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STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

DOCKET
02-AFC-1C
DATE APR 25 2012
RECD. APR 25 2012

In the Matter of:	
BLYTHE ENERGY PROJECT, PHASE II	**Docket No. 02-AFC-1C**
	Order No. 12-0425-3a
CAITHNESS BLYTHE II, LLC	**ORDER APPROVING Petition to Amend**

On October 23, 2009, Caithness Blythe II, LLC (Caithness), the owner of the Blythe Energy Project, Phase II, submitted a petition requesting to identify a new point of electrical interconnection, to replace the originally approved turbines, that are no longer available, with newer Siemens Rapid-Start turbines, to modify the combustion turbine and steam turbine enclosure, to incorporate an auxiliary boiler, to expand the approved cooling tower configuration, and to optimize the project's general arrangement. The modifications are intended to make the project a fully dispatchable, high efficiency, quick-start facility to meet the current and project market demands for Southern California. The air quality modifications were approved by the Mojave Desert Air Quality Management District and a revised Final Determination of Compliance was issued on August 10, 2010.

STAFF RECOMMENDATION

Energy Commission staff reviewed the petition and finds that it complies with the requirements of Title 20, Section 1769(a) of the California Code of Regulations and recommends approval of Caithness's petition to modify the Blythe Energy Project, Phase II and amend related Conditions of Certification.

ENERGY COMMISSION FINDINGS

Based on staff's analysis, the Energy Commission concludes that the proposed changes will not result in any significant impact to public health and safety, or the environment. The Energy Commission finds that:

- The petition meets all the filing criteria of Title 20, section 1769(a) of the California Code of Regulations concerning post-certification project modifications;

- The modification will not change the findings in the Energy Commission's Final Decision pursuant to Title 20, section 1755;
- The project will remain in compliance with all applicable laws, ordinances, regulations, and standards, subject to the provisions of Public Resources Code section 25525;
- The Change will be beneficial to the public and project owner, because the modifications are intended to make the project a fully dispatchable, high efficiency, quick-start facility to meet the current and project market demands for Southern California.
- There has been a substantial change in circumstances since the Energy Commission certification justifying the change and the change is based on information that was not available to the parties prior to Energy Commission certification.

CONCLUSION AND ORDER

The California Energy Commission hereby adopts Staff's recommendations and approves the following changes and additions to the Energy Commission Decision for the Blythe Energy Project, Phase II. New language is shown as **bold and underlined**, and deleted language is shown in ~~strikeout~~.

AIR QUALITY CONDITIONS OF CERTIFICATION

Staff proposed Conditions of Certification to provide mitigation during the construction phase of the project are **AQ-SC1** to **AQ-SC5**, and those for operation are **AQ-SC6** to **AQ-SC8**. District conditions of certification from the Final Determination of Compliance are shown as conditions **AQ-1** to **AQ-75**.

AQ-SC1 Air Quality Construction Mitigation Manager (AQCMM): The project owner shall designate and retain an on-site AQCMM who shall be responsible for directing and documenting compliance with conditions **AQ-SC3**, **AQ-SC4** and **AQ-SC5** for the **entire duration of project construction** ~~project site and linear facility construction~~. The on-site AQCMM may delegate responsibilities to one or more AQCMM Delegates. The AQCMM and AQCMM Delegates shall have full access to all areas of construction on the project site, and shall have the authority to stop any or all construction activities as warranted by applicable construction mitigation conditions. The AQCMM and AQCMM Delegates may have other responsibilities in addition to those described in this condition. The AQCMM shall not be terminated without written consent of the **Compliance Project Manager (**CPM**)**.

Verification: At least 60 days prior to the start of ground disturbance, the project owner shall submit to the CPM for approval~~,~~ the name, resume, qualifications, and contact information for the on-site AQCMM and all AQCMM Delegates. The AQCMM and all delegates must be approved by the CPM before the start of ground disturbance.

AQ-SC2 Air Quality Construction Mitigation Plan (AQCMP): The project owner shall provide**, for approval**, an AQCMP, ~~for approval,~~ which details the steps ~~that will~~ **to** be taken and the reporting requirements necessary to ensure compliance with conditions **of certification** **AQ-SC3**, **AQ-SC4** and **AQ-SC5**.

Verification: At least 60 days prior to the start of any ground disturbance, the project owner shall submit the AQCMP to the CPM for approval. The CPM will notify the project owner of any necessary modifications to the plan within 30 days from the date of receipt. **The AQCMP must be approved by the CPM before the start of ground disturbance.**

AQ-SC3 Construction Fugitive Dust Control: The AQCMM shall submit documentation to the CPM in each monthly compliance report (MCR) that demonstrates compliance with the ~~following~~ **Air Quality Construction Mitigation Plan (AQCMP)** mitigation measures for the purposes of **minimizing fugitive dust emission creation from construction activities and** preventing all fugitive dust plumes from leaving the project**'s boundary**. **The following fugitive dust mitigation measures shall be included in the AQCMP required by AQ-SC2, and** any deviation from the **AQCMP** ~~following~~ mitigation measures shall require prior CPM notification and approval.

A. The main access roads through the facility to the power block areas will be either paved or stabilized using soil binders, or equivalent methods, to provide a stabilized surface that is similar for the purposes of dust control to paving, that may or may not include a crushed rock (gravel or similar material with fines removed) top layer, prior to initiating construction in the main power block area, and delivery areas for operations materials (chemical, replacement parts, etc.) will be paved prior to taking initial deliveries.

B) All unpaved **construction** roads **and unpaved operation site roads, as they are being constructed, shall be stabilized with a non-toxic soil stabilizer or soil weighting agent that can be determined to be both as efficient or more efficient for fugitive dust control as CARB approved soil stabilizers, and shall not increase any other environmental impacts including loss of vegetation to areas beyond where the soil stabilizers are being applied for dust control. All other** disturbed areas in the project ~~and linear~~ construction sites shall be watered as frequently as necessary **during grading; and after active construction activities shall be stabilized with a non-toxic soil stabilizer or soil weighting agent, or alternative approved soil stabilizing methods, in order** to comply with the dust mitigation objectives of **AQ-SC4** ~~(the prevention of fugitive dust plumes)~~. The frequency of watering can be reduced or eliminated during periods of precipitation.

C~~b~~) No vehicle shall exceed 5 miles per hour **on unpaved areas** within the construction site, **with the exception that vehicles may travel up to 25**

miles per hour on stabilized unpaved roads as long as such speeds do not create visible dust emissions.

D~~c~~) The construction site entrances shall be posted with visible speed limit signs.

E~~d~~) All construction equipment vehicle tires shall be inspected and washed as necessary to be cleaned free of dirt prior to entering paved roadways.

F~~e~~) Gravel ramps of at least 20 feet in length must be provided at the tire washing/cleaning station.

G~~f~~) All unpaved exits from the construction site shall be graveled or treated to prevent track-out to public roadways.

H~~g~~) All construction vehicles shall enter the construction site through the treated entrance roadways, unless an alternative route has been submitted to and approved by the CPM.

I~~h~~) Construction areas adjacent to any paved roadway **below the grade of the surrounding construction area or otherwise directly impacted by sediment from site drainage shall be provided with sandbags or other equivalently effective measures to prevent run-off to roadways, or other similar run-off control measures** ~~shall be provided with sandbags or other measures~~ as specified in the Storm Water Pollution Prevention Plan (SWPPP) **only when such SWPPP measures are necessary so that the condition does not conflict with the requirements of the SWPPP**.~~to prevent run-off to roadways~~.

J~~i~~) All paved roads within the construction site shall be swept **daily or as needed (less during periods of precipitation)**~~as necessary~~ on days when construction activity occurs to prevent the accumulation of dirt and debris.

K~~j~~) At least the first 500 feet of any public roadway exiting from the construction site **or exiting other unpaved roads en route from the construction site or construction staging areas** shall be swept as **needed (less during periods of precipitation)** ~~necessary~~ on days when construction activity occurs or on any other day when dirt or runoff **resulting** from the construction site **activities** is visible on the public **paved** roadways.

L~~k~~) All soil storage piles and disturbed areas that remain inactive for longer than 10 days shall be covered, or shall be treated with appropriate dust suppressant compounds.

M~~l~~) All vehicles that are used to transport solid bulk material on public roadways and that have potential to cause visible emissions shall be provided with a cover, or the materials shall be sufficiently wetted and loaded onto the trucks in a manner to provide at least **two feet** ~~one foot~~ of freeboard.

N~~m~~) Wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) shall be used on all construction areas that may be disturbed. Any windbreaks installed to comply with this

condition shall remain in place until the soil is stabilized or permanently covered with vegetation.

Verification: The ~~project owner~~ **AQCMM shall provide a Monthly Compliance Report to** include ~~in the MCR~~ the following to demonstrated control of fugitive dust emissions:

~~(1)~~**A.** A summary of all actions taken to maintain compliance with this condition,

~~(2)~~**B.** Copies of any complaints filed with the air district **or facility representatives** in relation to project construction, and

~~(3)~~**C.** Any other documentation deemed necessary by the CPM and AQCMM to verify compliance with this condition. Such information may be provided via electronic format or disk at the project owner's discretion.

AQ-SC4 Dust Plume Response Requirement: The AQCMM or an AQCMM Delegate shall ~~continuously~~ monitor ~~the~~ construction activities for visible dust plumes. Observations of visible dust plumes that have the potential to be transported **off the project site and within 400 feet upwind of any regularly occupied structures not owned by the project owner indicates that existing mitigation measures are not resulting in effective mitigation. The AQCMP shall include a section detailing how the additional mitigation measures will be accomplished within the time limits specified.** The AQCMM or Delegate shall implement the following procedures for additional mitigation measures in the event that such visible dust plumes are observed:

~~(1) off the project site,~~

~~(2) 200 feet beyond the centerline of the construction of linear facilities, or~~

~~(3) within 100 feet upwind of any regularly occupied structures not owned by the project owner indicate that existing mitigation measures are not resulting in effective mitigation.~~

Step 1: The AQCMM or Delegate shall direct more intensive application of the existing mitigation methods within 15 minutes of making such a determination.

Step 2: The AQCMM or Delegate shall direct implementation of additional methods of dust suppression if Step 1 specified above fails to result in adequate mitigation within 30 minutes of the original determination.

Step 3: The AQCMM or Delegate shall direct a temporary shutdown of the activity causing the emissions if Step 2 specified above fails **result in effective mitigation within one hour of the original determination** ~~to eliminate visible dust plumes at any location 200 feet or more off the project site within one hour of the original determination~~. The activity shall not restart until the AQCMM or Delegate is satisfied that appropriate additional mitigation or other site conditions have changed so that visual dust plumes will not result upon restarting the shutdown **activity** ~~source~~. The owner/operator may appeal to the CPM any

directive from the AQCMM or Delegate to shut down an activity, provided that the shutdown shall go into effect within one hour of the original determination, unless overruled by the CPM before that time.

Verification: ~~The AQCMP shall include a section detailing how the additional mitigation measures will be accomplished within the time limits specified.~~ **The AQCMM shall provide the CPM a Monthly Compliance Report to include:**

A. a summary of all actions taken to maintain compliance with this condition;

B. copies of any complaints filed with the district or facility representatives in relation to project construction; and

C. any other documentation deemed necessary by the CPM and AQCMM to verify compliance with this condition. Such information may be provided via electronic format or disk at the project owner's discretion.

AQ-SC5 Diesel-Fueled Engines Control: The AQCMM shall submit to the CPM, in the Monthly Compliance Report ~~(MCR)~~, a ~~construction mitigation report that demonstrates compliance with the following~~ **table that demonstrates compliance with the AQCMP** mitigation measures for the purposes of controlling diesel construction-related emissions. Any deviation from the ~~following~~ **AQCMP** mitigation measures ~~shall~~ require**s** prior CPM notification and approval.

All off-road diesel construction equipment used in the construction of this facility shall be powered by the cleanest engines available that also comply with the California Air Resources Board's (CARB's) Regulations for in-use off-road diesel fleets and shall be included in the Air Quality Construction Mitigation Plan (AQCMP) required by AQ-SC2. The AQCMP measures shall include the following, with the lowest-emitting engine chosen in each case, as available:

~~a) All diesel-fueled engines used in the construction of the facility shall be fueled only with ultra-low sulfur diesel, which contains no more than 15 ppm sulfur.~~

~~b) All diesel-fueled engines used in the construction of the facility shall have clearly visible tags issued by the on-site AQCMM showing that the engine meets the conditions set forth herein.~~

~~c) All construction diesel engines, which have a rating of 100 hp or more, shall meet, at a minimum, the Tier 1 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, section 2423(b)(1) unless certified by the on-site AQCMM that such engine is not available for a particular item of equipment. In the event a Tier 1 engine is not available for any off-road engine larger than 100 hp, that engine shall be equipped with a catalyzed diesel~~

~~particulate filter (soot filter), unless certified by engine manufacturers or the on-site AQCMM that the use of such devices is not practical for specific engine types. For purposes of this condition, the use of such devices is "not practical" if, among other reasons:~~

~~(1) There is no available soot filter that has been certified by either the California Air Resources Board or U.S. Environmental Protection Agency for the engine in question; or~~

~~(2) The construction equipment is intended to be on-site for ten (10) days or less.~~

~~(3) The CPM may grant relief from this requirement if the AQCMM can demonstrate that they have made a good faith effort to comply with this requirement and that compliance is not possible.~~

~~d) The use of a soot filter may be terminated immediately if one of the following conditions exists, provided that the CPM is informed within ten (10) working days of the termination:~~

~~(1) The use of the soot filter is excessively reducing normal availability of the construction equipment due to increased downtime for maintenance, and/or reduced power output due to an excessive increase in backpressure.~~

~~(2) The soot filter is causing or is reasonably expected to cause significant engine damage.~~

~~(3) The soot filter is causing or is reasonably expected to cause a significant risk to workers or the public.~~

~~(4) Any other seriously detrimental cause which has the approval of the CPM prior to the termination being implemented.~~

~~e) All heavy earthmoving equipment and heavy-duty construction related trucks with engines meeting the requirements of (c) above shall be properly maintained and the engines tuned to the engine manufacturer's specifications.~~

~~f) All heavy construction equipment with engines meeting the requirements of (n)(3) above shall not remain running at idle for more than five minutes, to the extent practical.~~

a. **All off-road compression ignition engines shall comply with the California Air Resources Board's (CARB's) Regulations for in-use off-road diesel fleets (Californai Code of Regulation title 13, Article 4.8, Chapter 9, §2449 et. Seg).**

b. **To meet the highest level of emissions reduction available for the engine family of the equipment, each piece of diesel-powered equipment shall be powered by a Tier 4 engine, or Tier 4i engine or a Tier 3 engine with a post-combustion device retrofit device verified by**

the CARB or the US EPA. For PM, the retrofit device shall be a particulate filter if verified, or a flow-thru 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 CARB or US EPA as the best available control device to reduce exhaust emissions of PM and nitrogen oxides (NOx) unless certified by engine manufacturers or the on-site AQCMM that the use of such devices is not practical for specific engine types. 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 10 work days or less.**

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

e. The use of a retrofit control device may be terminated immediately provided that the CPM is informed within 10 working days of the termination and a replacement for the equipment item in question meeting the level of control required occurs within 10 work days of termination of the use (if the equipment would be needed to continue working at this site for more than 15 work days after the use of the retrofit control device is terminated) if one of the following conditions exists:

1. **The use of the retrofit control device is excessively reducing the normal availability of the construction equipment due to increased down time for maintenance, and/or reduced power output due to an excessive increase in exhaust back pressure.**

2. **The retrofit control device is causing or is reasonably expected to cause engine damage.**

3. **The retrofit control device is causing or is reasonably expected to cause a substantial risk to workers or the public.**

4. **Any other seriously detrimental cause which has the approval of the CPM prior to implementation of the termination.**

f. **All equipment with engines meeting the requirements above shall be properly maintained and the engines tuned to the engine manufacturer's specifications. Each engine shall be in its original configuration and the equipment or engine must be replaced if it exceeds the manufacturer's approved oil consumption rate.**

g. **Construction equipment will employ electric motors when feasible.**

h. **If the requirements detailed above cannot be met, the AQCMM shall certify that a good faith effort was made to meet these requirements and this determination must be approved by the CPM.**

i. **All off-road diesel-fueled engines used in the construction of the facility shall have clearly visible tags issued by the on-site AQCMM showing that the engine meets the conditions set forth herein.**

Verification: The ~~project owner~~ **AQCMM** shall include in the MCR **the following to demonstrate control of diesel construction-related emissions:**

A. ~~(1)~~ a summary of all actions taken to ~~maintain compliance with this condition,~~ **control diesel construction related emissions**;

B. ~~(2) copies of all diesel fuel purchase records,~~ **A list of all heavy equipment used on site during that month, showing the Tier level of each engine and the basis for alternative compliance with this condition for each engine not meeting Part "b". The list shall include the owner of the equipment and a letter from each owner indicating that the equipment has been properly maintained; and**

C. ~~(3) a list of all heavy equipment used on site during that month, including the owner of that equipment and a letter from each owner indicating that equipment has been properly maintained, and~~ **Any other documentation deemed necessary by the CPM and AQCMM to verify compliance with this condition. Such information may be provided via electronic format or disk at the project owner's discretion.**

~~(4) any other documentation deemed necessary by the CPM and AQCMM to verify compliance with this condition. Such information may be provided via electronic format or disk at the project owner's discretion.~~

AQ-SC6 **The project owner shall provide the CPM copies of all District issued Authority-to-Construct (ATC) and Permit-to-Operate (PTO) documents for the facility.** The project owner shall submit to the CPM for review and approval any modification proposed by the project owner to any project air permit. The project owner shall submit to the CPM any modification to any permit proposed by the District or U.S. EPA, and any revised permit issued by the District or U.S. EPA for the project.

Verification: The project owner shall submit any **ATC, PTO, and** proposed air permit modification to the CPM within five working days of its submittal either by 1) the project owner to an agency, or 2) receipt of proposed modifications from an agency. The project owner shall submit all modified air permits to the CPM within 15 days of receipt.

AQ-SC7 The project owner shall submit ~~Quarterly Operational Reports~~ to the CPM **Quarterly Operation Reports,** ~~and District~~ **following the end of each calendar quarter,** that include operational and emissions information as necessary to demonstrate compliance with Conditions **of Certification herein.** ~~**AQ-C10** and **AQ-C11**, and **AQ-1** through **AQ-54**, as applicable.~~ The Quarterly Operational Report ~~will~~ **shall** specifically note or highlight instances of noncompliance~~ and the corrective measures taken to correct these incidents~~.

Verification: The project owner shall submit the Quarterly Operational Reports to the CPM and **APCO** ~~the District~~ no later than 30 days following the end of each calendar quarter.

~~**AQ-SC8** The CPM, in consultation with the District, may approve any change to a Condition of Certification regarding air quality, as an insignificant change, provided that: (1) the project remains in compliance with all applicable laws, ordinances, regulations, and standards, (2) the requested change clearly will not cause the project to result in a significant environmental impact, (3) no additional mitigation or offsets will be required as a result of the change, (4) no existing daily, quarterly, or annual permit limit will be exceeded as a result of the change, and (5) no increase in any daily, quarterly, or annual permit limit will be necessary as a result of the change.~~

~~**Verification:** The project owner shall notify the CPM in writing of any proposed change to a condition of certification pursuant to this condition and shall provide the CPM with any additional information the CPM requests to substantiate the basis for approval.~~

AQ-SC9 The project owner shall surrender the emission offset credits listed below or a modified list, as allowed by this condition, at the time, that surrender is required by Condition **AQ-18**. The ERC list shall contain evidence that the MDAQMD and the U.S. EPA have determined that the ERCs are real, enforceable, surplus, permanent, and quantifiable. The project owner may request CPM approval for any substitutions or modification of credits listed below. The CPM, in consultation with the District and the U.S. EPA, may approve any such change to the ERC list provided that the project remains in compliance with all applicable laws, ordinances, regulations, and standards, the requested change(s) clearly will not cause the project to result in a significant environmental impact, and each requested change is consistent with applicable federal and state laws and regulations.

MDAQMD ERC Source	**ERC Identification**	**NOx (tpy)**	**VOC (tpy)**	**PM10 (tpy)**
CRIT Road Paving	**MDAQMD (pending)**			**126**
Existing ERC Held or Owned by Caithness Blythe II, LLC	**MDAQMD -0058**	**25**		
Existing ERC Held or Owned by Caithness Blythe II, LLC	**MDAQMD -0051**	**175**		
SoCal Gas Compressor Engines	**MDAQMD – 0052**	**250**		

~~**MDAQMD ERC Source**~~	~~**ERC Identification**~~	~~**NOx (tpy)**~~	~~**PM10 (tpy)**~~	~~**SOx (tpy)**~~	~~**VOC (tpy)**~~
~~Colorado River Indian Tribe Road Paving - 3,000 ft Lost Lake Road - 5,280 ft Colorado River Road - 1,000 ft Roadrunner Alley~~	~~MDAQMD (pending)~~	~~0~~	~~126~~	~~0~~	~~0~~
~~SoCal Gas Compressor Engines~~	~~MDAQMD – 0051~~	~~251~~	~~0~~	~~0~~	~~0~~

Note: MDAQMD allows inter-pollutant trading of NOx ~~and PM10~~ ERCs to fully offset VOC ~~and SOx, respectively~~.

Verification: The project owner shall submit to the CPM a list of ERCs to be surrendered to the District at least 60 days prior to construction. The list of ERC's shall include evidence that the U.S. EPA **and California ARB** concur~~s~~ with the determination that the ERCs are valid**, including road-paving**. If the CPM, in consultation with the District, approves a substitution or modification, the CPM shall file a statement of the approval with the Energy Commission docket and mail a copy of the statement to every person on the post-certification mailing list. The CPM shall maintain an updated list of approved ERCs for the project.

AQ-SC10 The ammonia slip shall not exceed 10 ppmv @ 15 percent O_2 averaged over one hour. The SCR ammonia injection grid shall be replaced, repaired or otherwise reconditioned within 12 months of the ammonia slip reaching 5 ppm @ 15 percent O_2 averaged over 24 hours with the following provision. The SCR ammonia injection grid replacement, repair or reconditioning scheduled event shall be canceled if the project owner can demonstrate to the CPM that, subsequent to the initial exceedance, the ammonia slip is remaining below 5 ppm @ 15 percent O_2 averaged over 24 hours and that the initial exceedance was a false trigger.

Protocol: Compliance with ammonia slip limits shall be demonstrated by using the following calculation procedure:

ammonia slip ppmv @ 15% O_2 = ((a - (b x c/1,000,000)) x 1,000,000 / b) x d, where
a = ammonia injection rate (lb/hr) /17 (lb/lb-mol),
b = dry exhaust gas flow rate (lb/hr) /29 (lb/lb-mol),
c = change in measured NOx concentration ppmv at 15% O_2 across catalyst, and
d = correction factor.

The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip.

Verification: The project owner shall include ammonia slip concentrations averaged on an hourly and 24-hour basis calculated via the protocol provided as part of the Quarterly Operational Reports (**AQ-C7**).

The project owner shall notify the CPM within 10 days of an exceedance of the 5-ppm ammonia slip limit herein.

The project owner shall notify the CPM no less than 30 days prior to the scheduled date of the SCR ammonia injection grid replacement, repair, or reconditioning event. If the project owner finds that the exceedance of the 5-ppm ammonia slip limit was a "false trigger" as provided for in this condition, the project owner shall submit all relevant information to the CPM no less than 30 days prior to the scheduled date of the SCR ammonia injection grid replacement, repair or reconditioning event in order to cancel the event.

AQ-SC11 If the project owner does not participate in the voluntary California Climate Action Registry, then the project owner shall report to the CPM the quantity of CO2 emitted on an annual basis as a direct result of facility electricity production.

Verification: Any CO_2 emissions that are reported to the California Climate action Registry or pursuant to this condition shall be reported to the CPM as part of the fourth Quarterly Operational Reports (**AQ-C7**).

DISTRICT DETERMINATION OF COMPLIANCE CONDITIONS (MDAQMD 2010B)

Turbine Power Train Conditions
[Two (2) individual ~~1776~~ 2019.6 MMBtu/hr F Class Gas Turbine Generators]
[MDAQMD Permit Numbers: B008877 and B008878]

~~**MDAQMD Permit Numbers: B008877 and B008878] [Conditions AQ-1 through AQ-28 apply to each combustion turbine, unless otherwise specified.]**~~

AQ-1 Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.

Verification: The project owner shall provide to the District and CPM, 30 days prior to installation of each combustion turbine, manufacturer and design data. A summary of significant operation and maintenance events for each combustion turbine shall be included in the Quarterly Operational Reports (**AQ-SC7**).

AQ-2 This equipment shall be exclusively fueled with pipeline quality natural gas with a sulfur content not exceeding 0.5 grains per 100 dscf on a **twenty-four hour basis and not exceeding 0.25 grains per 100 dscf on a** rolling twelve month average basis, and shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.

Verification: The project owner shall provide in the Quarterly Operational Reports (**AQ-SC7**) either a monthly laboratory analysis showing the fuel sulfur content, a monthly fuel sulfur content report from the fuel supplier(s), or the results from a custom fuel monitoring schedule approved by U.S. EPA for compliance with the fuel monitoring provisions of 40 CFR 60 Subpart GG.

AQ-3 This equipment is subject to the federal NSPS codified at 40 CFR Part 60, Subparts A (General Provisions) and **KKKK (Standards of Performance for New Stationary Gas Turbines)**~~GG (Standards of Performance for Stationary Gas Turbines)~~. This equipment is also subject to the Prevention of Significant Deterioration (40 CFR **52.21**~~51.166~~) and Federal Acid Rain (Title IV) programs. Compliance with all applicable provisions of these regulations is required.

Verification: At least ninety (90) days prior to the first firing of fuel in either turbine, the project owner shall provide the District, CARB and CPM with copies of the federal PSD and Acid Rain permits.

AQ-4 Emissions from this equipment (including its associated duct burner) shall not exceed the following emission limits at any firing rate, except for CO, NOx and VOC during periods of startup, shutdown and malfunction:

a. Hourly rate, computed every 15 minutes, verified by CEMS and annual compliance tests:

i. NOx as NO_2 – **17.9**~~14.82~~ lb/hr (based on 2.0 ppmvd corrected to 15% oxygen and averaged over **one**~~three~~ hour~~s~~)

ii. CO – **10.9**~~18.04~~ lb/hr (based on 2~~4~~.0 ppmvd corrected to 15% oxygen and averaged over ~~24~~ **one** hour~~s~~)

b. Hourly rates, verified by annual compliance tests or other compliance methods in the case of SOx:

i. VOC as CH_4 – 6.3~~2.90~~ lb/hr (based on **2.0 ppmvd** (1**.0** ppmvd **with no duct firing)** corrected to 15% oxygen **and averaged over one hour)**

ii. SOx as SO_2 – 3.3~~2.66~~ lb/hr (based on 0.5 grains/100 dscf fuel sulfur)

iii. PM_{10} – 7.5~~6.0~~ lb/hr

Verification: The project owner shall submit the following in the Quarterly Operational Reports (**AQ-SC7**): All continuous emissions data reduced and reported in accordance with the District approved CEMS protocol; a list of maximum hourly, maximum daily, total quarterly, and total calendar year emissions of NOx, CO, PM10, VOC and SOx (including calculation protocol); and a log of all excess emissions, including the information regarding malfunctions/breakdowns required by District Rule 430. Operating parameters of emission control equipment, including but not limited to ammonia injection rate, NOx emission rate and ammonia slip. Any maintenance to any air pollutant control system (recorded on an as performed basis). Any permanent changes made in the plant process or production that could affect air pollutant emissions, and when the changes were made.

AQ-5 Emissions of CO and NOx from this equipment shall only exceed the limits contained in Condition **AQ-4** during startup and shutdown periods as follows:

a. Startup is defined as the period beginning with ignition and lasting until either the equipment ~~complies with all~~ **has reached** operating permit limits **i.e., the applicable emission limits listed in AQ-4.** ~~specified in Condition AQ-4a for two consecutive 15-minute averaging periods or four hours after ignition, whichever occurs first.~~ **Cold startup is defined as a startup when the CTG has not been in operation during the preceding continuous 48 hours, although a startup after an aborted partial cold start(a cold start that does not reach 85% output) is still considered a cold start. Hot/warm startup is defined as a startup that is not a cold startup.** Shutdown is defined as the period beginning with the lowering of equipment from base load and lasting until fuel flow is completely off and combustion has ceased.

b. ~~The emissions from each startup or shutdown event shall not exceed the following, verified by CEMS:~~

~~i. NOx – 376 lb~~

~~ii. CO 3600 lb~~

Transient conditions shall not exceed the following durations:

i. Cold startup – 180 minutes

ii. Hot/warm startup – 60 minutes

iii. Shutdown – 60 minutes

c. During a cold startup emissions shall not exceed the following, verified by CEMS:

i. NOx – 120.9 lb

ii. CO – 140.4 lb

d. During hot/warm startup emissions shall not exceed the following, verified by CEMS:

i. NOx – 81.9 lb

ii. CO – 58.5 lb

e. During a shutdown emissions shall not exceed the following, verified by CEMS:

i. NOx – 29.7 lb

ii. CO – 25.3 lb

Verification: The project owner shall include a detailed record of each startup and shutdown event in the Quarterly Operational Reports (**AQ-SC7**). Each record shall include, but not be limited to, duration, fuel consumption, total emissions of NOx and CO, and the date and time of the beginning and end of each startup and shutdown event. Additionally, the project owner shall report the total plant operation time (hours), number of startups, hours in cold startup, hours in warm startup, hours in hot startup, hours in shutdown, and average plant operation schedule (hours per day, days per week, weeks per year).

AQ-6 Emissions from this facility, including the duct burners, auxiliary equipment, engine, and cooling towers, shall not exceed the following emission limits, based on a calendar day summary:

a. NOx – **1168**~~2924~~ lb/day, verified by CEMS, compliance tests, hours of operation and/or fuel use as applicable.

b. CO – **892**~~17,016~~ lb/day, verified by CEMS, compliance tests, hours of operation and/or fuel use as applicable.

c. VOC as CH4 – **499**~~187~~ lb/day, verified by compliance tests, and hours of operation in mode

d. SOx as SO2 – **154**~~128~~ lb/day, verified by fuel sulfur content and fuel use data.

e. PM_{10} – 380~~336~~ lb/day, verified by compliance tests and hours of operation.

Verification: The project owner shall submit in the Quarterly Operational Reports (**AQ-SC7**) the information required by **AQ-4** and a calendar day summary of emissions demonstrating compliance with these limits.

AQ-7 Emissions from this facility, including the duct burners**, auxiliary equipment, engine,** and cooling towers~~,~~ shall not exceed the following emission limits, based on a rolling 12 month summary:

a. NOx – **169.4**~~202~~ tons/year, verified by CEMS**, compliance tests, hours of operation and/or fuel use as applicable.**

b. CO – **110.7**~~685~~ tons/year, verified by CEMS**, compliance tests, hours of operation and/or fuel use as applicable.**

c. VOC as CH4 – **51.9**~~25~~ tons/year, verified by compliance tests and hours of operation in mode

d. SOx as SO2 – **13.3**~~23~~ tons/year, verified by fuel sulfur content and fuel use data

e. PM10 – **60.9**~~61~~ tons/year, verified by compliance tests and hours of operation.

Verification: The project owner shall submit in the Quarterly Operational Reports (**AQ-SC7**) the information required by **AQ-4** and a rolling 12 month summary of emissions demonstrating compliance with these limits.

AQ-8 Particulate emissions from this equipment shall not exceed an opacity equal to or greater than twenty percent (20%) for a period aggregating more than three (3) minutes in any one (1) hour, excluding uncombined water vapor. **(Rule 401 – *Visible Emissions*)**

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB and Energy Commission upon request.

AQ-9 This equipment shall exhaust through a stack at a minimum height of 130 feet.

Verification: At least 60 days prior to stack fabrication ~~Prior to the first firing of natural gas in either turbine~~ the project owner shall provide to the District and the CPM ~~as-built~~ drawings of the stack or other suitable proof of the minimum stack height.

AQ-10 The project owner shall not operate this equipment after the initial commissioning period without the **oxidation catalyst with valid District permit C00nnnn and** selective catalytic ~~NOx~~ reduction system with valid District permit**s'** C00nnnn#~~C008881 or C008882~~ installed ~~and fully functional~~.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB and the Energy Commission upon request.

AQ-11 The project owner shall provide stack sampling ports and platforms necessary to perform source tests required to verify compliance with District rules, regulations and permit conditions. The location of these ports and platforms shall be subject to District approval.

Verification: At least 60 days prior to stack fabrication ~~Prior to the first firing of natural gas in either turbine~~ the project owner shall provide to the District and the CPM ~~as-built~~ drawings of the stack or other suitable documentation of the correct and complete installation of all necessary sampling ports and access platforms.

AQ-12 Emissions of NOx, CO, oxygen and ammonia slip shall be monitored using a Continuous Emissions Monitoring System (CEMS). Turbine fuel consumption shall be monitored using a continuous monitoring system. Stack gas flow rate shall be monitored using either a Continuous Emission Rate Monitoring System (CERMS) meeting the requirements of 40 CFR 75 Appendix A or a stack flow rate calculation method. The project owner shall install, calibrate, maintain, and operate these monitoring systems according to a District-approved monitoring plan and MDAQMD Rule 218, **40 CFR 60 and/or 40 CFR 75 as applicable. Note; Where 40 CFR 60 and 40 CFR 75 are applicable but inconsistent, 40 CFR 75 shall take precedent.** ~~and they shall be installed prior to initial equipment startup.~~

Verification: Six (6) months prior to monitoring system installation, the project owner shall submit a monitoring plan for District review and approval. The project owner shall provide the CPM documentation of the District's approval of the CEMS, continuous fuel monitoring system, and CERMS, within 15 days of its receipt. The project owner shall make the site available for inspection of the CEMS by representatives of the District, CARB and the Energy Commission.

AQ-13 The project owner shall conduct all required compliance/certification tests in accordance with a District-approved test plan. **Thirty(30) days prior to the compliance/certification tests the project owner shall provide a written test plan for District review and approval. Written notice of the compliance/certification test shall be provided to the District ten (10) days prior to the tests so that an observer may be present. A written report with the results of such compliance/ certification tests shall be submitted to the District within forty-five (45) days after testing.**

Verification: Thirty (30) days prior to the compliance/certification tests, the project owner shall provide **the District and CPM test plan, including test dates. Documentation of the District's approval of the test plan should be provided to the CPM within 15 days of its receipt.** ~~a written test plan for District review and approval. The project owner shall provide the CPM documentation of the District's approval of the test plan within 15 days of its receipt.~~ Written notice of the compliance/certification test shall be provided to the District and CPM ten (10) days prior to the tests**.** ~~so that an observer may be present.~~ A written report with the results of such compliance/certification tests shall be submitted to the District and CPM within forty-five (45) days after testing.

AQ-14 The project owner shall perform the following annual compliance tests in accordance with the MDAQMD Compliance Test Procedural Manual. **The test report shall be submitted to the District no later than six weeks prior to the expiration date of this permit.** The following compliance tests are required **at full load**:

a. NOx as NO2 in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Methods 19 and 20).

b. VOC as CH4 in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Methods 25A and 18).

c. SOx as SO2 in ppmvd at 15% oxygen and lb/hr **(measured per USEPA Reference method 6 or equivalent).**

d. CO in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Method 10).

e. PM_{10} in mg/m^3 at 15% oxygen and lb/hr (measured per USEPA Reference Methods 5 and 202 or CARB Method 5).

f. Flue gas flow rate in **dscf per minute (measured per USEPA Reference Methods 1 and 2)**.~~DSCFM.~~

g. Opacity (measured per USEPA reference Method 9).

h. Ammonia slip in ppmvd at 15% oxygen.

Verification: The project owner shall notify the District and CPM at least 30 days prior to annual source tests. The annual source test report shall be submitted to the District and CPM no later than six (6) weeks prior to the expiration date of the District permit.

AQ-15 The project owner shall, at least as often as once every five years (commencing with the initial compliance test), include the following supplemental source tests in the annual compliance testing:

a. Characterization of cold startup VOC emissions;

b. Characterization of **hot/**warm startup VOC emissions; **and**

~~c. Characterization of hot startup VOC emissions; and~~

c~~d~~. Characterization of shutdown VOC emissions.

Verification: Each annual source test report (**AQ-14**) shall either include the results of these tests for the current year or document the date and results of the most recent ~~last such~~ tests.

AQ-16 Continuous monitoring systems shall meet the following acceptability testing requirements from 40 CFR 60 Appendix B **(or otherwise District approved)**:

a. For NOx, Performance Specification 2.

b. For **O_2**~~oxygen~~, Performance Specification 3.

c. For CO, Performance Specification 4.

d. For stack gas flow rate, Performance Specification 6 (if CERMS is installed).

e. For ammonia, a District approved procedure that is to be submitted by the project owner.

f. For stack gas flow rate (without CERMS), a District approved procedure that is to be submitted by the project owner.

Verification: The project owner shall provide the CPM documentation of the District's approval of the continuous monitoring systems, within 15 days of its receipt. The project owner shall make the site available for inspection of the continuous monitoring systems by representatives of the District, CARB and the Energy Commission.

AQ-17 The project owner shall submit to the APCO and USEPA Region IX the following information for the preceding calendar quarter by January 30, April 30, July 30 and October 30 of each year this permit is in effect. Each January 30 submittal shall include a summary of the reported information for the previous year. This information shall be maintained on site **and current** for a minimum of five (5) years and shall be provided to District personnel on request:

a. Operating parameters of emission control equipment, including but not limited to ammonia injection rate, NOx emission rate and ammonia slip.

b. Total plant operation time (hours), **duct burner operation time (hours),** number of startups, hours in cold startup, hours in **hot/**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 monthly~~quarterly~~, and **cumulative 12-month** ~~total calendar year~~ emissions of NOx, CO, PM10, VOC and SOx (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 USEPA for compliance with the fuel monitoring provisions of 40 CFR 60 Subpart GG)~~

h. A log of all excess emissions, including the information regarding malfunctions/breakdowns required by Rule 430.

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).

Verification: The project owner shall provide this information to the District and CPM in the Quarterly Operational Reports (**AQ-SC7**).

AQ-18 The project owner must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the operator shall obtain **169.4**~~202~~ tons of NOx, **51.9**~~49~~ tons of VOC, ~~47 tons of SOx,~~ and **60.9**~~61~~ tons of PM10 offsets ~~(Subject to U.S. EPA approval, NOx ERCs may be substituted for VOC ERCs at a rate of 1.0:1, and PM_{10} ERCs may be substituted for SOx ERCs at a rate of 1.0:1). The interpollutant offset ratios shall be approved by the U.S. EPA in conformance with District Rule 1305(B)(6)(a).~~

Verification: The project owner must submit all ERC documentation to the District and the CPM prior to the start of construction. ~~If interpollutant offsets are used, the project owner shall provide evidence of U.S. EPA approval of such interpollutant offset ratios to the CPM prior to the start of construction.~~

AQ-19 During an initial commissioning period of no more than 180 days, commencing with the first firing of fuel in this equipment, NOx, CO, VOC and ammonia concentration limits shall not apply. The project owner shall minimize emission of NOx, CO, VOC and ammonia to the maximum extent possible during the initial commissioning period.

Verification: During the initial commissioning period, the project owner shall submit a detailed record of all commissioning activities to the CPM in the Monthly Compliance Report.

AQ-20 The project owner shall tune each CTG and HRSG to minimize emissions of criteria pollutants at the earliest feasible opportunity in accordance with the

recommendations of the equipment manufacturers and the construction contractor.

Verification: At the end of ~~During~~ the initial commissioning period **and as needed after major maintenance,** the project owner shall submit a detailed record of all commissioning **and tuning** activities to the CPM in the **Quarterly Operational Report (AQ-SC7)**~~Monthly Compliance Report~~.

AQ-21 The project owner shall install, adjust and operate each SCR system to minimize emissions of NOx from the CTG and HRSG at the earliest feasible opportunity in accordance with the recommendations of the equipment manufacturers and the construction contractor. The NOx **concentration limit of AQ-4 above** and ammonia concentration limit~~s~~ **of AQ-4 of the SCR system** shall apply coincident with the steady state operation of the SCR systems.

Verification: At the end of ~~During~~ the initial commissioning period **and as needed after major maintenance,** the project owner shall submit a detailed record of all commissioning **and tuning** activities to the CPM in the **Quarterly Operational Report (AQ-SC7)**~~Monthly Compliance Report~~.

AQ-22 The project owner shall submit a commissioning plan to the District and the Energy Commission at least four weeks prior to the first firing of fuel in this equipment. The commissioning plan shall describe the procedures to be followed during the commissioning of the CTGs, HRSGs and steam turbine. The commissioning plan shall include a description of each commissioning activity, the anticipated duration of each activity in hours, and the purpose of the activity. The activities described shall include, but not be limited to, the timing of the dry low NOx combustors, the installation and testing of the CEMS, and any activities requiring the firing of the CTGs and HRSGs without abatement by an SCR system.

Verification: At least four (4) weeks prior to the first firing of natural gas in either turbine, the project owner shall submit a detailed Initial Commissioning Plan to the District and the CPM. This plan should provide detailed technical information regarding initial commissioning in a format that facilitates technical verification.

AQ-23 The total number of firing hours of each CTG and HRSG without abatement of NOx by the SCR shall not exceed **734**~~350~~ hours during the initial commissioning period. Such operation without NOx abatement shall be limited to discrete commissioning activities that can only be properly executed without the SCR system in place and operating. Upon completion of these activities, the project owner shall provide written notice to the District and Energy Commission and the unused balance of the unabated firing hours shall expire.

Verification: During the initial commissioning period, the project owner shall submit a detailed record of all commissioning activities to the CPM in the Monthly Compliance Report.

AQ-24 During ~~a~~ **the initial commissioning** period~~, that includes a portion of the initial commissioning period,~~ emissions from this facility shall not exceed the following ~~CO~~ emission limits (verified by CEMS): ~~421 tons/year (rolling 12 month summary), 44,000 pounds/calendar day and 3700 pounds/hour.~~

a. NOx – 25.5 tons, and 193.5 pounds/hour/CTG

b. CO – 203.5 tons, and 2713.0 pounds/hour/CTG

Verification: During the initial commissioning period, the project owner shall submit a detailed record of all commissioning activities to the CPM in the Monthly Compliance Report. In addition, after the end of the initial commissioning period the project owner shall continue to report the above data in the Quarterly Operational Report (**AQ-SC7**) for as long as monitoring period includes a portion of the initial commissioning period.

~~**AQ-25** During a period that includes a portion of the initial commissioning period, prior to the steady state operation of the SCR system, emissions from this facility shall not exceed the following NOx emission limits (verified by CEMS): 273 tons/year (rolling 12 month summary), 22,000 pounds/calendar day and 1000 pounds/hour.~~

~~**Verification:** During the initial commissioning period, the project owner shall submit a detailed record of all commissioning activities to the CPM in the Monthly Compliance Report.~~

~~In addition, after the end of the initial commissioning period the project owner shall continue to report the above data in the Quarterly Operational Report (**AQ-C7**) for as long as monitoring period includes a portion of the initial commissioning period.~~

AQ-26 Within 60 days after achieving the maximum firing rate at which the facility will be operated, but not later than 180 days after initial startup, the operator shall perform an initial compliance test. This test shall demonstrate that this equipment is capable of operation at 100% load in compliance with the emission limits in Condition **AQ-4**.

Verification: Thirty (30) days prior to the initial compliance test, the project owner shall provide a written test plan for District review and approval. The project owner shall provide the CPM documentation of the District's approval of the test plan within 15 days of its receipt. Written notice of the initial compliance test shall be provided to the District and CPM ten (10) days prior to the tests so that an observer may be present. A written report with the results of such initial compliance tests shall be submitted to the District and CPM within forty-five (45) days after testing.

AQ-27 The initial compliance test shall include tests for the following. The results of the initial compliance test shall be used to prepare a supplemental health risk analysis **if required by the District**:

a. Formaldehyde;

b. Certification of CEMS and CERMS (or stack gas flow calculation method) at 100% load, startup modes and shutdown mode;

c. Characterization of cold startup VOC emissions;

d. Characterization of **hot/**warm startup VOC emissions; **and**

~~e. Characterization of hot startup VOC emissions; and~~

f. Characterization of shutdown VOC emissions.

Verification: The results of the initial compliance test (see **AQ-26**) and a supplemental health risk analysis shall be submitted to the District and the CPM within forty-five (45) days after testing.

~~**AQ-28** The project owner shall provide sufficient space and appurtenances within the Heat Recovery Steam Generator to allow the subsequent installation of a high temperature oxidation catalyst.~~

~~**Verification:** The project owner shall provide to the District and CPM, 30 days prior to installation of each HRSG, manufacturer and design data showing this feature.If any VOC or CO limit specified by the above conditions is violated, within six (6) weeks the project owner shall submit a plan to install an oxidation catalyst. The catalyst shall be installed and operational within six (6) months of the violation.~~

AQ-55 This unit shall emit no more than 0.25 pounds/hour of formaldehyde (measured per California Air Resources Board Method 430) at full load.

Verification: The results of the initial compliance test (see AQ-26) and a supplemental health risk analysis (see AQ-27) shall be submitted to the District and the CPM within forty-five (45) days after testing.

AQ-56 Total emissions of Hazardous Air Pollutants or HAP (as defined in Rule 1320) from this facility shall not exceed 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs, calculated on a rolling twelve month basis.

Verification: The project owner shall submit in the health risk analysis (AQ-27) the information and a rolling 12 month summary of emissions demonstrating compliance with these limits.

HRSG Duct Burner Conditions
Two (2) Individual 221.6~~132~~ MMBTU/HR Natural Gas Duct Burners
[MDAQMD Permit Numbers: B008879 AND B008880]

AQ-29 Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.

Verification: The project owner shall provide to the District and CPM, 30 days prior to installation of each duct burner system, manufacturer and design data. A summary of significant operation and maintenance events for each duct burner system shall be included in the Quarterly Operational Reports (**AQ-SC7**).

AQ-30 This equipment shall be exclusively fueled with **pipeline quality** natural gas and shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB, and Energy Commission. A summary of significant operation and maintenance events for each duct burner system shall be included in the Quarterly Operational Reports (**AQ-SC7**).

AQ-31 The duct burner shall not be operated unless the combustion turbine generator with valid District permit # B08877 or B08878 and selective catalytic NOx reduction system with valid District permit # C008881 or C008882 are in operation.

Verification: A summary of fuel use and equipment operation for each duct burner shall be included in the Quarterly Operational Reports (**AQ-SC7**).

~~**AQ-32** Fuel use by this equipment shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to District personnel on request.~~

~~**Verification:** The above information shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to District or Commission personnel upon request.~~

AQ-57 This equipment shall not be operated for more than 2200 hours per rolling twelve month period.

Verification: The project owner shall maintain a log of the monthly hours of operation for this equipment. This information shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to District and Energy Commission personnel upon request.

AQ-58 Monthly hours of operation for this equipment shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to District personnel on request.

Verification: The above information shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to District and Energy Commission personnel upon request.

Selective Catalytic NOx Reduction System Conditions
[Two (2) Individual SCR Systems]
[MDAQMD Permit Numbers: C008881 and C008882]

AQ-33 Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.

Verification: The project owner shall provide to the District and CPM, 30 days prior to installation of each selective catalytic reduction system, manufacturer and design data. ~~A summary of significant operation and maintenance events for each selective catalytic reduction system shall be included in the Quarterly Operational Reports (**AQ-C7**).~~

AQ-34 This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.

Verification: A summary of significant operation and maintenance events for each selective catalytic reduction system shall be included in the Quarterly Operational Reports (**AQ-SC7**).

AQ-35 This equipment shall be operated concurrently with the combustion turbine generator with valid MDAQMD permit # B008877 or B008878.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB and Energy Commission upon request.

AQ-36 Ammonia shall be injected whenever the selective catalytic reduction system has reached or exceeded 550° Fahrenheit except for periods of equipment malfunction. Except during periods of startup, ~~and~~ shutdown, **and malfunction,** ammonia slip shall not exceed **5**~~10~~ ppmvd (corrected to 15% oxygen), averaged over **three**~~one~~ hour**s**.

Verification: The project owner shall maintain a log of the SCR temperatures and the commencement of ammonia injection times. This information shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to District and Energy Commission personnel upon request.

~~**AQ-37** Ammonia injection by this equipment in pounds per hour shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to MDAQMD personnel on request.~~

~~**Verification:** The above information shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to District and Commission personnel upon request.~~

AQ-59 The project owner shall record and maintain for this equipment the following on site for a minimum of five (5) years and shall be provided to District personnel upon request.

a. Ammonia injection, in pounds per hour

b. Temperature, in degrees Fahrenheit.

Verification: The above information shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to District and Energy Commission personnel upon request.

Oxidation Catalyst System Conditions
[Two (2) individual oxidation catalyst systems]
[MDAQMD Application Number: 0010949 and 0010950]

AQ-60 Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.

Verification: The project owner shall provide to the District and CPM, 30 days prior to installation of each oxidation catalyst system, manufacturer and design data.

AQ-61 This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.

Verification: A summary of significant operation and maintenance events for each oxidation catalyst system shall be included in the Quarterly Operational Reports (AQ-SC7).

AQ-62 This equipment shall be operated concurrently with the combustion turbine generator with valid District permit B008877 or B008878.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB and Energy Commission upon request.

Cooling Tower Conditions
[One Cooling Tower; MDAQMD Permit Number: B008884]

AQ-38 Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.

Verification: The project owner shall provide to the District and CPM, 30 days prior to installation of each cooling tower, manufacturer and design data. A summary of significant operation and maintenance events for each cooling tower shall be included in the Quarterly Operational Reports (**AQ-SC7**).

AQ-39 This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.

Verification: A summary of significant operation and maintenance events for each cooling tower shall be included in the Quarterly Operational Reports (**AQ-SC7**).

AQ-40 The drift rate shall not exceed 0.0005~~6~~ percent with a maximum circulation rate of **108,000**~~146,000~~ gallons per minute (gpm). ~~and the maximum Total Dissolved Solids shall not exceed 8190 ppm.~~ The maximum hourly PM10 emission rate ~~from this device and the evaporative condenser~~ shall not exceed **1.37**~~2.00~~ pounds per hour, as calculated per the written District approved protocol.

Verification: Compliance documentation in accordance with the written District approved protocol shall be submitted to the District and the CPM.

AQ-41 The operator shall perform weekly tests of the blow-down water ~~quality~~ **total dissolved solids (TDS). The average TDS shall not exceed 5050 ppm on a calendar monthly basis.** The operator shall maintain a log that contains the date and result of each blow-down water ~~quality~~ test **in TDS ppm**, and the resulting mass emission rate. This log shall be maintained on site for a minimum of five (5) years and shall be provided to District personnel on request. **The District may allow monthly testing in the future.**

Verification: A summary of the results of the weekly blow-down water ~~quality~~ tests **in TDS ppm** and the results of the mass emission rate calculations shall be submitted in the Quarterly Operational Reports (**AQ-SC7**).

AQ-42 The operator shall conduct all required cooling tower water quality tests in accordance with a District-approved test and emissions calculation protocol. Thirty (30) days prior to the first such test the operator shall provide a written test and emissions calculation protocol for District review and approval.

Verification: Thirty (30) days prior to the first such test the operator shall provide a written test and emissions calculation protocol for District and CPM review.

AQ-43 A maintenance procedure shall be established that states how often and what procedures will be used to ensure the integrity of the drift eliminators. This procedure is to be kept on-site and available to District personnel on request.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB and the Energy Commission upon request.

~~**ONE EVAPORATIVE CONDENSER (INLET CHILLER)**~~
~~**[MDAQMD PERMIT NUMBER: B008883]**~~

Auxiliary Boiler Conditions
[One 60 MMBtu/hr Gas Fired Auxiliary Boiler]
[MDAQMD Application Number: 0010864]

AQ-44 Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.

Verification: The project owner shall provide to the District and CPM, 30 days prior to installation of each cooling tower, manufacturer and design data. A summary of significant operation and maintenance events for each cooling tower shall be included in the Quarterly Operational Reports (**AQ-SC7**).

AQ-45 This equipment shall be **exclusively fueled with pipeline quality natural gas and shall be** operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB, and Energy Commission. A summary of significant operation and maintenance events for **the auxiliary boiler** ~~each cooling tower~~ shall be included in the Quarterly Operational Reports (**AQ-SC7**).

~~**AQ-46** The drift rate shall not exceed 0.0006 percent with a maximum circulation rate of 17,000 gallons per minute (gpm), and the maximum Total Dissolved Solids shall not exceed 8190 ppm. The maximum hourly PM_{10} emission rate from this device and the cooling tower shall not exceed 2.00 pounds per hour, as calculated per the written District-approved protocol.~~

~~**Verification:** Compliance documentation in accordance with the written District approved protocol shall be submitted to the District and the CPM.~~

~~**AQ-47** The operator shall perform weekly tests of the blow-down water quality. The operator shall maintain a log that contains the date and result of each blow-down water quality test, and the resulting mass emission rate. This log shall be maintained on site for a minimum of five (5) years and shall be provided to District personnel on request.~~

~~**Verification:** A summary of the results of the weekly blow-down water quality tests and the results of the mass emission rate calculations shall be submitted in the Quarterly Operational Reports (**AQ-C7**).~~

~~**AQ-48** The operator shall conduct all required cooling tower water quality tests in accordance with a District-approved test and emissions calculation protocol. Thirty (30) days prior to the first such test the operator shall provide a written test and emissions calculation protocol for District review and approval.~~

~~**Verification:** Thirty (30) days prior to the first such test the operator shall provide a written test and emissions calculation protocol for District and CPM review.~~

~~**AQ-49** A maintenance procedure shall be established that states how often and what procedures will be used to ensure the integrity of the drift eliminators. This procedure is to be kept on-site and available to District personnel on request.~~

~~**Verification:** The project owner shall make the site available for inspection by representatives of the District, CARB and the Commission upon request.~~

AQ-63 This equipment is subject to the Federal NSPS codified at 40 CFR Part 60, Subparts A (General Provisions) and Db (Industrial-Commercial-Institutional Steam Generating Units).

Verification: The project owner shall submit auxiliary boiler specifications at least 30 days prior to purchasing auxiliary boiler for review and approval demonstrating that the auxiliary boiler meets NSPS emission limit requirements at the time of engine purchase.

AQ-64 Emissions from this equipment shall not exceed the following hourly emission limits at any firing rate, verified by fuel use and annual compliance tests (initial compliance test with respect to VOC, SOx, and PM_{10}):

a. NOx as NO_2 – 0.550 lb/hr (based on 9.0 ppmvd corrected to 3% O_2 and averaged over one hour)

b. CO – 1.853 lb/hr (based on 50 ppmvd corrected to 3% O_2 and averaged over one hour)

c. VOC as CH_4 – 0.110 lb/hr

d. SOx as SO_2 – 0.141 lb/hr (based on 0.5 grains/100 dscf fuel sulfur)

e. PM_{10} – 0.270 lb/hr (front and back half)

Verification: The project owner shall submit the following in the Quarterly Operational Reports (AQ-SC7): All continuous emissions data reduced and reported in accordance with the District approved CEMS protocol; a list of maximum hourly, maximum daily, total quarterly, and total calendar year emissions of NOx, CO, PM10, VOC and SOx (including calculation protocol); and a log of all excess emissions, including the information regarding malfunctions/breakdowns required by District Rule 430. Operating parameters of emission control equipment, including but not limited to ammonia injection rate, NOx emission rate and ammonia slip. Any maintenance to any air pollutant control system (recorded on an as-performed basis). Any permanent changes made in the plant process or production that could affect air pollutant emissions, and when the changes were made.

AQ-65 This equipment shall not be operated for more than 1500 hours per rolling twelve month period.

Verification: The project owner shall maintain a log of the monthly hours of operation for this equipment. This information shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to District and Energy Commission personnel upon request. A summary of operation of this equipment shall be included in the Quarterly Operational Reports (AQ-SC7).

AQ-66 A non-resettable four-digit (9,999) hour timer shall be installed and maintained on this unit to indicate elapsed engine operating time.

Verification: At least 30 days prior to the installation of the engine, the project owner shall provide the District and the CPM the specification of the hour timer. A dated photograph showing cumulative hours of operation shall be included in the Quarterly Operational Reports (AQ-SC7).

AQ-67 The project owner shall maintain an operations log for this equipment on-site and current for a minimum of five (5) years, and said log shall be provided to District and Energy Commission personnel on request. The operations log shall include the following information at a minimum:

a. Total operation time (hours per month, by month);

b. Maximum hourly, maximum daily, monthly, and rolling 12 month emissions of NOx, CO, PM10, VOC and SOx (including calculation protocol); and,

c. Any permanent changes made to the equipment that would affect air pollutant emissions, and indicate when changes were made.

Verification: The above information shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to District and Energy Commission personnel upon request.

AQ-68 The project owner shall perform the following annual compliance tests on this equipment in accordance with the MDAQMD Compliance Test Procedural Manual. The test report shall be submitted to the District and Commission no later than six weeks prior to the expiration date of this permit. The following compliance tests are required:

a. NOx as NO2 in ppmvd at 3% oxygen and lb/hr (measured per USEPA Reference Methods 19 and 20).

b. CO in ppmvd at 3% oxygen and lb/hr (measured per USEPA Reference Method 10).

Verification: The annual compliance test report shall be submitted to the District and Energy Commission no later than six (6) weeks prior to the expiration date of the District permit.

Emergency Fire Pump Conditions
[One Emergency IC Engine Driving A Fire Pump]
[MDAQMD Permit Number: E008885]

~~**AQ-50** Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.~~

~~**Verification:** The project owner shall provide to the District and CPM, 30 days prior to installation of the fire pump engine, manufacturer and design data. A summary of significant operation and maintenance events for the fire pump engine shall be included in the Quarterly Operational Reports (**AQ-C7**).~~

~~**AQ-51** This equipment shall be installed, operated and maintained in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of contaminants.~~

~~**Verification:** A summary of significant operation and maintenance events for the fire pump engine shall be included in the Quarterly Operational Reports (**AQ-C7**).~~

~~**AQ-52** This unit shall be limited to use for emergency fire fighting, and as part of a testing program that does not exceed 60 minutes of testing operation per week (up to two hours once per year for annual testing and up to four hours once every three years for triennial testing).~~

~~**Verification:** The project owner shall make the fire pump engine operating records available for inspection by representatives of the District, CARB and the Commission upon request. The information shall be maintained on-site for a minimum of five years and shall be provided to District and/or Commission personnel on request.~~

~~**AQ-53** The project owner shall use only diesel fuel whose sulfur concentration is less than or equal to 0.05% on a weight per weight basis in this unit.~~

~~**Verification:** The project owner shall make fuel purchase, MSDS or other fuel supplier records containing diesel fuel sulfur content available for inspection by representatives of the District, CARB and the Commission upon request.~~

~~**AQ-54** The project owner shall maintain a log for this unit, which, at a minimum, contains the information specified below. This log shall be maintained current and on-site for a minimum of five (5) years and shall be provided to District personnel on request:~~

~~a. Date of each test;~~

~~b. Duration of each test in minutes;~~

~~c. Annual operation summary, in calendar year fuel consumption (gallons) or hours; and,~~

~~d. Fuel sulfur concentration (the project owner may use the supplier's certification of sulfur content if it is maintained as part of this log).~~

~~**Verification:** The project owner shall make the fire pump engine operating records available for inspection by representatives of the District, CARB and the Commission upon request.~~

AQ-69 This equipment shall be installed, operated and maintained in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of contaminants. Unless otherwise noted, this equipment shall also be operated in accordance with all data and specifications submitted with the application for this permit.

Verification: A summary of significant operation and maintenance events for the fire pump engine shall be included in the Quarterly Operational Reports (AQ-SC7).

AQ-70 This unit shall only be fired on ultra-low sulfur diesel fuel, whose sulfur concentration is less than or equal to 0.0015% (15 ppm) on a weight per weight basis per CARB Diesel or equivalent requirements.

Verification: The project owner shall make fuel purchase, MSDS or other fuel supplier records containing diesel fuel sulfur content available for inspection by representatives of the District, CARB and the Energy Commission upon request.

AQ-71 A non-resettable four-digit (9,999) hour timer shall be installed and maintained on this unit to indicate elapsed engine operating time.

Verification: At least 30 days prior to the installation of the engine, the project owner shall provide the District and the CPM the specification of the hour timer. A

dated photograph showing cumulative hours of operation shall be included in the Quarterly Operational Reports (AQ-SC7).

AQ-72 This unit shall be limited to emergency use defined as the pumping of water for fire suppression or protection or the pumping of water to maintain pressure in the water distribution system due to a high demand on the water supply system due to high use of water for fire suppression. In addition, this unit shall be operated no more than 50 hours per year for testing and maintenance including requirements pursuant to the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," 1998 edition.

Verification: The project owner shall make the fire pump engine operating records available for inspection by representatives of the District, CARB and the Energy Commission upon request. The information shall be maintained on-site for a minimum of five years and shall be provided to District and/or Energy Commission personnel on request.

AQ-73 The project owner shall maintain an operations log for this unit current and on-site, either at the engine location or at a on-site location, for a minimum of five (5) years, and be made available to the District staff within 5 working days from the District's request, and this log shall be provided to District, State and Federal personnel upon request. The log shall include, at a minimum, the information specified below:

a. Date of each use and duration of each use (in hours);

b. Reason for use (testing & maintenance, emergency, required emission testing);

c. Calendar year operation in terms of fuel consumption (in gallons) and total hours; and,

d. Fuel sulfur concentration (the owner/operator may use the supplier's certification of sulfur content if it is maintained as part of this log).

Verification: The project owner shall make the fire pump engine operating records available for inspection by representatives of the District, CARB and the Energy Commission upon request.

AQ-74 This equipment shall exhaust through a stack at a minimum height of 30 feet.

Verification: The project owner shall make the site available for inspection of equipment and records by representatives of the District, CARB, and the Energy Commission.

AQ-75 This equipment shall not be tested during periods of startup of the combustion turbine generators.

Verification: The project owner shall make the site available for inspection of records and equipment by representatives of the District, CARB, and the Energy Commission.

AQ-76 This unit is subject to the requirements of the Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines (Title 17 CCR 93115). In the event of conflict between these conditions and the ATCM, the more stringent requirements shall govern.

Verification: The project owner shall submit the engine specifications at least 30 days prior to purchasing the engines for review and approval demonstrating that the engines meet ATCM emission limit requirements at the time of engine purchase.

HAZARDOUS MATERIALS MANAGEMENT CONDITIONS OF CERTIFICATION

~~**HAZ-8** The project owner shall develop and implement an Ammonia Refrigeration Hazard Reduction Plan. This plan shall include procedures, protective equipment requirements, training and a checklist, as described in the August 2001 EPA Chemical Safety Alert. It shall also include a section describing all measures to be implemented to prevent the leaking of anhydrous ammonia from the refrigeration system. This plan shall also incorporate recommended practices as found in ANSI Standards 15-2001 and 34-2001 and the ASHRAE Position Document on Ammonia As A Refrigerant (January 17, 2002). The project owner shall also include appropriate elements of the Cal-OSHA Process Safety Management standard (8 CCR section 5189).~~

~~**Verification:** At least sixty (60) days prior to the delivery of anhydrous ammonia to the facility, the project owner shall provide a safety management plan as described above to the CPM for review and approval.~~

~~**HAZ-10** The project owner shall install an approved automatic fire suppression system in the ammonia refrigeration plant.~~

~~**Verification:** At least sixty (60) days prior to delivery of anhydrous ammonia to the facility, the project owner shall provide final design drawings and specification for the fire protection system approved by a registered Safety Engineer to the CPM for review and approval.~~

~~**HAZ-11** The project owner shall install an ammonia sensor on the discharge from the scrubber on the anhydrous ammonia refrigeration unit containment building that can be remotely read in the power plant control room and remotely read by a laptop computer operated by power plant personnel, the Blythe Fire Department and the Riverside County Fire Department. This sensor and all other sensors located inside the containment building shall be able to detect ammonia~~

~~concentrations within a range of at least 10 to 20,000 ppm and shall be reported to the power plant control room on a real-time recordable basis.~~
~~Additionally, the project owner shall:~~

1. ~~Perform a process safety evaluation of hazards associated with the chilling system and provide anhydrous ammonia release prevention features for the chilling system equipment and containment structure to enhance the safety of operators and emergency response personnel;~~
2. ~~Require that any routine maintenance or repair work on the anhydrous ammonia refrigeration unit is conducted only during normal daytime work hours;~~
3. ~~Require that maintenance or repair on any filter train be conducted only under lockout/tagout safety procedures;~~
4. ~~Provide handheld ammonia vapor detectors and direct that they be used by workers whenever entering the ammonia refrigeration unit containment building; and~~
5. ~~Conduct joint training and exercises at least annually with the Blythe Fire Department, the Riverside County Fire Department, the Riverside County Hazardous Materials Response Team, the Blythe Police Department, and site staff.~~

~~**Verification:** At least sixty (60) days prior to delivery of anhydrous ammonia to the facility, the project owner shall provide the final design drawings and specification for the above systems, the results and recommendations of the process safety evaluation of hazards associated with the chilling system, and an agreement with the Blythe Fire Department, the Riverside County Fire Department, the Riverside County Hazardous Materials Response Team, and the Blythe Police Department to conduct joint training and exercises with site personnel at least annually to the CPM for review and approval.~~

HAZ-12 The project owner shall not conduct or allow any fuel gas pipe cleaning activities on the site involving fuel gas pipe of four-inches or greater external diameter, either before placing the pipe into service or at any time during the lifetime of the facility, that involve "flammable gas blows" where natural (or flammable) gas is used to blow out debris from piping and then vented to atmosphere. Instead, an inherently safer method involving a non-flammable gas (e.g. air, nitrogen, steam) or mechanical pigging shall be used. The project owner shall prepare a Fuel Gas Pipe Cleaning Work Plan which shall be consistent with NFPA 56 and which shall indicate the method of cleaning to be used, what gas will be used, the source of pressurization, and whether a mechanical PIG will be used, and submit this Plan to the CBO for information, to the Riverside County Fire Department for review and comment, and to the CPM for review and approval. Exceptions to any of these provisions will be made only if no other satisfactory method is available, and then only with the approval of the CPM after review and comment from the CBO and the Riverside County Fire Department.

Verification: **At least 30 days before any fuel gas pipe cleaning activities involving pipe of four-inches or greater external diameter, the project owner shall submit a copy of the Fuel Gas Pipe Cleaning Work to the CBO for information, to the Riverside County Fire Department for review and comment, and to the CPM for review and approval.**

TRANSMISSION SYSTEM ENGINEERING CONDITIONS OF CERTIFICATION

TSE-1 The project owner shall furnish to the CPM and to the CBO a schedule of transmission facility design submittals, a Master Drawing List, a Master Specifications List, and a Major Equipment and Structure List ~~for the BEP II transmission facilities to the first point of interconnection at the Buck Blvd Substation~~. The schedule shall contain a description and list of proposed submittal packages for design, calculations, and specifications for major structures and equipment. To facilitate audits by Energy Commission staff, the project owner shall provide designated packages to the CPM when requested. This condition applies only to the power plant Integration Switchyard, **generator** ~~and transmission~~ tie line **and its termination**.

Verification: At least 60 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of construction of any transmission facility, the project owner shall submit the schedule, ~~an updated~~ a Master Drawing List, and a Master Specifications List to the CBO and to the CPM. The schedule shall contain a description and list of proposed submittal packages for design, calculations, and specifications for major structures and equipment (see a list of major equipment in **Table 1: Major Equipment List** ~~(~~below). Additions and deletions shall be made to the table only with CPM and CBO approval. The project owner shall provide schedule updates in the Monthly Compliance Report.

Table 1: Major Equipment List
Breakers
Step-up Transformer
Switchyard
Busses
Surge Arrestors
Disconnects and Wave-traps
Take off facilities
Electrical Control Building
Switchyard Control Building
Transmission Pole/Tower
Insulators and Conductors
Grounding System

TSE-2 Prior to the start of construction ~~of the power plant Integration Switchyard or transmission tie line to the Buck Boulevard Substation~~, the project owner shall assign an electrical engineer and at least one of each of the following to the project:

A) a civil engineer;

B) a geotechnical engineer or a civil engineer experienced and knowledgeable in the practice of soils engineering;

C) a design engineer, who is either a structural engineer or a civil engineer fully competent and proficient in the design of power plant structures and equipment supports; or

D) a mechanical engineer. (Business and Professions Code Sections 6704 et seq., require state registration to practice as a civil engineer or structural engineer in California.)

The tasks performed by the civil, mechanical, electrical or design engineers may be divided between two or more engineers, as long as each engineer is responsible for a particular segment of the project (e.g., proposed earthwork, civil structures, power plant structures, equipment support). No segment of the project shall have more than one responsible engineer. The transmission line may be the responsibility of a separate California registered electrical engineer. The civil, geotechnical or civil and design engineer assigned in conformance with Facility Design condition **GEN-5**, may be responsible for design and review of the TSE facilities.

The project owner shall submit to the CBO for review and approval, the names, qualifications and registration numbers of all engineers assigned to the project. If any one of the designated engineers is subsequently reassigned or replaced, the project owner shall submit the name, qualifications and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer. This engineer shall be authorized to halt earthwork and to require changes; if site conditions are unsafe or do not conform to predicted conditions used as a basis for design of earthwork or foundations.

The electrical engineer shall:

1. Be responsible for the electrical design of the power plant switchyard, outlet and termination facilities; and

2. Sign and stamp electrical design drawings, plans, specifications, and calculations.

Verification: At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of rough grading ~~for transmission related facilities to the first point of interconnection at Buck Boulevard~~, the project owner shall submit to the CBO for review and approval, the names, qualifications and registration numbers of all the responsible engineers assigned to the project. The project owner

shall notify the CPM of the CBO's approvals of the engineers within five days of the approval.

If the designated responsible engineer is subsequently reassigned or replaced, the project owner has five days in which to submit the name, qualifications, and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within five days of the approval.

TSE-3 If any discrepancy in design and/or construction is discovered in any ~~transmission facility~~ engineering work that has undergone CBO design review and approval, the project owner shall document the discrepancy and recommend corrective action. (1998 CBC, Chapter 1, Section 108.4, Approval Required; Chapter 17, Section 1701.3, Duties and Responsibilities of the Special Inspector; Appendix Chapter 33, Section 3317.7, Notification of Noncompliance]. The discrepancy documentation shall become a controlled document and shall be submitted to the CBO for review and approval and shall reference this condition of certification.

Verification: The project owner shall submit a copy of the CBO's approval or disapproval of any corrective action taken to resolve a discrepancy to the CPM within 15 days of receipt. If disapproved, the project owner shall advise the CPM, within five days, the reason for disapproval, and the revised corrective action required to obtain the CBO's approval.

TSE-4 For the power plant Integration switchyard, outlet line and termination, the project owner shall not begin any increment of construction until plans for that increment have been approved by the CBO. These plans, together with design changes and design change notices, shall remain on the site for one year after completion of construction. The project owner shall request that the CBO inspect the installation to ensure compliance with the requirements of applicable LORS. The following activities shall be reported in the Monthly Compliance Report:

a) receipt or delay of major electrical equipment;

b) testing or energizing of major electrical equipment; and

c) the number of electrical drawings approved, submitted for approval, and still to be submitted.

Verification: At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of each increment of construction, the project owner shall submit to the CBO for review and approval the final design plans, specifications and calculations for equipment and systems of the power plant **Integration** switchyard, outlet line and termination, including a copy of the signed and stamped statement from the responsible electrical engineer attesting to compliance with the applicable LORS, and send the CPM a copy of the transmittal letter in the next Monthly Compliance Report.

TSE-5 The project owner shall ensure that the design, construction and operation of the proposed ~~power plant Integration Switchyard and transmission tie line facilities to the Buck Boulevard Substation~~ **transmission facilities** will conform to all applicable LORS, ~~including~~ **and** the requirements ~~and description~~ listed below. ~~No increment of construction of these facilities shall commence until the CPM approves the documents required in the Verification for **TSE-5**.~~ The project owner shall submit the required number of copies of the design drawings and calculations, as determined by the CBO.

Once approved, the project owner shall inform the CPM and CBO of any anticipated changes to the design, and shall submit a detailed description of the proposed change and complete engineering, environmental, and economic rationale for the change to the CPM and CBO for review and approval. ~~The BEP II 500 kV integration switchyard shall have four switchbays with 500 kV circuit breakers. The high voltage transformer terminals of two CTGs and one STG unit shall be connected by overhead conductors to three switch bays. The fourth bay shall be connected to a 500 kV 2-2156 Aluminum Conductor Steel Reinforced (ACSR) interconnecting line to a new 500 kV substation to be built within the existing Buck Boulevard Substation. The Integration Switchyard shall be connected to the Buck Blvd. 500 kV Bus via a 500 kV single circuit transmission line.~~

a) The power plant Integration Switchyard and outlet line shall meet or exceed the electrical, mechanical, civil and structural requirements of CPUC General Order 95 or National Electric Safety Code (NESC), Title 8 of the California Code and Regulations (Title 8), Articles 35, 36 and 37 of the ~~"~~*High Voltage Electric Safety Orders*~~"~~, ~~Western~~ **California ISO and/or SCE** Interconnection standards, ~~IEEE grounding standards~~, National Electric Code (NEC) and related industry standards.

b) Breakers and busses in the power plant switchyard and other switchyards, where applicable, shall be sized to comply with a short-circuit analysis.

c) Outlet line crossings and line parallels with transmission and distribution facilities shall be coordinated with the transmission line owner and comply with the owner's standards.

d) The project conductors shall be sized to accommodate the full output from the project.

e) Termination facilities shall comply with applicable ~~Western~~ **SCE** interconnection standards.

f) The project owner shall provide to the CPM:

~~i) A System Impact Study and a final Detailed Facility Study (DFS) conducted by Western which includes, with respect to the major equipment listed in Table 1 of TSE-1, the following:~~

~~(1) a description of all interconnection facilities with a one-line diagram including BEP II integration switchyard and the new Buck~~

~~Boulevard 500 kV substation showing major equipment and their ratings.~~

~~(2) a description of any mitigation measures selected by project owner (to offset reliability criteria violations) and letters or reports of acceptance from the affected transmission owners and where applicable, the CA ISO.~~

~~ii) Executed Facility Interconnection Agreement between the BEP II project owner and Western.~~

i) The Special Protection System (SPS) sequencing and timing, if applicable;

ii) A letter stating that the mitigation measures or projects selected by the transmission owner for each reliability criteria violation, for which the project is responsible, are acceptable;

iii) A Deliverability Assessment report from the California ISO and/or SCE according to the California ISO Tariff;

iv) A letter from SCE and/or the California ISO confirming that the Blythe II 500 kV generation tie line to the new SCE 500 kV Colorado River Substation will interconnect through the proposed new 500 kV Keim substation;

v) A copy of the executed LGIA signed by the California ISO and the project owner which must include the new proposed Keim 500 kV substation as an interconnection facility (in Appendix A of the LGIA) in addition to the new Blythe II 500 kV integration switchyard and the Blythe II 500 kV generator tie line to the SCE 500 kV Colorado River substation, and

vi) A schedule for commercial operation of the new Keim 500 kV substation prior to completing construction of the Blythe II 500 kV generator tie line.

Verification: At least ~~90~~ **60** days prior to the start of construction of transmission facilities ~~to the first point of interconnection at the Buck Blvd. Substation~~ (or a lesser number of days mutually agreed to by the project owner and CBO), the project owner shall submit to the CBO and where applicable the CPM for approval:

a) Design drawings, specifications and calculations conforming with CPUC General Order 95 or National Electric Safety Code (NESC), Title 8 **of the California Code of Regulations**, Articles 35, 36 and 37 of the ~~"~~*High Voltage Electric Safety Orders*~~"~~, **California ISO Standards, National Electric Code (**NEC**)**, ~~applicable interconnection standards~~ and related industry standards, for the poles/towers, foundations, anchor bolts, conductors, grounding systems and major switchyard equipment ~~listed in Table 1 of Condition TSE-1~~;

b) For each element of the transmission facilities identified above, the submittal package to the CBO shall contain the design criteria, a discussion of the

calculation method(s), a sample calculation based on "worst case conditions"[1] and a statement signed and sealed by the registered engineer in responsible charge, or other acceptable alternative verification, that the transmission element(s) will conform with CPUC General Order 95 or **National Electric Safety code (**NESC**)**, Title 8, of the California Code of Regulations, Articles 35, 36 and 37 of the "*High Voltage Electric Safety Orders*", **California ISO Standards,** IEEE grounding standards, **National Electric Code (**NEC**)**, applicable interconnection standards, and related industry standards.

c) Electrical one-line diagrams signed and sealed by the registered professional electrical engineer in responsible charge, a route map, and an engineering description of equipment and the configurations covered by requirements **TSE-5** a) through f); above.

d) Item f) above submitted to the CPM for review and docketing.

e) The Special Protection System (SPS) sequencing and timing if applicable shall be provided concurrently to the CPM.

f) A letter stating that the mitigation measures or projects selected by the transmission owner for each reliability criteria violation, for which the project is responsible, are acceptable,

g) A Deliverability Assessment report from the California ISO and/SCE under the California ISO Tariff.

h) A letter from SCE and/or the California ISO confirming that the Blythe II generation overhead 500 kV tie line to the new SCE 500 kV CRS will interconnect through the proposed new Kiem 500 kV substation.

i) A copy of the executed LGIA signed by the California ISO and the project owner which must include the new Keim 500 kV substation as an interconnection facility (in the Appendix A of the LGIA) between the new Blythe II 500 kV integration switchyard and the 500 kV Colorado River substation, and

j) A schedule for commercial operation of the new Keim 500 kV substation prior to completing construction of the 500 kV generation tie line.

Prior to the construction of or start of modification of transmission facilities, the project owner shall inform the CBO and the CPM of any anticipated changes to the design that are different from the design previously submitted and approved and shall submit a detailed description of the proposed change and complete engineering, environmental, and economic rationale for the change to the CPM and CBO for review and approval.

TSE-6 The project owner shall inform the CPM and CBO of any impending changes, which may not conform to the requirements **TSE-5** a) through e), and have not received CPM and CBO approval, and request approval to implement such

[1] Worst-case conditions for the foundations would include for instance, a dead-end or angle pole.

~~changes. A detailed description of the proposed change and complete engineering, environmental, and economic rationale for the change shall accompany the request. Construction involving changed equipment shall not begin without prior written approval of the changes by the CBO and the CPM.~~

~~**Verification:** At least 60 days prior to the construction of transmission facilities to the first point of interconnection at the Buck Blvd. Substation, the project owner shall inform the CBO and the CPM of any impending changes which may not conform to requirements of **TSE-5** and request approval to implement such changes.~~

TSE-7 The project owner shall provide the following notice~~s~~ to the ~~Western Area Power Administration, Desert Southwest Region (Western, DSR) and the~~ California Independent System Operator (~~Cal-~~ California ISO) prior to synchronizing the facility with the Western transmission system:

1. At least one week prior to synchronizing the facility with the grid for testing, provide the ~~Western, DSR and Cal-~~ California ISO a letter stating the proposed date of synchronization; and
2. At least one business day prior to synchronizing the facility with the grid for testing, provide telephone notification to the ~~Western, DSR and Cal-~~ California ISO Outage Coordination Department.

Verification: The project owner shall provide copies of the ~~Western, DSR and Cal-~~ California ISO letter~~s~~ to the CPM when they are sent to the ~~Western, DSR and Cal-~~ California ISO one week prior to initial synchronization with the grid. The project owner shall contact the ~~Western, DSR and Cal-~~ California ISO Outage Coordination Department, Monday through Friday, between the hours of 07:00 and 15:30 at (916) 351-2300 at least one business day prior to synchronizing the facility with the grid for testing. A report of conversation with the ~~Western, DSR and Cal-~~ California ISO shall be provided electronically to the CPM one day before synchronizing the facility with the ~~Western, DSR~~ California transmission system for the first time.

TSE-8 The project owner shall be responsible for the inspection of the ~~power plant Integration Switchyard and transmission tie line to the Buck Blvd~~ **transmission facilities**~~. Substation~~ during and after project construction, and any subsequent CPM and CBO approved changes thereto, to ensure conformance with CPUC GO-95 or NESC, Title 8, CCR, Articles 35, 36 and 37 of the~~,~~ "*High Voltage Electric Safety Orders*", applicable interconnection standards, ~~IEEE grounding standards,~~ NEC and related industry standards. In case of non-conformance, the project owner shall inform the CPM and CBO in writing, within 10 days of discovering such nonconformance and describe the corrective action(s) to be taken.

Verification: Within 60 days after first synchronization of the project, the project owner shall transmit to the CPM and CBO:

1. "As built" engineering description(s) and one-line drawings of the electrical portion of the facilities ~~Integration Switchyard and the 500 kV line to the Buck Blvd. Substation~~ signed and sealed by the registered electrical engineer in responsible charge. A statement attesting to conformance with CPUC GO-95 or NESC, Title 8, California Code of Regulations, Articles 35, 36 and 37 of the~~,"~~ *High Voltage Electric Safety Orders*, ~~IEEE grounding standards, and~~ applicable interconnection standards, NEC, **and** related industry standards, and these conditions shall be provided concurrently.
2. An "as built" engineering description of the mechanical, structural, and civil portion of the transmission facilities signed and sealed by the registered engineer in responsible charge or acceptable alternative verification. "As built" drawings of the electrical, mechanical, structural, and civil portion of the transmission facilities shall be maintained at the power plant and made available, if requested, for CPM audit as set forth in the ~~"~~*Compliance Monitoring Plan*~~"~~.
3. A summary of inspections of the completed transmission facilities, and identification of any nonconforming work and corrective actions taken, signed and sealed by the registered engineer in charge.

~~**TSE-9** The Project Owner shall not commence construction of BEP II until the Desert Southwest Transmission Project (DSWTP) or an equivalent transmission Project or Upgrade as determined by the CPM has received all necessary permits to build the Project or Upgrade and has a definite construction schedule.~~

~~**Verification:** At least 60 days prior to the start of rough grading or construction, the Project Owner shall submit the following to the CPM:~~

~~1. A list of all permits, agreements and approvals required for the construction, operation and interconnection of the DSWTP or the approved equivalent Project or Upgrade.~~

~~2. The permits, agreements and approvals required for the construction, operation and interconnection of the DSWTP or the approved equivalent Project or Upgrade when they become available.~~

~~3. A definite schedule for the construction and completion of the DSWTP or approved equivalent Project or Upgrade.~~

WATER RESOURCES CONDITIONS OF CERTIFICATION

WATER RES - 4: BEP II's annual use of water shall not exceed a maximum of 2,800 acre-feet per year.

Verification: In compliance with WATER RES-2, the project owner shall record and provide to the CPM water use reports that demonstrate annual water consumption does not exceed 2,800 AFY.

WATER RES - 5: The project owner shall service, test and calibrate the water meters in accordance with the manufacturer's specifications.

Verification: When the metering devices are serviced, tested and calibrated, the project owner shall provide to the CPM a report summarizing these activities in the next Annual Compliance Report (ACR).

WATER RES - 6: For the first year of operation the project owner shall monitor, record and submit to the CPM the total water used on a monthly basis.

Verification: On a monthly basis for the first year of operation, the project owner shall provide to the CPM a Monthly Water Use Summary that states the quantity of water used daily during that month.

WATER RES - 7: The project owner shall prepare an annual Water Use Summary, which will include the monthly range and monthly average of water usage in gallons per day, and total water used by the project on a monthly and annual basis in acre-feet. For calculating the annual water use, the term "year" will correspond to the date established for the Annual Compliance Report (ACR) submittal.

For years subsequent to the first year, the annual Water Use Summary shall in addition to the information described above, also include the yearly range and yearly average water use by the project. The annual Water Use Summary shall be submitted to the CPM as part of the ACR.

Verification: The project owner shall provide a Water Use Summary that sets forth the information required in the condition above in the ACR. All prior annual water use, including yearly range and yearly average, shall be reported in subsequent ACRs.

WORKDER SAFETY AND FIRE PROTECTION CONDITIONS OF CERTIFICATION

~~**WORKER SAFETY-3** Prior to the delivery of anhydrous ammonia to the project site, the project owner shall train personnel at the BEP II facility to the level of Hazmat Technician that is required to assist the City of Blythe or Riverside County Fire Departments in the response to an anhydrous ammonia incident. The training shall meet or exceed that described in NFPA 472, PSHA 29 CFR 1910.120, and EPA 40 CFR part 311.~~

~~**Verification:** At least thirty (30) days prior to the delivery of hazardous materials to the site, the project owner shall provide the CPM with a letter indicating the number of employees that have been trained as Hazmat Technicians.~~

WORKER SAFETY-6 The project owner shall develop and implement an enhanced Dust Control Plan that includes the requirements described in AQ-SC3 and additionally requires:

i. **site worker use of dust masks (NIOSH N-95 or better) whenever visible dust is present;**

ii. **implementation of methods equivalent to Rule 402 of the Kern County Air Pollution Control District (as amended Nov. 3, 2004); and**

iii. **implementation of enhanced dust control methods (increased frequency of watering, use of dust suppression chemicals, etc. consistent with AQ-SC4) immediately whenever visible dust comes from or onto the site or when PM10 measurements obtained when implementing ii (above) exceed 50 $\mu g/m^3$.**

Verification: At least 60 days prior to the commencement of site mobilization, the enhanced Dust Control Plan shall be provided to the CPM for review and approval.

IT IS SO ORDERED.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of an Order duly and regularly adopted at a meeting of the California Energy Commission held on April 25, 2012.

AYE: Weisenmiller, Douglas, Peterman
NAY: None
ABSENT: None
ABSTAIN: None

Harriet Kallemeyn,
Secretariat