CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov

DATE: October 25, 2012

TO: Interested Parties

FROM: Christine Stora, Compliance Project Manager

SUBJECT: Huntington Beach Generating Station Retool Project (00-AFC-13C) Staff Analysis of Proposed Modifications to Convert the Existing Units 3 and 4 to Synchronous Condensers

On October 5, 2012, Edison Mission Huntington Beach, LLC filed a petition with the California Energy Commission (Energy Commission) requesting to modify the Huntington Beach Generating Station (HBGS) Retool Project, Units 3 and 4. The petition was docketed on October 5, 2012 and posted to the Energy Commission website on October 8, 2012. Staff prepared an analysis of this proposed change, and a copy is enclosed for your information and review.

The HBGS Retool Project, Units 3 and 4 were certified as a 450 megawatt (MW), natural gas-fired boiler retooling project located in the City of Huntington Beach, in Orange County on May 10, 2001.

The proposed modifications will allow Edison Mission Huntington Beach, LLC to convert Units 3 and 4 from electrical utility steam generators to synchronous condensers to provide voltage support to the grid. After the conversion, fuel will no longer be combusted in Units 3 and 4. The synchronous condensers would be removed when Units 3 and 4 are removed to accommodate the new Huntington Beach Energy project (2012-AFC-02), if approved by the Energy Commission. However, at this time Edison Mission does not know how long Units 3 and 4 will need to operate as synchronous condensers; therefore, these units could be available to operate through the end of operation date of December 31, 2020, as allowed by the decision for HBGS Retool Project, Units 3 and 4 (00-AFC-13C) if not removed sooner as part of the Huntington Beach Energy project (Edison Mission 2012). The Huntington Beach Energy Project Application For Certification (AFC) is currently undergoing permitting review by the Energy Commission.

The purpose of installing the synchronous condensers is to provide voltage support for the Los Angeles Basin that the California Independent System Operator (CAISO) has determined is needed (Huntington Beach 2012). This will change the project from an electric generating facility to a synchronous condenser facility and it will no longer combust fuel to generate electricity.

Energy Commission staff reviewed the petition and assessed the impacts of this proposal on environmental quality, public health and safety, and proposes to remove air quality conditions of certification **AQ-1** through **AQ-11** and **AQ-C1** through **AQ-C5** since they will no longer be relevant**.** In addition, staff is recommending two new conditions,

AQ-SC1 and **AQ-SC2** to address potential equipment and fugitive emissions from the facility modification and operation of the HBGS Project and synchronous condensers. It is staff's opinion that, with the deletion of existing conditions and the addition of **AQ-SC1** and **AQ-SC2**, the project will remain in compliance with applicable laws, ordinances, regulations, and standards and that the proposed modifications will not result in a significant adverse direct or cumulative impact to the environment (Title 20, California Code of Regulations, Section 1769).

The amendment petition and staff's analysis have been posted on the Energy Commission's webpage at http://www.energy.ca.gov/sitingcases/huntingtonbeach/compliance/index.html. The Energy Commission's Order (if approved) will also be posted on the webpage. Energy Commission staff intends to recommend approval of the petition at a November 29, 2012, Business Meeting of the Energy Commission.

Agencies and members of the public who wish to provide written comments on the Amendment are asked to submit comments to the Energy Commission Dockets Unit no later than November 26, 2012. Please include the docket number (00-AFC-13C) in the subject line or first paragraph of your comments. Those submitting comments electronically should provide them in either Microsoft Word format or as a Portable Document Format (PDF) to [docket@energy.ca.gov]. Please include your name or organization's name in the file name. Those preparing non-electronic written comments should mail or hand deliver them to:

California Energy Commission
Dockets Unit, MS-4
Docket No. 00-AFC-13C
1516 Ninth Street
Sacramento, CA 95814-5512

For further information on how to participate in this proceeding, please contact the Energy Commission Public Adviser's Office, at (916) 654-4489, or toll free in California at (800) 822-6228, or by e-mail at publicadviser@energy.ca.gov. News media inquiries should be directed to the Energy Commission Media Office at (916) 654-4989, or by e-mail at mediaoffice@energy.ca.gov.

If you have any comments or questions on the technical analysis, please contact Christine Stora, Compliance Project Manager, at (916) 654-4745, or by fax to (916) 654-3882, or via e-mail at: christine.stora@energy.ca.gov.

Enclosure
Mail List 7042

HUNTINGTON BEACH GENERATING STATION RETOOL (00-AFC-13C)

Request to Amend Final Energy Commission Decision to Convert Unit 3 and 4 Generators to Synchronous Condensers

Introduction and Summary
Prepared by: Christine Stora, CPM
October 19, 2012

INTRODUCTION AND SUMMARY

On October 5, 2012, Edison Mission Huntington Beach, LLC (Edison Mission) filed a petition with the California Energy Commission (Energy Commission) requesting to modify the Huntington Beach Generating Station (HBGS) Retool Project, Units 3 and 4. The HBGS Retool Project, Units 3 and 4 were certified as a 450 megawatt (MW), natural gas-fired boiler retooling project located in the City of Huntington Beach, in Orange County on May 10, 2001.

The petition provides a description of the affected environment and an analysis of the potential environmental and cumulative impacts associated with the project amendment, along with measures to avoid adverse impacts. The analysis and supporting information are provided to comply with Energy Commission requirements, including the California Environmental Quality Act (CEQA), and to determine compliance with applicable laws, ordinances, regulations and standards (LORS).

In the petition, Edison Mission proposed changes to convert the existing HBGS Units 3 and 4 from electric utility steam generators to synchronous condensers. After the conversion, operation will no longer require fuel to be combusted in Units 3 and 4. Therefore, there will no longer be combustion emissions from these units. The proposed project will be built entirely within the boundaries of the existing HBGS. No additional transmission lines, related transmission facilities or offsite changes or modifications to any related project infrastructure will be required.

Energy Commission technical staff reviewed the petition to amend for potential environmental effects and consistency with applicable LORS. Staff has determined that the technical or environmental areas of biological resources, cultural resources, geological hazards and resources, hazardous materials management, facility design, land use, noise and vibration, paleontological resources, public health, socioeconomics, soil and water resources, traffic and transportation, transmission line safety and nuisance, transmission system engineering, visual resources, waste management and safety are either not affected by the proposed changes or the changes have no significant environmental impact in these areas, and no revisions or new conditions of certification are needed to ensure the project remains in compliance with all applicable LORS. Table 1 summarizes staff's review.

Staff determined air quality conditions of certification **AQ-1** through **AQ-11** and **AQ-C1** through **AQ-C5** will no longer be relevant and proposes to delete them**.** In addition, staff is recommending two new conditions, **AQ-SC1** and **AQ-SC2** to address potential

equipment and fugitive emissions from the facility modification and operation of the HBGS Project and synchronous condensers.

TABLE 1 TECHNICAL AREAS REVIEWED

TECHNICAL AREAS REVIEWED	STAFF RESPONSE			New, Revised, or Removed Conditions of Certification Recommended
	Technical Area Not Affected	No Significant Environmental Impact*	Process As Amendment	
Air Quality			X	X
Biological Resources		X		
Cultural Resources		X		
Geological Hazards & Resources		X		
Hazardous Materials Management		X		
Facility Design	X			
Land Use		X		
Noise and Vibration		X		
Paleontological Resources	X			
Public Health		X		
Socioeconomics	X			
Soil and Water Resources		X		
Traffic and Transportation		X		
Transmission Line Safety & Nuisance	X			
Transmission System Engineering		X		
Visual Resources		X		
Waste Management	X			
Safety		X		

*****THERE IS NO POSSIBILITY THAT THE MODIFICATIONS MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND THE MODIFICATION WILL NOT RESULT IN A CHANGE OR DELETION OF A CONDITION ADOPTED BY THE COMMISSION IN THE FINAL DECISION OR MAKE CHANGES THAT WOULD CAUSE THE PROJECT NOT TO COMPLY WITH ANY APPLICABLE LAWS, ORDINANCES, REGULATIONS, OR STANDARDS (LORS) (20 CAL. CODE REGS., § 1769 (A)(2)).

HUNTINGTON BEACH GENERATING STATION RETOOL (00-AFC-13C)

Request to Amend Final Energy Commission Decision to Convert Unit 3 and 4 Generators to Synchronous Condensers

Air Quality Analysis
Nancy Fletcher

INTRODUCTION

In October 2012, Edison Mission Huntington Beach, LLC (EMHB) filed a petition (Huntington Beach 2012) with the California Energy Commission to amend the Conditions of Certification for the Huntington Beach Generating Station Retool Project (HBGS Retool Project). The Energy Commission decision approving the HBGS Retool Project was granted to AES Huntington Beach, LLC (AES) on May 10, 2001 for a limited duration during California's electrical supply emergency. The nominal 450 MW project located at the Huntington Beach Generating Station (HBGS) consisted of retooling steam turbine Units 3 and 4 that had been out of service since 1995. EMHB bought parts of the HBGS Retool Project (parts of Units 3 and 4, but not the land and some common equipment shared with Units 1 and 2) from AES on May 4, 2011, to provide emissions reduction credits for the Edison Mission Energy's Walnut Creek Energy Park (WCEP). AES has leased the units back from EMHB and has been operating Huntington Beach Units 1 to 4 under contract with the California Independent System Operator (CAISO).

The Energy Commission's decision approving the HBGS Retool Project required that the license be terminated after 10 years if certain conditions were not met. On October 20, 2010, AES' permit for the HBGS Retool Project was extended from September 30, 2011 to September 30, 2016 with the potential to extend approval to December 31, 2020 if an Application for Certification (AFC) for a project to replace Units 3 and 4 was submitted before June 30, 2012 and deemed adequate by the California Energy Commission by December 31, 2012. The AFC for the HBGS Units 1 through 5 replacement project was filed and deemed adequate prior to the necessary dates; therefore, Units 3 and 4 have an Energy Commission license through 2020. Although the Energy Commission license was extended through 2020, Unit 3 and 4 generating capacity and emission reduction credits will be transferred to WCEP prior to WCEP's first fire, expected in November 2012. The operation of HBGS Unit 3 and 4 fuel-burning electrical generating equipment will cease at that time.

EMHB is requesting changes to the Energy Commission decision in order to convert Unit 3 and 4 generators to synchronous condensers under the Energy Commission HBGS Retool Project license. This request was in response to CAISO's identification of a need for dynamic voltage support. The changes would include decoupling Unit 3 and 4 generators from the boilers and steam turbines and installing variable frequency drives, pony motors and other ancillary equipment to operate the generators as synchronous condensers. The HBGS Retool Project as reconfigured would no longer be able to use natural gas for combustion to generate power. Therefore, the existing conditions of certification for air quality will no longer be relevant after reconfiguring the

units. EMHB is requesting to revise the conditions of certification by removing or voiding Conditions of Certification **AQ-1** through **AQ-11**. EMHB is also proposing to retain **AQ-C1** through **AQ-C4** and is silent on **AQ-C5**. However, California Energy Commission staff (staff) finds that **AQ-C1** through **AQ-C5** are outdated, and as such proposes the removal of all existing air quality conditions including **AQ-C1** through **AQ-C5** and **AQ-1** through **AQ-11**.

The requested facility modification would result in a physical change to equipment and operating conditions. The modification would not result in any on-site increase in emissions for the units nor result in an exceedance to an ambient air quality standard. Operation of the synchronous condensers will not be associated with air emissions from natural gas combustion. But the permitted use of Units 3 and 4 generators as synchronous condensers would require some construction and maintenance activities through 2020 or when the units are removed, whichever comes first. Staff is recommending two new conditions, **AQ-SC1** and **AQ-SC2** to address potential equipment and fugitive emissions from the facility modification and operation of the HBGS Retool Project and synchronous condensers.

LAWS, ORDINANCES, REGULATIONS AND STANDARDS COMPLIANCE

The conditions of certification in the Commission Decision and any and all amendments thereafter ensure that the project will remain in compliance with all applicable laws, ordinances, regulations and standards (LORS).The project, as proposed for modification herein, will continue to comply with all applicable LORS.

SETTING

The project is located in the City of Huntington Beach in Orange County in the South Coast Air Basin. The HBGS Retool Project is part of a 12 acre site located at the southeast intersection of Newland Street and the Pacific Coast Highway, about 600 feet east of the Pacific Ocean. For convenience, staff includes **AIR QUALITY TABLE 1**, which summarizes the area's current attainment status for state and federal ambient air quality standards for the South Coast Air Basin; however the proposed revision will not result in a significant increase to any of the pollutants listed below.

AIR QUALITY TABLE 1
Federal and State Attainment Status
Orange County, South Coast Air Basin

Pollutant	State Classification	Federal Classification
Ozone (O_3) (1-hr and 8-hr)[a]	**Non-attainment**	**Non-attainment**
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO_2)	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
PM10	**Non-attainment**	**Non-attainment**
PM2.5	**Non-attainment**	**Non-attainment**

Source: http://www.arb.ca.gov/regact/2011/area11/areaattc.pdf
[a] Federal designation reflects the 8-hr standard. The national 1-hr standard was revoked June 15, 2005.

ANALYSIS

The petition submitted by EMHB requests the removal of Conditions of Certification **AQ-1** through **AQ-11.** The request is based on the conversion of the Units 3 and 4 to synchronous condensers. After the conversion, operation will no longer require fuel to be combusted in Units 3 and 4. Therefore, there will no longer be combustion emissions from these units. The following **AIR QUALITY TABLE 2** summarizes the existing conditions of certification and the justification for deleting each condition.

AIR QUALITY TABLE 2
Summary of Current Operating AQ Conditions

Condition Number	Summary	Justification [a]
AQ-1	Operation of post combustion controls	Equipment operation will cease combustion operations. Therefore post combustion controls will no longer be necessary
AQ-2	Requires pipeline quality natural gas	Equipment will no longer use natural gas during operation
AQ-3	Source Testing Requirement for Unit 5	Unit 5 was decommissioned in 2002
AQ-4	Limits operation of Units 3 & 4 with Unit 5	Unit 5 was decommissioned in 2002
AQ-5	Required feasibility investigation for installing CEMS monitor for ammonia prior to operation	Requirement deadline has past. Post combustion control parameters will no longer need to be monitored after combustion operations cease.
AQ-6	Limits initial commissioning of Units 3 & 4	Requirement deadline has passed. Restriction was based on emissions from fuel combustion during commissioning. Restrictions will not be necessary after combustion operations have ceased.
AQ-7	Limits Units 3 & 4 from starting up concurrently, and limits start-up hours	Restriction was based off emissions from fuel combustion during start-up operation. Restrictions will not be necessary after combustion operations cease.
AQ-8	Maintain compliance with the Districts FDOC and PTC/PTO conditions	The Title V Permit and Permit to Operate will be surrendered.
AQ-9	Maintain compliance with the District's source testing requirements	The Title V Permit and Permit to Operate will be surrendered. Source testing will no longer be required once combustion has ceased and the permits surrendered.
AQ-10	Maintain compliance with the Districts CEMS requirements	The Title V Permit and Permit to Operate will be surrendered. Emission monitoring will no longer be required once combustion has ceased and the permits surrendered.
AQ-11	Requires project owner to demonstrate sufficient RTCs	The Title V Permit and Permit to Operate will be surrendered.

The facility owner (Huntington Beach 2012) identified potential air quality impacts from both facility modification activities and subsequent operation as synchronous condensers. The facility modification emissions will occur from the use of fossil fuel by construction equipment and on-road vehicle use for workers and deliveries. Facility modification emissions will be short-term and unavoidable. The cessation of natural gas combustion and the addition of construction vehicle operations will still lead to significant reductions in operating emissions.

The installation and commissioning of the synchronous condensers is expected to require 30 days. Construction will account for approximately 20 days and commissioning will account for the remaining 10 days. The new equipment installation will occur on the steam turbine deck and does not require any excavation or new underground infrastructure. The facility expects to use the existing cranes on site and additional equipment to complete the installation and commissioning of the synchronous condenser equipment. The additional equipment includes one five-ton forklift, two scissor lifts and five one-ton on-road work trucks. Construction trips are estimated at 7 tractor trailer deliveries and 14 miscellaneous deliveries, approximating 1 trip per day. This activity can be compared to the original expected activity from equipment used during annual maintenance for Units 3 and 4. Annual maintenance activities were estimated to include 30-75 workers for up to 28 days, using up to four forklifts and two mobile cranes with 2-4 material deliveries per day. The emissions associated with the expected equipment used for construction and installation of the synchronous condenser equipment is considered less than significant as they are below emissions expected from routine activities such as annual maintenance.

Staff recommends deletion of all current conditions of certification pertaining to construction. **AIR QUALITY TABLE 3** summarizes the current conditions of certification for construction and the justification for removing each.

AIR QUALITY TABLE 3
Summary of Construction AQ Conditions

Condition Number	Summary	Justification [a]
AQ-C1	Requires preparation of construction Fugitive Dust Mitigation Plan prior to construction	Fugitive dust is expected to be insignificant as the installation will occur on the steam turbine deck and requires minimal equipment and vehicle trips.
AQ-C2	Requires use of 15 ppm fuel sulfur content	This condition is no longer necessary as all diesel fuel sold in California for the proposed equipment meets the requirement .
AQ-C3	Requires use of EPA certified 1996 low NOx equipment or demonstrate equipment meets EPA 1996 diesel engine standards.	This condition is outdated. California has adopted more stringent emission requirements for construction equipment. Condition AQ-SC1 is proposed by staff to ensure that equipment used for facility modification meets the highest tier rating available.
AQ-C4	Limits operation of IC engines powering generators to power outages	The applicant has not proposed the use of any IC engine powering a generator for facility modification.
AQ-C5	Vendor and design data for SCR and oxidation catalysts systems shall be provided demonstrating NOx, CO and ammonia slip requirements	This requirement deadline has passed. Facility modification will cease combustion operations. Therefore, post combustion controls will no longer be necessary

During operation as a synchronous condenser, small quantities of VOC containing products will be used to clean, prime, and paint equipment during installation. The proposed operation of Units 3 and 4 after conversion and commissioning will not have any emissions from fuel combustion; however, there will be small quantities of VOC emissions from products used for continued maintenance of the synchronous condenser units.

The use of VOC containing compounds associated with the operation of the synchronous condensers will also continue to be regulated under the existing Title V permit for Units 1 and 2. SCAQMD has rules and regulations pertaining to the use and storage of VOC containing products. The solvents, cleaners, paints and other VOC containing compounds used during construction and installation will be required to comply with these rules and regulations.

The existing facility is currently operated under two separate Title V operating permits. The Title V permit for Units 3 and 4 will be surrendered prior to the operation of the synchronous condensers, while the Title V operating permit for Units 1 and 2 will remain in place and continue to regulate VOC usage and other regulated services for both Units 1 and 2 as well as the operation of Units 3 and 4 as synchronous condensers (AES 2012). Condition **AQ-SC2** is proposed by Staff to require notification of any change to the Title V operating permit or any other air permit related to HBGS 1-5 and operation of the HBGS Retool Project and the synchronous condensers**.** The notification is only required for changes that are related to the HBGS Retool Project or synchronous condenser operation.

CONCLUSIONS AND RECOMMENDATIONS

Staff recommends removing Conditions of Certification **AQ-C1** through **AQ-C5 and AQ-1** through **AQ-11.** In addition, staff recommends the addition of Conditions of Certification **AQ-SC1** and **AQ-SC2**. Condition of Certification **AQ-SC1** will require any construction and maintenance equipment brought onsite to meet the highest tier rating available. Condition of Certification **AQ-SC2** will ensure the HBGS Retool Project complies with applicable LORS associated with the facility modification and operation of Units 3 and 4 as synchronous condensers. The requested changes will conform with the applicable LORS related to air quality and will not result in significant air quality impacts

PROPOSED AND AMENDED CONDITIONS OF CERTIFICATION

Staff recommends deletion of the following Air Quality conditions of certification. ~~Strikethrough~~ is used to indicate deleted language.

~~AQ-C1~~ ~~Prior to the commencement of project construction, the project owner shall prepare a construction Fugitive Dust Mitigation Plan that will specifically identify fugitive dust mitigation measures that will be employed for the construction of the HBSG Retool Project and related facilities.~~

~~a) The Construction Fugitive Dust Mitigation Plan shall specifically identify measures to limit fugitive dust emissions from construction of the project. Measures that shall be addressed include the following:~~

- ~~the identification of the employee parking area(s) and surface of the parking area(s);~~
- ~~the frequency of watering of unpaved roads and disturbed areas;~~
- ~~the application of chemical dust suppressants;~~
- ~~the stabilization of storage piles and disturbed areas;~~
- ~~the use of gravel in high traffic areas;~~
- ~~the use of paved access aprons;~~
- ~~the use of posted speed limit signs;~~
- ~~the use of wheel washing areas prior to large trucks leaving the project site; and~~
- ~~the methods that will be used to clean mud and dirt tracked-out from the project site~~
- ~~onto public roads.~~

~~b) The following measures should be addressed for the transportation of the any borrow fill materials to the HBGS Retool Project site and the transmission and natural gas line sites, if any, and the transportation of export soils and construction debris:~~

- ~~the use of covers on the vehicles;~~
- ~~the wetting of the material; and~~
- ~~insuring appropriate freeboard of material in the vehicles.~~

~~Verification:~~ ~~At least 5 days prior to the start of construction, the project owner shall provide the CPM with a copy of the Construction Fugitive Dust Mitigation Plan for approval. Construction shall not commence until CPM approval of the Plan.~~

~~AQ-C2~~ ~~The project owner shall use exclusively 15 ppm sulfur content fuel (such as ECD-1 or equivalent) in all diesel off-road construction equipment.~~

~~Verification :~~ ~~The project owner shall submit to the CPM, no later than 15 days after initiating construction, a written evaluation signed by a California registered professional engineer that demonstrates that all construction diesel engines comply with this requirement and if available copies of the EPA or CARB engine certifications.~~

AQ-C3 The project owner shall use EPA certified 1996 low NOx emission construction equipment or demonstrate that its equipment complies with the EPA 1996 diesel engine emission standards. The project owner shall ensure that all heavy earthmoving equipment including, but not limited to, bulldozers, backhoes, compactors, loaders, motor graders and trenchers, and cranes, dump trucks and other heavy duty construction related trucks, have been properly maintained and the engines tuned to the engine manufacturer's specifications.

Verification The project owner shall submit to the CPM, no later than 15 days after initiating construction, a written evaluation signed by a California registered professional engineer that demonstrates that all construction diesel engines comply with this requirement and if available copies of the EPA or CARB engine certifications.

AQ-C4 The project owner shall only use internal combustion powered generating equipment to provide electrical power for the Unit 3 and 4 construction activities during power outages.

Verification The project owner shall maintain an operating log on all fuel-fired internal combustion engines that are used to supply electricity for the construction of Units 3 and 4. The operating log will identify at a minimum the dates and times of use and a daily record of equipment hour gauge data. A copy of this operating log will be provided to the CPM each month during construction, and will be made available to CEC or District staff at all times.

AQ-C5 The project owner shall provide to the CPM and the District, vendor and design data for the SCR and Oxidation catalyst systems, which will include performance guarantees that demonstrate that the systems have been designed to meet the NOx and CO emission concentration limits (5 ppm corrected to 3% O2 for each pollutant) Additionally, the SCR vendor data shall include ammonia slip performance guarantees of 5 ppm corrected to 3% O2.

Verification At least 30 days prior to the installation of the catalyst systems, the project owner shall provide the CPM and the District with a copy of the SCR and Oxidation catalyst systems vendor and design data for approval.

OPERATING CONDITIONS

AQ-1 The project owner shall operate the post-combustion emission control devices (SCR and Oxidation catalyst systems) at all times, except during start-up or breakdowns, as defined by District Rule 430 and 2004, during boiler operation.

Verification: The project owner shall provide operating interlocks, or other control systems, that require the emission control equipment to be in operation during normal operation. At least 15 days prior to the installation of the catalyst systems, the project owner shall provide the CPM documentation on the control systems, procedures, etc. that will be used to ensure proper control of equipment operation.

AQ-2 The project owner shall use only pipeline quality natural gas to fuel Units 3 and 4 and the total sulfur content of the fuel shall be limited to 0.25 grain/100 scf, expressed as H2S.

Verification: The project owner shall test on-site the total sulfur content of the fuel quarterly and shall provide the results of the tests, expressed as equivalent grains of H2S per 100 scf. to the CPM within 30 days of performing each test.

AQ-3 The project owner shall source test Unit 5 for the following pollutants and exhaust parameters prior to September 1, 2001:

Nitrogen Oxides (and NO to NO2 ratio)
Carbon Monoxide
Reactive Organic Gases
PM10
Exhaust Velocity
Temperature

During this source test the project owner shall keep operating records, such as fuel flow, in order to determine appropriate emission factors for Unit 5.

Verification: The project owner shall provide the CPM with the source test protocol and schedule for review 30 days prior to conducting the source test on Unit 5, and shall provide the source test report to the CPM within 30 days of performing the source test. Additionally, the project owner shall allow CEC staff, CEC contractors, or other regulatory agency staff access to the site to observe the Unit 5 source tests.

AQ-4 Through December 31, 2002, Units 3 and 4 shall not operate contemporaneously with Unit 5 unless the ISO has declared a Stage 3 Electrical Emergency and the ISO has specifically called-up Unit 5 to avoid an imminent blackout. After December 31, 2002, operation of Huntington Beach Unit 5 shall cease. These requirements may be superseded by SCAQMD's adoption of emission controls by Best Available Retrofit Control Technology or other means applicable to Unit 5.

Verification: The project owner shall maintain operating records that identify contemporaneous periods of operation for Units 3 and 4 and Unit 5 along with the ISO emergency declaration or other documentation that verifies compliance with this condition. This compliance documentation shall be submitted to the CPM on a quarterly basis. If the project owner intends to install Best Available Retrofit Control Technology (BARCT) on Unit 5, the project owner will provide the CPM a BARCT assessment document prior to initiating air quality permitting and shall provide the CPM a copy of all permitting documents for review during the BARCT permitting process.

AQ-5 The project owner shall investigate the feasibility of installing continuous emission monitors (CEMs) for ammonia on the stacks of Units 1 and 2 and Units 3 and 4 as a means of demonstrating compliance with required ammonia limits. If the use of an ammonia CEM system is found to be feasible and cost

effective, it shall be installed and operating by the time Units 3 and 4 begin normal operation.

Verification: The project owner shall provide to the CPM the ammonia CEM feasibility report 30 days prior to beginning the normal operation of Units 3 and 4. The feasibility report, at a minimum will identify the available ammonia monitoring systems, their technical specifications and detection ranges, costs; if necessary, any reasons why these systems are not technically feasibility for the HBGS; and if applicable the installation schedule and record keeping procedures for the ammonia CEMs that may be installed.

AQ-6 The initial commissioning of the Unit 3 and Unit 4 boilers shall not be performed concurrently, initial commissioning shall be limited to 48 hours for each boiler, and the input heat rate during initial commissioning of each boiler shall be limited to a total of 120 MMBtu/hr.

Verification: The project owner shall provide to the CPM, within 15 days of initial commissioning, the hourly fuel flow data for the initial commissioning period of each boiler.

AQ-7 The Unit 3 and Unit 4 boilers shall not be operated in start-up mode concurrently, each start-up (not including initial commissioning) shall be limited to 12 hours for each boiler, and the heat rate during initial commissioning of each boiler shall be limited to a total of 120 MMBtu/hr until the SCR is operational.

Verification: The project owner shall provide to the CPM quarterly records of the hourly fuel flow data and SCR operating data for the start-ups for each boiler.

AQ-8 The project owner shall maintain compliance with the District's FDOC and PTC/PTO conditions, including all monitoring and record keeping provisions.

Verification: The project owner shall provide to the CPM, on a quarterly basis within 30 days of the end of each quarter, a summary of the permit compliance status that, at a minimum, includes a summary of compliance with all District permit conditions and all CEC Air Quality Conditions of Certification, a listing and copies of notices of violation received from SCAQMD, ongoing status of any SCAQMD enforcement actions, and a listing of air quality related (i.e. odor, opacity, etc.) community complaints received by the project owner.

AQ-9 The project owner shall maintain compliance with the District's source testing requirements.

Verification: The project owner shall provide to the CPM copies of all District required source tests within 45 days of conducting those tests.

AQ-10 The project owner shall maintain compliance with the District's continuous emissions monitoring system (CEMS) requirements, including all record keeping requirements.

~~**Verification:** The project owner shall provide to the CPM, on a quarterly basis within 30 days of the end of each quarter, summaries of the CEMS data as required to be kept by District permit conditions, and as necessary to summarize data from CEMS that may be required by other CEC Conditions of Certification.~~

~~**AQ-11** Units 3 and 4 shall not be operated unless the project owner demonstrates that the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, the equipment shall not be operated unless the project owner demonstrates that, at the commencement of each compliance year after the first compliance year of operation, the facility holds sufficient RTCs in an amount equal to the annual emissions increase.~~

~~**Verification:** The project owner shall provide operating records, including fuel use data and total operating hours for Units 3 and 4 and Unit 5, to the CPM on a quarterly basis within 30 days of the end of each quarter. The project owner shall also provide to the District and the CPM a quarterly NOx emissions profile of the entire Huntington Beach Generating Station verifying that there are sufficient NOx RECLAIM trading credits allocated for continued project operation.~~

AQ-SC1 All construction and maintenance equipment brought on site shall be powered by the cleanest engines available that also comply with the California Air Resources Board's (ARB's) Regulation for In-Use Off-Road Diesel Fleets (California Code of Federal Regulations Title 13, Article 4.8, Chapter 9, Section 2449 et.seq.). Specifically:

- **a. All off-road vehicles with compression ignition engines shall comply with the California Air Resources Board's (ARB's) Regulation for In-Use Off-Road Diesel Fleets.**
- **b. To meet the highest level of emissions reduction available, each piece of diesel-powered equipment shall be powered by a Tier 4 engine (without add-on controls) or Tier 4i engine (without add-on controls), or a Tier 3 engine with a post-combustion retrofit device verified by the ARB or the U.S. EPA for use on the particular engine powering the device. For PM, the retrofit device shall be a particulate filter if verified, or a flow-through filter, or at least an oxidation catalyst. For NOx, the device shall meet the latest Mark level verified to be available (as of January 2012, none meet this NOx requirement).**
- **c. For diesel powered equipment where the requirements of Part "b" cannot be met, the equipment shall be equipped with a Tier 3 engine without retrofit control devices or with a Tier 2 or lower Tier engine using retrofit controls verified by ARB or U.S. EPA as the best available control device to reduce exhaust emissions of PM and nitrogen oxides (NOx) unless certified by engine manufacturers or the Air Resources Board that the use of such devices is not practical for the specific engine types used in the facility modification. For purposes of this condition, the use of such devices can be considered "not practical" for the following, as well as other, reasons:**
  1. **There is no available retrofit control device that has been verified by either the California Air Resources Board or U.S. Environmental Protection Agency to control the engine in question and the highest level of available control using retrofit or Tier 1 engines is being used for the engine in question; or**

2. **The use of the retrofit device would unduly restrict the vision of the operator such that the vehicle would be unsafe to operate because the device would impair the operator's vision to the front, sides, or rear of the vehicle, or**
3. **The construction equipment is intended to be on site for 5 work days or less.**

d. **The CPM may grant relief from a requirement in Part "b" or "c" if the facility representative can demonstrate a good faith effort to comply with the requirement and that compliance is not practical.**

Verification: The project owner shall submit in the annual compliance report: (1) a summary of all actions taken to maintain compliance with this condition; (2) a list of all construction and maintenance equipment used on the HBGS Retool Project site during the year, including the owner of that equipment and a letter from each owner indicating that the equipment has been properly maintained; and (3) any other documentation deemed necessary by the CPM to verify compliance with this condition. Such information may be provided via electronic format or disk at the project owner's discretion.

AQ-SC2 The project owner shall notify the CPM of any modifications made to any air permit associated with HBGS Units 1-5 that affect the HBGS Retool Project and the operation of the synchronous condensers.

Verification: The project owner shall provide notification of any modifications to any air permit associated with HBGS Units 1-5 that affect the HBGS Retool Project and operation of the and synchronous condensers in the annual compliance report. The notification is only required for changes that are related to the HBGS Retool Project or synchronous condenser operation.

REFERENCES

AES 2012 - Stephen O'Kane. "Huntington Beach Amendment." E-mail to Mary Dyas. October 11, 2012

CEC 2001 - Energy Commission Final Decision on AES's Huntington Beach – (00-AFC-13) May 2001

CEC 2001 - Staff Assessment AES's Huntington Beach Generating Station Retool Project – (00-AFC-13) March 2001

Edison Mission Huntington Beach, LLC. 2012 - Jane Luckhardt. "Huntington Beach 3 & 4 Conversion (Docket No. 00-AFC-13C)." E-mail to Christine Stora. October 22, 2012

Huntington Beach 2012 – Petition to Amend Final Decision October, 2012.