

## CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET  
SACRAMENTO, CA 95814-5512**DOCKET**  
**01-AFC-17C**DATE MAY 17 2010  
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**DATE:** May 17, 2010

**TO:** Interested Parties

**FROM:** Dale Rundquist, Compliance Project Manager

**SUBJECT:** Inland Empire Energy Center Project (01-AFC-17C)  
Staff Analysis of Proposed Modifications to Amend Air Quality  
Conditions of Certification

On November 11, 2009, the California Energy Commission (Energy Commission) received a petition from Inland Empire Energy Center, LLC to amend the Energy Commission Decision for the Inland Empire Energy Center Project (IEEC).

The IEEC Project is an 800 MW combined-cycle power plant located on approximately 46-acres in the city of Menifee, in Riverside County. The project was certified by the Energy Commission on December 17, 2003, and began operations on June 29, 2009.

The proposed modifications will allow Inland Empire Energy Center, LLC to make the Commission Decision consistent with the South Coast Air Quality Management District (District) permit.

Energy Commission staff reviewed the petition and assessed the impacts of this proposal on environmental quality, public health and safety, and proposes revisions to existing Air Quality Conditions of Certification AQ-18, AQ-39, AQ-42, AQ-45, AQ-48, and AQ-51. It is staff's opinion that, with the implementation of revised conditions, the project will remain in compliance with applicable laws, ordinances, regulations, and standards and that the proposed modifications will not result in a significant adverse direct or cumulative impact to the environment (Title 20, California Code of Regulations, Section 1769).

The amendment petition has been posted on the Energy Commission's webpage at <http://www.energy.ca.gov/sitingcases/inlandempire/compliance/index.html>.

The staff analysis is enclosed for your information and review. The staff analysis and order (if the amendment is approved) will also be posted on the webpage. Energy Commission staff intends to recommend approval of the petition at the July 28, 2010 Business Meeting of the Energy Commission.

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If you have comments on this proposed modification, please submit them to me at the address below by June 14, 2010.

Dale Rundquist, Compliance Project Manager  
California Energy Commission  
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Comments may be submitted by fax to (916) 654-3882, or by e-mail to [drundqui@energy.state.ca.us](mailto:drundqui@energy.state.ca.us).

If you have any questions, please contact me at (916) 651-2072.

Enclosure

**INLAND EMPIRE ENERGY CENTER (01-AFC-17C)**  
**Request to Amend Selected Air Quality Conditions of Certification**  
Tao Jiang

## **INTRODUCTION**

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On November 6, 2009, the Inland Empire Energy Center, LLC (IEEC) filed a petition with the California Energy Commission (Energy Commission) requesting to amend the Conditions of Certification for the Inland Empire Energy Center Project (IEEC 2009). This amendment incorporates all air district permit changes that were made after the latest amendment was approved by the Energy Commission, as explained below.

## **BACKGROUND**

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The combined cycle project was certified by the Energy Commission on December 17, 2003. In August 2005, the Energy Commission approved the petition to change the configuration of the IEEC project, imposing a number of air quality conditions based on the South Coast Air Quality Management District's (SCAQMD) Preliminary Determination of Compliance (PDOC). Construction of the facility started on August 5, 2005 and first fire for Unit 1 occurred on May 18, 2008, and Unit 2 on July 22, 2008. On April 11, 2007, the Energy Commission approved another amendment petition for air quality conditions of certification to make the project consistent with several changes of the SCAQMD RECLAIM/Title V permit in 2006. The facility is an 800 MW base load gas fired power plant located in the City of Menifee, in southern Riverside County.

The current amendment request would modify several Air Quality Conditions of Certification to reflect the additional changes that have been made to the SCAQMD permit since the last Energy Commission amendment was approved on April 11, 2007:

- On September 21, 2007, the SCAQMD issued a minor revision to the RECLAIM/Title V facility permit related to a change in the specifications for the auxiliary boiler (see Attachment Air Quality 1).
- On April 4, 2008, the SCAQMD issued a minor revision to the RECLAIM/Title V facility permit related to permit condition changes needed to allow commissioning of the auxiliary boiler.
- On October 17, 2008, the SCAQMD issued a minor revision to the RECLAIM/Title V facility permit related to the auxiliary boiler's burner model designation, storage capacity for the on-site aqueous ammonia storage tanks, and emission limits applicable to the auxiliary boiler during boiler startups / shutdowns (see Attachment Air Quality 1).
- On June 3, 2009, the SCAQMD issued a minor revision to the RECLAIM/Title V facility permit related to allowable hours of operations for the emergency generators at the site.

- On August 25, 2009, the SCAQMD issued a minor revision to the RECLAIM/Title V facility permit related to allowable Carbon Monoxide (CO) emissions from the combined cycle units during startups and shutdowns.

Staff notes that the project has already been modified (i.e., the proposed conditions have already been approved by the SCAQMD) and the current amendment request addresses the differences between the Energy Commission’s most recent decision and the current SCAQMD RECLAIM/Title V permit. Staff evaluated any potential non-compliance issues related to the Energy Commission Decision and any effect on air quality.

## **LAWS, ORDINANCES, REGULATION, AND STANDARDS (LORS) - COMPLIANCE**

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The project’s proposed amendment is subject to all the LORS described in the Final Staff Assessment (FSA) (CEC 2003a).

## **SETTING**

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Since the certification of the project in 2003, the implementation of PM2.5 standards has led to changes in the categorization of air quality in the IEEC project area. In addition, a new federal 1-hour NO<sub>2</sub> standard became effective on April 12, 2010.

**Air Quality Table 1** summarizes the area's attainment status for various applicable current state and federal ambient air quality standards.

**Air Quality Table 1  
Federal and State Attainment Status for the South Coast Air Basin**

<b>Pollutant</b>	<b>Attainment Status</b>	
	<b>Federal</b>	<b>State</b>
Ozone	Nonattainment	Nonattainment
CO	Nonattainment <sup>a</sup>	Attainment
NO <sub>2</sub>	Unclassified/Attainment <sup>b</sup>	Attainment
SO <sub>2</sub>	Attainment	Attainment
PM10	Nonattainment	Nonattainment
PM2.5	Nonattainment	Nonattainment

Source: USEPA 2010a. ARB 2010a.

Note:

- Because of CO violations in Los Angeles County, portions of the South Coast Air Basin are designated nonattainment. The federal classification for CO nonattainment applies to the entire basin; state-level nonattainment for CO applies to only Los Angeles County.
- A new federal 1-hour NO<sub>2</sub> standard became effective April 12, 2010. Attainment status is expected to be initially determined by January 2012.

On February 9, 2010, U. S. Environmental Protection Agency (U.S. EPA) proposed a final rule for a new federal short-term NO<sub>2</sub> standard. In this rule, U.S. EPA acknowledged the need to provide further guidance on methods to be used to evaluate

the impact of new projects on this standard (Federal Register 2010). As of May 13, 2010, staff has not been able to find any such guidance.

## CRITERIA POLLUTANT AIR QUALITY DATA

Since the original IEEC licensing in 2003 and the first amendment in 2005, additional ambient air quality data have become available. **Air Quality Table 2** reflects the most recent data for the last six years.

**Air Quality Table 2**  
**Maximum Ambient Concentrations (ppm or  $\mu\text{g}/\text{m}^3$ )**

Pollutant (Station) <sup>a</sup>	Averaging Period	Units	2003	2004	2005	2006	2007	2008	Limiting AAQS <sup>c</sup>
Ozone (Perris)	1 hour	ppm	0.155	0.128	0.088	0.169	0.138	0.142	0.09
Ozone (Perris)	8 hours	ppm	0.121	0.104	0.079	0.123	0.117	0.115	0.07
PM10 <sup>b</sup> (Perris)	24 hours	$\mu\text{g}/\text{m}^3$	142	83	80	125	167	85	50
PM10 (Perris)	Annual	$\mu\text{g}/\text{m}^3$	43.9	41.4	39.1	44.9	65.4	29.6	20
PM2.5 <sup>b</sup> (Magnolia St.)	24 hours	$\mu\text{g}/\text{m}^3$	73.3	93.8	94.9	55.3	68.5	42.9	35
PM2.5 (Magnolia St.)	Annual	$\mu\text{g}/\text{m}^3$	22.6	20.8	17.9	16.9	18.3	13.2	12
CO (Magnolia St.)	1 hour	ppm	4.6	3.9	4	3.8	3.7	4.7	20
CO (Magnolia St.)	8 hours	ppm	3.33	2.46	2.39	2.38	2.16	1.93	9.0
NO <sub>2</sub> (Lake Elsinore)	1 hour	ppm	0.074	0.090	0.065	0.072	0.064	0.055	0.18
NO <sub>2</sub> (Lake Elsinore)	98th Percentile of Daily Maximum 1-hr	ppm	--	--	0.053	0.054	0.051	0.05	0.01
NO <sub>2</sub> (Lake Elsinore)	Annual	ppm	0.018	0.015	0.014	0.015	0.015	0.013	0.03
SO <sub>2</sub> (Rubidoux Ave.)	1 hour	ppm	0.018	0.017	0.024	0.012	0.016	0.011	0.25
SO <sub>2</sub> (Rubidoux Ave.)	24 hours	ppm	0.012	0.015	0.011	0.003	0.004	0.003	0.04
SO <sub>2</sub> (Rubidoux Ave.)	Annual	ppm	0.002	0.004	0.003	0.001	--	0.000	0.03

Source: ARB 2010b, U.S.EPA 2010b.

Notes:

<sup>a</sup> No single station in the area monitors all pollutants. The representative station nearest the project site is used in each case.

<sup>b</sup> Exceptional PM concentration events, such as those caused by wind storms are not shown where excluded by U.S.EPA; however, some exceptional events may still be included in the data presented.

<sup>c</sup> The limiting AAQS is the most stringent of the CAAQS or NAAQS for that pollutant and averaging period.

Staff recommends the background ambient air concentrations in **Air Quality Table 3** for use in the impacts analysis. The recommended background concentrations are based on the maximum criteria pollutant concentrations from the past three years of available data collected at the most representative monitoring stations surrounding the project site.

**Air Quality Table 3**  
**Staff Recommended Background Concentrations ( $\mu\text{g}/\text{m}^3$ )**

Pollutant	Averaging Time	Recommended Background	Limiting AAQS	Percent of Standard
NO <sub>2</sub>	1 hour	135.6	339	40%
	98th Percentile of Daily Maximum 1-hr	97.5	189	52%
	Annual	28.5	57	50%
CO	1 hour	5405.0	23,000	24%
	8 hour	2644.4	10,000	26%
PM10	24 hour	167.0	50	334%
	Annual	65.4	20	327%
PM2.5	24 hour	18.3	35	52%
	Annual	4.7	12	39%
SO <sub>2</sub>	1 hour	41.9	665	6%
	24 hour	10.5	105	10%
	Annual	2.7	80	3%

Source: ARB 2010b, U.S.EPA 2010b and Energy Commission Staff Analysis.

## ANALYSIS OF AMENDMENT REQUESTS

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### **Exemption from 1-hour NOx Emission Limit during Auxiliary Boiler Commissioning, Startups and Shutdowns**

On March 21, 2008, the applicant requested a 200-hour exemption from the 1-hour average NOx emission limit of 7.0 ppm @ 3% O<sub>2</sub> during the commissioning of the auxiliary boiler. On June 4, 2008, the applicant requested an exemption from the 1-hour average NOx emission limit of 7.0 ppm @ 3% O<sub>2</sub> and the 1-hour average NH<sub>3</sub> emission limit of 5 ppm @ 3% O<sub>2</sub> during auxiliary boiler startups and shutdowns.

Since no change is proposed to annual emissions limits, or to emission levels for any criteria pollutant other than NOx, the only changes are the project's 1-hour NO<sub>2</sub> impacts. The impacts are summarized in **Air Quality Table 4**.

**Air Quality Table 4**  
**Maximum 1-hour NO<sub>2</sub> Impacts**

Pollutants	Period	Project Impact (µg/m <sup>3</sup> )	Background (µg/m <sup>3</sup> )	Total Impact (µg/m <sup>3</sup> )	Standard (µg/m <sup>3</sup> )	Percent of Standard
1-hr NO <sub>2</sub>	200 hour auxiliary boiler Commissioning	123	135.6	258.5	339	76%
	auxiliary boiler startups/shutdowns	44	135.6	180	339	53%
98th Percentile of Daily Maximum 1-hr	200 hour auxiliary boiler Commissioning	123	97.5	220.5	189	117%
	auxiliary boiler startups/shutdowns	44	97.5	141.5	189	75%

Source: IEEC 2009, table 3.1-1.

The impacts estimated in **Air Quality Table 4** are from auxiliary boiler alone. Since the auxiliary boiler is the only equipment in operation during both periods, these impacts also represent the worst-case facility total impacts. The analysis shows that the proposed project's changes would not create new exceedances or contribute to existing exceedances for any of the criteria air pollutants, except of the new federal 1-hour NO<sub>2</sub> standard.

The U.S. Environmental Protection Agency (U.S. EPA) implemented a new, 1-hour NO<sub>2</sub> standard, which became effective on April 12, 2010. This new standard is expressed as a 3-year average of the 98<sup>th</sup> percentile of the *daily maximum* 1-hour concentration (i.e., the 8<sup>th</sup> highest of daily highest 1-hour concentrations). The new standard requires "first tier" ambient NO<sub>2</sub> monitoring near major roadways as defined in the implementing language and "second tier" monitoring for regional NO<sub>2</sub> concentrations. Staff adds the 2006-2008 average of 98<sup>th</sup> percentile background NO<sub>2</sub> concentration to the maximum 1-hour NO<sub>2</sub> project impacts to get a very conservative estimation of the total impacts. According to this analysis, the 1-hour NO<sub>2</sub> impacts of the auxiliary boiler during startup and shutdown under routine operations are less than the new federal standard. Although the 1-hour NO<sub>2</sub> impact in the commissioning phase is likely to be above the standard, staff does not expect it to have significant impact due to the very limited 200 hour commissioning period and the 3-year averaging time used for the standard.

### **Increase in Total Commissioning Hours for the Gas Turbine**

On September 23, 2008, the applicant filed with the SCAQMD Hearing Board a variance relief from the SCAQMD permit condition of 509 commissioning hours. The SCAQMD Hearing Board granted a short-term variance for Units 1 and 2, which increased the commissioning period to 738 hours. The extended commissioning hours are due to the unexpected Unit 2 trip and shut-down. With 466 commissioning hours consumed at that time, an additional 72 hours for Unit 1 and 200 hours for Unit 2 were needed to perform the remaining commissioning activities. Although there is an increase of total commissioning hours, the maximum monthly or annual emissions are not likely to increase due to the associated extended shutdown period. There is no need

to increase the current monthly and /or annual emission limits for gas turbines. Therefore, the proposed change is not expected to lead to new significant impacts.

**Proposed CO Emission Limits during Startups / Shutdowns of Gas Turbines**

On February 19, 2009, the applicant requested a revision of the permit to allow an increase in the CO emission limit from 95 lbs/hr to 375 lbs/hr and from 300 lbs/event to 2,000 lbs/event during startups/shutdowns of the two gas turbines. Since the gas turbines at this facility are the first General Electric S107H gas turbines constructed in the United States, and the second and the third in the world, the CO emission limits were based on very limited information available from the vendor. The recent commissioning data from IEEC Unit 1 indicate that the actual CO emissions during the turbine startups are higher than the original emission limits in the permit.

The requested new CO emission startup limit of 375 lbs/hr would result in a combined emission rate of 750 lbs/hr for both turbines. As shown in **Air Quality Table 5**, the emission impacts with this increase are well below the most stringent CO ambient air quality standards. Due to the limited number of startups/shutdowns per year, the monthly and annual CO emission limits need not change. Staff believes that this revision will not lead to significant air quality impacts and has no objection to this revision.

**Air Quality Table 5  
Maximum Startup/Shutdown CO Impacts**

Pollutants	Average Period	Project Impact (µg/m <sup>3</sup> )	Background (µg/m <sup>3</sup> )	Total Impact (µg/m <sup>3</sup> )	Standard (µg/m <sup>3</sup> )	Percent of Standard
CO	1 hour	1,646	5405.0	7051	23,000	31%
	8 hour	9,57	2644.4	3601.4	10,000	36%

Source: IEEC 2009, table 3.1-1.

**Clarification of the Emergency Generators Operation Hours**

On March 3, 2009, the applicant requested a permit change to clarify the number of hours allowed for emergency generators. The previous permit conditions limited the annual operations to no more than 50 hours, which matches the 50 hours/year allowed under CARB’s I/C Engine Air Toxic Control Measure (ATCM) for non-emergency operation. While non-emergency operations are mainly for test/maintenance purposes, additional operating hours are necessary for emergency operations. Under both the ATCM and SCAQMD emergency engine policy, a total of 200 hours/year is allowed for emergency and non-emergency operation. Therefore, the applicant requested a combined total of 200 hours in any one year for each engine for any purpose, which includes no more than 50 hours for test/maintenance purposes. Due to the increase of annual operation hours, the required amount of NOx RECLAIM trading credits (RTCs) was increased from 1,946 lbs/year to 7,784 lbs/year per engine.



SCAQMD issues facility permits on an equipment basis. According to SCAQMD Rule 2005(k)(5), the emergency generators are exempted from air quality impacts modeling requirements. Therefore, the maximum 1-hour and annual NO<sub>2</sub> impacts from the emergency generator and the total facility due to the change of emergency generators operation hours were not evaluated or compared to the current state and federal standards.

### **Administrative Changes to Air Quality Conditions**

On May 4, 2007, the applicant requested a change of the auxiliary boiler from a Nebraska Model NS-F-76 to a Rentech Model 2005-84. The auxiliary boiler burner, selective catalytic reduction (SCR) system, and the auxiliary boiler stack height remained unchanged.

On March 18, 2008, the applicant requested a change to the auxiliary boiler burner from a Todd Variflare Model VII690VGXXX to a John Zink Model VII690VGXXX. The change impacts only the manufacturer's name on the equipment plate because Todd Combustion became a subsidiary of John Zink. There is no physical difference between the permitted and the actual burner. The applicant also requested the change of the aqueous ammonia storage tanks from a 16,000-gallon storage capacity to a 16,900-gallon storage capacity. This change does not affect the emission rates or regulatory requirements because the tanks will continue to be vented back to tanker during filling.

## **CONCLUSIONS AND RECOMMENDATIONS**

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The requested project changes would likely conform with applicable federal, state, and SCAQMD air quality laws, ordinances, regulations, and standards, and the amended project would not be likely to cause significant air quality impacts, provided that the following Conditions of Certification are included. Staff recommends that the revised COCs be approved as shown below.

## **AMENDED AND PROPOSED CONDITIONS OF CERTIFICATION**

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Below is a list of those conditions of certification that must be revised from those in effect as of the 2007 amendment (CEC2007). These changes make the conditions of certification consistent with current SCAQMD permit requirements. Strikeout is used to indicate deleted language and **underline and bold** is used for new language.

### **Gas Turbines and SCR**

**AQ-18** The operator shall operate and maintain this equipment according to the following requirements:

The commissioning period shall not exceed ~~509~~ **738** hours of operation for both turbines ~~during the first 180 calendar days from the date of initial start-up.~~

Startup/shutdown time shall not exceed 4 hours per day per gas turbine, except for a cold startup and combustor-tuning activities, which shall not exceed 6 hours per

day per gas turbine. A cold startup shall be defined as a startup of the gas turbine after 72 hours of non-operation. Combustor-tuning activities shall be defined as all testing, adjusting, tuning, and calibration activities recommended by the turbine manufacturer to ensure safe, reliable, and in-specification operation of the turbine. Startup/shutdown and combustor-tuning activity emissions shall not exceed 408 lbs/hr NO<sub>x</sub> and ~~95~~ **800** lbs/hr CO averaged for the duration of the startup. The startup/shutdown and combustor-tuning activity emissions shall not exceed 803 lbs/event NO<sub>x</sub> and ~~300~~ **2000** lbs/event CO.

Monthly startup/shutdown time shall not exceed 31 hours. Shutdown time does not include non-operation time.

The operator shall provide the AQMD with written notification of the initial startup date. Written records of commissioning, startups, shutdowns, and combustor-tuning activities shall be maintained and made available upon request from AQMD. (SCAQMD E193-2)

**Verification:** The project owner shall submit to the CPM the final commissioning status report as in Condition AQ-17. The project owner shall provide startup/shutdown and combustor-tuning activity occurrence, duration, and emissions data demonstrating compliance with this condition as part of the Quarterly Operation Report (AQ-SC8). The project owner shall make the site available for inspection of the commissioning, startup/shutdown, and combustor tuning activity records by representatives of the District, CARB and the Commission.

### Auxiliary Boiler and SCR

**AQ-39** The 8.49 lbs/mmscf NO<sub>x</sub> emission limit(s) shall only apply after the installation and operation of the SCR catalyst during the interim reporting period to report RECLAIM emissions. (SCAQMD A99-2) The 100.67 lbs/mmscf NO<sub>x</sub> emission limit(s) shall only apply prior to the installation of the SCR catalyst during the interim reporting period to report RECLAIM emissions. (SCAQMD A99-4)

**Verification:** The project owner shall submit to the CPM and APCO auxiliary boiler emissions data demonstrating compliance with this condition through the use of the required RECLAIM emission factor, as appropriate, as part of the Quarterly Operation Report (**AQ-SC8**).

**AQ-42** The 7 ppmv NO<sub>x</sub> emission limit(s) is averaged over one hour at 3 percent oxygen, dry basis. This limit shall not apply during the initial auxiliary boiler commissioning period not to exceed 200 hours or until the SCR catalyst is installed and operational, whichever occurs first. This limit shall not apply during startup and shutdown periods. Startup shall not exceed 75 minutes per occurrence and shutdown shall not exceed 30 minutes per occurrence. There shall be no more than one startup and one shutdown per day. (SCAQMD A195-4)

**Verification:** The project owner shall submit to the CPM and APCO auxiliary boiler CEMS emissions data demonstrating compliance with this condition as part of the Quarterly Operation Report (**AQ-SC8**).

**AQ-45** The 5 ppmv NH<sub>3</sub> emission limit(s) is averaged over 1 hour at 3 percent oxygen, dry basis. **The limit shall not apply during the auxiliary boiler D3 startup process when the SCR catalyst temperature is below 480 degree F. The limit shall not apply during the auxiliary boiler D3 boiler shutdowns.** (SCAQMD A195-8)

**Verification:** See verification for Conditions **AQ-32**, **AQ-33**, and **AQ-46**.

### Two Emergency Generator Engines and One Fire Pump Engine

**AQ-48 Emergency Generator Engines:** The operator shall limit the operating time of each engine to no more than ~~50~~ **200** hours per year. **The 200 hours annual limit includes no more than 50 hours in any one year for maintenance and testing purposes.** (SCAQMD C1-1) **Emergency Fire Pump Engine: The operator shall limit the operating time to no more than 50 hours in any one year. (SCAQMD C1-3)**

**Verification:** The project owner shall submit to the CPM and APCO the emergency generator and fire pump IC engines operations data demonstrating compliance with this condition as part of the Quarterly Operation Report (**AQ-SC8**).

**AQ-51** The emergency generator engines shall not be operated unless the operator demonstrates to the Executive Officer that the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the first compliance year of operation, the facility holds sufficient RTCs in an amount equal to the annual emissions increase. To comply with this condition, the operator shall prior to the first compliance year hold a minimum NO<sub>x</sub> RTCs of 1,946 lbs for each engine. This condition shall apply during the first twelve months of operation. To comply with this condition, the operator shall, prior to the beginning of all years subsequent to the first compliance year, hold a minimum NO<sub>x</sub> RTCs of ~~1,946~~ **7,784** lbs for each engine. In accordance with Rule 2005(f), unused RTCs may be sold only during the reconciliation period for the fourth quarter of the applicable compliance year inclusive of the first compliance year. (SCAQMD I296-4)

**Verification:** The project owner shall submit to the CPM copies of all RECLAIM reports filed with the District demonstrating compliance with this condition as part of the Quarterly Operation Report (**AQ-SC8**).

**Attachment Air Quality 1 – AQ-SC16, Equipment Description**

**EQUIPMENT DESCRIPTION**

Section H of the facility permit: Permit to Construct and temporary Permit to Operate

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
<b>PROCESS 1: COMBUSTION AND POWER GENERATION</b>					
<b>SYSTEM 2: AUXILIARY EQUIPMENT</b>					
BOILER, AUXILIARY BOILER, NATURAL GAS, <del>NEBRASKA, MODEL NS F 76</del> <b>RENTECH, MODEL 2005-84</b> , WITH LOW NOX BURNER, 152.12 MMBtu/HR, WITH: A/N: 456170 <b>483511</b> Permit to Construct Issued: <del>6/02/06</del> <b>10/16/08</b> BURNER, NATURAL GAS, <del>TODD VARIFLAME</del> <b>JOHN ZINK</b> , MODEL VII690VGXXX, WITH LOW NOX BURNER, 152.12 MMBTU/HR	D3	C6	NOx MAJOR SOURCE**	<b>NOx:</b> 7.0 PPMV NATURAL GAS (4) [RULE 2005 BACT, RULE1703-PSD Analysis]; <b>NOx:</b> 8.49 LBS/MMSCF NATURAL GAS (1) [RULE 2012]; <b>100.67 LBS/MMSCF NATURAL GAS (1A) [RULE 2012]</b> <b>CO:</b> 50 PPMV NATURAL GAS (4) [RULE 1303 BACT]; <b>CO:</b> 400 PPMV NATURAL GAS (5A) [RULE 1146]; <b>CO:</b> 2,000 PPMV NATURAL GAS (5) [RULE 407]; <b>VOC:</b> 10 PPMV NATURAL GAS (4) [RULE 1303 BACT] <b>PM10:</b> 7.26 LB/MMSCF NATURAL GAS (4) [RULE 1303-BACT]; <b>PM10:</b> 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409]; <b>H2S:</b> 0.25 GRAINS PER 100 SCF NATURAL GAS (4) [RULE 1303-BACT]	A63.2, A99.2, <b>A99.4</b> , A195.4, A195.5, A195.6, B61.1, C1.2, D29.4, D82.3, D82.4, E193.1, E193.3, E193.6, I296.3, K40.2

<b>Process 2: INORGANIC CHEMICAL STORAGE</b>					
<b>System 1: AMMONIA STORAGE TANKS</b>					
ROOF, #1, 28% AQUEOUS AMMONIA, <del>16,000</del> <b>16,900</b> GALS, DIAMETER: 10 FT; LENGTH: 26 FT A/N: 439497 <b>480152</b> Permit to Construct Issued: <del>08/05/05</del> <b>10/16/08</b>	D7				E144.1, C157.1, E193-1 E193.3,
STORAGE TANK, FIXED ROOF, #2, 28% AQUEOUS AMMONIA, <del>16,000</del> <b>16,900</b> GALS, DIAMETER: 10 FT; LENGTH: 26 FT A/N: 439498 <b>480153</b> Permit to Construct Issued: <del>08/05/05</del> <b>10/16/08</b>	D8				E144.1, C157.1, E193-1, E193.3,

## References

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- ARB 2010a (California Air Resources Board). Air Designation Maps available on ARB website. <http://www.arb.ca.gov/desig/adm/adm.htm>. Accessed 2010.
- ARB 2010b (California Air Resources Board). California Ambient Air Quality Data Statistics available on ARB website. <http://www.arb.ca.gov/adam/welcome.html>. Accessed 2010.
- CEC 2003a - California Energy Commission, Final Staff Assessment of the Inland Empire Energy Center Project (01-AFC-17). May 23, 2003.
- CEC 2003b - California Energy Commission, Commission Final Decision of the Inland Empire Energy Center Project (01-AFC-17). December 22, 2003.
- CEC 2005 - California Energy Commission, ORDER APPROVING a Petition to Change to GE 107H Combined-Cycle Systems and add secondary laydown/parking areas (01-AFC-17C). June 22, 2005.
- CEC 2007 - California Energy Commission, ORDER APPROVING a Petition to Modify Various Air Quality Conditions of Certification (01-AFC-17C). April 11, 2007.
- Federal Register 2010 - Federal Register, Vol. 75, No. 26 (February 9, 2010, page 6525).
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