbine fuel flow initiation until the gas turbine achieves two consecutive CEM data points in compliance with the emission concentration limits of Conditions of Certification <b>AQ-19(b)</b> and <b>19(d)</b> .
Gas Turbine Cold Start-up Mode:	The lesser of the first 360 minutes of continuous fuel flow to the gas turbine after fuel flow is initiated or the period of time from gas turbine fuel flow initiation until the gas turbine achieves two consecutive CEM data points in compliance with the emission concentration limits of Conditions of Certification <b>AQ-19(b)</b> and <b>19(d)</b> .
Gas Turbine Shutdown Mode:	The lesser of the 30 minute period immediately prior to the termination of fuel flow to the gas turbine or the period of time

from non-compliance with any requirement listed in Conditions of Certification **AQ-19(b) and through 19(d)** until termination of fuel flow to the gas turbine.

Gas Turbine Combustor:  
Tuning Mode:

The period of time, not to exceed 360 minutes, in which testing, adjustment, tuning, and calibration operations are performed, as recommended by the gas turbine manufacturer, to insure safe and reliable steady-state operation, and to minimize NOx and CO emissions. ~~The SCR and oxidation catalyst are not operating during the tuning operation.~~

Gas Turbine Cold Start-up: A gas turbine start-up that occurs more than 48 hours after a gas turbine shutdown.

Gas Turbine Hot Start-up: A gas turbine start-up that occurs within 8 hours of a gas turbine shutdown.

Gas Turbine Warm Start-up: A gas turbine start-up that occurs between 8 hours and 48 hours of a gas turbine shutdown.

Specified PAHs:

The polycyclic aromatic hydrocarbons listed below shall be considered to be Specified PAHs for these permit conditions. Any emission limits for Specified PAHs refer to the sum of the emissions for all six of the following compounds:

Benzo[a]anthracene  
Benzo[b]fluoranthene  
Benzo[k]fluoranthene  
Benzo[a]pyrene  
Dibenzo[a,h]anthracene  
Indeno[1,2,3-cd]pyrene

Corrected Concentration: The concentration of any pollutant (generally NOx, CO, or NH3) corrected to a standard stack gas oxygen concentration. For emission points P-1 (combined exhaust of S-1 gas turbine and S-3 HRSG duct burners), P-2 (combined exhaust of S-2 gas turbine and S-4 HRSG duct burners), the standard stack gas oxygen concentration is 15% O2 by volume on a dry basis.

Commissioning Activities: All testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and the RCEC construction contractor to insure safe and reliable steady state operation of the gas turbines, heat recovery steam generators, steam turbine, and associated electrical delivery systems during the commissioning period.

Commissioning Period: The Period shall commence when all mechanical, electrical, and control systems are installed and individual system start-up has been completed, or when a gas turbine is first fired, whichever occurs first. The period shall terminate when the

plant has completed performance testing, is available for commercial operation, and has initiated sales to the power exchange.

Precursor Organic Compounds (POCs):

Any compound of carbon, excluding methane, ethane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

CPM:

California Energy Commission Compliance Program Manager

RCEC:

Russell City Energy Center

### **CONDITIONS FOR THE COMMISSIONING PERIOD**

**AQ-11.** No less than ~~90~~ **120** days after start-up, the owner/operator shall conduct District and Energy Commission approved source tests using certified continuous emission monitors to determine compliance with the emission limitations specified in **AQ-19**. The source tests shall determine NO<sub>x</sub>, CO, and POC emissions during start-up and shutdown of the gas turbines. The POC emissions shall be analyzed for methane and ethane to account for the presence of unburned natural gas. The source test shall include a minimum of three start-up and three shutdown periods and shall include at least one cold start, one warm start, and one hot start. Twenty (20) working days before the execution of the source tests, the owner/operator shall submit to the District and the CPM a detailed source test plan designed to satisfy the requirements of this condition. The District and the CPM will notify the owner/operator of any necessary modifications to the plan within 20 working days of receipt of the plan; otherwise, the plan shall be deemed approved. The owner/operator shall incorporate the District and CPM comments into the test plan. The owner/operator shall notify the District and the CPM within seven (7) working days prior to the planned source testing date. The owner/operator shall submit the source test results to the District and the CPM within 60 days of the source testing date.

**Verification:** No later than 30 working days before the commencement of the source tests, the project owner shall submit to the District and the CPM a detailed source test plan designed to satisfy the requirements of this condition. The District and the CPM will notify the project owner of any necessary modifications to the plan within 20 working days of receipt of the plan; otherwise, the plan shall be deemed approved. The project owner shall incorporate the District and CPM comments into the test plan. The project owner shall notify the District and the CPM within seven (7) working days prior to the planned source testing date. Source test results shall be submitted to the District and the CPM within 60 days of the source testing date.

### **CONDITIONS FOR THE GAS TURBINES (S-1 & S-3) AND THE HRSGS (S-2 & S-4)**

**AQ-12.** The owner/operator shall fire the gas turbines (S-1 & S-3) and HRSG duct burners (S-2 & S-4) exclusively on PUC-regulated natural gas with a maximum sulfur content of 1 grain per 100 standard cubic feet. To

demonstrate compliance with this limit, the operator of S-1 through S-4 shall sample and analyze the gas from each supply source at least monthly to determine the sulfur content of the gas. PG&E monthly sulfur data may be used provided that such data can be demonstrated to be representative of the gas delivered to the RCEC. In the event that the rolling 12-month average sulfur content exceeds 0.25 grain per 100 standard cubic feet, a reduced annual heat input rate may be utilized to calculate the maximum projected annual emissions. The reduced annual heat input rate shall be subject to District review and approval. (BACT for SO<sub>2</sub> and PM<sub>10</sub>)

**Verification:** The project owner shall complete, on a monthly basis, a laboratory analysis showing the sulfur content of natural gas being burned at the facility. The sulfur analysis reports shall be incorporated into the quarterly compliance reports.

**Verification:** As part of the quarterly and annual compliance reports, the project owner shall provide information on any major problem in the operation of the oxidizing catalyst and SCR Systems for the gas turbines and HRSGs. The information shall include, at a minimum, the date and description of the problem and the steps taken to resolve the problem.

- AQ-19.** The owner/operator shall ensure that the gas turbines (S-1 & S-3) and HRSGs (S-2 & S-4) comply with requirements **(a) through (h)** under all operating scenarios, including duct burner firing mode. Requirements **(a) through (h)** do not apply during a gas turbine start-up, combustor tuning operation or shutdown. (BACT, PSD, and Regulation 2, Rule 5)
- (a) Nitrogen oxide mass emissions (calculated as NO<sub>2</sub>) at P-1 (the combined exhaust point for S-1 gas turbine and S-2 HRSG after abatement by A-1 SCR System) shall not exceed 16.5 pounds per hour or 0.00735 lb/MM BTU (HHV) of natural gas fired, averaged over any 1-hour period. Nitrogen oxide mass emissions (calculated as NO<sub>2</sub>) at P-2 (the combined exhaust point for S-3 gas turbine and S-4 HRSG after abatement by A-3 SCR System) shall not exceed 16.5 pounds per hour or 0.00735 lb/MM BTU (HHV) of natural gas fired, averaged over any 1-hour period.
  - (b) The nitrogen oxide emission concentration at emission points P-1 and P-2 each shall not exceed 2.0 ppmv, on a dry basis, corrected to 15% O<sub>2</sub>, averaged over any 1-hour period. (BACT for NO<sub>x</sub>)
  - (c) Carbon monoxide mass emissions at P-1 and P-2 each shall not exceed 10 pounds per hour or 0.045 lb/MM BTU of natural gas fired, averaged over any 1-hour period. (PSD for CO)
  - (d) The carbon monoxide emission concentration at P-1 and P-2 each shall not exceed 2.0 ppmv, on a dry basis, corrected to 15% O<sub>2</sub>, averaged over any 1-hour period. (BACT for CO)
  - (e) Ammonia (NH<sub>3</sub>) emission concentrations at P-1 and P-2 each shall not exceed 5 ppmv, on a dry basis, corrected to 15% O<sub>2</sub>, averaged over any rolling 3-hour period. This ammonia emission concentration shall be verified by the use of a District approved calculation continuous recording of the ammonia injection rate to A-2 and A-4 SCR Systems. The correlation between the gas turbine and HRSG heat input rates, A-2 and A-4 SCR System ammonia injection rates, and corresponding ammonia emission concentration at emission points

**~~P-1 and P-2 shall be determined in accordance with permit condition 30.~~ (Regulation 2-5)**

- (f) Precursor organic compound (POC) mass emissions (as CH<sub>4</sub>) at P-1 and P-2 each shall not exceed 2.86 pounds per hour or 0.00128 lb/MM BTU of natural gas fired. (BACT)
- (g) Sulfur dioxide (SO<sub>2</sub>) mass emissions at P-1 & P-2 each shall not exceed 6.21 pounds per hour or 0.0028 lb/MM BTU of natural gas fired. (BACT)
- (h) Particulate matter (PM<sub>10</sub>) mass emissions at P-1 & P-2 each shall not exceed 7.5 pounds per hour or 0.0036 lb PM<sub>10</sub>/MM BTU of natural gas fired. (BACT)

**Verification:** The project owner shall submit to the District and CPM, quarterly reports for the proceeding calendar quarter within 30 days from the end of the quarter. The report for the fourth quarter can be an annual compliance summary for the preceding year. The quarterly and annual compliance summary reports shall contain the following information:

- (a) Operating parameters of emission control equipment, including but not limited to ammonia injection rate, NO<sub>x</sub> emission rate and ammonia slip.
- (b) Total plant operation time (hours), number of startups, hours in cold startup, hours in warm startup, hours in hot startup, and hours in shutdown.
- (c) Date and time of the beginning and end of each startup and shutdown period.
- (d) Average plant operation schedule (hours per day, days per week, weeks per year).
- (e) All continuous emissions data reduced and reported in accordance with the District approved CEMS protocol.
- (f) Maximum hourly, maximum daily, total quarterly, and total calendar year emissions of NO<sub>x</sub>, CO, PM<sub>10</sub>, POC and SO<sub>x</sub> (including calculation protocol).
- (g) Fuel sulfur content (monthly laboratory analyses, monthly natural gas sulfur content reports from the natural gas supplier(s), or the results of a custom fuel monitoring schedule approved by the District.
- (h) A log of all excess emissions, including the information regarding malfunctions/breakdowns.
- (i) Any permanent changes made in the plant process or production, which would affect air pollutant emissions, and indicate when changes were made.
- (j) Any maintenance to any air pollutant control system (recorded on an as performed basis).

In addition, this information shall be maintained on site for a minimum of five (5) years and shall be provided to District personnel on request.

**AQ-20.** The owner/operator shall ensure that the regulated air pollutant mass emission rates from each of the gas turbines (S-1 & S-3) during a start-up or shutdown does not exceed the limits established below. **The project owner shall not operate both of the gas turbines (S-1 & S-3) in start-up mode at the same time.** (PSD)

POLLUTANT	Cold Start-Up Combustor Tuning	Hot Start-Up	Warm Start-Up	Shutdown
	lb/start-up	lb/start-up	lb/start-up	lb/start-up
NO <sub>x</sub> (as NO <sub>2</sub> )	480.0	95	125	40
CO 5	2,514	891	2514	100
POC (as CH <sub>4</sub> )	83	35.3	79	16

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**Verification:** The project owner shall submit to the District and CPM the quarterly and annual compliance reports as required by **AQ-19**.

**AQ-26.** The owner/operator shall demonstrate compliance with **AQ-13 through AQ-16, AQ-19(a) through (d), AQ-20, AQ-22(a) and (b), AQ-23(a) and (b)** by using properly operated and maintained continuous monitors (during all hours of operation including gas turbine start-up, combustor tuning, and shutdown periods) for all of the following parameters:

- (a) Firing Hours and Fuel Flow Rates for each of the following sources: S-1 & S-3 combined, S-2 & S-4 combined.
- (b) Oxygen (O<sub>2</sub>) concentration, Nitrogen Oxides (NO<sub>x</sub>) concentration, and Carbon Monoxide (CO) concentration at exhaust points P-1 and P-2.
- (c) Ammonia injection rate at A-1 and A-3 SCR Systems The owner/operator shall record all of the above parameters every 15 minutes (excluding normal calibration periods) and shall summarize all of the above parameters for each clock hour. For each calendar day, the owner/operator shall calculate and record the total firing hours, the average hourly fuel flow rates, and pollutant emission concentrations.

The owner/operator shall use the parameters measured above and District approved calculation methods to calculate the following parameters:

- (d) Heat Input Rate for each of the following sources: S-1 & S-3 combined, S-2 & S-4 combined.
- (e) Corrected NO<sub>x</sub> concentration, NO<sub>x</sub> mass emission rate (as NO<sub>2</sub>), corrected CO concentration, and CO mass emission rate at each of the following exhaust points: P-1 and P-2.

For each source, source grouping, or exhaust point, the owner/operator shall record the parameters specified in **AQ-26(d) and (e)** at least once every 15 minutes (excluding normal calibration periods). As specified below, the owner/operator shall calculate and record the following data:

- (f) total heat input rate for every ~~clock~~ hour.
- (g) on an hourly basis, the cumulative total heat input rate for each calendar day for the following: each gas turbine and associated HRSG combined and all four sources (S-1, S-2, S-3 and S-4) combined.
- (h) the average NO<sub>x</sub> mass emission rate (as NO<sub>2</sub>), CO mass emission rate, and corrected NO<sub>x</sub> and CO emission concentrations for every ~~clock~~ hour.
- (i) on an hourly basis, the cumulative total NO<sub>x</sub> mass emissions (as NO<sub>2</sub>) and the cumulative total CO mass emissions, for each calendar day for the following: each gas turbine and associated HRSG combined and all four sources (S-1, S-2, S-3 and S-4) combined.
- (j) For each calendar day, the average hourly heat input rates, corrected NO<sub>x</sub> emission concentration, NO<sub>x</sub> mass emission rate (as NO<sub>2</sub>), corrected CO emission concentration, and CO mass emission rate for each gas turbine and associated HRSG combined ~~and the auxiliary boiler~~.

- (k) on a daily basis, the cumulative total NO<sub>x</sub> mass emissions (as NO<sub>2</sub>) and cumulative total CO mass emissions, for the previous consecutive twelve month period for all four sources (S-1, S-2, S-3 and S-4) combined.  
(1-520.1, 9-9-501, BACT, Offsets, NSPS, PSD, Cumulative Increase)

**Verification:** At least 30 days before first fire, the project owner shall submit to the CPM a plan on how the measurements and recordings required by this condition will be performed.

**AQ-27.** To demonstrate compliance with conditions **AQ-19(f) thru (h)**, **AQ-22(c) thru (e)(d) thru (f)**, and **AQ-23(c) thru (e)**, the owner/operator shall calculate and record on a daily basis, the Precursor Organic Compound (POC) mass emissions, Fine Particulate Matter (PM<sub>10</sub>) mass emissions (including condensable particulate matter), and Sulfur Dioxide (SO<sub>2</sub>) mass emissions from each power train. The owner/operator shall use the actual heat input rates measured pursuant to **AQ-26**, actual gas turbine start-up times, actual gas turbine shutdown times, and CEC and District-approved emission factors developed pursuant to source testing under **AQ-30** to calculate these emissions. The owner/operator shall present the calculated emissions in the following format:

- (a) For each calendar day, POC, PM<sub>10</sub>, and SO<sub>2</sub> emissions, summarized for each power train (gas turbine and its respective HRSG combined) and all four sources (S-1, S-2, S-3 & S-4) combined
- (b) on a daily basis, the cumulative total POC, PM<sub>10</sub>, and SO<sub>2</sub> mass emissions, for each year for all eight sources (S-1, S-2, S-3 & S-4) combined  
(Offsets, PSD, Cumulative Increase)

**Verification:** The project owner shall submit to the District and CPM the quarterly and annual compliance reports as required by **AQ-19**.

**AQ-29.** Within ~~90~~ **120** days of start-up of the RCEC, the owner/operator shall conduct a District-approved source test on exhaust point P-1 or P-2 to establish the factors to be used to determine ~~the corrected ammonia (NH<sub>3</sub>) emission concentration to determine~~ compliance with **AQ-19(e)**. ~~The source test shall determine the correlation between the heat input rates of the gas turbine and associated HRSG, A-2 or A-4 SCR System ammonia injection rate, and the corresponding NH<sub>3</sub> mission concentration at emission point P-1 or P-2.~~ The source test shall be conducted over the expected operating range of the turbine and HRSG (including, but not limited to, minimum and full load modes) to establish the range of ammonia injection rates necessary to achieve NO<sub>x</sub> emission reductions while maintaining ammonia slip levels. The owner/operator shall repeat the source testing on an annual basis thereafter. Ongoing compliance with **AQ-19(e)** shall be demonstrated through calculations of corrected ammonia concentrations based upon the factors established during source testing described in this part 29 source test correlation and continuous records of the calculated ammonia slip injection rate. The owner/operator shall submit the source test results to the District and the CPM within 60 days of conducting the tests. (Regulation 2, Rule 5)

**Verification:** The project owner shall notify the District and the CPM within seven (7) working days before the execution of the source tests required in this condition. Source test results shall be submitted to the District and to the CPM within 60 days of the date of the tests.

**AQ-30.** ~~Within 90 days of start-up of the RCEC and on~~ an annual basis thereafter, the owner/operator shall conduct a District-approved source test on exhaust points P-1 and P-2 while each gas turbine and associated Heat Recovery Steam Generator are operating at maximum load to determine compliance with **AQ-19(a), (b), (c), (d), (f), (g), and (h)** and while each gas turbine and associated Heat Recovery Steam Generator are operating at minimum load to determine compliance with **AQ-19(c) and (d)**, and to verify the accuracy of the continuous emission monitors required in **AQ-26**. **The For the purposes of testing at maximum load only,** owner/operator shall test for (as a minimum): water content; stack gas flow rate; oxygen concentration; precursor organic compound concentration and mass emissions; nitrogen oxide concentration and mass emissions (as NO<sub>2</sub>); carbon monoxide concentration and mass emissions; sulfur dioxide concentration and mass emissions; methane; ethane; and, particulate matter (PM<sub>10</sub>) emissions, including condensable particulate matter. The owner/operator shall submit the source test results to the District and the CPM within 60 days of conducting the tests. (BACT, offsets)

**Verification:** The project owner shall notify the District and the CPM within seven (7) working days before the execution of the source tests required in this condition. Source test results shall be submitted to the District and to the CPM within 60 days of the date of the tests.

**AQ-32.** Within ~~90~~ 120 days of start-up of the RCEC and on a biennial basis (once every two years) thereafter, the owner/operator shall conduct a District-approved source test on exhaust point P-1 or P-2 while the gas turbine and associated Heat Recovery Steam Generator are operating at maximum allowable operating rates to demonstrate compliance with **AQ- 25**. The owner/operator shall also test the gas turbine while it is operating at minimum load. If three consecutive biennial source tests demonstrate that the annual emission rates calculated pursuant to **AQ-25** for any of the compounds listed below are less than the BAAQMD trigger levels, pursuant to Regulation 2, Rule 5, shown, then the owner/operator may discontinue future testing for that pollutant:

- Benzene  $\leq$  6.4 pounds/year and 2.9 pounds/hour
- Formaldehyde  $<$ 30 pounds/year and 0.21 pounds/hour
- Specified PAHs  $\leq$  0.011 pounds/year

(Regulation 2, Rule 5)

**Verification:** The project owner shall notify the District and the CPM within seven (7) working days before the execution of the source tests required in this condition. Source test results shall be submitted to the District and to the CPM within 60 days of the date of the tests.

**AQ-33.** The owner/operator shall calculate the SAM emission rate using the total heat input for the sources and the highest results of any source testing conducted pursuant to **AQ-3034**. If this SAM mass emission limit of **AQ-24** is exceeded, the owner/operator must utilize air dispersion modeling to determine the impact (in  $\mu\text{g}/\text{m}^3$ ) of the sulfuric acid mist emissions pursuant to Regulation 2-2-306. (PSD)

**Verification:** The project owner shall notify the District and the CPM within seven (7) working days before the execution of the source tests required in this condition. Source test results shall be submitted to the District and to the CPM within 60 days of the date of the tests.

**AQ-34.** Within ~~90~~ **120** days of start-up of the RCEC and on a ~~semi~~-annual basis (~~twice per year~~) thereafter, the owner/operator shall conduct a District-approved source test on exhaust points P-1 and P-2 while each gas turbine and HRSG duct burner is operating at maximum heat input rates to demonstrate compliance with the SAM emission rates specified in **AQ-24**. The owner/operator shall test for (as a minimum) SO<sub>2</sub>, SO<sub>3</sub>, and H<sub>2</sub>SO<sub>4</sub>. After acquiring one year of source test data on these sources, the owner/operator may petition the District to reduce the test frequency to an annual basis if test result variability is sufficiently low as determined by the District. The owner/operator shall submit the source test results to the District and the CPM within 60 days of conducting the tests. (PSD)

**Verification:** The project owner shall notify the District and the CPM within seven (7) working days before the execution of the source tests required in this condition. Source test results shall be submitted to the District and to the CPM within 60 days of the date of the tests.

**AQ-42.** Pursuant to 40 CFR Part 72.30(b)(2)(ii) of the Federal Acid Rain Program, the owner/operator of the Russell City Energy Center shall submit an application for a Title IV operating permit to the BAAQMD at least 24 months before operation of any of the gas turbines (S-1, or S-3, ~~S-5, or S-7~~) or HRSGs (S-2, or ~~S-4, S-6, or S-8~~). (Regulation 2, Rule 7)

**Verification:** The project owner shall submit to the CPM copies of the Federal (Title IV) Acid Rain and (Title V) Operating Permit within 30 days after they are issued by the District.

### **Permit Conditions for Cooling Towers**

**AQ-45.** The owner/operator shall perform a visual inspection of the cooling tower drift eliminators at least once per calendar year, and repair or replace any drift eliminator components which are broken or missing. Prior to the initial operation of the Russell City Energy Center, the owner/operator shall have the cooling tower vendor's field representative inspect the cooling tower drift eliminators and certify that the installation was performed in a satisfactory manner. Within ~~60~~ **120** days of the initial operation of the cooling tower, the owner/operator shall perform an initial performance source test to determine the PM<sub>10</sub> emission rate from the cooling tower to verify compliance with the vendor-guaranteed drift rate specified in **AQ-44**. The CPM may require the

owner/operator to perform source tests to verify continued compliance with the vendor-guaranteed drift rate specified in **AQ-44**. (PSD)

**Verification:** The project owner shall submit to the District and CPM the quarterly and annual compliance reports as required by **AQ-19**.

## 6.2 Amendments to Visual Resource Conditions of Certification

**VIS-2** Prior to the first turbine roll, the project owner shall prepare and implement an approved onsite landscape plan to screen the power plant from view to the greatest extent possible. Suitable irrigation shall be installed to ensure survival of the plantings. Landscaping shall be installed consistent with the City of Hayward zoning ordinance and with the U.S. Fish and Wildlife Service's recommendations, if applicable, that plants not provide opportunities for perching by birds of prey.

Protocol: The project owner shall submit a landscape plan to the City of Hayward for review and comment, and to the CPM for review and approval. The submittal to the CPM shall include the City's comments. The plan shall include, but not be limited to:

- 1) A detailed landscape, grading, and irrigation plan, at a reasonable scale, which includes a list of proposed tree and shrub species and installation sizes, and a discussion of the suitability of the plants for the site conditions and mitigation objectives.
- 2) An installation schedule. The project owner shall not implement the landscape plan until the project owner receives approval of the plan from the CPM. The planting must be completed ~~during the~~ **by the start of commercial operation, and the planting must occur during the first optimal planting season (either March through June or September through November) following the start of commercial operation.**
- 3) Maintenance procedures, including any needed irrigation and a plan for routine annual or semi-annual debris removal for the life of the project; and
- 4) A procedure for monitoring for and replacement of unsuccessful plantings for the life of the project.

The project owner shall not implement the plan until the project owner receives approval of the plan from the CPM.

**Verification:** Prior to the first turbine roll and at least 60 days prior to installing the landscaping, the project owner shall submit the landscape plan to the CPM for review and approval.

If the CPM notifies the project owner that revisions of the submittal are needed before the CPM would approve the submittal, within 30 days of receiving that notification, the project owner shall prepare and submit to the CPM a revised submittal.

The project owner shall notify the CPM within seven days after completing installation of the landscape screening that the planting and irrigation system are ready for inspection.

The project owner shall report landscape maintenance activities, including replacement of dead vegetation, for the previous year of operation in the Annual Compliance Report.

**VIS-9 is deleted in its entirety.**

**VIS-10** The project owner shall convey to the East Bay Regional Park District ("District") that real property comprising approximately 26 acres as described in Appendix A to the project owner's Petition for Modification dated [ \_\_\_\_\_ ] (the "Donated Property"). The project owner shall also contribute to the District on a pro rata basis one-half of the amount of an endowment fund necessary to operate the Donated Property, which contribution shall not exceed \$150,000. The payment schedule for such contribution shall be agreed upon by the District and the project owner.

**Verification:** The project owner shall notify the CPM within 30 days of (1) conveyance of the Donated Property, (2) execution of the endowment fund payment schedule between the District and the project owner, and (3) payment of the final payment by the project owner pursuant to payment schedule.

~~**VIS-10** Prior to the start of construction, the project owner shall prepare and implement an approved off-site landscaping plan. Consistent with Measure 3 of the Visual Mitigation Plan, the project owner shall install trees along the west side of the warehouse and industrial park complexes that line the eastern edge of the shoreline wetlands. The extent of the landscaping area, as shown in Visual Resources Figure 14 shall be expanded to include the berm from Breakwater Avenue north to Johnson Road. Trees shall be planted close together to create a dense screen. Trees planted along the edge of the Whitesell Business Park parking lot shall be pruned up as they grow to allow westward views from the parking lot to the shoreline open space. Trees planted close to the walls of the warehouses shall be allowed to take on a bush-like form to maximize their screening potential.~~

~~All tree species shall be fast growing and evergreen and shall be 24" box size when planted. The project owner shall provide an appropriate level of irrigation and fertilization to ensure optimal tree growth, health, and appearance.~~

~~Protocol: Prior to start of construction, the project owner shall submit an offsite landscape plan to the City of Hayward and the U.S. Fish and Wildlife Service, if applicable, for review and comment, and to the CPM for review and approval. The submittal to the CPM shall include the City's comments. The plan shall include, but not be limited to:~~

- ~~1) A detailed landscape, grading, and irrigation plan, at a reasonable scale, which includes a list of proposed tree and shrub species and installation~~

- sizes, and a discussion of the suitability of the plants for the site conditions and mitigation objectives.
- 2) An installation schedule. The project owner shall not implement the landscape plan until the project owner receives approval of the plan from the CPM. The planting must be completed by the start of commercial operation, and the planting must occur during the optimal planting season.
  - 3) Maintenance procedures, including any needed irrigation and a plan for routine annual or semi-annual debris removal for the life of the project; and
  - 4) A procedure for monitoring for and replacement of unsuccessful plantings for the life of the project. The project owner shall not implement the plan until the project owner receives approval of the plan from the CPM.

**Verification:** At least 90 days prior to start of construction, the project owner shall submit the offsite landscape plan to the CPM for review and approval. If the CPM notifies the project owner that revisions of the submittal are needed before the CPM would approve the submittal, within 30 days of receiving that notification, the project owner shall prepare and submit to the CPM a revised submittal.

The project owner shall notify the CPM within seven days after completing installation of the landscape screening that the planting and irrigation system are ready for inspection.

The project owner shall report landscape maintenance activities, including replacement of dead vegetation, for the previous year of operation in the Annual Compliance Report.

## ATTACHMENT A

### LEGAL DESCRIPTION OF LAND

The land described herein is situated in the City of Hayward, County of Alameda, State of California, and is described as follows:

#### Parcel 1:

Portion of the parcel of land described in the deed by Johanna M. Warneke, as executrix of the Last Will and Testament of Mary A. Prest, Alias, deceased, to C.N. Gadding, dated December 30, 1908, recorded June 8, 1909, in Book 1607 of Deeds, Page 228, Alameda County Records, described as follows:

BEGINNING at the Southwestern corner of said land conveyed to Gadding; and running thence along a line dividing Swamp and Overflow Land Survey No. 171 of Alameda County from the Rancho Arroyo Del La Alameda, North 10° 22' East, 1,380.31 feet to a point on the line established by Agreement between Arthur Warneke, Johanna M. Warneke and Mary Marsicano, dated June 25, 1931, recorded July 3, 1931, in Book 2605 of Official Records of Alameda County Page 459 (BB/38206); thence along said Agreement Line, the following courses and distances; South 27° 24' East 254.23 feet, South 6° 14' East 807.09 feet, South 88° 31' West, 322.97 feet and South 0° 03' West 327 feet to the southern line of said land conveyed to Gadding, being the Northern line of Johnson Road; and thence along the last named line North 87° 30' West 161.26 feet to the Point of Beginning.

EXCEPTING THEREFROM that portion conveyed to the City of Hayward, a municipal corporation in Instrument dated June 19, 1978, recorded August 3, 1978, Reel 5516, Image 237, Instrument No. 78/148844 of Alameda County Records.

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#### PARCEL 2:

BEGINNING at the intersection of the Southern line of Swamp and Overflowed Lands Survey No. 232 in Township 3 South, Range 2 and 3 West, Mount Diablo Base and Meridian, with the Northwestern line of the 200 foot strip of land of the San Francisco Bay Tool Bridge Company; running thence along the Southern line of said Survey No. 232, West 1002.28 feet to the Western line of said Survey, thence along the boundary line of said Survey the following six courses and distances, North 1,320 feet, West 2,640 feet, North 1,320 feet; East 2,640 feet, North 1,320 feet; and East 858 feet to a stake on the exterior boundary line of the Rancho Arroyo De La Alameda; thence along said boundary line South 15-1/2° West, 508.86 feet and Southeasterly to a point on the boundary line established by the Agreement between Andre Paper Box Company and Frances Marsicano Harris, et al., dated April 20, 1962, recorded April 20, 1962, on Reel 565, Image 223, (AT/52932) Alameda County Records, thence along the last said boundary line South 69° 12' 3" East 854.55 feet to the Southern line of the land described in the Deed from Jose T. Baptista to M.B. Bettencourt

and Tony A. Bettencourt, dated January 15, 1924, recorded January 16, 1924, in Book 591, of Official Records of Alameda County, at Page 355 (t/88764); thence along the last line Easterly 142.85 feet to a point in the boundary line established by the Agreement between Arthur Warneke, Johanna M. Warneke and Mary Marsicano, dated June 25, 1931, recorded July 3, 1931 in Book 2605, of Official Records of Alameda County Records, at Page 459; thence Southeasterly along the last said line 565.07 feet to said exterior boundary line of the Rancho Arroyo De La Alameda; thence along the last said line Southerly to the Northwestern line of said 200 foot strip of the San Francisco Bay Too Bridge Company; thence along the last said line Southwesterly 1,382.21 feet, more or less, to the Point of Beginning.

EXCEPTING THEREFROM that portion thereof described in the Deed to the City of Hayward recorded September 24, 1965, Reel 1604, Image 694, Official Records, Instrument No. AX/I32369.

ALSO EXCEPTING THEREFROM:

**Parcel A:**

BEGINNING at a stake at the Southeast corner of the Northeast quarter of Section 36, in Township 3 South, Range 3 West, Mount Diablo Base and Meridian, and running thence North 387.42 feet thence North 82° 10' West, 1,331.88 feet; thence South 570.24 feet thence East 1,320 feet to the Point of Beginning.

**Parcel B:**

BEGINNING at the intersection of the line established by Agreement between Arthur Warneke, Johanna M. Warneke and Mary Marsicano, dated June 25, 1931, recorded July 3, 1931, in Book 2605, Official Records of Alameda County, Page 459, with the Northern line of the parcel of land described in the Deed by Johanna M. Warneke, as executrix of the Last Will and Testament of Mary A. Frese, alias, deceased, to C.N. Gadding, dated December 30, 1908, recorded June 8, 1909, in Book 1607 of Deeds, Page 228, Alameda County Records; and running thence along the last named line Westerly to the Western boundary line of the Rancho Arroyo De La Alameda; thence along the last named line Southeasterly to a point on the line established by Agreement above referred to; and thence along the last named line Northwesterly to the Point of Beginning.

**Parcel C:**

Those portions conveyed to the City of Hayward, a municipal corporation in Instrument dated June 19, 1978, recorded August 3, 1978, Reel 5516, Image 237, Official Records, Instrument No. 78/148844.

**Parcel D:**

Those portions conveyed to East Bay Regional Park District, in Instrument dated June 19, 1978, recorded August 3, 1978, Reel 5516, Image 202, Official Records, Instrument No. 78/148841.

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**PARCEL 3:**

BEGINNING at the intersection of the established by Agreement between Arthur Warneke, Johanna M. Warneke and Mary Marsicano, dated June 25, 1931, recorded July 3, 1931, in Book 2605 of Official Records of Alameda County, Page 459, with the Northern line of the Parcel of land described in the Deed by Johanna M. Warneke, as executrix of the Last Will and Testament of Mary A. Frese, Alias deceased to C.N. Gadding, dated December 30, 1908, recorded June 8, 1909, in Book 1607 of Deeds, Page 220, Alameda County Records; and running thence along the last named line Westerly to the Western boundary line of the Rancho Arroyo De La Alameda; thence along the last named line Southeasterly to a point on the line established by Agreement above referred to, and thence along the last named line Northwesterly to the Point of Beginning.

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