# Oregon Clean Energy Center

# Application for Prevention of Significant Deterioration Preconstruction Permit

## *Volume 1*

***Mitsubishi 501GAC Turbine Scenario***

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*Natural Gas Energy for Ohio's Future*

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## List of Acronyms and Abbreviations

| | |
|---|---|
| °F | degrees Fahrenheit |
| % | percent |
| AWMA | Air and Waste Management Association |
| AQRV | Air Quality Related Values |
| BAAMD | Bay Area Air Quality Management District |
| BACT | Best Available Control Technology |
| BAT | Best Available Technology |
| BP | British Petroleum |
| Btu | British thermal units |
| Btu/kW-hr | British thermal unit per kilowatt-hour |
| CAA | Clean Air Act |
| CAIR | Clean Air Interstate Rule |
| CARB | California Air Resource Board |
| CATEF | California Air Toxics Emission Factor |
| CCGT | combined-cycle gas turbine |
| CCS | carbon capture and sequestration |
| CEMS | continuous emissions monitoring systems |
| CFR | Code of Federal Regulations |
| $CH_4$ | methane |
| CI | compression ignition |
| CO | carbon monoxide |
| $CO_2$ | carbon dioxide |
| $CO_2e$ | carbon dioxide equivalents |
| the Court | U.S. Court of Appeals for the D.C. Circuit |
| CSAPR | Cross-State Air Pollution Rule |
| CTG | combustion turbine generator |
| DB | duct burner |
| DLN | dry low $NO_x$ |
| EGU | Electric Utility Generating Units |

| | |
|---|---|
| EPRI | Electric Power Research Institute |
| FGD | flue gas desulfurization |
| FLM | Federal Land Manager |
| GHG | greenhouse gas |
| g/hp-hr | grams per horsepower-hour |
| g/kW-hr | grams per kilowatt-hour |
| gr | grains |
| HAP | hazardous air pollutant |
| HHV | higher heating value |
| $H_2O$ | water |
| hp | horsepower |
| HRSG | heat recovery steam generator |
| $H_2SO_4$ | sulfuric acid mist |
| ISO | International Standards Organization |
| km | kilometer |
| kV | kilovolts |
| kW | kilowatts |
| LAER | Lowest Achievable Emission Rate |
| lb | pounds |
| lb/hr | pounds per hour |
| lb/MMBtu | pounds per million British thermal units |
| lb/MW-hr | pounds per megawatt-hour |
| LNB | Low $NO_x$ Burner |
| MACT | Maximum Achievable Control Technology |
| MAGLC | Maximum Acceptable Ground-Level Concentration |
| mg/l | milligrams per liter |
| min | minutes |
| MMBtu | million British thermal units |
| MMBtu/hr | million British thermal units per hour |
| MW | megawatts |

| | |
|---|---|
| MW-hr | megawatt hour |
| $N_2$ | nitrogen gas |
| n/a | not applicable |
| NESHAP | National Emission Standards for Hazardous Air Pollutants |
| NAAQS | National Ambient Air Quality Standards |
| ng/J | nanograms per Joule |
| $NH_3$ | ammonia |
| NO | nitrogen oxide |
| $NO_2$ | nitrogen dioxide |
| $N_2O$ | nitrous oxide |
| $NO_x$ | nitrogen oxides |
| NSPS | New Source Performance Standards |
| $O_2$ | oxygen |
| OAC | Ohio Administrative Code |
| OCE | Oregon Clean Energy, LLC |
| Ohio EPA | Ohio Environmental Protection Agency |
| Pb | lead |
| $PM_{10}$ | particulate matter with a diameter equal to or less than 10 microns |
| $PM_{2.5}$ | particulate matter with a diameter equal to or less than 2.5 microns |
| ppm | parts per million |
| $ppm_v$ | parts per million by volume |
| $ppm_w$ | parts per million by weight |
| the Project | Oregon Clean Energy Center |
| PSD | Prevention of Significant Deterioration |
| psia | pounds per square inch absolute |
| PTE | Potential to Emit |
| PTI | Permit to Install |
| RACT | Reasonably Available Control Technology |
| RBLC | RACT/BACT/LAER Clearinghouse |
| RICE | Reciprocating Internal Combustion Engines |

| | |
|---|---|
| scf | standard cubic feet |
| SCR | selective catalytic reduction |
| SER | Significant Emission Rate |
| $SF_6$ | sulfur hexafluoride |
| SIL | Significant Impact Level |
| $SO_2$ | sulfur dioxide |
| $SO_3$ | sulfur trioxide |
| $SO_4$ | sulfate |
| STG | steam turbine generator |
| TDS | total dissolved solids |
| TES | Toledo Environmental Services |
| TLV | threshold limit value |
| tpy | tons per year |
| TSP | total suspended particulates |
| ULSD | ultra low sulfur diesel |
| USEPA | United States Environmental Protection Agency |
| VCAPCD | Ventura County Air Pollution Control District |
| VOC | volatile organic compounds |

# 1. INTRODUCTION

## 1.1 Project Overview

Oregon Clean Energy, LLC (OCE) is proposing to construct the Oregon Clean Energy Center, a nominal 799-megawatt (MW) (unfired International Standards Organization [ISO] conditions) combined cycle gas turbine (CCGT) facility (the Project). The Project will utilize combined cycle combustion turbine technology in a 2 x 2 x 1 configuration. OCE is requesting a permit-to-install (PTI) that will allow two optional plant configurations. The turbines being considered for the Project are:

- Option 1 -- Two Mitsubishi M501 GAC units; or
- Option 2 – Two Siemens SGT-8000H units

The permit application is being provided in two submittals to differentiate the two options. This submittal, Volume I, presents information for Option 1, the Mitsubishi engines. Volume II reflects the same information for the Siemens engines.

The major equipment will include two combustion turbine generators (CTGs), two supplementary-fired heat recovery steam generators (HRSGs), one steam turbine generator (STG), a mechanical draft wet cooling tower, and associated auxiliary and balance of plant equipment and systems. The Project is anticipated to be fired with natural gas; no oil backup is proposed. Where necessary, ancillary equipment utilizing fuel oil will utilize ultra-low sulfur (0.0015%) diesel (ULSD) fuel. The Project is intended to operate as a base-load facility and is proposing to be available to operate up to 8,760 hours per year, incorporating a range of load conditions. The Project seeks the flexibility to operate with frequent starts in order to meet energy demand (anticipating potential operation for 16 hours per day, five days per week).

OCE proposes to construct the Project within an approximately 30-acre parcel of land located entirely within Lucas County in the City of Oregon, Ohio. The site is industrially zoned within the Cedar Point Development Park, a designated Foreign Trade Zone. Its setting is within a mixed industrial, commercial and agricultural area that is located east of North Lallendorf Road, west of farmland located at 4632 Cedar Point Road, north of the Norfolk Southern Railroad, and south of the John Gradel and Sons' Farms. Access to the site is via North Lallendorf Road. The western edge of the site is transected by Driftmeyer Ditch, while Johlin Ditch transects the eastern portion of the site.

Air emissions from the proposed Project primarily consist of products of combustion from the combustion turbines, HRSG duct burners, and ancillary equipment. Pollutants that are regulated under federal and Ohio programs, such as Prevention of Significant Deterioration (PSD), include: carbon monoxide (CO); nitrogen dioxide ($NO_2$); sulfur dioxide ($SO_2$); total suspended particulates (TSP); particulate matter with a diameter equal to or less than 10 microns ($PM_{10}$); particulate matter with a diameter equal to or less than 2.5 microns ($PM_{2.5}$); volatile organic compounds (VOC); greenhouse gases (GHGs); lead (Pb); sulfuric acid mist ($H_2SO_4$); and hazardous air pollutants (HAPs). Potential emissions from the proposed Project on a tons per year (tpy) basis are presented in Table 1-1.

**Table 1-1: Summary of Proposed Potential Emissions and Applicable Regulatory Thresholds**

| Pollutant | Annual Emissions (tpy) | PSD Major Source Threshold (tpy) | PSD Significant Emission Rate (tpy) | PSD Applies? (Yes/No) |
|---|---|---|---|---|
| $NO_x$ | 198.86 | 100 | 40[a] | Yes |
| VOC | 113.68 | 100 | 40 | Yes |
| CO | 378.07 | 100 | 100 | Yes |
| $PM_{10}$ | 94.1 | 100 | 15 | Yes |
| $PM_{2.5}$ | 89.56 | 100 | 10 | Yes |
| $SO_2$ | 34.24 | 100 | 40 | No |
| $H_2SO_4$ | 10.52 | 100 | 7 | Yes |
| GHGs[b] | 2,801,030 | 100,000 | 75,000 | Yes |
| Pb | 0.00008 | 10 | 0.6 | No |

a. PSD significant emission rate for $NO_2$.
b. GHGs are expressed as carbon dioxide equivalents ($CO_2e$).

## 1.2 Regulatory Overview

The Project incorporates emissions control technology that reflect Best Available Control Technology (BACT) and Best Available Technology (BAT), as applicable. In addition to the use of clean-burning natural gas, emissions of nitrogen oxides ($NO_x$) will be controlled with selective catalytic reduction (SCR). Emissions of CO and VOC will be controlled with oxidation catalyst systems.

## 1.3 Application Overview

### 1.3.1 Application Organization

This permit application is divided into five sections. Section 2 provides a detailed description of the proposed Project, including a facility description and estimated emissions. Section 3 provides a review of regulations applicable to the proposed Project. Section 4 provides the BACT/BAT control technology evaluations. Section 5 provides a list of references. The air quality modeling analysis for the Project is provided in a separate report.

A printout of the information submitted to the Toledo Environmental Services (TES) via the Ohio Environmental Protection Agency (Ohio EPA) Air Services eBusiness Center is included as Appendix A. Emission calculation spreadsheets providing supporting calculations for the application are provided in Appendix B. Appendix C presents summary tables supporting the BACT/BAT analysis.

### 1.3.2 Application Contacts

To facilitate agency review of this application, individuals familiar with the Project and this application are identified below.

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# 2. PROJECT DESCRIPTION

## 2.1 Overview

OCE proposes development of a nominal 799-MW electric generating facility (ISO conditions) at an industrially zoned site in the City of Oregon, Ohio. Figure 1 presents the proposed Project location on a topographic map. The facility will include the following major and ancillary equipment:

- Two CTGs;
- Two HRSGs with supplemental duct firing;
- One STG;
- One mechanical draft wet cooling tower;
- One 2,250-kilowatt (kW) emergency diesel generator;
- One natural gas-fired, 99-million British thermal units (MMBtu) steam production auxiliary boiler; and
- One 300-horsepower (hp) fire pump.

The Project will be fueled by clean-burning natural gas. A new natural gas lateral will be built and operated to connect with nearby natural gas transmission lines. Electrical interconnection will be to the 345-kilovolt (kV) FirstEnergy transmission line, located just north of the site. Steam condenser cooling will utilize a 16-cell mechanical draft wet cooling tower system with average consumptive water use of 3-4 million gallons per day. Raw water from the City of Oregon is proposed to meet process requirements. Discharge of wastewater is proposed to be to the Oregon sanitary sewer system for treatment at the City's wastewater treatment plant, located within one mile of the site.

## 2.2 Site Location

The proposed site consists of an irregularly shaped parcel of land, totaling approximately 30 acres, located entirely within Lucas County in the City of Oregon, Ohio. The site consists of farmland with associated structures, including two single-family dwellings, a garage and a barn. The majority of the parcel is in active agricultural use. Site topography is relatively flat, at an elevation of approximately 588 feet above mean sea level. The Maumee River, which flows southwest to northeast to its confluence with Lake Erie, is situated approximately 2 miles northwest of the site.

The Project is located approximately 2 miles south of First Energy's existing Bay Shore coal-fired power plant on Lake Erie. British Petroleum's (BP's) expansive Toledo Refinery is located less than 0.5 mile to the north, beyond the electric transmission corridor. Land uses east and southeast of the site are primarily agricultural, with some residences along the roads which divide the land in a grid-like fashion. A cluster of commercial/industrial uses border the site to the south-southwest, including several manufacturing and warehouse facilities. More densely developed residential areas are located about a mile southwest of the site.

Pearson Park is located approximately 1.5 miles south of the site, Collins Park is 1.5 miles west-southwest of the site, and Maumee Bay State Park is approximately 2 miles east-northeast of the site. Further east-northeast, along the shore of Lake Erie are Mallard Club Wilderness Area and Cedar Point National Wildlife Refuge.

## 2.3 Combined Cycle Combustion Turbines

The Project's major equipment will include two CTGs, two supplementary-fired HRSGs, one STG, and a 16-cell mechanical draft wet cooling tower. This equipment is described in more detail below. The information provided in this application is based upon Mitsubishi M501 GAC turbines.

### 2.3.1 Combustion Turbine Generators

Thermal energy will be produced in the two CTGs through the combustion of natural gas as the sole fuel. Each CTG is capable of running independently of the other. The thermal energy is converted to mechanical energy in the CTG turbine that drives the CTG compressor and electric generator. The maximum heat input rate of each CTG is 2,945 MMBtu per hour (MMBtu/hr) (higher heating value [HHV]) and occurs at 100 percent load, 0 degrees Fahrenheit [°F]), relative humidity of 60 percent and an atmospheric pressure of 14.38 pounds per square inch absolute (psia).

### 2.3.2 Heat Recovery Steam Generators and Duct Burners

In combined cycle configuration, each CTG will exhaust through a dedicated HRSG to generate steam from the waste heat energy in the exhaust gas. Each HRSG will be equipped with supplemental fuel firing via a duct burner. The duct burners provide additional thermal energy to the HRSG, to provide more steam to the STG during periods of high demand. The duct burners will be natural gas-fired and each will have a maximum input capacity of 301 MMBtu/hr (HHV), although the duct burners will not always operate

at maximum capacity. The use of the duct burners will vary based upon different temperature and operating conditions.

#### 2.3.3 Steam Turbine Generator

Steam generated in the HRSGs will be expanded through a multi-stage, reheat-capable, condensing steam turbine. Rotational power in the steam turbine is converted to electric power via the steam turbine generator.

#### 2.3.4 Cooling Tower

The steam condenser cooling system will utilize a 16-cell mechanical draft wet cooling tower. In the cooling tower, circulating water is distributed among multiple cells of the cooling tower, where it cascades downward through each cell and then collects in the cooling tower basin. The mechanical draft cooling tower employs electric motor-driven fans to move air through each cooling tower cell. The cascading circulating water is partially evaporated and the evaporated water is dispersed to the atmosphere as part of the moist air leaving each cooling tower cell. The circulating water is cooled primarily through its partial evaporation. The cooling tower will be equipped with a high-efficiency drift eliminator with a drift rate of 0.0005 percent.

## 2.4 Air Pollution Control Equipment

The emission control technologies proposed for the combustion turbine and duct burner exhaust gases include dry low-$NO_x$ (DLN) combustors, an SCR to control $NO_x$ emissions, and an oxidation catalyst to control CO and VOC emissions. The DLN is integrated within the combustion turbines and the SCR and oxidation catalyst are located within each HRSG. The DLN combustion controls $NO_x$ formation by pre-mixing fuel and air immediately prior to combustion. Pre-mixing inhibits $NO_x$ formation by minimizing both the flame temperature and the concentration of oxygen at the flame front. Emissions of $SO_2$, $PM_{10}$/$PM_{2.5}$, and $H_2SO_4$ will be minimized through the exclusive use of pipeline quality natural gas in the combustion turbines. The SCR and oxidation catalyst are discussed further in the sections below.

#### 2.4.1 Selective Catalytic Reduction

SCR, a post-combustion chemical process, will be installed in the HRSGs to treat exhaust gases downstream of the CTGs. The SCR process will use 19 percent aqueous ammonia ($NH_3$) as a reagent. Aqueous $NH_3$ will be injected into the flue gas stream, upstream of the

SCR catalyst, where it will mix with $NO_x$. The catalyst bed will be located in a temperature zone of the HRSG where the catalyst is most effective. The mixture will pass over the catalyst and the $NO_x$ will be reduced to nitrogen gas ($N_2$) and water ($H_2O$). The SCR system will reduce $NO_x$ concentrations to 2.0 parts per million by volume ($ppm_v$) at 15 percent oxygen ($O_2$) with or without duct firing at all load conditions and ambient temperatures. A small amount of $NH_3$ will remain un-reacted through the catalyst, which is called "ammonia slip." The $NH_3$ slip will be limited to 5.0 $ppm_v$ at all load conditions and ambient temperatures.

#### 2.4.2 Oxidation Catalyst

An oxidation catalyst system will be located within each HRSG to control emissions of CO and VOC. Exhaust gases from the turbines will be passed over a catalyst bed where excess air will oxidize the CO and VOC to form carbon dioxide ($CO_2$) and $H_2O$. The oxidation catalyst system will reduce CO and VOC concentrations to 2.0 $ppm_v$ (at 15% $O_2$) in the exhaust gas under all load conditions and ambient temperatures.

### 2.5 Ancillary Equipment

The proposed Project will utilize a variety of ancillary equipment to support the facility including an auxiliary boiler, emergency generator, emergency fire pump, and storage tanks. This equipment is discussed further in the sections below.

#### 2.5.1 Auxiliary Boiler

The auxiliary boiler will be natural gas-fired and operate as needed to keep the HRSG warm during periods of turbine shutdown and provide sealing steam to the steam turbine during warm and hot starts. The auxiliary boiler will have a maximum input capacity of 99 MMBtu/hr, and will be limited to 2,000 hours of operation per year.

#### 2.5.2 Emergency Diesel Generator

The Project will have a 2,250 kW (3016.6 hp) emergency diesel generator to provide on-site emergency power capabilities independent of the utility grid. The emergency generator will fire ULSD fuel and will typically only operate for testing and to maintain operational readiness in the event of an emergency. Routine operation of the generator will be limited to a maximum of 500 operating hours per year.

#### 2.5.3 Emergency Diesel Fire Pump

The Project will have a 300-hp (223.6 kW) emergency fire pump to provide on-site fire fighting capabilities independent of the utility grid. The emergency fire pump will fire ULSD fuel and will typically only operate for testing and to maintain operational readiness in the event of an emergency. Similar to the emergency generator, it will be limited to a maximum of 500 operating hours per year.

#### 2.5.4 Aqueous Ammonia Storage Tank

The proposed facility will have tanks for storage of 19 percent aqueous $NH_3$ for use in the SCR system. The tanks will be equipped with secondary containment sized to accommodate the entire volume of one tank and sufficient freeboard for precipitation. The tanks will be located outdoors within an impermeable containment area, surrounded by a wall. The floor of the containment area will be covered with plastic balls designed to float on the liquid surface in the event of a spill, thereby reducing the exposed surface area, and minimizing potential emissions.

### 2.6 Emissions Estimates

The combined cycle units will typically operate at or near full load capacity to respond to electricity demands as needed. However, depending upon the demand, each unit can operate at loads ranging from approximately 50 percent turbine load without supplemental duct firing to 100 percent load with supplemental duct firing (full capacity). Combustion turbine performance and emissions are affected by ambient conditions: humidity, pressure, and temperature; with turbine fuel consumption, power output and emissions increasing at lower ambient temperatures. Supplemental duct firing performance and emissions are affected indirectly by ambient conditions, with fuel consumption, heat output and emissions increasing at higher ambient temperatures. As the combustion turbine decreases heat output to the HRSG at higher ambient temperatures, the supplemental duct firing increases to make up the loss of heat output to maintain maximum steam production to the steam turbine.

Table 2-1 presents a summary of the proposed limits for pollutants emitted from combined cycle combustion turbines at steady state full load operation. The limits incorporate BACT/BAT as applicable (Section 4.0).

**Table 2-1: Summary of Proposed Emission Limits for Combined Cycle Combustion Turbines (Steady State Full Load Operation)[a]**

| Pollutant | Case | Emission Rate (lb/MMBtu)[b] | Emission Rate ($ppm_v$)[c] |
|---|---|---|---|
| $NO_x$ | CT Only | 0.0077 | 2.0 |
| | CT with DB[d] | 0.0077 | 2.0 |
| VOC | CT Only | 0.0027 | 2.0 |
| | CT with DB | 0.0027 | 2.0 |
| CO | CT Only | 0.0047 | 2.0 |
| | CT with DB | 0.0047 | 2.0 |
| $PM_{10}/PM_{2.5}$ | CT Only | 0.0038 | n/a |
| | CT with DB | 0.0039 | n/a |
| $SO_2$ | CT Only | 0.0014 | n/a |
| | CT with DB | 0.0014 | n/a |
| $H_2SO4$ | CT Only | 0.0004 | n/a |
| | CT with DB | 0.0004 | n/a |
| GHG | CT Only | 840[e] | n/a |

a. Facility may exceed these limits during defined periods of startup and shutdown.
b. Emission rates are based on HHV of natural gas.
c. Concentrations are $ppm_v$ at 15% $O_2$.
d. Duct burner.
e. BACT/BAT for GHGs is expressed as lbs $CO_2$ per MW-hr gross output on an annual basis.

Because of the different emission rates and exhaust characteristics, a range of operation modes, including partial load operation, will be evaluated in the OCE Dispersion Modeling Report.

Combined cycle start-up and shutdown scenarios are also addressed in this air permit application. Emissions during start-up may, for some pollutants, result in an increase in short-term (pounds per hour [lb/hr]) emission rates. There is a minimum turbine downtime (preceding a start-up) and maximum duration associated with each type of start-up. Potential annual emissions estimates for the proposed Project include emissions from start-up and shutdown.

The following sections provide estimated emissions from the combined cycle combustion turbines and from the facility's ancillary equipment. Emissions of air contaminants from this equipment have been estimated based upon vendor emission guarantees, United States Environmental Protection Agency (USEPA) emission factors, mass balance calculations and engineering estimates.

### 2.6.1 Combined Cycle Combustion Turbine Emissions – Steady State Operation

Table 2-2 presents short term (lb/hr) emissions estimates from each combined cycle turbine under ISO conditions at 100 percent load conditions including duct burner operations. These emissions were developed from vendor estimates. The $PM_{10}/PM_{2.5}$ emissions estimates include filterable and condensable particulate matter and an allowance for sulfate and/or ammonia salt formation due to the reaction of sulfur trioxide ($SO_3$) with $H_2O$ and/or excess $NH_3$ in the SCR and oxidation catalyst systems. Emission rates for all base load operating conditions are provided in Appendix B.

Potential non-criteria pollutant emissions from the operation of the combustion turbines and ancillary equipment were estimated using AP-42 emission factors (USEPA, 2000) with the following exceptions. Emissions of formaldehyde from the combustion turbine generators were estimated using an emission factor from a California Air Resource Board (CARB) database. The California Air Toxics Emission Factor (CATEF) database contains air toxics emission factors calculated from source test data collected for California's Air Toxics Hot Spots Program (CARB, 1996). Emissions of hexane from the duct burner and the auxiliary boiler were estimated using an emission factor from the Ventura County Air Pollution Control District (VCAPCD, 2001). In both cases, the AP-42 emission factors had a very low emission factor rating and were not considered representative of the proposed equipment. The CARB and VCAPCD emission factors are considered more appropriate for the advanced technology of the combustion turbines. Potential emissions of HAPs and Ohio EPA air toxics from operation of the combustion turbines and duct burners are also provided in Appendix B.

**Table 2-2: Summary of Short Term Emission Rates for a Single Combustion Turbine[a]**

| Pollutant | 100% Load with Duct Burning (lb/hr) | 100% Load without Duct Burning (lb/hr) |
|---|---|---|
| $NO_x$ | 20.8 | 20.0 |
| VOC | 7.3 | 7.0 |
| CO | 12.7 | 12.2 |
| $PM_{10}/PM_{2.5}$ | 10.1 | 10.1 |
| $SO_2$ | 3.9 | 3.7 |
| $H_2SO_4$ | 1.2 | 1.1 |
| $NH_3$ | 19.3 | 18.5 |
| $CO_2$ | 317,920 | 305,607 |
| $CO_2e$ [b] | 318,278 | 305,786 |

a. Emissions presented in table are for ISO conditions. These may not represent worst-case conditions for air quality dispersion modeling. Appropriate worst-case conditions are used for analyses in the Dispersion Modeling Report.
b. $CO_2e$ incorporate emissions of methane and nitrous oxide.

### 2.6.2 Combined Cycle Combustion Turbine Emissions – Start-up and Shutdown Operations

Potential emissions associated with start-up of the combustion turbines were developed using vendor supplied information. Table 2-3 presents the emissions and downtimes (minimum number of hours the turbines would be off before a re-start) associated with startup events for the combined cycle turbines. In most cases emissions from these events are “self-correcting” on an annual basis. In other words, the average hourly emissions for each start-up event, incorporating the minimum downtime, are less than the corresponding steady state emission rate. Table 2-3 identifies the pollutants that are self-correcting for each event. Note that the shutdown emissions (not included in the tables) will be significantly lower than the start-up emissions and are also self-correcting on an annual basis.

**Table 2-3: Emissions and Downtimes Associated with Start-up Events**

| | Cold Start-up | Hot Start-up | Warm Start-up |
|---|---|---|---|
| **Number of Events per Year** | 50 | 250[a] | 0[a] |
| **Minimum Downtime Preceding Event (hours)[b]** | 60 | 0 | 8 |
| **Duration of Event (min)[c]** | 150 | 67 | 110 |
| | **Emissions Per Event (lb)[d]** | | |
| **$PM_{10}/PM_{2.5}$** | 9.2 | 3.8 | 6.6 |
| **$NO_x$** | 108.9 | 52.4 | 77.5 |
| **CO** | 2,766.8 | 646 | 1,784.6 |
| **VOC** | 848.5 | 122.1 | 575.8 |
| | **Self-Correcting** | | |
| **$PM_{10}/PM_{2.5}$** | Yes | Yes | Yes |
| **$NO_x$** | Yes | No | Yes |
| **CO** | No | No | No |
| **VOC** | No | No | No |

a. Total hot start and warm start emissions are 250 starts.
b. Cold start applies to units that are down more than 60 hours. Warm start applies to units that are down between 8 and 60 hours. Hot start applies to units that are down less than 8 hours.
c. minutes
d. pounds

Proposed annual emission estimates for the facility incorporate those conditions that are not considered self-correcting. Table 2-4 presents the average hourly emission rates associated with each start-up/shutdown event. The average emission rates for dispersion modeling for compliance with short-term air quality standards are shown along with emission rates to be used in calculating annual emissions. The latter emission rates incorporate the minimum downtime that would precede each event. These average hourly rates were used to determine if the event was considered self-correcting compared to steady state emission rates. Emissions of $SO_2$ will always be self-correcting because $SO_2$ emissions are dependent upon the amount of fuel burned, and steady state is always worst-case.

**Table 2-4: Average Hourly Emissions for Start-up and Shutdown Events**

| Pollutant | Cold Start-up (lb/hr) | | Hot Start-up (lb/hr) | | Warm Start-up (lb/hr) | |
|---|---|---|---|---|---|---|
| | Short-term | Long-term[b] | Short-term | Long-term[b] | Short-term | Long-term[b] |
| $PM_{10}/PM_{2.5}$ | 3.68 | 0.147 | 3.4 | 3.4 | 3.6 | 0.67 |
| $NO_x$ | 43.56[a] | 1.74 | 46.93[a] | 46.93 | 42.27[a] | 7.88 |
| CO | 1,106.7[a] | 44.27 | 578.5[a] | 578.51 | 973.4[a] | 181.48 |
| VOC | 339.4 | 13.58 | 109.3 | 109.34 | 314.1 | 58.56 |

a. Short-term emission rate during start-up was used in modeling analysis demonstrating compliance with ambient air quality standards.

b. Long-term emission rate during start-up was used for determining annual Potential to Emit (PTE). This rate incorporates the minimum downtime.

### 2.6.3 Ancillary Equipment

This section presents estimated criteria pollutant emissions from the ancillary equipment at the facility. The proposed ancillary equipment includes one auxiliary boiler, one emergency generator, one emergency fire pump, and the cooling tower. The following assumptions were used in evaluating emissions from this equipment:

- The natural gas-fired auxiliary boiler will have a maximum input capacity of 99.0 MMBtu/hr and will be limited to 2,000 hours of operation per year.
- The diesel-fired emergency fire pump with a rated capacity of 300 hp (or 223.8 kW) will have a maximum heat input of approximately 2.1 MMBtu/hr (15.3 gallons per hour) and will be limited to 500 hours of operation per year.
- The diesel-fired emergency generator with a rated capacity of 2,250 kW (or 3,016.6 hp) will have a maximum heat input of approximately 15.8 MMBtu/hr (115 gallons per hour) and will be limited to 500 hours of operation per year.
- The cooling tower is expected to have a recirculating flow rate of 322,000 gallons per minute and 2,031 milligrams per liter (mg/l) of total dissolved solids (TDS).

Criteria pollutant emissions from the ancillary equipment were estimated based on vendor-supplied information except for $SO_2$ emissions from the emergency equipment, which are based on a mass balance. $PM_{10}/PM_{2.5}$ emissions from the cooling tower are

estimated using a particulate distribution developed by the Electric Power Research Institute (EPRI) and presented in an Air and Waste Management Association (AWMA) publication (AWMA, 2001) with design values and conservatively assuming five cycles of concentration. The cooling tower will utilize a high efficiency (0.0005%) drift eliminator.

Tables 2-5 and 2-6 summarize estimated short-term (lb/hr) and annual emissions of criteria pollutants from the ancillary equipment, respectively. Supporting calculations are located in Appendix B.

HAP emissions will be less than major source thresholds, which are less than 10 tpy for any individual HAP and 25 tpy for total HAPs.

#### 2.6.4 Potential Annual Emissions

Potential annual emissions from the proposed facility were estimated using the following worst-case assumptions:

- Full-load operation of the combustion turbines (at 59°F ambient temperature);
- Duct burning for 8,760 hours per year during steady state operation of each combustion turbine;
- Incorporation of start-up/shutdown events as described in Section 2.6.2; for start-up/shutdown events that are not self-correcting, a total of 300 combined start-up events per year per year were assumed (see Table 2-3); and
- Incorporation of emissions from ancillary equipment as discussed in Section 2.6.3 (see Table 2-6).

Potential annual emissions for the proposed Project are summarized in Table 2-7.

**Table 2-5: Short-Term Potential Emissions from Ancillary Equipment**

| Pollutant | Auxiliary Boiler (lb/hr) | Emergency Fire Pump (lb/hr) | Emergency Generator (lb/hr) | Cooling Tower (lb/hr) |
|---|---|---|---|---|
| $PM_{10}$ | 0.79 | 0.1 | 1.0 | 1.04 |
| $PM_{2.5}$ | 0.79 | 0.1 | 1.0 | 0.004 |
| $SO_2$ | 0.07 | 0.003 | 0.032 | -- |
| $H_2SO_4$ | 0.005 | 0.00007 | 0.00016 | -- |
| $NO_x$ | 1.98 | 1.73 | 27.8 | -- |
| CO | 5.45 | 1.73 | 17.3 | -- |
| VOC | 0.59 | 0.24 | 3.9 | -- |
| Pb | 0.00 | 0.00003 | 0.0003 | -- |
| $CO_{2e}$ | 11,952.3 | 347.7 | 3,496.4 | -- |

**Table 2-6: Potential Annual Emissions from Ancillary Equipment**

| Pollutant | Auxiliary Boiler (tpy) | Emergency Fire Pump (tpy) | Emergency Generator (tpy) | Cooling Tower (tpy) | Total (tpy) |
|---|---|---|---|---|---|
| $PM_{10}$ | 0.79 | 0.025 | 0.25 | 4.56 | 5.62 |
| $PM_{2.5}$ | 0.79 | 0.025 | 0.25 | 0.02 | 1.08 |
| $SO_2$ | 0.07 | 0.0008 | 0.008 | -- | 0.08 |
| $H_2SO_4$ | 0.0054 | 0.00002 | 0.0002 | -- | 0.0056 |
| $NO_x$ | 1.98 | 0.43 | 6.95 | -- | 9.36 |
| CO | 5.45 | 0.43 | 4.34 | -- | 10.21 |
| VOC | 0.59 | 0.06 | 0.98 | -- | 1.63 |
| Pb | 0.00 | 0.000007 | 0.00007 | -- | 0.00008 |
| $CO_2e$ | 11,952.3 | 86.9 | 874.1 | -- | 12,913 |

**Table 2-7: Summary of Annual Potential Emissions**

| Pollutant | Combustion Turbines (tpy) | Ancillary Equipment (tpy) | Cooling Tower (tpy | Total (tpy) |
|---|---|---|---|---|
| $PM_{10}$ | 88.48 | 1.06 | 4.56 | 94.10 |
| $PM_{2.5}$ | 88.48 | 1.06 | 0.02 | 89.56 |
| $SO_2$ | 34.16 | 0.08 | 0.0 | 34.24 |
| $NO_x$ | 189.5 | 9.36 | 0.0 | 198.86 |
| CO | 367.86 | 10.21 | 0.0 | 378.07 |
| VOC | 112.05 | 1.64 | 0.0 | 113.69 |
| $H_2SO_4$ | 10.51 | 0.01 | 0.0 | 10.52 |
| $NH_3$ | 169.07 | 0.0 | 0.0 | 169.07 |
| Pb | 0.0 | 0.00008 | 0.0 | 0.00008 |
| $CO_2e$ | 2,788,117 | 12,913 | 0.0 | 2,801,030 |

# 3. REGULATORY APPLICABILITY EVALUATION

OCE is requesting approval to construct a nominal 799-MW (ISO conditions) combined cycle electric generating facility in the City of Oregon, Lucas County, Ohio. The Project is considered a new major stationary combustion source under PSD regulations because the potential annual emissions from the facility exceed major source thresholds as illustrated in Table 1-1.

This section contains an analysis of the applicability of federal and state air quality regulations to the proposed Project. The specific regulations and programs that are included in this review include:

- PSD New Source Review;
- Federal New Source Performance Standards (NSPS);
- Federal National Emission Standards for Hazardous Air Pollutants (NESHAP);
- Federal Acid Rain Program; and
- Other Ohio EPA requirements.

## 3.1 PSD New Source Review

Combined cycle power plants with potential emissions greater than 100 tpy of one or more criteria pollutants are considered new major stationary sources under the PSD program. As shown in Table 1-1, the potential emissions of at least one regulated criteria pollutant will exceed this threshold. As such, the proposed facility is subject to PSD New Source Review. Under the PSD regulations, once a major source threshold is triggered, PSD review must be completed for all pollutants whose potential emissions exceed their respective Significant Emission Rate (SER).

On April 2, 2007, the U.S. Supreme Court found that GHGs, including $CO_2$, are air pollutants covered by the Clean Air Act (CAA). On May 13, 2010, the USEPA issued a final rule (called the “Tailoring Rule”) that establishes an approach to GHG emissions from stationary sources under the CAA. This final rule “tailors” the requirements of the CAA permitting program to limit which facilities will be required to obtain PSD permits. The CAA permitting program emissions thresholds for criteria pollutants are 100 tpy or 250 tpy, depending on the source category. While these thresholds are appropriate for criteria pollutants, they are not feasible for GHG emissions as they are emitted in much greater quantities. Under the rule, new construction projects that exceed 100,000 tpy of GHG emissions are subject to PSD review, and the SER for GHGs is 75,000 tpy.

As presented in Table 1-1, the Project has triggered major source thresholds for GHGs. In addition, PSD review is required for $NO_x$, CO, VOC, $H_2SO_4$ and $PM_{10}/PM_{2.5}$ emissions.

PSD review requirements include application of BACT, an ambient air quality modeling analysis demonstrating compliance with National Ambient Air Quality Standards (NAAQS) and PSD increments, and additional impacts analyses. Ohio EPA has been delegated PSD review authority by the USEPA. For an air contaminant subject to BACT, compliance with BACT requirements also represents Ohio EPA BAT.

#### 3.1.1 Best Available Control Technology

Pollutants subject to PSD review are required to apply BACT for control of emissions of PSD pollutants. BACT is defined as an emission limitation based on the maximum degree of reduction, on a case-by-case basis, taking into account energy, environmental and economic considerations. In establishing the final BACT limit, agencies may consider any new information, including recent permit decisions, subsequent to submittal of a complete application. The BACT analyses for $NO_x$, CO, VOC, $H_2SO_4$, $PM_{10}/PM_{2.5}$ and GHG are presented in Section 4.0.

#### 3.1.2 Air Quality Impact Analysis

An ambient air quality analysis must be performed to demonstrate compliance with NAAQS and PSD increments. Proposed new sources subject to PSD review may not cause or significantly contribute to a violation of the NAAQS. As part of this demonstration, the USEPA has established Significant Impact Levels (SILs) for all of the criteria pollutants. SILs represent concentrations of pollutants that are considered to be insignificant with respect to demonstration of NAAQS compliance. Proposed new sources whose air quality impacts exceed the SILs must complete a cumulative analysis taking into consideration existing background air quality levels and contributions from other sources.

The air quality impact analysis for the Project, which demonstrates that all impacts are below SILs and comply with all applicable NAAQS and PSD increments, is presented in the OCE Dispersion Modeling Report, Volume 1.

#### 3.1.3 PSD Class I Area Impact Analysis

PSD regulations require that proposed major sources within 100 kilometers (km) of a PSD Class I area perform an assessment of potential impacts in the PSD Class I area. PSD Class I areas are specifically designated areas of special national or regional value from a

natural, scenic, recreational or historic perspective. These areas are administered by the National Park Service, United States Fish and Wildlife Service, or the United States Forest Service. These Federal Land Managers (FLMs) are responsible for evaluating proposed projects' air quality impacts in the Class I areas and may make recommendations to the permitting agency to approve or deny permit applications.

PSD Class I area impact analyses may consist of:

- An air quality impact analysis;
- A visibility impairment analysis; and
- An analysis of impacts on other air quality related values (AQRVs) such as impacts to flora and fauna, water, and cultural resources.

There are no PSD Class I areas within 100 km of the proposed Project site. The nearest PSD Class I areas are the Otter Creek and Dolly Sods Wilderness Areas in West Virginia, and the Mammoth Cave National Park in Kentucky. These PSD Class I areas are located over 250 miles (400 km) from the Project site. Ohio EPA recommends that a screening formula from *The Federal Land Managers AQRV Workgroup (FLAG) Phase I Report – Revised* (FLAG, 2010) be used to determine if a Class I Area is close enough to warrant analysis. A screening analysis using this methodology, which is presented in the OCE Dispersion Modeling Report, Volume 1, demonstrates that a Class I analysis is not required for this Project.

#### 3.1.4 Additional Impact Analyses

Additional impact analyses are also required as part of PSD review and Ohio EPA regulations. These additional analyses include an assessment of impacts on community growth resulting from the Project, an assessment of visibility impairment and an assessment of impacts to soils and vegetation. These impact analyses are presented in the OCE Dispersion Modeling Report.

Federal actions, such as the issuance of PSD permits (in this case, delegated to the state), require review and consideration of the potential implications of a proposed project to endangered or threatened species and their habitats, as well as cultural resources. OCE has consulted with applicable agencies to determine whether such resources will require specific consideration, and records of these communications are provided in the OCE Dispersion Modeling Report.

## 3.2 New Source Performance Standards

NSPS are technology-based standards applicable to new and modified stationary sources. NSPS have been established for approximately 70 source categories. Based upon a review of these standards, several subparts are applicable to the proposed Project. The Project's compliance with each of these standards is presented in the sections below.

### 3.2.1 40 CFR 60 – Subpart A – General Provisions

Any source subject to an applicable standard under 40 Code of Federal Regulations (CFR) 60 is also subject to the general provisions under Subpart A. Because the Project is subject to other Subparts of the regulation, the requirements of Subpart A will also apply. OCE will comply with the applicable notifications, performance testing, recordkeeping and reporting outlined in Subpart A.

### 3.2.2 40 CFR 60 – Subpart KKKK – Stationary Combustion Turbines

Subpart KKKK places emission limits on $NO_x$ and $SO_2$ from new combustion turbines. The proposed combustion turbines and duct burners will be subject to this standard. For new combustion turbines firing natural gas with a rated heat input greater than 850 MMBtu/hr, $NO_x$ emissions are limited to:

- 15 $ppm_v$ at 15 percent $O_2$; or
- 54 nanograms per Joule (ng/J) of useful output (0.43 pounds per megawatt-hour [lb/MW-hr]).

Additionally, $SO_2$ emissions must meet one of the following:

- Emissions limited to 110 ng/J (0.90 lb/MW-hr) gross output; or
- Emissions limited to 26 ng/J (0.060 pounds per million British thermal units [lb/MMBtu]).

As described in Section 2.0, the proposed Project will use an SCR system to reduce $NO_x$ emissions to 2.0 $ppm_v$ at 15 percent $O_2$ and pipeline natural gas to limit $SO_2$ emissions to 0.0015 lb/MMBtu. As such, the Project will meet the emission limits under Subpart KKKK.

Additionally, the provisions of this Subpart require continuous monitoring of water-to-fuel ratio, but allow for the use of either a 40 CFR Part 60 or Part 75 certified $NO_x$ continuous

emissions monitoring system (CEMS) in lieu of this requirement. OCE is proposing to use a 40 CFR Part 75 certified $NO_x$ CEMS, which will satisfy this requirement.

#### 3.2.3 40 CFR 60 – Subpart Dc – Small Industrial-Commercial-Institutional Steam Generating Units

Subpart Dc is applicable to steam generating units with a maximum input capacity greater than 10 MMBtu/hr and less than 100 MMBtu/hr. The proposed auxiliary boiler has a maximum input capacity of 99 MMBtu/hr, and is, therefore, subject to the standard. For units combusting natural gas, the standard requires initial notifications at the start of construction and at initial start-up. In addition, records must be maintained regarding the amount of fuel burned on a monthly basis; however, since natural gas is the only fuel burned in the proposed boiler, there are no specific reporting requirements to the USEPA under Subpart Dc.

#### 3.2.4 40 CFR 60 – Subpart IIII – Stationary Compression Ignition Internal Combustion Engines

Subpart IIII is applicable to owners and operators of stationary compression ignition (CI) internal combustion engines that commence operation after July 11, 2005. Relevant to the proposed Project, this rule applies to the emergency generator and emergency fire pump.

For model year 2009 and later fire pump engines with a displacement less than 30 liters per cylinder and an energy rating between 300 and 600 hp, Subpart IIII provides the following emission limits:

- 4.0 grams per kilowatt-hour (g/kW-hr) (3.0 grams per horsepower-hour [g/hp-hr]) of VOC + $NO_x$
- 3.5 g/kW-hr (2.6 g/hp-hr) of CO
- 0.2 g/kW-hr (0.15 g/hp-hr) of particulate matter

The Project will install a fire pump meeting these emission standards.

To comply with Subpart IIII, the emergency generator must meet the emission standards for new non-road CI engines (Tier 2 or 3). Engines with a model year 2006 or later with a power rating of 560 kW (750 hp) or greater must meet the following limits:

- 6.4 g/kW-hr (4.8 g/hp-hr) of VOC + $NO_x$

- 3.5 g/kW-hr (2.6 g/hp-hr) of CO
- 0.2 g/kW-hr (0.15 g/hp-hr) of particulate matter

The emergency generator associated with the proposed Project will be certified to meet non-road emission standards.

### 3.3 State of Ohio Best Available Technology

"Best available technology," or BAT, means any combination of work practices, raw material specifications, throughput limitations, and source design characteristics. BAT can include an evaluation of the annualized cost per ton of air pollutant removed, and air pollution control devices that have been previously demonstrated to the director of environmental protection to operate satisfactorily in this state or other states with similar air quality on substantially similar air pollution sources (Ohio Administrative Code [OAC] Rule 3745-31-01 [T]).

Ohio EPA has published several memoranda (inter-office communications) and engineering guides that explain the implementation of the BAT program. Under the BAT program, sources with pollutants meeting certain other standards are also presumed to meet BAT. For pollutants subject to BACT requirements, BACT is presumed to meet BAT requirements. For pollutants subject to NSPS, compliance with NSPS represents BAT. If there is a Reasonably Available Control Technology (RACT) minimum limit anywhere in the state, BAT is determined to be, at a minimum, equivalent to the most stringent pollutant emission rate limit no matter where in the state the RACT limit applies. Where the above prescriptive approach is not applicable to a criteria pollutant, a case-by-case BAT determination may be conducted using a "top down" approach, similar to a BACT analysis. BAT for criteria pollutants is described in Section 4.0.

For HAPs subject to Maximum Available Control Technology (MACT), compliance with MACT represents BAT. In addition, BAT is applied to any air toxic (non-criteria pollutant) for which there is no federal or state standard using Ohio EPA's Air Toxics policy. Ohio EPA's Air Toxic policy is contained in the guidance document titled "Option A – Review of New Sources of Air Toxics." The guidelines provide the following approach:

- Determine if a threshold limit value (TLV) exists for the specific compound, which is emitted from the source.

- Divide the TLV by ten to adjust the standard from the working population to the general public (TLV/10).

- Adjust the standard to account for the duration of the exposure (operating hours of source) of "X" hours per day and "Y" days per week from 8 hours per day and 5 days per week. This formula is used to obtain the Maximum Acceptable Ground-Level Concentration (MAGLC) or Acceptable Incremental Impact:

$$\frac{TLV}{10} \times \frac{8}{X} \times \frac{5}{Y} = 4\frac{TLV}{XY} = MAGLC$$

- Compare the one-hour average ambient pollutant concentrations, predicted by an appropriate air dispersion model, with the corresponding MAGLC for compliance with the air toxic's policy.

A comprehensive list of air toxics to which the policy applies is contained in Appendix B of OAC Rule 3745-114. For these air toxics, Ohio EPA requires only those emitted above 1 tpy to be subject to review. For the Project, the following air toxics will be subject to "Option A" review or require a BAT determination: ammonia; formaldehyde; toluene; xylene; and sulfuric acid.

### 3.4 Operating Permit

OAC Rule 3745-77 specifies that a facility with an annual PTE equal to or exceeding any of the following thresholds is required to obtain an Operating Permit from Ohio EPA:

- CO – 100 tpy;
- $PM_{10}$ – 100 tpy;
- TSP – 100 tpy;
- $SO_2$ – 100 tpy;
- $NO_x$ – 100 tpy;
- VOC – 100 tpy;
- Pb – 10 tpy;
- Any other contaminant, except $CO_2$ – 100 tpy;
- Any single HAP – 10 tpy; and
- Combination of HAPs – 25 tpy.

Potential $NO_x$, CO, VOC, $PM_{10}$, and TSP emissions for the Project exceed the Title V Operating Permit applicability threshold, triggering the need to apply for the Operating Permit. The Project is also required to obtain an Operating Permit due to the combustion turbines being subject to NSPS Subpart KKKK.

An Operating Permit application is a comprehensive document that includes: PTE data for all sources across the facility; supporting information and calculations; control equipment data; a review of state and federal regulations; a description of proposed monitoring methods; fuel data; stack and vent information; a proposed compliance plan; proposed operating hours; and descriptions of normal source operation and start-up and shutdown conditions for each source at the facility along with emissions data for those operating modes. Permit applications are submitted using the Ohio EPA Air Services system.

Pursuant to OAC rule 3745-77-04, a timely and complete Title V operating permit is required to be submitted within 12 months after commencing operations. As per OAC rule 3745-77-08, the state shall take final action on the application within 18 months of receiving a complete application. The draft permit shall be issued no later than 45 days before the aforementioned deadline for final action on the permit.

### 3.5 National Emission Standards for Hazardous Air Pollutants (40 CFR Parts 61 and 63)

There are no 40 CFR Part 61 standards applicable to the proposed facility operations. Current USEPA AP-42 emission factors, other applicable emission factors and vendor information were reviewed in determining if the proposed Project was subject to a standard under 40 CFR Part 63. Based on potential emission calculations, the potential emissions of a single HAP will not exceed the major source threshold of 10 tpy. In addition, potential emissions of combined HAPs will be less than the major source threshold of 25 tpy. Therefore, the major source NESHAP standards under 40 CFR Part 63 are not applicable to this Project.

The USEPA has also promulgated a variety of standards applicable to area sources, those sources that are not considered major sources of HAPs. USEPA recently promulgated an area source standard for industrial, commercial and institutional boilers. This standard does not have requirements for boilers that are exclusively natural gas-fired. As such, the auxiliary boiler associated with the proposed Project does not have any requirements under this standard.

The USEPA has also promulgated an area source NESHAP for Reciprocating Internal Combustion Engines (RICE) under 40 CFR 63 Subpart ZZZZ. Under this NESHAP, new emergency engines are required to meet the requirements under the applicable NSPS. As discussed in Section 3.2.4, the emergency engines associated with the Project will meet the NSPS requirements under 40 CFR 60 Subpart IIII.

### 3.6 Acid Rain Program

Title IV of the Clean Air Act Amendments required USEPA to establish a program to reduce emissions of acid rain forming pollutants, called the Acid Rain Program. The overall goal of this program is to achieve significant environmental benefits through reduction in $SO_2$ and $NO_x$ emissions. To achieve this goal, the program employs both traditional and market-based approaches for controlling air pollution. Under the market-based aspect of the program, affected units are allocated $SO_2$ allowances by the USEPA, which may be used to offset emissions, or traded under the market allowance program. In addition, in order to ensure that facilities do not exceed their allowances, affected units are required to monitor and report their emissions using a CEMS system, as approved under 40 CFR Part 75.

The Project is subject to the Acid Rain Program based on the provisions of 40 CFR 72.6(a)(3) because the turbines are considered utility units under the program definition and they do not meet the exemptions listed under paragraph (b) of this Section. The Project will be required to submit an acid rain permit application at least 24 months prior to the date on which the affected unit commences operation. OCE will submit an acid rain permit application in compliance with these requirements prior to this deadline.

### 3.7 Cross-State Air Pollution Rule

On March 10, 2005, USEPA issued the Clean Air Interstate Rule (CAIR) which requires reductions in emissions of $NO_x$ and $SO_2$ from large fossil fueled electric generating units using a cap-and-trade system. The rule provides both annual emissions budgets and an ozone season emission budget for each state. On July 11, 2008, the U.S. Court of Appeals for the D.C. Circuit (the Court) issued an opinion vacating and remanding these rules. However, on December 23, 2008, the Court granted rehearing only to the extent that it remanded the rules to USEPA without vacating them. The December 23, 2008 ruling leaves CAIR in place until the USEPA issues a new rule to replace CAIR in accordance with the July 11, 2008 provisions. On July 6, 2011, the USEPA issued the Cross-State Air Pollution Rule (CSAPR) which replaced CAIR. Ohio power generation sources of 25 MW or greater would be subject to this rule. CSPAR was to go into effect

January 1, 2012 and would have imposed new cap-and-trade programs for ozone season $NO_x$, annual $NO_x$, and annual $SO_2$ emissions. However, a ruling issued by the Court on December 30, 2011 stayed CSAPR until further resolution of petitions filed by several entities. On August 21, 2012, the Court vacated CSPAR and ruled that the former CAIR remain in effect until a viable replacement to CSAPR is made. Under CSAPR, electric generating facilities in Ohio would have been required to obtain allowances for ozone season $NO_x$, annual $NO_x$, and annual $SO_2$ emissions.

Under CAIR, assets holding excess allowances will be able to sell or trade allowances to those without sufficient allowances. The Project will comply with the rules currently in effect at the time of operational start.

### 3.8 State Regulations

In addition to regulations already discussed in preceding sections, state regulations that pertain to this facility are listed in Table 3-2. Titles shown in capital letters in the table are permits, notifications, and/or reports that will be needed for construction and operation of this facility.

Federal authority is delegated to the State of Ohio, and all permit applications will be submitted to Ohio EPA through the delegated local permitting agency. In Lucas County, the TES in Toledo, Ohio will handle these permit applications. The PTI will serve as the air construction permit and initial operating permit for emission testing purposes. As explained in preceding sections, the following list of air permits is applicable to the proposed facility:

1) Ohio EPA PTI: OAC Chapter 3745-31 – Permit to Install New Source of Pollution. The PTI will serve as the submission vehicle for the preconstruction permit.

2) Title V Permit: OAC Chapter 3745-77 – Title V Permits.

3) Acid Rain Permit: OAC Chapter 3745-103 – Title IV Acid Rain Permits and Compliance.

**Table 3-1: Ohio EPA Applicable Regulations**

| Rule | Description |
|---|---|
| OAC 3745-17-07 | Control of visible particulate emissions from stationary sources |
| OAC 3745-17-10 | Restrictions on particulate emissions from fuel burning equipment |
| OAC 3745-18-06 | General emission limit provisions for sulfur dioxide |
| OAC 3745-21-07 | Control of emissions of organic materials from stationary sources |
| OAC 3745-21-09 | Control of emissions of volatile organic compounds from stationary sources |
| OAC 3745-23-06 | Control of nitrogen oxides emissions from stationary sources |
| OAC 3745-25-03 | Emission control action programs |
| OAC 3745-31 | PERMIT TO INSTALL NEW SOURCES OF POLLUTION |
| OAC 3745-71-02 | Emissions test methods and procedures for new and existing sources |
| OAC 3745-77 | TITLE V PERMITS |
| OAC 3745-100 | TOXIC CHEMICAL RELEASE REPORTING |
| OAC 3745-103 | ACID RAIN PERMITS AND COMPLIANCE |
| OAC 3745-104 | ACCIDENTAL RELEASES PREVENTION PROGRAM |

# 4. CONTROL TECHNOLOGY EVALUATION – BACT/BAT

Control technology evaluations for new major stationary sources involve an evaluation of BACT for pollutants subject to PSD pre-construction review and State of Ohio BAT for other pollutants not subject to PSD. A control technology analysis has been performed for the proposed facility based upon the USEPA guidance document New Source Review Workshop Manual (USEPA, 1990). The PSD and State of Ohio BAT requirements for each pollutant were defined in Section 3.0 of this application, and are briefly summarized in the sections below.

## 4.1 Regulatory Applicability of Control Requirements

This section provides a brief summary of the control technology requirements under the PSD and state of Ohio permitting programs for each pollutant. Control technology requirements are generally based on the potential emissions from the new or modified source and the attainment status of the area in which the source is located. A detailed determination of applicable regulatory requirements under PSD rules is provided in Section 3.0. The following sections discuss the applicability of BACT and BAT requirements for emissions from the equipment associated with the Project.

### 4.1.1 PSD Pollutants Subject to BACT/BAT

Pollutants subject to a PSD review are also subject to a BACT analysis. The proposed Project is considered a major source for PSD purposes since potential emissions of one or more criteria pollutants exceed major source thresholds. Therefore, individual pollutants are subject to BACT requirements if their potential emissions exceed the SERs presented in Table 1-1. As shown in this table, the Project is subject to PSD review for the criteria pollutants: $NO_2$, CO, VOC, $H_2SO_4$, GHG and $PM_{10}/PM_{2.5}$ and is, therefore, required to implement BACT for these pollutants. Criteria pollutants for which BACT is not required to be implemented are subject to BAT.

As described in Section 3.3, sources with pollutant emission rates meeting certain other standards are also presumed to meet BAT. For pollutants subject to BACT requirements, compliance with BACT meets BAT requirements. For HAPs subject to MACT, compliance with MACT meets BAT requirements. For pollutants subject to NSPS, compliance with NSPS represents BAT. Sources subject to BAT may comply with the levels achieved by similar sources or may conduct a case-by-case BAT determination using a “top down” approach, similar to a BACT analysis. BAT for non-criteria or air toxic pollutants are

addressed by an "Option A" evaluation described in Section 3.3. This evaluation is included in the Air Modeling Dispersion Report submitted for the Project.

#### 4.1.2 Emission Units Subject to BACT Analyses

For a facility subject to a BACT analysis, each pollutant emitted in amounts greater than the regulatory thresholds are subject to a prescribed level of control technology review for each emission unit that emits that pollutant. For the proposed Project, the source responsible for the majority of the Project's emissions will be the combined cycle combustion turbines with supplemental duct burning. Therefore, the primary focus of the BACT analyses presented in the following sections is on the combined cycle combustion turbines. Evaluation of the ancillary equipment is conducted consistent with proposed small annual emission levels and with limited hours of operation.

## 4.2 BACT Analysis Approach

The sections below outline the approach used to conduct the BACT/BAT analyses presented in this application.

#### 4.2.1 Best Available Control Technology

BACT is defined as the optimum level of control applied to a pollutant emissions based upon consideration of energy, economic and environmental factors. In a BACT analysis, the energy, environmental, and economic factors associated with each alternate control technology are evaluated, as necessary, in addition to the benefit of reduced emissions that each technology would provide. The BACT analyses presented in the following sections consist of up to four steps as outlined below.

##### *4.2.1.1 Identification of Technically Feasible Control Options*

The first step in a BACT analysis is the identification of technically feasible and available control technology options, including consideration of transferable and innovative control measures that may not have been previously applied to the source type under analysis. The minimum requirement for a BACT proposal is an option that meets federal NSPS limits or other minimum state or local requirements, such as RACT or Ohio EPA emission standards. After elimination of technically infeasible control technologies, the remaining options are ranked by control effectiveness.

If there is only a single feasible option, or if the most stringent alternative is proposed, then no further analysis is required. Technical considerations and site-specific sensitive issues will often play a role in BACT determinations. Generally, if the most stringent technology is rejected as BACT, the next most stringent technology is evaluated and so on.

In order to identify options for each class of equipment, a search of the USEPA's RACT/BACT/LAER Clearinghouse (RBLC) database was performed. Individual searches were performed for each pollutant emitted from each emission unit. The most recently issued permits from Ohio and other permits listed on the RBLC were also analyzed if available. Information was found for several hundred large combined cycle power plant projects permitted in the past decade. Appendix C provides a summary of recent similar energy projects from around the country. Less recent projects were also included due to regional proximity and/or very stringent emission limits. Using these criteria, lists for each pollutant for each equipment source were compiled and are presented in Appendix C.

If two or more technically feasible options are identified, the next three steps (as presented below) are applied to identify and compare the economic, energy and environmental impacts of the options.

##### *4.2.1.2 Economic (Cost-Effectiveness) Analysis*

This analysis consists of an estimation of cost and calculation of the cost-effectiveness of each control technology, on a dollar per ton of pollution removed basis. Annual emissions with a control option are subtracted from base case emissions to calculate tons of pollutant controlled per year. The base case may be uncontrolled emissions or the maximum emission rate allowed with BACT considerations (such as an NSPS or RACT limit). Annual costs are calculated by adding annual operation and maintenance costs to the annualized capital cost of a control option. Cost-effectiveness (dollars per ton) of a control option is the annual cost (dollars per year) divided by the annual reduction in emissions (tpy). If either the most effective control option is proposed, or if there are no technically feasible control options, an economic analysis is not required.

##### *4.2.1.3 Energy Impact Analysis*

Two types of energy impacts are normally considered quantifiable. First, when the installation of a particular option would result in a reduction in either the power output capacity or reliability of a unit, this reduction is a quantifiable energy impact. Second, the consumption of energy by the control option itself is a quantifiable energy impact. These

impacts can be quantified by either an increase in fuel consumption due to reduced efficiency or fuel consumption to power the equipment.

#### *4.2.1.4 Environmental Impact Analysis*

The primary focus of the environmental impact analysis is the reduction in ambient concentrations of the pollutant being emitted. Collateral increases or decreases in emissions of other criteria or non-criteria pollutants may occur with some technologies and should be identified. Non-air related impacts such as solid waste generation, increased water consumption or waste water generation may also be an issue associated with a control option. These additional impacts should be identified and qualitatively or quantitatively evaluated.

## 4.3 BACT Analysis for $NO_x$

$NO_x$ is formed during the combustion of fuel and is generally classified as either thermal $NO_x$ or fuel-related $NO_x$. Thermal $NO_x$ results when atmospheric nitrogen is oxidized at high temperatures to produce nitrogen oxide (NO), $NO_2$, and other oxides of nitrogen. The major factors influencing the formation of thermal $NO_x$ are temperature, concentrations of oxygen in the inlet air and residence time within the combustion zone. Fuel-related $NO_x$ is formed from the oxidation of chemically bound nitrogen in the fuel. Fuel-related $NO_x$ is generally minimal for natural gas combustion. As such, $NO_x$ formation from combustion of natural gas is due mostly to thermal $NO_x$ formation.

Reduction in $NO_x$ formation can be achieved using combustion controls and/or flue gas treatment. Available combustion controls include water or steam injection and low emission combustors. Most gas turbines are designed to operate at a nearly stoichiometric ratio of fuel in the combustion zone, with additional air introduced downstream. Fuel-to-air ratios below stoichiometric are referred to as fuel-lean mixtures. This type of fuel mixture limits the formation of $NO_x$ because there is lower flame temperature with a lean fuel mixture. Using this concept, lean combustors are designed to operate below the stoichiometric ratio, thereby reducing the thermal $NO_x$ formation within the combustion chamber.

The turbines proposed for the Project utilize a lean fuel technology. In addition, exhaust gases from the turbine (and duct burner) will exhaust through an SCR system (discussed below) to further reduce $NO_x$ emissions to 2.0 $ppm_v$ at 15 percent $O_2$, with and without duct burning.

The project will also utilize an auxiliary boiler, emergency diesel fire pump and emergency diesel generators. The auxiliary boiler will utilize flue gas recirculation and low-$NO_x$ burner technology, two combustion optimization techniques that also reduce the formation of $NO_x$. Using these enhanced combustion techniques, emissions from the auxiliary boiler will be limited to 0.02 lb/MMBtu. As discussed in Section 3.2.4, the emergency diesel fire pump and the diesel black-start engines will meet the emission limitations for current model years under the NSPS for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60 Subpart IIII).

The following discussion demonstrates that the proposed $NO_x$ emission rates for the combined cycle turbines and ancillary equipment are considered BACT.

#### 4.3.1 Identification of Control Options

SCR is an add-on $NO_x$ control technology that is placed in the exhaust stream following the gas turbine/duct burner. SCR involves the injection of ammonia into the exhaust gas upstream of a catalyst bed. On the catalyst surface, $NH_3$ reacts with the $NO_x$ contained within the flue gas to form nitrogen gas and water in accordance with the following chemical reactions:

$$4NH_3 + 4NO + O_2 \rightarrow 4N_2 + 6H_2O$$

$$8NH_3 + 6NO_2 \rightarrow 7N_2 + 12H_2O$$

The catalyst's active surface is usually a noble metal (platinum), base metal (titanium or vanadium) or a zeolite-based material. Metal-based catalysts are usually applied as a coating over a metal or ceramic substrate. Zeolite catalysts are typically a homogeneous material that forms both the active surface and the substrate. $NH_3$ is fed and mixed into the combustion gas upstream of the catalyst bed in greater than stoichiometric amounts to achieve maximum conversion of $NO_x$. Excess $NH_3$ which is not reacted in the catalyst bed is subsequently emitted through the stack; this is called "ammonia slip."

An important factor that affects the performance of an SCR system is the operating temperature. The optimal temperature range for standard base metal catalysts is between 400°F and 800°F. Because the optimal temperature is below the CTG exhaust temperature but above the stack exhaust temperature, the catalyst needs to be located within the HRSG.

An undesirable side effect of the use of SCR systems is the potential for formation of ammonium bisulfate and ammonium sulfate, referred to as ammonium salts. These salts are reaction products of $SO_3$ and $NH_3$. Ammonium salts are corrosive and can stick to the heat exchanger surfaces, duct work or the stack at low temperatures. In addition, ammonium salts are considered $PM_{10}/PM_{2.5}$, and, therefore, increase the emissions of these criteria pollutants. Use of low sulfur fuels such as natural gas minimizes the formation of $SO_3$ and the subsequent formation of these ammonium salts.

### 4.3.2 Search of RBLC Determinations

#### *4.3.2.1 Combustion Turbine Generators and Duct Burners*

The search of the RBLC and other available permits identified several natural gas-fired combined cycle combustion turbine projects. As described previously, representative projects were selected based upon recent decisions, local proximity, or stringent limits. Details for representative facilities are presented in Appendix C. The lowest permitted $NO_x$ limit for a natural gas-fired combined cycle turbine with duct burning was 2.0 $ppm_v$ at 15 percent $O_2$. All of these projects use SCR systems in combination with combustion optimization technology such as low-$NO_x$ burners. It is our understanding that several of these projects have demonstrated compliance with the 2.0 $ppm_v$ emission limits under primary operating modes. Some of these projects have permit limits above 2.0 $ppm_v$ to accommodate alternative operating modes such as duct burning.

In general, BACT determinations have focused on the level that can be achieved in the primary operating mode (typically gas-fired 100 percent load), with $NO_x$ levels being set for alternative modes (duct burning, partial load, etc.) at the levels that result from application of the same degree of control used to achieve BACT in the primary mode.

#### *4.3.2.2 Auxiliary Boiler*

The RBLC and recent air permit search for natural gas-fired boilers between 10 and 100 MMBtu/hr in size identified close to 100 installations. $NO_x$ emission limits for these boilers widely range from approximately 0.0035 lb/MMBtu to 0.37 lb/MMBtu. Details on the installations that were determined to be most representative for the proposed boiler are provided in Appendix C. The projects with emission limits less than 0.011 lb/MMBtu are generally industrial/commercial boilers less than 30 MMBtu/hr that are operated continuously to support industrial processes or other operations; these were not considered relevant to the Project. Beyond these projects, other determinations generally

proposed $NO_x$ emission limits greater than 0.03 lb/MMBtu. The most recent determination for an auxiliary boiler in Ohio proposed a $NO_x$ emission limit of 0.035 lb/MMBtu.

#### 4.3.3 BACT Determinations

##### *4.3.3.1 Combustion Turbine Generators and Duct Burners*

OCE is proposing a $NO_x$ emission limit of 2.0 $ppm_v$ at 15 percent $O_2$ (with and without duct burning) as BACT for the proposed Project. This level of emissions will be achieved through the application of DLN burners in combination with SCR. This emission level is consistent with the most stringent level of control found during the RBLC search and has been demonstrated in practice.

##### *4.3.3.2 Auxiliary Boiler*

OCE is proposing a $NO_x$ emission limit of 0.02 lb/MMBtu. The auxiliary boiler will use flue gas recirculation in combination with low-$NO_x$ burners. These technologies, used in combination, are capable of reducing $NO_x$ emissions by 60 to 90 percent. This limit is consistent with the results from the RBLC database search.

##### *4.3.3.3 Diesel Engines*

OCE is proposing to utilize state-of-the-art combustion design to comply with the federal emission limitations for the current model years for the emergency fire pump and emergency generator. Thus, OCE proposes emission rates of 3.0 g/hp-hr (4.0 g/kW-hr) for the emergency fire pump and 4.8 g/hp-hr (6.4 g/kW-hr) for the emergency generator. The emission rates apply to $NO_x$ and VOCs combined. These limits are consistent with NSPS Subpart IIII. The NSPS emission limits were established recently, and are based on the USEPA's extensive analysis of the feasibility of controls. In addition, the NSPS implements standards in more stringent phases from 2007 to 2015 based upon their feasibility analysis for future years. As such, compliance with the applicable NSPS for the proposed emergency engines associated with the Project is considered BACT for $NO_x$.

## 4.4 BACT Analysis for VOC

Combustion turbines have inherently low VOC emission rates. Emissions of VOC from a combustion turbine occur as a result of incomplete combustion of organic compounds within the fuel. In an ideal combustion process, all carbon and hydrogen contained within

the fuel are oxidized to form $CO_2$ and water. VOC emissions can be minimized by the use of good combustion controls and add-on controls as described below.

The turbines proposed for the Project will utilize good combustion controls and exhaust through an oxidation catalyst to further reduce VOC emissions. Emissions of VOC from the exhaust stack will be limited to 2.0 $ppm_v$ at 15 percent $O_2$ with and without duct burning.

The Project will also utilize an auxiliary boiler, emergency diesel fire pump and emergency diesel generators. The auxiliary boiler will utilize combustion optimization technologies to minimize incomplete combustion and subsequent emissions of VOC. Using good combustion controls, emissions from the auxiliary boiler will be limited to 0.006 lb/MMBtu. As discussed in Section 3.2.4, the emergency diesel fire pump and the emergency generator will meet the emission limitations for current model years under the NSPS for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60 Subpart IIII). The following discussion demonstrates that the proposed VOC emission rates for the combined cycle turbines and ancillary equipment are considered BACT.

#### 4.4.1 Identification of Control Options

There are only two practical methods for controlling VOC emissions from combustion processes: efficient combustion and add-on control equipment. The most stringent level of control is through the use of add-on control equipment. The only post-combustion control that can be practically implemented is catalytic oxidation. Oxidation catalyst systems consist of a passive reactor comprised of a grid of metal panels with a platinum catalyst. The optimal location for VOC control, in the 900°F to 1,100°F temperature range, would be upstream of the HRSG or in the front-end section of the HRSG. However, at the high temperatures necessary to make the oxidation catalyst optimized for VOC reduction, there is the undesirable result of causing substantially more conversion of $SO_2$ to $SO_3$. As described previously, $SO_3$ may react with water and/or $NH_3$ to form $H_2SO_4$ and/or ammonium salt ($PM_{10}$/$PM_{2.5}$). Therefore, the placement of the oxidation catalyst in the "cooler" section of the HRSG, which is necessary for CO control, is the optimal design.

VOC emissions from the auxiliary boiler will also occur due to incomplete combustion. As such, VOC emissions are minimized by combustion practices that promote high combustion temperatures, long residence times, and turbulent mixing of fuel and combustion air. In practice, post-combustion control methods are not routinely implemented for the reduction of VOC emissions from auxiliary boilers, as supported by the search of the RBLC determinations presented below.

### 4.4.2 Search of RBLC Determinations

#### *4.4.2.1 Combustion Turbine Generators and Duct Burners*

The search of the RBLC and other available permits identified many natural gas-fired combined cycle combustion turbine projects. Details for approximately 30 of these facilities have been included in Appendix C. Based on this search, use of an oxidation catalyst appears to be the most stringent level of VOC control for natural gas fired combined cycle turbines. VOC limits range from 0.3 $ppm_v$ to 34 $ppm_v$. The variation in VOC concentrations between different projects is not unexpected due to differences in turbine and HRSG manufacturers and overall engineering design. Based on the review of the RBLC, BAT for VOC is utilization of an oxidation catalyst system to achieve an outlet VOC concentration of 2.0 $ppm_v$.

#### *4.4.2.2 Auxiliary Boiler*

The RBLC and recent air permit search for natural gas-fired boilers between 10 and 100 MMBtu/hr in size identified close to 100 installations. VOC emission limits for these installations range from approximately 0.002 lb/MMBtu to 0.02 lb/MMBtu. Details on the installations that were determined to be most applicable to the proposed boiler are provided in Appendix C.

The most recent determination in the database is for a commercial boiler with a VOC BACT limit of 0.003 lb/MMBtu. Most of the boilers that operate in a similar manner to the proposed boiler also have operational restrictions on hours. There are several determinations for auxiliary boilers at energy generating facilities in the database. The majority of the installations have emission limits of 0.005 lb/MMBtu or greater. Based on the review of the RBLC, BAT for VOC is good combustion practices to achieve a VOC emission limit in the 0.004 to 0.006 lb/MMBtu range.

### 4.4.3 BACT Determinations

#### *4.4.3.1 Combustion Turbine Generators and Duct Burners*

OCE is proposing a VOC emission limit of 2 $ppm_v$ at 15 percent $O_2$ with and without duct burning as BACT for the proposed Project. This level of emissions will be achieved via good combustion control and an oxidation catalyst.

#### *4.4.3.2 Auxiliary Boiler*

OCE is proposing a VOC emission limit of 0.006 lb/MMBtu from the auxiliary boiler using good combustion practices as BACT/BAT.

#### *4.4.3.3 Diesel Engines*

OCE is proposing to utilize state-of-the-art combustion design to comply with the federal emission limitations for the current model years for the emergency fire pump and emergency generator. Thus, OCE proposes emission rates of 3.0 g/hp-hr (4.0 g/kW-hr) for the emergency fire pump and 4.8 g/hp-hr (6.4 g/kW-hr) for the emergency generator. The emission rates apply to $NO_x$ and VOCs combined. These limits are consistent with NSPS Subpart IIII. The NSPS emission limits were established recently, and are based on the USEPA's extensive analysis of the feasibility of controls. In addition, the NSPS implements standards in more stringent phases from 2007 to 2015 based upon a feasibility analysis for future years. As such, compliance with the applicable NSPS for the proposed emergency engines associated with the Project is considered BACT for VOC.

## 4.5 BACT Analysis for CO

Emissions of CO from combustion occur as a result of incomplete combustion of fuel. CO emissions are minimized by the use of proper combustor design, good combustion practices and add-on controls. The combined cycle turbines and the auxiliary boiler will be sources of CO emissions. Since the potential emissions from the project exceed PSD significance thresholds, BACT is required for CO emissions. As indicated previously, pollutants that comply with BACT meet BAT requirements.

The turbines proposed for the Project will utilize good combustion controls and exhaust through an oxidation catalyst to reduce CO emissions. Emissions of CO from the exhaust stack will be limited to 2.0 $ppm_v$ at 15 percent $O_2$ with and without duct burning.

The auxiliary boiler will utilize good combustion practices to minimize incomplete combustion and subsequent emissions of CO. Using good combustion controls, emissions from the auxiliary boiler will be limited to 0.055 lb/MMBtu. The emergency diesel fire pump and the emergency diesel generator will meet the emission limitations for current model years under the NSPS for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60 Subpart IIII).

The following discussion demonstrates that the proposed CO emission rates for the combined cycle turbines and ancillary equipment are considered BACT.

### 4.5.1 Identification of Control Options

There are only two practical methods for controlling CO emissions from combustion processes: efficient combustion and add-on control equipment. The most stringent level of control is the use of add-on equipment. The only post-combustion control that can be practically implemented is catalytic oxidation. Oxidation catalyst systems consist of a passive reactor comprised of a grid of metal panels with a platinum catalyst. CO reduction efficiencies in the range of 80 to 90 percent can be expected, although CO reduction may at times be less than these values due to the low inlet concentrations expected from the turbines.

CO emissions from the auxiliary boiler will also occur due to incomplete combustion. As such, combustion design that promotes high combustion temperatures, long residence times, and turbulent mixing of fuel and combustion air is the common practice used to minimize CO emissions. Although it is technologically feasible to control CO emissions from a boiler in the 10 to 100 MMBtu/hr size range using an oxidation catalyst, current combustion technology results in very low emissions of CO such that add-on control would not be considered cost-effective for auxiliary boilers that are not operated continuously. The Project will limit operation of the auxiliary boiler to 2,000 hours per year.

### 4.5.2 Search of RBLC Determinations

#### *4.5.2.1 Combustion Turbine Generators and Duct Burners*

The search of the RBLC available permits identified almost 300 natural gas-fired combined cycle combustion turbine projects. Based on this search, use of an oxidation catalyst appears to be the most stringent level of control for natural gas-fired combined cycle turbines.

CO emission limits from recently permitted projects generally ranged from 0.9 $ppm_v$ to 15 $ppm_v$ (or greater). The lowest CO limit found in a permit for a natural gas fired combined cycle turbine was 0.9 $ppm_v$ without duct burning and 1.8 $ppm_v$ with duct burning, issued to Kleen Energy Systems in Connecticut. While the duct burning limit is consistent with other determinations, the 0.9 $ppm_v$ limit is an outlier. It is important to note that Kleen Energy has a VOC BACT limit of 5.0 $ppm_v$, which is significantly higher than the proposed VOC limit for the Project. This is indicative of the fact that it is difficult to design a system that

provides a very high level of control for CO while simultaneously providing a very high level of control for VOC. As such, systems are more commonly designed to provide substantial control for both CO and VOC simultaneously. This is illustrated by two recent BACT/Lowest Achievable Emission Rate (LAER) determinations for proposed combined cycle power plants in New Jersey. Draft permits for the Woodbridge Energy Center and the Newark Energy Center were issued in June 2012. Both facilities proposed CO BACT limits of 2.0 $ppm_v$ and VOC LAER limits of 1.0 $ppm_v$ (without duct burning). For these facilities, the turbine train was designed to optimize control of both CO and VOC. There are many facilities in the RBLC with recently permitted BACT CO emission limits of 2.0 $ppm_v$ (or greater). For example, the Empire Generating and Caithness Long Island Energy projects in New York State have permit limits of 2.0 $ppm_v$ for CO, which is considered representative of BACT. It is our understanding that several of these facilities are operating in compliance with their 2.0 $ppm_v$ limit.

##### *4.5.2.2 Auxiliary Boiler*

The RBLC and recent air permit search for natural gas-fired boilers between 10 and 100 MMBtu/hr in size identified close to 100 installations. CO emission limits for these installations range from approximately 0.0073 lb/MMBtu to 0.8 lb/MMBtu. Details on approximately 30 of the installations that were determined to be most applicable to the proposed boiler are provided in Appendix C.

The most stringent limit for an auxiliary boiler at an energy generating facility is 0.0164 lb/MMBtu at Emery Generating Station in Iowa, which was permitted in 2002. This installation is operational and it utilizes a catalytic oxidizer with an estimated control efficiency of 80 percent to achieve this emission rate. Since this installation, there have been many projects permitted without add-on controls that utilize good combustion practices to achieve CO control. The most recent auxiliary boiler installation listed in the RBLC has a CO limit of 0.15 lb/MMBtu. There are several other recent determinations with CO limits between 0.02 and 0.08 lb/MMBtu.

#### 4.5.3 BACT Determinations

##### *4.5.3.1 Combustion Turbine Generators and Duct Burners*

OCE is proposing a CO emission limit of 2.0 $ppm_v$ at 15 percent $O_2$ with and without duct burning as BACT for the proposed Project. This level of emissions will be achieved via good combustion control and an oxidation catalyst. This proposal is consistent with the

limits and control technologies found in the RBLC and with recent BACT determinations in Ohio and in other states.

*4.5.3.2 Auxiliary Boiler*

OCE is proposing a CO emission limit of 0.055 lb/MMBtu from the auxiliary boiler using good combustion practices and a limitation of operation to 2,000 hours per year. This is consistent with BACT determinations for this type of equipment.

*4.5.3.1 Diesel Engines*

The proposed diesel engines for the Project will utilize state-of-the-art combustion design to comply with the federal emission limitations for the current model years. Thus, OCE proposes CO emission rates of 2.6 g/hp-hr (3.5 g/kW-hr) for the emergency fire pump and emergency generators as BACT, with limited annual hours of operation. These limits are consistent with NSPS Subpart IIII. The NSPS emission limits were established recently, and are based on the USEPA's extensive analysis of the feasibility of controls. In addition, the NSPS implements standards in more stringent phases from 2007 to 2015 based upon a feasibility analysis for future years. As such, compliance with the applicable NSPS for the proposed emergency engines associated with the Project is considered BACT for CO.

## 4.6 BACT Analysis for Particulate Matter ($PM_{10}$/$PM_{2.5}$)

Emissions of particulate matter from combustion occur as a result of inert solids contained in the fuel, unburned fuel hydrocarbons which agglomerate to form particles, and mineral matter in water that may be injected for $NO_x$ or power augmentation in certain applications. Particulate emissions can also result from the formation of ammonium salts due to the conversion of $SO_2$ to $SO_3$, which is then available to react with ammonia to form ammonium sulfates. All of the particulate matter emitted from the turbines is conservatively assumed to be less than 2.5 microns in diameter. Therefore, $PM_{10}$ and $PM_{2.5}$ emission rates are assumed to be the same.

The combustion of clean-burning fuels is the most effective means for controlling particulate emissions from combustion equipment. The Project is proposing to use natural gas as the only fuel for the turbines. Natural gas is a very clean-burning fuel with very low associated particulate emissions. OCE is not aware of any combustion turbine projects in existence that have add-on particulate control.

The turbines proposed for the Project will utilize natural gas as their only fuel to minimize particulate emissions. Emissions of $PM_{10}/PM_{2.5}$ from the exhaust stack will be limited to 0.0038 lb/MMBtu without duct burning and 0.0039 lb/MMBtu with duct burning.

The Project will also utilize an auxiliary boiler, emergency diesel fire pump, emergency generator and cooling towers. The auxiliary boiler will combust only natural gas, resulting in a $PM_{10}/PM_{2.5}$ emission limit of 0.008 lb/MMBtu. The cooling tower will also be a source of $PM_{10}/PM_{2.5}$ emissions. The Project is proposing use of a high-efficiency drift eliminator (0.0005 percent). The emergency diesel fire pump and the diesel generator engines will meet the emission limitations for current model years under the NSPS for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60 Subpart IIII).

The following discussion demonstrates that the proposed $PM_{10}/PM_{2.5}$ emission rates for the combined cycle turbines and ancillary equipment are considered BACT.

### 4.6.1 Search of RBLC Determinations

#### *4.6.1.1 Combustion Turbine Generators and Duct Burners*

The search of the RBLC and other available permits identified several natural gas-fired combined cycle combustion turbine projects. Based on this search, use of clean-burning fuels is the primary control for particulate emissions. Particulate matter emission limits in the RBLC database generally ranged from approximately 0.003 lb/MMBtu to 0.3 lb/MMBtu (or greater). The most recent $PM_{10}/PM_{2.5}$ BACT determination for a large combined cycle turbine train is 0.0066 lb/MMBtu for the Sumpter Power Plant in Michigan. Beyond this example, there are many facilities in the RBLC with permitted BACT $PM_{10}/PM_{2.5}$ emission limits in the range of 0.006 lb/MMBtu to 0.01 lb/MMBtu. Generally, all of these projects utilize clean-burning fuel as their primary control technology and their emission limits are based upon the overall quality of their commercial natural gas source.

#### *4.6.1.2 Auxiliary Boiler*

A review of the RBLC indicates that good combustion practices and clean-burning fuels have typically been determined to be BACT for boilers. $PM_{10}/PM_{2.5}$ emission limits for natural gas-fired boilers vary widely, ranging from 0.002 lb/MMBtu through 0.6 lb/MMBtu. $PM_{10}/PM_{2.5}$ emission limits for gas-fired auxiliary boilers of similar size are as low as 0.003 lb/MMBtu. The most recent listing in the RBLC for an auxiliary boiler proposed a $PM_{10}/PM_{2.5}$ limit of 0.008 lb/MMBtu.

#### *4.6.1.3 Cooling Tower*

A review of the RBLC provides very few entries for cooling towers, the most recent being in 2005. In the RBLC listings, BACT for $PM_{10}$ and $PM_{2.5}$ was determined to be utilization of high-efficiency drift eliminators with a removal efficiency of 0.0005 percent. A drift rate of 0.0005 percent is the most effective drift eliminator commercially available.

### 4.6.2 BACT Determinations

#### *4.6.2.1 Combustion Turbine Generators and Duct Burners*

OCE is proposing a $PM_{10}/PM_{2.5}$ emission limit of 0.0038 lb/MMBtu without duct burning and 0.0039 lb/MMBtu with duct burning as BACT for the proposed Project. This level of emissions will be achieved by combusting only commercially available, pipeline quality natural gas in the turbines. This emission level is consistent with the limits and control technologies found in the RBLC for recent BACT determinations in Ohio and in other states.

#### *4.6.2.2 Auxiliary Boiler*

OCE is proposing the exclusive use of clean-burning pipeline quality natural gas in conjunction with good combustion practices as BACT for the auxiliary boiler. The Project proposes a $PM_{10}/PM_{2.5}$ emission limit of 0.008 lb/MMBtu boiler using natural gas as the only fuel. This is consistent with other BACT determinations for this type of equipment.

#### *4.6.2.3 Diesel Engines*

The proposed engines for the Project will utilize state-of-the-art combustion design to comply with the federal emission limitations for the current model years. Thus, OCE proposes $PM_{10}/PM_{2.5}$ emission rates of 0.15 g/hp-hr (0.2 g/kW-hr) for the emergency fire pump and emergency generator as BACT, with limited annual hours of operation. These limits are consistent with NSPS Subpart IIII. The NSPS emission limits were established recently, and are based on the USEPA's extensive analysis of the feasibility of controls. In addition, the NSPS implements standards in more stringent phases from 2007 to 2015 based upon a feasibility analysis for future years. As such, compliance with the applicable NSPS for the proposed emergency engines associated with the Project is considered BACT.

#### *4.6.2.4 Cooling Tower*

OCE is proposing use of 0.0005 percent high-efficiency drift eliminators as BACT and for $PM_{10}$ and $PM_{2.5}$. This equates to hourly emission rates of 1.04 lb/hr for $PM_{10}$ and 0.004 lb/hr for $PM_{2.5}$. Use of high-efficiency drift eliminators is consistent with recent BACT determinations in Ohio and in other states.

## 4.7 BAT/BACT Analysis for Sulfur Dioxide and Sulfuric Acid

Emissions of $SO_2$ are formed from the oxidation of sulfur in the fuel. Normally, all sulfur compounds contained in the fuel will oxidize, and virtually all will oxidize to form $SO_2$. A small percentage will oxidize to $SO_3$ and sulfate ($SO_4$), dependent on a number of factors including: combustor design; temperature; pressure; oxygen level; and moisture level in the combustion zone and downstream in the combined cycle system, exhaust stack, and ambient air proximate to the stack. After being formed, the $SO_3$ and $SO_4$ will react to form $H_2SO_4$ and sulfate particulate. $SO_2$ and $H_2SO_4$ emissions can be controlled using pre- and post-combustion controls. Pre-combustion controls involve the use of low sulfur fuels such as natural gas or ULSD. Post-combustion controls involve the use of add-on control technology such as wet and dry flue gas desulfurization (FGD) processes. Installation of such systems is an established technology principally on coal-fired and high sulfur oil-fired steam electric generation stations. However, FGD systems are not practical for combustion turbines due to several factors including the large exhaust flow (and corresponding pressure drop) and the low inlet concentration in the flue gas. The use of natural gas and ULSD are the most common methods for controlling $SO_2$/$H_2SO_4$ emissions from combustion turbines.

The turbines proposed for the Project will utilize natural gas with a maximum sulfur content of 0.5 grains (gr) per 100 standard cubic feet (scf) as their only fuel to minimize $SO_2$ and $H_2SO_4$ emissions. Emissions of $SO_2$ and $H_2SO_4$ from the exhaust stack will be limited to 0.0014 lb/MMBtu and 0.0004 lb/MMBtu with and without duct burning, respectively.

The Project will also utilize an auxiliary boiler, emergency diesel fire pump, emergency generator. The auxiliary boiler will combust only natural gas, resulting in $SO_2$ and $H_2SO_4$ emission limits of 0.0007 lb/MMBtu and 0.00005 lb/MMBtu, respectively. The diesel fire pump and the diesel generator engines will utilize ULSD. $SO_2$ emissions from the fire pump and generators will be limited to 0.0015 lb/MMBtu for both pieces of equipment. Emissions of $H_2SO_4$ from both engines will be limited to 0.0003 lb/MMBtu.

The following discussion demonstrates that the proposed $SO_2$ and $H_2SO_4$ emission rates for the combined cycle turbines and auxiliary boiler are considered BAT/BACT.

### 4.7.1 Search of RBLC Determinations

#### *4.7.1.1 Combustion Turbine Generators and Duct Burners*

The search of the RBLC and other available permits identified more than 300 natural gas fired combined cycle projects. Based on this search, use of low sulfur fuels is the primary control for $SO_2$ emissions, with emission limits being dependent upon the sulfur content of the fuel and engine design. $SO_2$ emission limits in the RBLC generally ranged from 0.0003 lb/MMBtu to 0.01 lb/MMBtu (or greater), with a recent BACT determination having a sulfur content of 5 gr/100 scf.

Similarly, a search of permits for natural gas-fired combined cycle units indicated $H_2SO_4$ emissions ranging from 0.0001 lb/MMBtu to 0.002 lb/MMBtu (or greater). Similar to $SO_2$, BACT for these sources was the use of low sulfur fuels and emission limits are dependent upon the sulfur content of the fuel and engine design.

#### *4.7.1.2 Auxiliary Boiler*

A review of the RBLC indicates that combustion of clean burning low-sulfur fuels has typically been determined to be BACT for $SO_2$ and $H_2SO_4$. The most stringent $SO_2$ emission limit for an auxiliary boiler found the RBLC was 0.0006 lb/MMBtu. The most recent project listed in the RBLC proposes an $SO_2$ emission limit of 0.001 lb/MMBtu. In all cases, the BACT limit is based upon the assumed sulfur content of the pipeline quality natural gas.

A search of the RBLC for $H_2SO_4$ emissions only identified two boilers of similar size to the proposed auxiliary boiler. Of these listings, only one was for an auxiliary boiler at an energy facility. This project, CPV Saint Charles, proposed an $H_2SO_4$ limit of 0.0001 lb/MMBtu.

### 4.7.2 BAT/BACT Determinations

#### *4.7.2.1 Combustion Turbine Generators and Duct Burners*

OCE is proposing an $SO_2$ emission limit of 0.0014 lb/MMBtu (with and without duct burning) as BAT and an $H_2SO_4$ emission limit of 0.0004 lb/MMBtu (with and without duct

burning) as BACT for the proposed Project. This level of emissions will be achieved by combusting commercially available, pipeline quality natural gas with a maximum sulfur content of 0.5 gr/100 scf in the combustion turbines. This emission level is consistent with the limits and control technologies found in the RBLC.

##### *4.7.2.2 Auxiliary Boiler*

OCE is proposing an $SO_2$ emission limit of 0.0007 lb/MMBtu as BAT and an $H_2SO_4$ emission limit of 0.00005 lb/MMBtu as BACT for the proposed Project. The proposed auxiliary boiler will combust natural gas with a maximum sulfur content of 0.5 gr/100 scf. This is consistent with other BACT determinations for this type of equipment.

##### *4.7.2.3 Diesel Engines*

The proposed diesel engines for the Project will use ULSD with a maximum sulfur content of 15 parts per million by weight ($ppm_w$) as a fuel. Thus, OCE proposes $SO_2$ emission rates of 0.0015 lb/MMBtu (0.005 g/hp-hr) as BAT and $H_2SO_4$ emissions of 0.00003 lb/MMBtu (0.0001 g/hp-hr) for the engines as BACT, with limited annual hours of operation.

## 4.8 BACT Analysis for Greenhouse Gases

The principal GHGs associated with the Project are $CO_2$, methane ($CH_4$), and nitrous oxide ($N_2O$). Because these gases differ in their ability to trap heat, one ton of $CO_2$ in the atmosphere has a different effect on warming than one ton of $CH_4$ or one ton of $N_2O$. For example, $CH_4$ and $N_2O$ have 21 times and 298 times the global warming potential of $CO_2$, respectively. GHG emissions from the proposed Project are primarily attributable to combustion of fuels. The Project will not have any other industrial processes releasing GHGs. By far the greatest proportion of potential GHGs emissions are from $CO_2$. Trace amounts of $CH_4$ and $N_2O$, would be emitted in varying quantities depending on operating conditions. However, emissions of $CH_4$ and $N_2O$ are negligible when compared to total $CO_2$ emissions, and would not be considered significant to climate change issues. In addition, as presented previously, the Project is proposing to implement BACT for both VOC (expressed as $CH_4$) and $NO_x$, such that these pollutants are being effectively controlled. As such, the remainder of this section will focus on BACT for $CO_2$.

$CO_2$ is a product of combusting any carbon containing fuel, including natural gas. All fossil fuel contains significant amounts of carbon. During complete combustion, the fuel carbon is oxidized into $CO_2$ via the following reaction:

$$C + O_2 \rightarrow CO_2$$

Full oxidation of carbon in fuel is desirable because CO, a product of partial combustion, has long been a regulated pollutant and because full combustion results in more useful energy. In fact, emission control technologies required for CO emissions (oxidation catalysts) increase $CO_2$ emission by oxidizing CO to $CO_2$.

There are limited alternatives available for controlling $CO_2$. The USEPA has indicated in the document, *PSD and Title V Permitting Guidance for Greenhouse Gases,* that carbon capture and sequestration (CCS) should be considered in BACT analyses as a technically feasible add-on control option for $CO_2$ (USEPA, 2010) Currently, there are no combined cycle power plants utilizing CCS, and although theoretically feasible, this technology is not commercially available.

CCS requires three distinct processes:

1. Isolation of $CO_2$ from the waste gas stream;
2. Transportation of the captured $CO_2$ to a suitable storage location; and
3. Safe and secure storage of the captured and delivered $CO_2$.

The first step in the CCS process is capture of the $CO_2$ from the process in a form that is suitable for transport. There are several methods that may be used for capturing $CO_2$ from gas streams including chemical and physical absorption, cryogenic separation, and membrane separation. Only physical and chemical absorption would be considered technically implementable for a high volume, low concentration gas stream. Currently, there are no combined cycle power plants utilizing $CO_2$ absorption systems. As such, this technology, while theoretically feasible, has not been demonstrated in practice for combined cycle facilities. Even if it were commercially available, the cost for designing, installing and operating this type of capture system would be prohibitive. In addition, the costs of compressing the captured $CO_2$ to pressures needed for transportation would result in a large parasitic load to the facility, reducing its efficiency and increasing overall emissions of $CO_2$ and all other regulated pollutants on a per megawatt-hour basis.

The next step in the CCS process is transportation of the captured $CO_2$ to a suitable storage location. Currently $CO_2$ storage is available at only a very limited number of sites. Geologic conditions at the proposed Project site are not suitable for carbon sequestration. OCE does not own or control any other sites that would be appropriate for $CO_2$ sequestration. The closest commercially available $CO_2$ sequestration site is in

Saskatchewan Canada, over 1,600 miles from the Project site. Accordingly, to remain a viable control technology, captured $CO_2$ would have to be transported to the storage site in order to achieve any environmental benefit. Pipelines are the most common method for transporting large quantities of $CO_2$ over long distances. There are currently approximately 3,600 miles of existing pipeline located in the United States. However, there is no existing $CO_2$ pipeline located near the project site. As such, a $CO_2$ transportation pipeline would need to be constructed to tie into the existing pipeline structure. The cost for permitting and constructing this pressurized pipeline would be economically prohibitive.

Based upon the large costs associated with the capture, transportation and storage of $CO_2$, in addition to the large parasitic load, CCS is considered cost prohibitive and economically infeasible for the Project.

Apart from CCS, the only other technology with the potential to reduce GHG from the proposed facility is pollution prevention or the use of inherently lower-emitting processes, practices and designs. Because emissions of $CO_2$ are directly related to the amount of fuel combusted, an effective means of reducing GHG emissions is through highly efficient combustion technologies. By utilizing more efficient technology, less fuel is required to produce the same amount of output electricity.

#### 4.8.1 Combustion Turbines

The Project is designed for baseload electricity generation and will utilize state-of-the-art combustion turbine technology in combined cycle mode. Combined cycle generation takes advantage of the waste heat from the combustion turbines, capturing that heat in the HRSG and generating steam which then powers a conventional steam turbine. Use of waste heat in this manner makes combined cycle projects considerably more efficient than conventional boiler technology.

The Project is proposing to use combustion turbines which utilize highly efficient combustion technology. In addition, the combustion turbines will combust natural gas as their only fuel source. Other fossil fuels generate a greater amount of $CO_2$ per megawatt-hour of power produced or MMBtu of fuel consumed. As such, using natural gas as the only fuel source effectively minimizes the production of $CO_2$ from combustion. The proposed Project has a “Design Base Heat Rate” of approximately 6,454 British thermal units per kilowatt-hour (Btu/kW-hr), HHV full load at ISO conditions (59°F, 71 percent relative humidity) with no duct firing.

*4.8.1.1 Search of RBLC Determinations*

OCE is aware of several projects that have been issued draft or final permits incorporating GHG requirements. These projects include:

- Russell City Energy Center (final permit)
- Cricket Valley Energy Center (final permit)
- Lower Colorado River Authority (final permit)
- Woodbridge Energy Center (final permit)
- Newark Energy Center (final permit)

The GHG emissions limits in these permits are based upon engine efficiency expressed as HHV heat rate and range from 7,522 to 7,730 Btu/kW-hr (operating at 100 percent load, ISO conditions without duct firing). Several of these permits also incorporate emission limits for $CO_2$ in lbs $CO_2$ per MW-hr. These limits range from 887 lb $CO_2$/MW-hr gross to 918 lb $CO_2$/MW-hr net, while combusting natural gas.

The heat rate limits for the above referenced projects incorporate a margin over the design heat rate to account for degradation over the life of the equipment. Documentation associated with Russell City Energy Center provides a methodology for determining a reasonable estimate of degradation. The Bay Area Air Quality Management District (BAAQMD) in California issued a permit in February 2010 for the Russell City Energy Center that included a BACT limit. Russell City is a proposed combined cycle generating facility with a nominal capacity of 600 MW utilizing two Siemens F-class combustion turbines. In its analysis, the BAAQMD evaluated factors that could be reasonably expected to degrade the theoretical design efficiency of the turbines and increase the heat rate. They considered a number of factors including:

- A design margin to reflect that the equipment as constructed and installed may not fully achieve the assumptions that went into the design calculations;
- A reasonable performance degradation margin to reflect normal wear and tear; and
- A reasonable degradation margin based on normal wear and tear caused by variability in the operation of the auxiliary plant equipment.

Based on their analysis, BAAMD concluded that 12.8 percent was a reasonable compliance margin to add to the design base heat rate to develop a numerical BACT limit.

#### *4.8.1.2 BACT Determination*

Based upon this design, and adding a reasonable margin of compliance consistent with the BAAQMD analysis for Russell City Energy Center (12.8 percent), OCE is proposing the following as BACT:

- 7,280 Btu/kW-hr HHV (full load at ISO conditions without duct firing); and
- 840 lb $CO_2$ per MW-hr gross output (ISO conditions).

On March 27, 2012, the USEPA proposed an NSPS for carbon emissions from power plants. This NSPS would apply to new fossil-fuel-fired electric utility generating units (EGUs), which, under this rule, include stationary combined cycle turbine units larger than 25 MW. New EGUs would be required to meet an output-based standard of 1,000 pounds of $CO_2$ per MW-hr gross output. As presented above, the Project will meet the new proposed NSPS requirements. Since the NSPS has been only recently proposed, it can be presumed to be consistent with current BACT limits.

These limits are consistent with recently permitted projects and can reasonably be assured under all full load operating scenarios. This level of emissions will be achieved through utilization of high efficiency, state-of-the-art, combustion turbine technology and combusting only commercially available, pipeline quality natural gas in the turbines.

### 4.8.2 Other Ancillary Sources

There are several other smaller sources associated with the Project that have the potential to emit GHGs. These include fugitive releases from the natural gas pipelines, sulfur hexafluoride ($SF_6$) releases from circuit breakers, and the auxiliary boiler. BACT limits have not been established for equipment such as auxiliary boilers in recent permits. However, the boiler proposed for the Project will be state-of-the-art and, thus, have efficiency reflective of new equipment.

Methane is a GHG with a global warming potential of 21 times that of $CO_2$. There is the potential for minor fugitive leaks of methane gas from connection points along the natural gas pipeline. These connection points include valves, flanges and compressors. The Project will have many of these piping components incorporated into its design. The Project will implement best management practices and routine monitoring to minimize fugitive leaks from the piping components. While BACT for fugitive emissions have not

been included in recent permits, this is consistent with BACT determinations for other projects.

$SF_6$ is a dielectric fluid used in circuit breakers with a global warming potential of 23,900 times that of $CO_2$. There is the potential for negligible leakage of $SF_6$ from circuit breakers and the Project will have several circuit breakers incorporated into its design. The Project will use state-of-the-art enclosed pressure $SF_6$ circuit breakers with leak detection, which is consistent with BACT for other similar projects.

### 4.9 Emission Limit and Control Technology Summaries

Tables 4-1 through 4-4 summarize the proposed emission limits and associated control technology for the Project.

**Table 4-1: Summary of Proposed BACT/BAT Emission Limits and Associated Control Technologies for the Combustion Turbines**

| Pollutant | Emission Rate (lb/MMBtu) | Emission Rate ($ppm_v$) at 15% $O_2$ | Control Technology | Represents |
|---|---|---|---|---|
| $NO_x$<br>CT only<br>CT w/ DB | 0.0077<br>0.0077 | 2.0<br>2.0 | DLN and SCR | BACT/BAT |
| VOC<br>CT only<br>CT w/ DB | 0.0027<br>0.0027 | 2.0<br>2.0 | Good combustion controls and oxidation catalyst | BACT/BAT |
| CO<br>CT only<br>CT w/ DB | 0.0047<br>0.0047 | 2.0<br>2.0 | Good combustion controls and oxidation catalyst | BACT/BAT |
| $PM_{10}/PM_{2.5}$<br>CT only<br>CT w/ DB | 0.0038<br>0.0039 | n/a<br>n/a | Low sulfur fuel | BACT/BAT |
| $SO_2$<br>CT only<br>CT w/ DB | 0.0014<br>0.0014 | n/a<br>n/a | Low sulfur fuel | BACT/BAT |
| $H_2SO_4$<br>CT only<br>CT w/ DB | 0.0004<br>0.0004 | n/a<br>n/a | Low sulfur fuel | BACT/BAT |
| GHG[a] | 840[a] | n/a | High efficient combustion technology | BACT/BAT |

a. BACT/BAT for GHGs is expressed as lbs $CO_2$ per MW-hr gross output on an annual basis.

**Table 4-2: Summary of Proposed BACT/BAT Emission Limits and Associated Control Technologies for the Auxiliary Boiler**

| Pollutant | Emission Rate (lb/MMBtu) | Control Technology | Represents |
|---|---|---|---|
| $NO_x$ | 0.02 | LNB[a] and FGR | BACT/BAT |
| VOC | 0.006 | Good combustion controls | BACT/BAT |
| CO | 0.055 | Good combustion controls | BACT/BAT |
| $PM_{10}/PM_{2.5}$ | 0.008 | Low sulfur fuel | BACT/BAT |
| $SO_2$ | 0.0007 | Low sulfur fuel | BACT/BAT |
| $H_2SO_4$ | 0.00005 | Low sulfur fuel | BACT/BAT |
| $CO_2e$ (GHG) | n/a | Good Combustion Controls and Natural gas Combustion | BACT/BAT |

a. Low-$NO_x$ Burner

**Table 4-3: Summary of Proposed BACT/BAT Emission Limits and Associated Control Technologies for the Emergency Fire Pump**

| Pollutant | Emission Rate (g/kW-hr) | Emission Rate (g/hp-hr) | Control Technology | Represents |
|---|---|---|---|---|
| $NO_x$ | 4.0 | 3.0 | State-of-the-art Combustion design | BACT/BAT |
| VOC | | | State-of-the-art Combustion design | BACT/BAT |
| CO | 3.5 | 2.6 | State-of-the-art Combustion design | BACT/BAT |
| $PM_{10}/PM_{2.5}$ | 0.2 | 0.15 | State-of-the-art Combustion design | BACT/BAT |
| $SO_2$ | -- | 0.0015 lb/MMBtu | Low sulfur fuel | BACT/BAT |
| $H_2SO_4$ | -- | 0.000031 lb/MMBtu | Low sulfur fuel | BACT/BAT |

**Table 4-4: Summary of Proposed BACT/BAT Emission Limits and Associated Control Technologies for the Emergency Generator**

| Pollutant | Emission Rate (g/kW-hr) | Emission Rate (g/hp-hr) | Control Technology | Represents |
|---|---|---|---|---|
| $NO_x$ | 6.4 | 4.8 | State-of-the-art Combustion design | BACT/BAT |
| VOC | | | State-of-the-art Combustion design | BACT/BAT |
| CO | 3.5 | 2.6 | State-of-the-art Combustion design | BACT/BAT |
| $PM_{10}/PM_{2.5}$ | 0.2 | 0.15 | State-of-the-art Combustion design | BACT/BAT |
| $SO_2$ | -- | 0.0015 lb/MMBtu | Low sulfur fuel | BACT/BAT |
| $H_2SO_4$ | -- | 0.000031 lb/MMBtu | Low sulfur fuel | BACT/BAT |

## 5. REFERENCES

AWMA, 2001. AWMA Abstract No 216, Session No. AM-1b, Orlando, 2001.

CARB, 1996. California Air Toxics Emission Factor Database (CATEF), 1996.

FLAG, 2010. *The Federal Land Managers AQRU Workgroup (FLAG) Phase I Report, Revised 2010*.

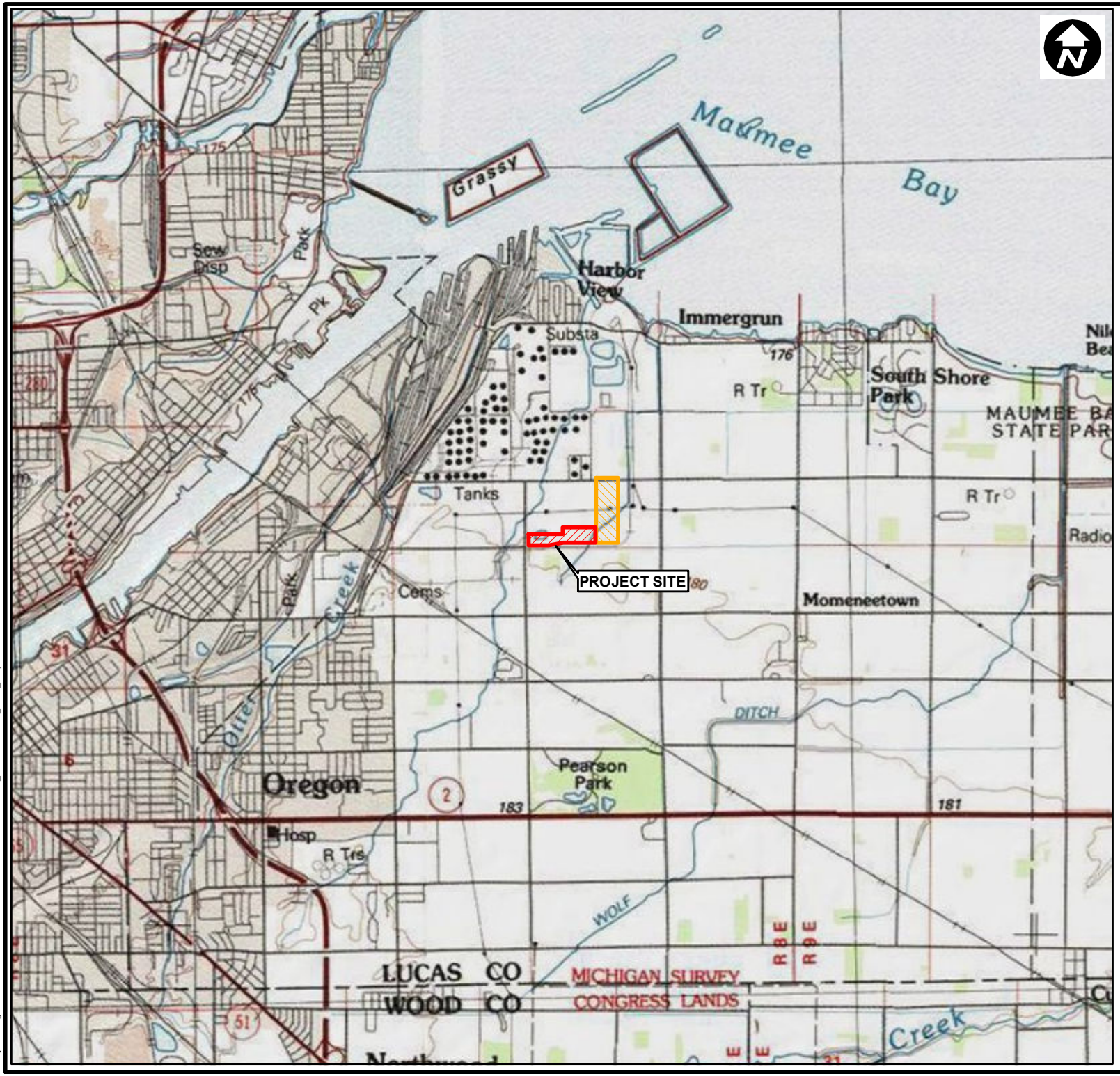
USEPA, 1990. *New Source Review Workshop Manual (Draft)*. October 1990.

USEPA, 2000. *Compilation of Air Pollutant Emission Factors AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources*.

USEPS, 2010. "*PSD and Title V Permitting Guidance for Greenhouse Gases,*" Office of Air Quality Planning and Standards, November 2010.

VCAPCD, 2001. AB2588 Combustion Emission Factors, 2001.

# Figures



LUCAS COUNTY, OHIO

**Legend**

- Project Site
- Construction Laydown Parcel

Topographic Base Image Source: ArcGIS Online Services, Access date: 01/04/2013, via ArcGIS v10. This image is not for re-sale or distribution outside of the use of this PDF.

0 0.5 1
Miles

1 inch equals 1 miles

ARCADIS

**OREGON CLEAN ENERGY CENTER, LLC**

***FIGURE 1***

**SITE LOCATION**

Lucas County, Ohio | Date: 01/04/2013

City: Chicago Author: MNesta Path: C:\PROJECTS\OCE\MXD\OPSB_20130104\01-1_OCE_ProjectLocation.mxd

# Appendix A: Printout of Ohio EPA Permit Forms

FOR OHIO EPA USE
FACILITY ID: _____
EU ID: _____ PTI#:_____

# EMISSIONS ACTIVITY CATEGORY FORM
# STATIONARY INTERNAL COMBUSTION ENGINE

*This form is to be completed for each stationary reciprocating or gas turbine engine. State/Federal regulations which may apply to stationary internal combustion engines are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.*

1. Reason this form is being submitted (Check one)

   ☒ New Permit ☐ Renewal or Modification of Air Permit Number (e.g. P001)_____

2. Maximum Operating Schedule: __8,760_____ hours per day; _365____ days per year

   If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. _____

3. Engine type: ☒ Gas turbine ☐ Reciprocating

4. Purpose of engine: ☐ Driving pump or compressor
   ☒ Driving electrical generator

5. Normal use of engine: ☐ Emergency only ☒ Non-emergency

6. Engine Manufacturer: ___Mitsubishi_____ Model No: ___501GAC_____

7. Engine exhaust configuration: ☐ simple cycle *(no heat recovery)*

   (for turbines only) ☐ regenerative cycle *(heat recovery to preheat combustion air)*
   ☐ cogeneration cycle *(heat recovered to produce steam)*
   ☒ combined cycle *(heat recovered to produce steam which drives generator)*

8. Input capacities (million BTU/hr): Rated _____ Maximum __2,945_____ Normal _____

   *Supplemental burner (duct burner) input capacity, if equipped (million BTU/hr):*

   Rated:_____ Maximum ___301__ Normal _____

9. Output capacities (Horsepower): Rated: _____ Maximum _____ Normal _____

   (Kilowatts): Rated: 272,000 (gross)__ Maximum __ Normal _____

   (lbs steam/hr)*: Rated: _____ Maximum ____ Normal _____

*required for cogeneration or combined cycle units only

10. Type of ignition: ☐ non-spark (diesel) ☐ spark

11. Type of fuel fired (check all that apply):

☒ single fuel
☐ dual fuel

☐ No. 2 oil, low-sulfur
☐ No. 2 oil, high-sulfur
☐ gasoline
☐ other, explain _____

☒ natural gas
☐ diesel

☐ landfill gas
☐ digester gas
☐ propane

12. Complete the following table for all fuels identified in question 11 that are used for the engine and any supplemental (duct) burners, if equipped:

| Fuel | Heat Content (BTU/unit) | wt.% Ash | wt.% Sulfur | Fuel Usage | | |
|---|---|---|---|---|---|---|
| | | | | Estimated Maximum Per Year | Normal Per Hour | Max. Per Hour |
| Nat. gas | 1,050 BTU/cu ft | | 0.005 gr/scf | 24,573.8 MMcu ft | cu ft | 2.8 MMcu ft |
| No. 2 oil | BTU/gal | | | gal | gal | gal |
| Gasoline | BTU/gal | | | gal | gal | gal |
| Diesel | BTU/gal | | | gal | gal | gal |
| Landfill/digester gas | BTU/cu ft | | ppm | cu ft | cu ft | cu ft |
| Other (show units) | | | | | | |
| *List supplemental (duct) burner fuel and information below (show units):* | | | | | | |
| Nat. gas | 1,050 BTU/cu ft | | 0.005 gr/scf | 2,511.2 MMcu ft | | 0.3 MMcu ft |

13. Type of combustion cycle (check all that apply):

☐ 2-stroke
☐ rich-burn
☐ carbureted
☐ other, explain _____

☐ 4-stroke
☐ lean-burn
☐ fuel injected

14. Emissions control techniques (check all that apply):

☐ prestratified charge
☒ catalytic oxidation (CO)
☐ air/fuel ratio
☐ 2-stage rich/lean combustion
☐ water/steam injection
☐ other, explain_____

☐ nonselective catalytic reduction (NSCR)
☒ selective catalytic reduction (SCR)
☐ injection timing retard (ITR)
☐ 2-stage lean/lean combustion
☐ preignition chamber combustion (PCC)

For each emissions control technique checked above, explain what pollutants are controlled by each technique:

Catalytic oxidation will control VOCs and CO. Selective Catalytic Reduction (SCR) will control NOx

FOR OHIO EPA USE
FACILITY ID: _____
EU ID: _____ PTI#:_____

# EMISSIONS ACTIVITY CATEGORY FORM
# STATIONARY INTERNAL COMBUSTION ENGINE

*This form is to be completed for each stationary reciprocating or gas turbine engine. State/Federal regulations which may apply to stationary internal combustion engines are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.*

1. Reason this form is being submitted (Check one)

   ☒ New Permit ☐ Renewal or Modification of Air Permit Number (e.g. P001)_____

2. Maximum Operating Schedule: __8,760_____ hours per day; _365____ days per year

   If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. _____

3. Engine type: ☒ Gas turbine ☐ Reciprocating

4. Purpose of engine: ☐ Driving pump or compressor
   ☒ Driving electrical generator

5. Normal use of engine: ☐ Emergency only ☒ Non-emergency

6. Engine Manufacturer: ___Mitsubishi_____ Model No: ___501GAC_____

7. Engine exhaust configuration: ☐ simple cycle *(no heat recovery)*

   (for turbines only) ☐ regenerative cycle *(heat recovery to preheat combustion air)*
   ☐ cogeneration cycle *(heat recovered to produce steam)*
   ☒ combined cycle *(heat recovered to produce steam which drives generator)*

8. Input capacities (million BTU/hr): Rated _____ Maximum __2,945_____ Normal _____

   *Supplemental burner (duct burner) input capacity, if equipped (million BTU/hr):*

   Rated:_____ Maximum ___301__ Normal _____

9. Output capacities (Horsepower): Rated: _____ Maximum _____ Normal _____

   (Kilowatts): Rated: 272,000 (gross)__ Maximum __ Normal _____

   (lbs steam/hr)*: Rated: _____ Maximum ____ Normal _____

*required for cogeneration or combined cycle units only

10. Type of ignition: ☐ non-spark (diesel) ☐ spark

11. Type of fuel fired (check all that apply):

☒ single fuel
☐ dual fuel

☐ No. 2 oil, low-sulfur
☐ No. 2 oil, high-sulfur
☐ gasoline
☐ other, explain _____

☒ natural gas
☐ diesel

☐ landfill gas
☐ digester gas
☐ propane

12. Complete the following table for all fuels identified in question 11 that are used for the engine and any supplemental (duct) burners, if equipped:

| Fuel | Heat Content (BTU/unit) | wt.% Ash | wt.% Sulfur | Fuel Usage | | |
|---|---|---|---|---|---|---|
| | | | | Estimated Maximum Per Year | Normal Per Hour | Max. Per Hour |
| Nat. gas | 1,050 BTU/cu ft | | 0.005 gr/scf | 24,573.8 MMcu ft | cu ft | 2.8 MMcu ft |
| No. 2 oil | BTU/gal | | | gal | gal | gal |
| Gasoline | BTU/gal | | | gal | gal | gal |
| Diesel | BTU/gal | | | gal | gal | gal |
| Landfill/digester gas | BTU/cu ft | | ppm | cu ft | cu ft | cu ft |
| Other (show units) | | | | | | |
| *List supplemental (duct) burner fuel and information below (show units):* | | | | | | |
| Nat. gas | 1,050 BTU/cu ft | | 0.005 gr/scf | 2,511.2 MMcu ft | | 0.3 MMcu ft |

13. Type of combustion cycle (check all that apply):

☐ 2-stroke
☐ rich-burn
☐ carbureted
☐ other, explain _____

☐ 4-stroke
☐ lean-burn
☐ fuel injected

14. Emissions control techniques (check all that apply):

☐ prestratified charge
☒ catalytic oxidation (CO)
☐ air/fuel ratio
☐ 2-stage rich/lean combustion
☐ water/steam injection
☐ other, explain_____

☐ nonselective catalytic reduction (NSCR)
☒ selective catalytic reduction (SCR)
☐ injection timing retard (ITR)
☐ 2-stage lean/lean combustion
☐ preignition chamber combustion (PCC)

For each emissions control technique checked above, explain what pollutants are controlled by each technique:

Catalytic oxidation will control VOCs and CO. Selective Catalytic Reduction (SCR) will control NOx

FOR OHIO EPA USE
FACILITY ID: _____

EU ID: _____ PTI #:_____

# EMISSIONS ACTIVITY CATEGORY FORM
# FUEL BURNING OPERATION

*This form is to be completed for each fuel burning operation. State/Federal regulations which may apply to fuel burning operations are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list*

1. Reason this form is being submitted (check one)

☒ New Permit ☐ Renewal or Modification of Air Permit Number(s) (e.g. B001)_____

2. Maximum Operating Schedule: __24_____hours per day; _Varies___days per year

If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. __2,000 hours/year voluntary restriction_____

3. Input Capacity (million Btu/hr):

| Rated *(Indicate units if other than mmBtu/hr)* | Maximum *(Indicate units if other than mmBtu/hr)* | Normal *(Indicate units if other than mmBtu/hr)* |
|---|---|---|
| 99 | 99 | 99 |

4. Output Capacity:

| Rated *(lb steam/hr)* | Maximum *(lb steam/hr)* | Normal *(lb steam/hr)* |
|---|---|---|
| | | |

☐ Not applicable - operation does not produce steam.

5. Percent of Operating Time Used for:

Process: ____100___%
Space Heat: _____%

6. Type of Draft (check one):

☐ Natural ☐ Induced ☒ Forced

7. Type of combustion monitoring (check one):

☒ Fuel/Air Ratio ☐ Oxygen ☐ None
☐ Other (describe) _____

8. Type of Fuel Fired (complete all that apply):

| Fuel* | Fired as... | Min. Heat Content (Btu/unit) | Max. % Ash | Max. % Sulfur | Max. Annual Fuel Use | Average Hourly Fuel Use | Maximum Hourly Fuel Use |
|---|---|---|---|---|---|---|---|
| Coal | ☐ Primary ☐ Backup | | | | tons | lbs | lbs |
| No. 2 Fuel Oil | ☐ Primary ☐ Backup | | | | gal | gal | gal |
| No. 6 Fuel Oil | ☐ Primary ☐ Backup | | | | gal | gal | gal |
| Other** Oil | ☐ Primary ☐ Backup | | | | gal | gal | gal |
| Natural Gas | ☒ Primary ☐ Backup | 950 Btu/scf | | | 208.42 MM $ft^3$ | 0.104 MM $ft^3$ | 0.104 MM $ft^3$ |
| Wood | ☐ Primary ☐ Backup | | | | tons | lbs | lbs |
| LPG | ☐ Primary ☐ Backup | | | | gal | gal | gal |
| Other** | ☐ Primary ☐ Backup | | | | | | |
| Other** | ☐ Primary ☐ Backup | | | | | | |

* Please identify all combinations of fuels that are co-fired: _____

** Identify other fuel(s): _____

**Coal-Fired Units**

9. Type of Coal Firing (check one):

☐ Pulverized-Wet Bottom ☐ Hand-Fired ☐ Chain Grate ☐ Traveling Grate
☐ Pulverized-Dry Bottom ☐ Cyclones ☐ Spreader Stoker ☐ Fluidized Bed
☐ Underfeed Stoker ☐ Other (describe) _____

10. Flyash Reinjection:

☐ Yes ☐ No

11. Overfire Air:

☐ Yes ☐ No

## Oil-Fired Units

12. Oil Preheater:

☐ Yes - Indicate Temperature_____deg. F
☐ No

FOR OHIO EPA USE
FACILITY ID:_____

EU ID: _____ PTI #:

# EMISSIONS ACTIVITY CATEGORY FORM
# GENERAL PROCESS OPERATION

*This form is to be completed for each process operation when there is no specific emissions activity category (EAC) form applicable. If there is more than one end product for this process, copy and complete this form for each additional product (see instructions). Several State/Federal regulations which may apply to process operations are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.*

1. Reason this form is being submitted (Check one)

   ☒ New Permit ☐ Renewal or Modification of Air Permit Number(s) (e.g.P001)_____

2. Maximum Operating Schedule: **24** hours per day ; **365** days per year

   If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. _____

3. End product of this process: **Cooling water**

4. Hourly production rates (indicate appropriate units). Please see the instructions for clarification of "Maximum" and "Average" for new versus existing operations:

| Minute | Rate | Units (e.g., widgets) |
|---|---|---|
| Average production | **1,932,000** | **Gallon** |
| Maximum production | | |

5. Annual production rates (indicate appropriate units) Please see the instructions for clarification of "Maximum" and "Actual" for new versus existing operations:

| Annual | Rate | Units (e.g., widgets) |
|---|---|---|
| Actual production | | |
| Maximum production | | |

6. Type of operation (please check one):

☒ Continuous
☐ Batch (please complete items below)

Minimum cycle* time (minutes): _____
Minimum time between cycles (minutes): _____
Maximum number of cycles per daily 24 hour period: _____
(Note: include cycle time and set up/clean up time.)

*"Cycle" refers to the time the equipment is in operation.

7. Materials used in process at maximum production rate (add rows/pages as needed):

| Material | Physical State at Standard Conditions | Principle Use | Amount** |
|---|---|---|---|
| **Water** | **Liquid** | **Cooling** | **322,000 gpm** |
| | | | |
| | | | |
| | | | |
| | | | |

** Please indicate the amount **and** rate (e.g., lbs/hr, gallons/hr, lbs/cycle, etc.).

8. Please provide a narrative description of the process below (e.g., coating of metal parts using high VOC content coatings for the manufacture of widgets; emissions controlled by thermal oxidizer...):

___See Section 2.3.4 of PTI Application Package_____

FOR OHIO EPA USE
FACILITY ID: _____
EU ID: _____ PTI#:_____

# EMISSIONS ACTIVITY CATEGORY FORM
# STATIONARY INTERNAL COMBUSTION ENGINE

*This form is to be completed for each stationary reciprocating or gas turbine engine. State/Federal regulations which may apply to stationary internal combustion engines are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.*

1. Reason this form is being submitted (Check one)

   ☒ New Permit ☐ Renewal or Modification of Air Permit Number (e.g. P001)_____

2. Maximum Operating Schedule: __24____ hours per day; _varies____ days per year

   If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples.

   _Limited to 500 hours/year for emergency operations _____

3. Engine type: ☐ Gas turbine ☒ Reciprocating

4. Purpose of engine: ☐ Driving pump or compressor
   ☒ Driving electrical generator

5. Normal use of engine: ☒ Emergency only ☐ Non-emergency

6. Engine Manufacturer: ___TBD_____ Model No: ___TBD_____

7. Engine exhaust configuration: ☐ simple cycle *(no heat recovery)*

   (for turbines only) ☐ regenerative cycle *(heat recovery to preheat combustion air)*
   ☐ cogeneration cycle *(heat recovered to produce steam)*
   ☐ combined cycle *(heat recovered to produce steam which drives generator)*

8. Input capacities (million BTU/hr): Rated ___15.75_____ Maximum __15.75_____ Normal _15.75_____

   *Supplemental burner (duct burner) input capacity, if equipped (million BTU/hr):*

   Rated:_____ Maximum _____ Normal _____

9. Output capacities (Horsepower): Rated: _____ Maximum _____ Normal _____

   (Kilowatts): Rated: 2,250_ Maximum _1,500_ Normal __2,250_____

(lbs steam/hr)*: Rated: _____ Maximum _____ Normal _____

*required for cogeneration or combined cycle units only

10. Type of ignition: ☒ non-spark (diesel) ☐ spark

11. Type of fuel fired (check all that apply):

☒ single fuel
☐ dual fuel

☐ No. 2 oil, low-sulfur
☐ No. 2 oil, high-sulfur
☐ gasoline
☐ other, explain _____

☐ natural gas
☒ diesel

☐ landfill gas
☐ digester gas
☐ propane

12. Complete the following table for all fuels identified in question 11 that are used for the engine and any supplemental (duct) burners, if equipped:

| Fuel | Heat Content (BTU/unit) | wt.% Ash | wt.% Sulfur | Fuel Usage | | |
|---|---|---|---|---|---|---|
| | | | | Estimated Maximum Per Year | Normal Per Hour | Max. Per Hour |
| Nat. gas | BTU/cu ft | | gr/scf | MMcu ft | cu ft | MMcu ft |
| No. 2 oil | BTU/gal | | | gal | gal | gal |
| Gasoline | BTU/gal | | | gal | gal | gal |
| Diesel | 137,000 BTU/gal | | 0.0015 | 57,482gal | 115gal | 115gal |
| Landfill/digester gas | BTU/cu ft | | ppm | cu ft | cu ft | cu ft |
| Other (show units) | | | | | | |
| *List supplemental (duct) burner fuel and information below (show units):* | | | | | | |
| | | | | | | |

13. Type of combustion cycle (check all that apply):

☐ 2-stroke
☐ rich-burn
☐ carbureted
☐ other, explain _____

☐ 4-stroke
☐ lean-burn
☐ fuel injected

14. Emissions control techniques (check all that apply):

☐ prestratified charge
☐ catalytic oxidation (CO)
☐ air/fuel ratio
☐ 2-stage rich/lean combustion
☐ water/steam injection
☒ other, explain__Use of low sulfur fuel_____

☐ nonselective catalytic reduction (NSCR)
☐ selective catalytic reduction (SCR)
☐ injection timing retard (ITR)
☐ 2-stage lean/lean combustion
☐ preignition chamber combustion (PCC)

For each emissions control technique checked above, explain what pollutants are controlled by each technique:

The use of ultra low sulfur fuel will minimize SO2 emissions

FOR OHIO EPA USE
FACILITY ID: _____
EU ID: _____ PTI#:_____

# EMISSIONS ACTIVITY CATEGORY FORM
# STATIONARY INTERNAL COMBUSTION ENGINE

*This form is to be completed for each stationary reciprocating or gas turbine engine. State/Federal regulations which may apply to stationary internal combustion engines are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.*

1. Reason this form is being submitted (Check one)

   ☒ New Permit ☐ Renewal or Modification of Air Permit Number (e.g. P001)_____

2. Maximum Operating Schedule: __24____ hours per day; _varies____ days per year

   If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples.

   _Limited to 500 hours/year for emergency operations _____

3. Engine type: ☐ Gas turbine ☒ Reciprocating

4. Purpose of engine: ☒ Driving pump or compressor
   ☐ Driving electrical generator

5. Normal use of engine: ☒ Emergency only ☐ Non-emergency

6. Engine Manufacturer: ___TBD_____ Model No: ___TBD_____

7. Engine exhaust configuration: ☐ simple cycle *(no heat recovery)*

   (for turbines only) ☐ regenerative cycle *(heat recovery to preheat combustion air)*
   ☐ cogeneration cycle *(heat recovered to produce steam)*
   ☐ combined cycle *(heat recovered to produce steam which drives generator)*

8. Input capacities (million BTU/hr): Rated ___2.1____ Maximum __2.1_____ Normal _2.1_____

   *Supplemental burner (duct burner) input capacity, if equipped (million BTU/hr):*

   Rated:_____ Maximum _____ Normal _____

9. Output capacities (Horsepower): Rated: _300___ Maximum __300____ Normal _300_____

   (Kilowatts): Rated: _ Maximum __ Normal _____

(lbs steam/hr)*: Rated: _____ Maximum _____ Normal _____

*required for cogeneration or combined cycle units only

10. Type of ignition: ☒ non-spark (diesel) ☐ spark

11. Type of fuel fired (check all that apply):

☒ single fuel
☐ dual fuel

☐ No. 2 oil, low-sulfur
☐ No. 2 oil, high-sulfur
☐ gasoline
☐ other, explain _____

☐ natural gas
☒ diesel

☐ landfill gas
☐ digester gas
☐ propane

12. Complete the following table for all fuels identified in question 11 that are used for the engine and any supplemental (duct) burners, if equipped:

| Fuel | Heat Content (BTU/unit) | wt.% Ash | wt.% Sulfur | Fuel Usage | | |
|---|---|---|---|---|---|---|
| | | | | Estimated Maximum Per Year | Normal Per Hour | Max. Per Hour |
| Nat. gas | BTU/cu ft | | gr/scf | MMcu ft | cu ft | MMcu ft |
| No. 2 oil | BTU/gal | | | gal | gal | gal |
| Gasoline | BTU/gal | | | gal | gal | gal |
| Diesel | 137,000 BTU/gal | | 0.0015 | 7,664.2gal | 15.3gal | 15.3gal |
| Landfill/digester gas | BTU/cu ft | | ppm | cu ft | cu ft | cu ft |
| Other (show units) | | | | | | |
| *List supplemental (duct) burner fuel and information below (show units):* | | | | | | |
| | | | | | | |

13. Type of combustion cycle (check all that apply):

☐ 2-stroke
☐ rich-burn
☐ carbureted
☐ other, explain _____

☐ 4-stroke
☐ lean-burn
☐ fuel injected

14. Emissions control techniques (check all that apply):

☐ prestratified charge
☐ catalytic oxidation (CO)
☐ air/fuel ratio
☐ 2-stage rich/lean combustion
☐ water/steam injection
☒ other, explain__Use of low sulfur fuel_____

☐ nonselective catalytic reduction (NSCR)
☐ selective catalytic reduction (SCR)
☐ injection timing retard (ITR)
☐ 2-stage lean/lean combustion
☐ preignition chamber combustion (PCC)

For each emissions control technique checked above, explain what pollutants are controlled by each

technique:

The use of ultra low sulfur fuel will minimize SO2 emissions

# Appendix B: Supporting Calculations

# Summary of Annual Emissions
# Oregon Clean Energy

1/31/2013

**Max Annual Emissions - facility wide (including startup and shutdown)**

| ***number of CTs*** | ***2*** | **NOx** | **CO** | **VOC** | **SO2** | **PM10** | **PM2.5** | **NH3** | **H2SO4** | **Pb** | **CO2** | **CO2e** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| combustion turbines | tpy | 189.50 | 367.86 | 112.05 | 34.16 | 88.48 | 88.48 | 169.07 | 10.51 | 0.00E+00 | 2784983.20 | 2,788,117 |
| ancillary equipment | tpy | 9.36 | 10.21 | 1.637 | 0.08 | 1.06 | 1.06 | 0.00 | 0.01 | 8.13E-05 | 12837.66 | 12,913 |
| cooling tower | tpy | 0.00 | 0.00 | 0.00 | 0.00 | 4.56 | 0.02 | 0.00 | 0.00 | 0.00E+00 | 0.00 | 0.00 |
| **TOTAL** | **TPY** | **198.86** | **378.07** | **113.684** | **34.24** | **94.10** | **89.56** | **169.07** | **10.52** | **8.13E-05** | **2797820.86** | **2,801,030** |

# Summary of Annual Emissions
# Oregon Clean Energy

1/31/2013

## Overall Assumptions

| | | |
|---|---|---|
| number of CTs | 2 | |
| duct burning hours | 8760 | hrs/yr |
| steady state hours per unit | 8760 | |

## Steady State Emissions Data

*Emission from Mitsubishi issued on 11/16/2012*
*Emissions without DuctBurning Case 7 (100% load, 59 F)*
*Emissions with DuctBurning Case 11 (100% load, 90 F)*
*NOx emissions assume SCR*
*CO and VOC assume oxidation catalyst*
*SO2 emissions assume no conversion to SO3 and 0.5 grains/100 SCF*
*H2SO4 emissions provided by vendor and assume 0.5 grains/100 SCF*

***Each Turbine***

| | | NOx | CO | VOC | SO2 | PM10/PM2.5 | NH3 | H2SO4 | CO2 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|
| Emissions - (Case 7) - No DB | lb/hr | 20 | 12.2 | 7.0 | 3.70 | 10.1 | 18.5 | 1.1 | 305607 | 305786 |
| Emissions - (Case 11) - w/DB | lb/hr | 20.8 | 12.7 | 7.3 | 3.90 | 10.1 | 19.3 | 1.2 | 317920 | 318278 |
| Emissions from DB | lb/hr | 0.8 | 0.5 | 0.3 | 0.2 | 0 | 0.8 | 0.1 | 12313.3 | 12492.4 |
| Facility operating hours | hr/yr | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 |
| operating hours no DB | hrs/yr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| operating hours with DB | hrs/yr | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 |
| steady state emissions per turbine | tpy | 91.104 | 55.626 | 31.974 | 17.082 | 44.238 | 84.534 | 5.26 | 1392492 | 1394059 |

***Both Turbines***

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| number of turbines | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| total plant emissions emissions - steady state | tpy | 182.21 | 111.25 | 63.95 | 34.16 | 88.48 | 169.07 | 10.51 | 2784983.2 | 2788117.0 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Plant gross output (case 7) | MW | 820.9 | 820.9 | 820.9 | 820.9 | 820.9 | 820.9 | 820.9 | 820.9 | |
| Plant net output (case 7) | MW | 817.7 | 817.7 | 817.7 | 817.7 | 817.7 | 817.7 | 817.7 | 817.7 | |
| lbs CO2 per MW-hr gross (case 7) | lb/MW hr | | | | | | | | 745 | |
| lbs CO2 per MW-hr gross (case 7) + 12.8% margin | lb/MW hr | | | | | | | | 839.9 | |

# Summary of Annual Emissions
# Oregon Clean Energy

1/31/2013

## Overall Assumptions

*SU/SD information from Mitsubishi Budgetary Proposal Dated September 2012*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| cold starts/unit | 50 | number/yr | 2.50 | hours/event | 60 | minimum hours downtime with event | 150 | minutes per event |
| hot starts/unit | 250 | number/yr | 1.12 | hours/event | 0 | minimum hours downtime with event | 67 | minutes per event |
| warm starts/unit | 0 | number/yr | 1.83 | hours/event | 8 | minimum hours downtime with event | 110 | minutes per event |

## Emissions

| | | NOx | CO | VOC | SO2 | PM10/PM2.5 |
|---|---|---|---|---|---|---|
| Emissions per cold start | lbs | 108.9 | 2766.8 | 848.5 | | 9.2 |
| Emissions per hot start | lbs | 52.4 | 646 | 122.1 | | 3.8 |
| Emissions per warm start | lbs | 77.5 | 1784.6 | 575.8 | | 6.6 |
| cold start - duration of event (include downtime) | hrs | 62.50 | 62.50 | 62.50 | 62.50 | 62.50 |
| hot start - duration of event (include downtime) | hrs | 1.12 | 1.12 | 1.12 | 1.12 | 1.12 |
| warm start - duration of event (include downtime) | hrs | 9.83 | 9.83 | 9.83 | 9.83 | 9.83 |
| cold start - avg hourly emissions (including downtime) | lb/hr | 1.74 | 44.27 | 13.58 | 0.00 | 0.147 |
| hot start - avg hourly emissions (including downtime) | lb/hr | 46.93 | 578.51 | 109.34 | 0.0 | 3.403 |
| warm start - avg hourly emissions (including downtime) | lb/hr | 7.88 | 181.48 | 58.56 | 0.00 | 0.67 |
| steady state average hourly | | 20.80 | 12.70 | 7.30 | 3.90 | 10.10 |
| cold start - self correcting? | - | yes | no | no | yes | yes |
| hot start - self correcting? | - | no | no | no | yes | yes |
| warm start - self correcting? | - | yes | no | no | yes | yes |

## Dispersion Modeling Parameters (per turbine)

| | Exhaust Flow | Temp | Temp | Stack Diameter | Exit Velocity | Exit Velocity |
|---|---|---|---|---|---|---|
| | acfm | F | K | ft | ft/min | m/s |
| Cold Start | 818955.86 | 195.93 | 364.1 | 22 | 2154 | 10.94 |
| Hot Start | 797898.24 | 184.17 | 357.5 | 22 | 2099 | 10.66 |
| Warm Start | 824918.16 | 194.68 | 363.4 | 22 | 2170 | 11.02 |

## Dispersion Modeling Emissions (per turbine)

| | | NOx | CO |
|---|---|---|---|
| Cold Start | g/s | 5.49 | 139.57 |
| Hot Start | g/s | 5.92 | 72.96 |
| Warm Start | g/s | 5.33 | 122.76 |

## Emissions From Ancillary Equipment
### Oregon Clean Energy

**Total Emissions from Ancillary Equipment (tpy)**

| | | NOx | CO | VOC | TSP | SO2 | PM10/ PM2.5 | lead (Pb) | H2SO4 | CO2 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Auxilliary Boiler | tpy | 1.98 | 5.45 | 0.59 | 0.52 | 0.07 | 0.79 | 0.00 | 5.41E-03 | 11880.00 | 11952.2997 |
| Emergency Generator | tpy | 6.95 | 4.34 | 0.98 | 0.22 | 0.008 | 0.25 | 0.00007391 | 1.64E-04 | 871.04 | 874.1 |
| Emergency Fire Pump | tpy | 0.43 | 0.43 | 0.06 | 0.022 | 0.0008 | 0.025 | 0.00000735 | 1.63E-05 | 86.63 | 86.9 |
| TOTAL | tpy | **9.36** | **10.21** | **1.64** | **0.77** | **0.08** | **1.06** | **0.0000813** | **5.59E-03** | **12,837.66** | **12,913.33** |

**Emissions (lb/hr)**

| | | NOx | CO | VOC | TSP | SO2 | PM10/ PM2.5 | lead (Pb) |
|---|---|---|---|---|---|---|---|---|
| Auxilliary Boiler | | 1.980 | 5.445 | 0.594 | 0.792 | 0.071 | 0.79 | 0.00E+00 |
| Emergency Generator | | 27.791 | 17.346 | 3.927 | 0.882 | 0.032 | 0.99 | 2.96E-04 |
| Emergency Fire Pump | | 1.727 | 1.725 | 0.244 | 0.088 | 0.003 | 0.10 | 2.94E-05 |

**Emissions for Modeling (g/s) - annual average**

| | | NOx | CO | VOC | SO2 | PM10/ PM2.5 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Auxilliary Boiler | | 0.057 | 0.157 | 0.0171 | 0.002036 | 0.022804 | *diameter:* | 4.0 ft | *exhaust flow:* | 12,634 acfm | *temperature:* | 200 F | *stack height:* | same as HRSG stack |

**Emissions for Modeling (g/s) - hourly average**

| | | NOx | CO | VOC | SO2 | PM10/ PM2.5 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Auxilliary Boiler | | 0.25 | 0.69 | 0.07 | 0.00892 | 0.10 | *diameter:* | 4.0 ft | *exhaust flow:* | 12,634 acfm | *temperature:* | 200 F | *stack height:* | same as HRSG stack |

**Auxilliary Boiler**

| | | NOx | CO | VOC | TSP | SO2 | PM10/ PM2.5 | | H2SO4 | CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Input Capacity | MMBtu/hr | 99 | 99 | 99 | 99 | 99 | 99 | | 99 | 99 | 99 | 99 | |
| Emission Factor | lb/MMscf | | | | | 0.714 | | | | 120000 | | | |
| Emission Factor | lb/MMBtu | 0.020 | 0.055 | 0.006 | 0.008 | 0.0007 | 0.008 | | 0.00005 | 120.00 | 0.0023 | 0.0022 | |
| Operating Hours per Years | hrs/yr | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | | 2000 | 2000 | 2000 | 2000 | |
| **Potential Emissions** | lb/hr | 1.98 | 5.45 | 0.59 | 0.79 | 0.07 | 0.79 | | 0.005 | 11880.000 | 0.228 | 0.218 | 11952.2997 |
| **Potential Emissions** | **tpy** | **1.98** | **5.45** | **0.59** | **0.79** | **0.07** | **0.79** | | **0.005** | **11880.0** | **0.228** | **0.218** | **11952.2997** |

*emission factors for NOx, CO, VOC, PM10/PM2.5 based on information provided by NTE Energy (12/15/2012)*
*emissions of SO2 assume a sulfur content in NG of 0.5 gr/100 dscf*
*emissions of H2SO4 assumes a 5% conversion of SO2 --> SO3 (on a molar basis)*
*CO2 Emission Factor from AP-42 Table 1.4-2 (provided in lb/MMscf and converted to lb/MMBtu)*

## Emissions From Ancillary Equipment
### Oregon Clean Energy

**Emergency Generator**

| | | NOx | CO | VOC | TSP | SO2 | PM10/ PM2.5 | lead (Pb) | H2SO4 | CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Power rating | kW | 2250 | 2250 | 2250 | 2250 | 2250 | 2250 | 2250 | 2250 | 2250 | 2250.0 | 2250.0 | |
| Power rating | hp | 3016.6 | 3016.6 | 3016.6 | 3016.6 | 3016.6 | 3016.6 | 3016.6 | 3016.6 | 3016.6 | 3016.5750 | 3016.5750 | |
| emission factor | g/kW hr | 5.61 | 3.5 | 0.79 | 0.18 | | 0.2 | | | | | | |
| emission factor | lb/MMBtu | | | | | | | 1.40E-05 | 3.10E-05 | 165.00 | 8.10E-03 | 0.0013216 | |
| emission factor | g/bhp hr | | | | | 0.0048 | | 4.45E-05 | 9.85E-05 | 5.24E+02 | 2.57E-02 | 4.20E-03 | |
| emissions | lb/hr | 27.791 | 17.346 | 3.927 | 0.882 | 0.032 | 0.991 | 0.0003 | 6.55E-04 | 3484.144 | 0.171 | 0.028 | 3496.387 |
| operating hours per year | hrs/yr | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500.00 | 500.00 | 500.00 | 500.00 | |
| **Potential Emissions** | **tpy** | **6.95** | **4.34** | **0.98** | **0.22** | **0.0079** | **0.25** | **7.39E-05** | **0.0001636** | **871.0** | **0.0428** | **0.0070** | **874.1** |

*emission factors for NOx, CO, VOC and PM10/PM2.5 based on Tier 2 emission standards provided in 40 CFR 89 Subpart B - Table 1.*
*The Tier 2 emission factor for NOx and VOC (non methane hydrocarbons (NMHC)) provided in Subpart B - Table 1 is provided as a combined factor (NOx+NMHC). The breakdown of NOx and NMHC in this total factor was estimated using the Tier 1 factors provided in 40 CFR 89 Subpart B Table 1. For example, the NOx emission factor was determined via the following equation: 6.4 * (9.2/(9.2+1.3))*
*TSP emission factor = 89% of PM-10 emission factor, based on AP-42, Table 3.4-2 distribution of particulate emissions for stationary diesel engines.*
*emission factor for SO2 based on ULSD fuel oil (sulfur content of 15 ppmw or 0.0015 lb/MMBtu) and fuel input ratio of 7000 Btu/hp hr (AP-42 Section 3.3)*
*emission factor for Pb based on AP-42 Section 3.1 (1.4e-5 lb/MMBtu) and fuel input of 7000 Btu/hp hr (AP-42 Section 3.3)*
*emission factor for H2SO4 ( 0.000031 lb/MMBTu) from Page 276 of Toxic air pollutant emission factors - a compilation for selected compounds and sources (EPA, 1990) and fuel input ratio of 7000 Btu/hp*
*emission factor for CO2 (165 lb/MMBtu) from AP-42 Table 3.4-1*
*emission factor for CH4 (0.0081 lb/MMBtu) from AP-42 Table 3.4-1*
*emission factor for N2O (0.6 g/MMBtu) from Climate Registry General Reporting Protocol (GRP) (Emission Factors by Fuel Type and Sector)*

**Emergency Fire Pump**

| | | NOx | CO | VOC | TSP | SO2 | PM10/ PM2.5 | lead (Pb) | H2SO4 | CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Power rating | hp | 300.0 | 300.0 | 300.0 | 300.0 | 300.0 | 300.0 | 300.0 | 300.0 | 300.0 | 300.0 | 300.0 | |
| Power rating | kW | 223.8 | 223.8 | 223.8 | 223.8 | 223.8 | 223.8 | 223.8 | 223.8 | 223.8 | 223.8 | 223.8 | |
| emission factor | g/kW hr | 3.50 | 3.5 | 0.50 | 0.18 | | 0.2 | | | | | | |
| | lb/MMBtu | | | | | | | 1.40E-05 | 3.10E-05 | 165.00 | 8.10E-03 | 0.0013216 | |
| emission factor | g/bhp hr | | | | | 0.0048 | | 4.45E-05 | 9.85E-05 | 5.24E+02 | 2.57E-02 | 4.20E-03 | |
| emissions | lb/hr | 1.727 | 1.725 | 0.244 | 0.088 | 0.003 | 0.099 | 2.94E-05 | 6.51E-05 | 3.47E+02 | 1.70E-02 | 2.78E-03 | 347.7175624 |
| operating hours per year | hrs/yr | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | |
| **Potential Emissions** | **tpy** | **0.43** | **0.43** | **0.06** | **0.022** | **0.0008** | **0.025** | **7.35E-06** | **1.63E-05** | **86.625** | **0.0042525** | **0.0006938** | **86.9** |

*emission factors for NOx, CO, VOC and PM10/PM2.5 based on post -2009 emission standards provided in 40 CFR 60 Subpart IIII - Table 4*
*The post-2009 emission factor for NOx and VOC (non methane hydrocarbons (NMHC)) provided in Subpart IIII - Table 4 is provided as a combine factor (NOx+NMHC). The breakdown of NOx and NMHC in this total factor was estimated using the Tier 1 factors provided in 40 CFR 89 Subpart B Table 1. For example, the NOx emission factor was determined via the following equation: 0.4 * (9.2/(9.2+1.3))*
*TSP emission factor = 89% of PM-10 emission factor, based on AP-42, Table 3.4-2 distribution of particulate emissions for stationary diesel engines.*
*emission factor for SO2 based on ULSD fuel oil (sulfur content of 15 ppmw or 0.0015 lb/MMBtu) and fuel input ratio of 7000 Btu/hp hr (AP-42 Section 3.3)*
*emission factor for Pb based on AP-42 Section 3.1 (1.4e-5 lb/MMBtu) and fuel input of 7000 Btu/hp hr (AP-42 Section 3.3)*
*emission factor for H2SO4 ( 0.000031 lb/MMBTu) from Toxic air pollutant emission factors - a compilation for selected compounds and sources (EPA, 1990) and fuel input ratio of 7000 Btu/hp*
*emission factor for CO2 (165 lb/MMBtu) from AP-42 Table 3.4-1*
*emission factor for CH4 (0.0081 lb/MMBtu) from AP-42 Table 3.4-1*
*emission factor for N2O (0.6 g/MMBtu) from Climate Registry General Reporting Protocol (GRP) (Emission Factors by Fuel Type and Sector)*

**Emission Factors by Fuel Type and Sector**

| Fuel Type | Sector | $CO_2$ Emission Factor | $CH_4$ Emission Factor | $N_2O$ Emission Factor |
|---|---|---|---|---|
| Natural Gas | Industrial | 0.054 kg/scf | 1 g/MMBtu | 0.1 g/MMBtu |
| Coal | Industrial | 2,054.32 kg/short ton | 11 g/MMBtu | 1.6 g/MMBtu |
| Distillate Fuel | Commercial | 10.13 kg/gallon | 11 g/MMBtu | 0.6 g/MMBtu |

## Estimated Emissions from Cooling Tower
## Oregon Clean Energy

**based on NTE Energy information (12/15/12)**

### Emissions

| | | PM10 | PM2.5 |
|---|---|---|---|
| recirculating water flow | gpm | 322000 | 322000 |
| drift eliminator efficiency | % | 0.0005% | 0.0005% |
| TDS in recirculating water | mg/l | 2030.5 | 2030.5 |
| particle size distribution | % | 63.0% | 0.21% |
| estimated emissions | lb/hr | 1.040 | 0.0040 |
| estimated emissions | tpy | 4.56 | 0.018 |
| number of cells | - | 16 | 16 |
| estimated emissions per cell | lb/hr | 0.07 | 0.000 |
| estimated emissions per cell | g/s | 0.0082 | 0.0000 |

| Dispersion Modeling Parameters (per cell) | | |
|---|---|---|
| diameter | m | 10 |
| diameter | ft | 33.0 |
| exhaust temperature | K | ambient + 10 K |
| exhaust flow rate | acfm | 1422426.25 |
| exit velocity | ft/min | 1663.1 |
| exit velocity | m/s | 8.45 |

cooling tower

PRELIMINARY/FOR INFORMATION ONLY

## Mitsubishi - Expected Performance and Steady State Emissions for Combined Cycle Power Plant

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fuel Heat Input | Btu/lb - LHV | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | 20443.9 | |
| Fuel Heat Input | Btu/lb - HHV | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | 22697.8 | |
| CONDITION | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | |
| Ambient Dry Bulb Temperature | oF | -8 | -8 | -8 | 0 | 0 | 0 | 59 | 59 | 59 | 59 | 90 | 90 | 90 | 90 | 90 | 90 | 95 | | 105 | 105 | 105 | 105 | 105 | 105 | |
| Barometric Pressure | psia | 14.39 | 14.39 | 14.39 | 14.39 | 14.39 | 14.39 | 14.39 | 14.39 | 14.39 | 14.39 | 14.39 | 14.39 | 14.39 | 14.39 | 14.39 | 14.39 | 14.39 | | 14.39 | 14.39 | 14.39 | 14.39 | 14.39 | 14.39 | |
| Relative Humidity | % | 100 | 60.0 | 60.0 | 60.0 | 60.0 | 60.0 | 60.0 | 60.0 | 60.0 | 60.0 | 60.0 | 60.0 | 60.0 | 60.0 | 60.0 | 60.0 | 50.0 | | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0 | |
| Evap Cooler Status | On/Of | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | OFF | OFF | ON | OFF | ON | OFF | OFF | OFF | ON | | ON | OFF | ON | OFF | OFF | OFF | |
| Duct Burner Status | On/Off | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | OFF | OFF | OFF | OFF | ON | | ON | ON | OFF | OFF | OFF | OFF | |
| GT Load | % | 100% | 75% | 50% | 100% | 75% | 50% | 100% | 100% | 75% | 50% | 100% | 100% | 100% | 100% | 75% | 52% | 100% | 100% | 100% | 100% | 100% | 100% | 75% | 55% | |
| GT Heat Input | MMBtu/h - LHV | 2,652 | 2,143 | 1,607 | 2,653 | 2,090 | 1,573 | 2,357 | 2,315 | 1,817 | 1,435 | 2,192 | 2,118 | 2,192 | 2,118 | 1,690 | 1,342 | 2,181 | 2,147 | 2,009 | 2,147 | 2,009 | 1,616 | 1,328 | |
| Duct Burner Heat Input (per HRSG) | MMBtu/h - LHV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 253 | 253 | 0 | 0 | 0 | 0 | 264 | 264 | 264 | 0 | 0 | 0 | 0 | |
| GT Heat Input | MMBtu/h - HHV | 2944.4 | 2379.3 | 1784.2 | 2945.5 | 2320.4 | 1746.4 | 2616.9 | 2570.2 | 2017.3 | 1593.2 | 2433.7 | 2351.5 | 2433.7 | 2351.5 | 1876.3 | 1490.0 | 2421.5 | 2383.7 | 2230.5 | 2383.7 | 2230.5 | 1794.2 | 1474.4 | |
| Duct Burner Heat Input (per HRSG) | MMBtu/h - HHV | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 280.9 | 280.9 | 0.0 | 0.0 | 0.0 | 0.0 | 293.1 | 293.1 | 293.1 | 0.0 | 0.0 | 0.0 | 0.0 | |
| CC EXHAUST CONDITIONS @ Stack (per Stack) | | 2,944 | 2379.3 | 1784.2 | 2945.5 | 2320.4 | 1746.4 | 2616.9 | 2570.2 | 2017.3 | 1593.2 | 2714.6 | 2632.4 | 2433.7 | 2351.5 | 1876.3 | 1490.0 | 2714.6 | 2676.8 | 2523.6 | 2383.7 | 2230.5 | 1794.2 | 1474.4 | 2,945 |
| CC Exhaust Flow | kpph | 5,372 | 4,621 | 3,363 | 5,303 | 4,578 | 3,341 | 4,798 | 4,742 | 4,018 | 3,183 | 4,509 | 4,420 | 4,497 | 4,408 | 3,716 | 3,029 | 4,494 | 4,442 | 4,277 | 4,430 | 4,264 | 3,587 | 3,034 | |
| CC Exhaust Gas Temperature | oF | 187 | 187 | 165 | 185 | 185 | 165 | 184 | 183 | 180 | 165 | 175 | 174 | 188 | 187 | 180 | 169 | 173 | 177 | 175 | 191 | 189 | 182 | 173 | |
| CC EMISSIONS @ STACK (per Stack) | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOx (abated) | ppmvd@15% O 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| NOx (abated) | lb/h | 22.6 | 18.2 | 13.6 | 22.5 | 17.7 | 13.3 | 20 | 19.7 | 15.4 | 12.2 | 20.8 | 20.2 | 18.6 | 18 | 14.3 | 11.4 | 20.8 | 20.5 | 19.3 | 18.2 | 17 | 13.7 | 11.2 | |
| CO (abated) | ppmvd@15% O 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| CO (abated) | lb/h | 13.7 | 11.1 | 8.3 | 13.7 | 10.8 | 8.1 | 12.2 | 12 | 9.4 | 7.4 | 12.7 | 12.3 | 11.3 | 11 | 8.7 | 6.9 | 12.7 | 12.5 | 11.8 | 11.1 | 10.4 | 8.3 | 6.8 | |
| VOC (abated) | ppmvd@15% O 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| VOC (abated) | lb/h | 7.9 | 6.3 | 4.7 | 7.9 | 6.2 | 4.7 | 7 | 6.9 | 5.4 | 4.2 | 7.3 | 7 | 6.5 | 6.3 | 5 | 4 | 7.3 | 7.2 | 6.7 | 6.4 | 5.9 | 4.8 | 3.9 | |
| SO2 @ actual O2 | lb/h | 4.2 | 3.4 | 2.5 | 4.2 | 3.3 | 2.5 | 3.7 | 3.7 | 2.9 | 2.3 | 3.9 | 3.7 | 3.5 | 3.4 | 2.7 | 2.1 | 3.9 | 3.8 | 3.6 | 3.4 | 3.2 | 2.6 | 2.1 | |
| SO2 @ actual O2 | lb/MMBtu - HHV | 1.43E-03 | 1.43E-03 | 1.43E-03 | 1.43E-03 | 1.43E-03 | 1.43E-03 | 1.43E-03 | 1.43E-03 | 1.43E-03 | 1.43E-03 | 1.42E-03 | 1.42E-03 | 1.43E-03 | 1.43E-03 | 1.43E-03 | 1.43E-03 | 1.42E-03 | 0.00142 | 1.42E-03 | 1.43E-03 | 1.43E-03 | 1.43E-03 | 1.43E-03 | |
| Sulfur Mist (H2SO4) | lb/h | 1.2 | 1 | 0.7 | 1.2 | 1 | 0.7 | 1.1 | 1.1 | 0.8 | 0.7 | 1.2 | 1.2 | 1 | 1 | 0.8 | 0.6 | 1.2 | 1.2 | 1.1 | 1 | 0.9 | 0.7 | 0.6 | |
| Sulfur Mist (H2SO4) | lb/MMBtu - HHV | 4.13E-04 | 4.13E-04 | 4.13E-04 | 4.13E-04 | 4.13E-04 | 4.13E-04 | 4.13E-04 | 4.13E-04 | 4.13E-04 | 4.13E-04 | 4.39E-04 | 4.39E-04 | 4.13E-04 | 4.13E-04 | 4.13E-04 | 4.13E-04 | 4.39E-04 | 4.39E-04 | 4.39E-04 | 4.13E-04 | 4.13E-04 | 4.13E-04 | 4.13E-04 | |
| Particulates (PM10 Total) | lb/h | 11.3 | 9.5 | 7 | 11.3 | 9.4 | 6.9 | 10.1 | 9.9 | 8.1 | 6.5 | 10.1 | 9.9 | 9.3 | 9.1 | 7.5 | 6.1 | 10.1 | 10 | 9.5 | 9.2 | 8.7 | 7.2 | 6 | |
| Particulates (PM10 Total) | lb/MMBtu - HHV | 3.85E-03 | 4.00E-03 | 3.92E-03 | 3.82E-03 | 4.03E-03 | 3.96E-03 | 3.84E-03 | 3.86E-03 | 4.04E-03 | 4.05E-03 | 3.73E-03 | 3.75E-03 | 3.83E-03 | 3.87E-03 | 4.00E-03 | 4.06E-03 | 3.72E-03 | 3.72E-03 | 3.77E-03 | 3.84E-03 | 3.91E-03 | 4.02E-03 | 4.09E-03 | |
| Ammonia Slip (NH 3) | ppmvd@15% O 2 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Ammonia Slip (NH 3) | lb/h | 20.9 | 16.8 | 12.6 | 20.9 | 16.4 | 12.3 | 18.5 | 18.2 | 14.3 | 11.3 | 19.3 | 18.7 | 17.2 | 16.7 | 13.3 | 10.5 | 19.3 | 19 | 17.9 | 16.9 | 15.8 | 12.7 | 10.4 | |
| **ARCADIS ADDED CALCULATIONS** | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO2 Emission Factor- turbine | lb/MMBtu (40 cfr 98) | 116.784141 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | 116.7841 | |
| CO2 Emission Factor- duct burner | lb/MMBtu (AP-42) | 120 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | 120.0000 | |
| CH4 Emission Factor - turbine | lb/MMBtu (40 CFR 98) | 0.00220264 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | |
| CH4 Emission Factor - duct burner | lb/MMBtu (AP-42) | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | |
| N2O Emission Factor - turbine | lb/MMBtu (40 CFR 98) | 0.00022026 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | |
| N2O Emission Factor - duct burner | lb/MMBtu (AP-42) | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | |
| **CO2 Emissions** | **lb/hr** | **343857** | **277860** | **208363** | **343986** | **270988** | **203954** | **305607** | **300161** | **235591** | **186061** | **317920** | **308326** | **284213** | **274619** | **219124** | **174003** | **317960** | **313551** | **295658** | **278379** | **260486** | **209530** | **172188** | |
| CH4 Emissions | lb/hr | 6.5 | 5.2407 | 3.9299 | 6.4879 | 5.1111 | 3.8467 | 5.7640 | 5.6613 | 4.4434 | 3.5093 | 6.0065 | 5.8256 | 5.3605 | 5.1795 | 4.1329 | 3.2818 | 6.0077 | 5.9246 | 5.5871 | 5.2504 | 4.9130 | 3.9519 | 3.2476 | |
| N2O Emissions | lb/hr | 0.6 | 0.5241 | 0.3930 | 0.6488 | 0.5111 | 0.3847 | 0.5764 | 0.5661 | 0.4443 | 0.3509 | 1.1540 | 1.1359 | 0.5360 | 0.5180 | 0.4133 | 0.3282 | 1.1782 | 1.1699 | 1.1361 | 0.5250 | 0.4913 | 0.3952 | 0.3248 | |
| **CO2e Emissions** | **lb/hr** | **344058** | **278022** | **208484** | **344187** | **271147** | **204073** | **305786** | **300337** | **235729** | **186170** | **318278** | **308678** | **284380** | **274779** | **219252** | **174105** | **318325** | **313914** | **296011** | **278541** | **260638** | **209652** | **172288** | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| formaldehyde emission factor - turbine (lb/MMBtu) (CARB- CATEF) | | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | 0.00011 | |
| formaldehyde emission factor - DB (lb/MMBtu) (AP-42, 1.4-3) | | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | 7.89E-05 | |
| toluene emission factor - turbine (lb/MMBtu) (AP-42, 3.1-3) | | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | |
| toluene emission factor - DB (lb/MMBtu) (AP-42, 1.4-3) | | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | 3.58E-06 | |
| xylene emission factor - turbine (lb/MMBtu) (AP-42, 3.1-3) | | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | 0.000064 | |
| xylene emission factor - DB (lb/MMBtu) (AP-42, 1.4-3) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **formaldehyde emissions (lb/hr)** | | 0.324 | 0.262 | 0.196 | 0.324 | 0.255 | 0.192 | 0.288 | 0.283 | 0.222 | 0.175 | 0.290 | 0.281 | 0.268 | 0.259 | 0.206 | 0.164 | 0.289 | 0.285 | 0.268 | 0.262 | 0.245 | 0.197 | 0.162 | |
| **toluene emissions (lb/hr)** | | 0.383 | 0.309 | 0.232 | 0.383 | 0.302 | 0.227 | 0.340 | 0.334 | 0.262 | 0.207 | 0.317 | 0.307 | 0.316 | 0.306 | 0.244 | 0.194 | 0.316 | 0.311 | 0.291 | 0.310 | 0.290 | 0.233 | 0.192 | |
| **xylene emissions (lb/hr)** | | 0.188 | 0.152 | 0.114 | 0.189 | 0.149 | 0.112 | 0.167 | 0.164 | 0.129 | 0.102 | 0.156 | 0.150 | 0.156 | 0.150 | 0.120 | 0.095 | 0.155 | 0.153 | 0.143 | 0.153 | 0.143 | 0.115 | 0.094 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | **w/o DB** | **w/DB** |
| **NOx (lb/MMBtu)** | | 0.0077 | 0.0076 | 0.0076 | 0.0076 | 0.0076 | 0.0076 | 0.0076 | 0.0077 | 0.0076 | 0.0077 | 0.0077 | 0.0077 | 0.0076 | 0.0077 | 0.0076 | 0.0077 | 0.0077 | 0.0077 | 0.0076 | 0.0076 | 0.0076 | 0.0076 | 0.0076 | **0.00768** | **0.00767** |
| **CO (lb/MMBtu)** | | 0.0047 | 0.0047 | 0.0047 | 0.0047 | 0.0047 | 0.0046 | 0.0047 | 0.0047 | 0.0047 | 0.0046 | 0.0047 | 0.0047 | 0.0046 | 0.0047 | 0.0046 | 0.0046 | 0.0047 | 0.0047 | 0.0047 | 0.0047 | 0.0047 | 0.0046 | 0.0046 | **0.0047** | **0.0047** |
| **VOC (lb/MMBtu)** | | 0.0027 | 0.0026 | 0.0026 | 0.0027 | 0.0027 | 0.0027 | 0.0027 | 0.0027 | 0.0027 | 0.0026 | 0.0027 | 0.0027 | 0.0027 | 0.0027 | 0.0027 | 0.0027 | 0.0027 | 0.0027 | 0.0027 | 0.0027 | 0.0026 | 0.0027 | 0.0026 | **0.0027** | **0.0027** |
| **SO2 (lb/MMBtu)** | | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | 0.0014 | **0.0014** | **0.0014** |
| **H2SO4 (lb/MMBtu)** | | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | **0.0004** | **0.0004** |
| **PM10/PM2.5 (lb/MMBtu)** | | 0.0039 | 0.0040 | 0.0039 | 0.0038 | 0.0040 | 0.0040 | 0.0038 | 0.0039 | 0.0040 | 0.0041 | 0.0037 | 0.0038 | 0.0038 | 0.0039 | 0.0040 | 0.0041 | 0.0037 | 0.0037 | 0.0038 | 0.0038 | 0.0039 | 0.0040 | 0.0041 | **0.0039** | **0.0038** |
| **NH3 (lb/MMBtu)** | | 0.0071 | 0.0071 | 0.0071 | 0.0071 | 0.0071 | 0.0070 | 0.0071 | 0.0071 | 0.0071 | 0.0071 | 0.0071 | 0.0071 | 0.0071 | 0.0071 | 0.0071 | 0.0070 | 0.0071 | 0.0071 | 0.0071 | 0.0071 | 0.0071 | 0.0071 | 0.0071 | **0.0071** | **0.0071** |

**Mitsubishi - Expected Performance and Steady State Emissions for Combined Cycle Power Plant**

NOTES:
1.) All performance data are based on New & Clean conditions.
2.) All supplied values are estimations and not guaranteed.
3.) A tolerance of 0.75% on Power Output and 1.0% on Heat Rate shall apply to the above values.
4.) Fuel gas composition (mol%): 96.8% $CH_4$, 1.1% $C_2H_6$, 0.1% $C_3H_8$, 0.0% n-$C_4H_{10}$, 0.0% i-$C_4H_{10}$, 0.0% n-$C_5H_{12}$, 0.0% i-$C_5H_{12}$, 0.0% $C_6H_{14}$, 0.2% $N_2$, 1.7% $CO_2$, 0.0% $H_2O$, 0.0% $O_2$
5.) 0.5 gr/100scf of sulfur and 0% fuel bound nitrogen (FBN) are considered in the fuel.
6.) Fuel must be in compliance with MPSA's fuel specification.
7.) Gross power output is at the generator terminals minus excitation losses.
8.) Balance of plant design (condenser, piping losses, etc.) shall be based on MPSA estimations.
9.) Assumed Site Conditions: Frequency 60 Hz, Generator Power Factor 0.85, HRSG Drum blowdown 0%, wet condenser cooling water circuit.
10.) Since this data is based on estimated and/or assumed values, Customer shall confer with MPSA prior to including in any air permit application or contract guarantees.
11.) Emissions shall be tested in accordance with the following EPA methods: NOx: 20, CO: 10, VOC: 25/18, NH 3: CTM-027, PM10: Non-condensables using Method 201 or 201A and condensables using Method 202.
12.) Data included in any air permit application or Environmental Impact Study is strictly the Customer's responsibility.
13.) Emission values are net emissions generated from MPSA's equipment, unless otherwise stated.
14.) VOC's are expressed as non-methane and non-ethane basis assuming equivalent molecular weight of methane.
15.) Values given are as measured at the HRSG stack outlet with the applicable emission control equipment in place.

**Oregon Clean Energy**
**Dispersion Modeling Parameters (per turbine)**

*developed by ARCADIS based on Mitsubishi Data (as provided below)*

| SITE CONDITIONS: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LOAD LEVEL | 100% | 75% | 50% | 100% | 75% | 50% | 100% | 100% | 75% | 50% | 100% | 100% | 100% | 100% | 75% | 52% | 100% | 100% | 100% | 100% | 100% | 75% | 55% |
| AMBIENT DRY BULB TEMPERATURE, °F | -8 | -8 | -8 | 0 | 0 | 0 | 59 | 59 | 59 | 59 | 90 | 90 | 90 | 90 | 90 | 90 | 105 | 105 | 105 | 105 | 105 | 105 | 105 |
| exhaust flow rate (scfm) (@77 F) | 1,201,744 | 1,034,096 | 752,578 | 1,186,309 | 1,024,824 | 747,655 | 1,076,284 | 1,063,358 | 901,315 | 714,009 | 1,015,639 | 994,906 | 1,013,634 | 992,889 | 837,306 | 682,508 | 1,012,609 | 1,001,582 | 963,049 | 999,911 | 960,784 | 808,518 | 683,871 |
| stack gas temperature (K) | 359.1 | 359.1 | 346.9 | 358.0 | 358.0 | 346.9 | 357.4 | 356.9 | 355.2 | 346.9 | 352.4 | 351.9 | 359.7 | 359.1 | 355.2 | 349.1 | 351.3 | 353.6 | 352.4 | 361.3 | 360.2 | 356.3 | 351.3 |
| stack gas temperature (F) | 187 | 187 | 165 | 185 | 185 | 165 | 184 | 183 | 180 | 165 | 175 | 174 | 188 | 187 | 180 | 169 | 173 | 177 | 175 | 191 | 189 | 182 | 173 |
| exhaust flow rate (acfm) | 1,447,912 | 1,245,922 | 875,906 | 1,424,896 | 1,230,934 | 870,176 | 1,290,740 | 1,273,257 | 1,074,193 | 831,016 | 1,200,988 | 1,174,619 | 1,223,156 | 1,196,274 | 997,907 | 799,437 | 1,193,634 | 1,188,097 | 1,138,801 | 1,212,183 | 1,161,171 | 966,608 | 806,127 |
| stack diameter (ft) | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| stack exit velocity (ft/min) | 3809 | 3278 | 2304 | 3748 | 3238 | 2289 | 3395 | 3350 | 2826 | 2186 | 3159 | 3090 | 3218 | 3147 | 2625 | 2103 | 3140 | 3125 | 2996 | 3189 | 3055 | 2543 | 2121 |
| stack exit velocity (m/s) | 19.35 | 16.65 | 11.71 | 19.04 | 16.45 | 11.63 | 17.25 | 17.02 | 14.36 | 11.11 | 16.05 | 15.70 | 16.35 | 15.99 | 13.34 | 10.68 | 15.95 | 15.88 | 15.22 | 16.20 | 15.52 | 12.92 | 10.77 |
| NOx emissions (g/s) | 2.85 | 2.30 | 1.72 | 2.84 | 2.23 | 1.68 | 2.52 | 2.48 | 1.94 | 1.54 | 2.62 | 2.55 | 2.35 | 2.27 | 1.80 | 1.44 | 2.62 | 2.59 | 2.43 | 2.30 | 2.14 | 1.73 | 1.41 |
| CO emissions (g/s) | 1.73 | 1.40 | 1.05 | 1.73 | 1.36 | 1.02 | 1.54 | 1.51 | 1.19 | 0.93 | 1.60 | 1.55 | 1.43 | 1.39 | 1.10 | 0.87 | 1.60 | 1.58 | 1.49 | 1.40 | 1.31 | 1.05 | 0.86 |
| SO2 emissions (g/s) | 0.53 | 0.43 | 0.32 | 0.53 | 0.42 | 0.32 | 0.47 | 0.47 | 0.37 | 0.29 | 0.49 | 0.47 | 0.44 | 0.43 | 0.34 | 0.26 | 0.49 | 0.48 | 0.45 | 0.43 | 0.40 | 0.33 | 0.26 |
| PM10/PM2.5 emissions (g/s) | 1.43 | 1.20 | 0.88 | 1.43 | 1.19 | 0.87 | 1.27 | 1.25 | 1.02 | 0.82 | 1.27 | 1.25 | 1.17 | 1.15 | 0.95 | 0.77 | 1.27 | 1.26 | 1.20 | 1.16 | 1.10 | 0.91 | 0.76 |
| formaldehyde emissions (g/s) | 0.0408 | 0.0330 | 0.0248 | 0.0409 | 0.0322 | 0.0242 | 0.0363 | 0.0357 | 0.0280 | 0.0221 | 0.0366 | 0.0354 | 0.0338 | 0.0326 | 0.0260 | 0.0207 | 0.0365 | 0.0360 | 0.0339 | 0.0331 | 0.0309 | 0.0249 | 0.0205 |
| toluene emissions (g/s) | 0.0483 | 0.0390 | 0.0293 | 0.0483 | 0.0380 | 0.0286 | 0.0429 | 0.0421 | 0.0331 | 0.0261 | 0.0400 | 0.0387 | 0.0399 | 0.0386 | 0.0308 | 0.0244 | 0.0398 | 0.0392 | 0.0367 | 0.0391 | 0.0366 | 0.0294 | 0.0242 |
| xylene emissions (g/s) | 0.0238 | 0.0192 | 0.0144 | 0.0238 | 0.0187 | 0.0141 | 0.0211 | 0.0207 | 0.0163 | 0.0129 | 0.0196 | 0.0190 | 0.0196 | 0.0190 | 0.0151 | 0.0120 | 0.0195 | 0.0192 | 0.0180 | 0.0192 | 0.0180 | 0.0145 | 0.0119 |

# Appendix C: RBLC Tables

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *TX-0618 | CHANNEL ENERGY CENTER LLC | TX | PSDTX955M1 | 10/15/2012 | Combined Cycle Turbine | 180 | MW | Selective catalytic reduction | 2 | PPMVD | LAER | 0 | |
| *TX-0619 | DEER PARK ENERGY CENTER | TX | PSDTX979M2 | 9/26/2012 | Combined Cycle Turbine | 180 | MW | Selective Catalytic Reduction | 2 | PPMVD | LAER | 0 | |
| *TX-0620 | ES JOSLIN POWER PLANT | TX | PSDTX1256 | 9/12/2012 | Combined cycle gas turbine | 195 | MW | Selective catalytic reduction | 2 | PPMVD | BACT-PSD | 0 | |
| *WY-0070 | CHEYENNE PRAIRIE GENERATING STATION | WY | CT-12636 | 8/28/2012 | Simple Cycle Turbine (EP03) | 40 | MW | SCR | 5 | PPMV AT 15% O2 | BACT-PSD | 36 | TONS |
| *WY-0070 | CHEYENNE PRAIRIE GENERATING STATION | WY | CT-12636 | 8/28/2012 | Combined Cycle Turbine (EP01) | 40 | MW | SCR | 3 | PPMV AT 15% O2 | BACT-PSD | 25.5 | TONS |
| *WY-0070 | CHEYENNE PRAIRIE GENERATING STATION | WY | CT-12636 | 8/28/2012 | Combined Cycle Turbine (EP02) | 40 | MW | SCR | 3 | PPMV AT 15% O2 | BACT-PSD | 25.5 | TONS |
| *WY-0070 | CHEYENNE PRAIRIE GENERATING STATION | WY | CT-12636 | 8/28/2012 | Simple Cycle Trubine (EP04) | 40 | MW | SCR | 5 | PPMV AT 15% O2 | BACT-PSD | 36 | TONS |
| *WY-0070 | CHEYENNE PRAIRIE GENERATING STATION | WY | CT-12636 | 8/28/2012 | Simple Cycle Turbine (EP05) | 40 | MW | SCR | 5 | PPMV AT 15% O2 | BACT-PSD | 36 | TONS |
| LA-0257 | SABINE PASS LNG TERMINAL | LA | PSD-LA-703(M3) | 12/6/2011 | Simple Cycle Generation Turbines (2) | 286 | MMBTU/H | water injection | 28.68 | LB/H | BACT-PSD | 25 | PPMV |
| *MI-0402 | SUMPTER POWER PLANT | MI | 81-11 | 11/17/2011 | Combined cycle combustion turbine w/ HRSG | 130 | MW electrical output | Low NOx burners | 9 | PPM | BACT-PSD | 0 | |
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | COMBUSTION TURBINE GENERATOR | 154 | MW | DRY LOW NOX (DLN) COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 2 | PPMVD | BACT-PSD | 0 | |
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | COMBUSTION TURBINE GENERATOR | 154 | MW | DRY LOW NOX (DLN) COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 2 | PPMVD | BACT-PSD | 0 | |
| TX-0600 | THOMAS C. FERGUSON POWER PLANT | TX | PSDTX1244 | 9/1/2011 | Natural gas-fired turbines | 390 | MW | Dry low NOx burners and Selective Catalytic Reduction | 2 | PPMVD | BACT-PSD | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | COMBUSTION TURBINE GENERATOR | 180 | MW | SCR | 2 | PPMVD | BACT-PSD | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | COMBUSTION TURBINE GENERATOR | 180 | MW | SCR | 2 | PPMVD | BACT-PSD | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | COMBUSTION TURBINE GENERATOR | 180 | MW | SCR | 160 | LB/HR | BACT-PSD | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | COMBUSTION TURBINE GENERATOR | 180 | MW | SCR | 2 | PPMVD | BACT-PSD | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | COMBUSTION TURBINE GENERATOR | 180 | MW | SCR | 2 | PPMVD | BACT-PSD | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | COMBUSTION TURBINE GENERATOR | 180 | MW | SCR | 160 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | DRY LOW NOX BURNERS (LNB), SELECTIVE CATALYTIC REDUCTION (SCR) | 333.3 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | DRY LOW NOX BURNERS (LNB), SELECTIVE CATALYTIC REDUCTION (SCR) | 249.9 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | DRY LOW NOX BURNERS (LNB), SELECTIVE CATALYTIC REDUCTION (SCR) | 152 | LB/HR | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | DRY LOW NOX BURNERS (LNB), SELECTIVE CATALYTIC REDUCTION (SCR) | 115 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | DRY LOW NOX BURNERS (LNB), SELECTIVE CATALYTIC REDUCTION (SCR) | 2 | PPMVD | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | DRY LOW NOX BURNERS (LNB), SELECTIVE CATALYTIC REDUCTION (SCR) | 333.3 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | DRY LOW NOX BURNERS (LNB), SELECTIVE CATALYTIC REDUCTION (SCR) | 249.9 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | DRY LOW NOX BURNERS (LNB), SELECTIVE CATALYTIC REDUCTION (SCR) | 152 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | DRY LOW NOX BURNERS (LNB), SELECTIVE CATALYTIC REDUCTION (SCR) | 115 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | DRY LOW NOX BURNERS (LNB), SELECTIVE CATALYTIC REDUCTION (SCR) | 2 | PPMVD | BACT-PSD | 0 | |
| OR-0048 | CARTY PLANT | OR | 25-0016-ST-02 | 12/29/2010 | COMBINED CYCLE NATURAL GAS-FIRED ELECTRIC GENERATING UNIT | 2866 | MMBTU/H | SELECTIVE CATALYTIC REDUCTION (SCR) | 2 | PPM@15%O2 | BACT-PSD | 0 | |
| AK-0071 | INTERNATIONAL STATION POWER PLANT | AK | AQ0164CPT01 | 12/20/2010 | GE LM6000PF-25 Turbines (4) | 59900 | hp ISO | Selective Catalytic Reduction and Dry Low NOx Combustion | 5 | PPMDV | BACT-PSD | 0 | |
| *VA-0315 | WARREN COUNTY POWER PLANT - DOMINION | VA | 81391-007 | 12/17/2010 | Combined cycle turbine and duct burner, 3 | 2996 | MMBTU/H | Two-stage, lean pre-mix dry low-NOx combustor and a selective catalytic reduction (SCR) control system using ammonia injection. | 2 | PPMVD@15%O 2 | BACT-PSD | 0 | |
| TX-0590 | KING POWER STATION | TX | PSDTX1125 | 8/5/2010 | Turbine | 1350 | MW | DLN burners and SCR | 2 | PPMVD AT 15% O2 | LAER | 0 | |
| ID-0018 | LANGLEY GULCH POWER PLANT | ID | P-2009.0092 | 6/25/2010 | COMBUSTION TURBINE, COMBINED CYCLE W/ DUCT BURNER | 2375.28 | MMBTU/H | SELECTIVE CATALYTIC REDUCTION (SCR), DRY LOW NOX (DLN), GOOD COMBUSTION PRACTICES (GCP) | 2 | PPMVD | BACT-PSD | 0 | |
| GA-0138 | LIVE OAKS POWER PLANT | GA | 4911-127-0075-P-02-0 | 4/8/2010 | COMBINED CYCLE COMBUSTION TURBINE - ELECTRIC GENERATING PLANT | 600 | MW | DRY LOW NOx BURNERS, SELECTIVE CATALYTIC REDUCTION | 2.5 | PPM@15%02 | BACT-PSD | 0 | |
| *CA-1209 | HIGH DESERT POWER PROJECT | CA | SE 98-01 | 3/11/2010 | COMBUSTION TURBINE GENERATOR | 190 | MW | DRY LOW NOX BURNERS (LNB), SELECTIVE CATALYTIC REDUCTION (SCR) | 2.5 | PPMVD | BACT-PSD | 0 | |
| *CA-1209 | HIGH DESERT POWER PROJECT | CA | SE 98-01 | 3/11/2010 | COMBUSTION TURBINE GENERATOR | 190 | MW | DRY LOW NOX BURNERS (LNB), SELECTIVE CATALYTIC REDUCTION (SCR) | 2.5 | PPMVD | BACT-PSD | 0 | |
| *CA-1209 | HIGH DESERT POWER PROJECT | CA | SE 98-01 | 3/11/2010 | COMBUSTION TURBINE GENERATOR | 190 | MW | DRY LOW NOX BURNERS (LNB), SELECTIVE CATALYTIC REDUCTION (SCR) | 2.5 | PPMVD | BACT-PSD | 0 | |
| CA-1177 | OTAY MESA ENERGY CENTER LLC | CA | 978379 | 7/22/2009 | Gas turbine combined cycle | 171.7 | MW | SCR | 2 | PPMVD@15% OXYGEN | OTHER CASE-BY-CASE | 0 | |
| CA-1178 | APPLIED ENERGY LLC | CA | 987494 | 3/20/2009 | Gas turbine combined cycle | 0 | | SCR | 2 | PPM | BACT-PSD | 0 | |
| OK-0129 | CHOUTEAU POWER PLANT | OK | 2007-115-C(M-1)PSD | 1/23/2009 | COMBINED CYCLE COGENERATION >25MW | 1882 | MMBTU/H | SCR AND DRY LOW-NOX | 2 | PPM | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FL-0304 | CANE ISLAND POWER PARK | FL | PSD-FL-400 (0970043-014-AC) | 9/8/2008 | 300 MW COMBINED CYCLE COMBUSTION TURBINE | 1860 | MMBTU/H | SCR | 2 | PPMVD | BACT-PSD | 0 | |
| LA-0136 | PLAQUEMINE COGENERATION FACILITY | LA | PSD-LA-659(M2) | 7/23/2008 | (4) GAS TURBINES/DUCT BURNERS | 2876 | MMBTU/H | DRY LOW NOX BURNERS, SELECTIVE CATALYTIC REDUCTION | 240 | LB/H | BACT-PSD | 5 | PPMVD @ 15% O2 |
| LA-0224 | ARSENAL HILL POWER PLANT | LA | PSD-LA-726 | 3/20/2008 | TWO COMBINED CYCLE GAS TURBINES | 2110 | MMBTU/H | LOW NOX TURBINES, DUCT BURNERS COMBINED WITH SCR | 30.15 | LB/H | BACT-PSD | 4 | PPMVD@15% O2 |
| LA-0224 | ARSENAL HILL POWER PLANT | LA | PSD-LA-726 | 3/20/2008 | SCN-3 COLD STARTUP CTG-1 SCN-7 COLD STARTUP CTG-2 | 2110 | MMBTU/H | COMPLETE EVENTS AS QUICKLY AS POSSIBLE ACCORDING TO MANUFACTURE¿S RECOMMENDED PROCEDURES. | 400 | LB/H | BACT-PSD | 0 | |
| LA-0224 | ARSENAL HILL POWER PLANT | LA | PSD-LA-726 | 3/20/2008 | SCN-4 HOT STARTUP CTG-1 SCN-8 HOT STARTUP CTG-2 | 2110 | MMBTU/H | COMPLETE EVENTS AS QUICKLY AS POSSIBLE ACCORDING TO MANUFACTURE¿S RECOMMENDED PROCEDURES. | 400 | LB/H | BACT-PSD | 0 | |
| LA-0224 | ARSENAL HILL POWER PLANT | LA | PSD-LA-726 | 3/20/2008 | SCN-5 SHUTDOWN CTG-1 / SCN-9 SHUTDOWN CTG-2 | 2110 | MMBTU/H | COMPLETE EVENTS AS QUICKLY AS POSSIBLE ACCORDING TO MANUFACTURE¿S RECOMMENDED PROCEDURES. | 400 | LB/H | BACT-PSD | 0 | |
| CT-0151 | KLEEN ENERGY SYSTEMS, LLC | CT | 104-0131 AND 104-0133 | 2/25/2008 | SIEMENS SGT6-5000F COMBUSTION TURBINE #1 AND #2 (NATURAL GAS FIRED) WITH 445 MMBTU/HR NATURAL GAS DUCT BURNER | 2.1 | MMCF/H | LOW NOX BURNER AND SELECTIVE CATALYTIC REDUCTION | 15.5 | LB/H | LAER | 2 | PPM @ 15% O2 |
| MN-0071 | FAIRBAULT ENERGY PARK | MN | 13100071-003 | 6/5/2007 | COMBINED CYCLE COMBUSTION TURBINE W/DUCT BURNER | 1758 | MMBTU/H | DRY LOW NOX COMBUSTION FOR NG; WATER INJECTION FOR NO.2 OIL; SCR W/NHZ INJECTION IN HRSG FOR BOTH NG & NO. 2 OIL. | 3 | PPMVD | BACT-PSD | 4.5 | PPMVD |
| CA-1144 | BLYTHE ENERGY PROJECT II | CA | SE 02-01 | 4/25/2007 | 2 COMBUSTION TURBINES | 170 | MW | SELECTIVE CATALYTIC REDUCTION | 2 | PPMVD | BACT-PSD | 0 | |
| FL-0285 | PROGRESS BARTOW POWER PLANT | FL | PSD-FL-381 AND 1030011-010-AC | 1/26/2007 | COMBINED CYCLE COMBUSTION TURBINE SYSTEM (4-ON-1) | 1972 | MMBTU/H | WATER INJECTION | 15 | PPMVD UNCORRECTED | BACT-PSD | 0 | |
| FL-0285 | PROGRESS BARTOW POWER PLANT | FL | PSD-FL-381 AND 1030011-010-AC | 1/26/2007 | SIMPLE CYCLE COMBUSTION TURBINE (ONE UNIT) | 1972 | MMBTU/H | WATER INJECTION DRY LOW NOX | 15 | PPMVD | BACT-PSD | 0 | |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | COMBINED CYCLE COMBUSTION GAS TURBINES - 6 UNITS | 2333 | MMBTU/H | DRY LOW NOX AND SCR WATER INJECTION | 2 | PPMVD @15%O2 | BACT-PSD | 0 | |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO 99.8 MMBTU/H GAS-FUELED AUXILIARY BOILERS | 99.8 | MMBTU/H | | 0.05 | LB/MMBTU | BACT-PSD | 0 | |
| TX-0497 | INEOS CHOCOLATE BAYOU FACILITY | TX | PSD-TX 983 AND 46192 | 8/29/2006 | COGENERATION TRAIN 2 AND 3 (TURBINE AND DUCT BURNER EMISSIONS) | 35 | MW | BP AMOCO PROPOSES TO USE SCR TO CONTROL NOX EMISSIONS FROM BOTH TURBINES AND DUCT BURNERS AFTER CONSIDERING ALTERNATIVE NOX CONTROL METHODS. THE TURBINES AND DUCT BURNERS WILL ALSO USE LOW NOX COMBUSTORS. BP AMOCO PROPOSES | 11.43 | LB/H | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TX-0502 | NACOGDOCHES POWER STERNE GENERATING FACILITY | TX | PSD-TX 1015 AND 49293 | 6/5/2006 | WESTINGHOUSE/SIEMENS MODEL SW501F GAS TURBINE W/ 416.5 MMBTU DUCT BURNERS | 190 | MW | STEAG POWER LLC IS PROPOSING THE USE OF DRY LOW NOX (DLN) COMBUSTORS FOR THE TURBINES AND LOW NOX BURNERS IN THE DUCT BURNERS ALONG WITH SELECTIVE CATALYST REDUCTION (SCR) SYSTEM FOR THE CONTROL OF NOX EMISSIONS FROM THE COMB | 45.4 | LB/H | BACT-PSD | 0 | |
| NY-0095 | CAITHNES BELLPORT ENERGY CENTER | NY | PSD-NY-0001 | 5/10/2006 | COMBUSTION TURBINE | 2221 | MMBUT/H | SCR | 2 | PPMVD@15%02 | BACT-PSD | 0 | |
| CO-0056 | ROCKY MOUNTAIN ENERGY CENTER, LLC | CO | 05WE0524 | 5/2/2006 | NATURAL-GAS FIRED, COMBINED-CYCLE TURBINE | 300 | MW | LOW NOX BURNERS AND SCR | 3 | PPM @ 15% O2 | BACT-PSD | 3 | PPM @ 15% O2 |
| *CA-1213 | MOUNTAINVIEW POWER COMPANY LLC | CA | SE 04-01 | 4/21/2006 | COMBUSTION TURBINE GENERATOR | 175.7 | MW | 1991 MMBTU/HR DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 2 | PPMVD | BACT-PSD | 0 | |
| *CA-1213 | MOUNTAINVIEW POWER COMPANY LLC | CA | SE 04-01 | 4/21/2006 | COMBUSTION TURBINE GENERATOR | 175.7 | MW | 1991 MMBTU/HR DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 160 | LB/HR | BACT-PSD | 400 | LB/STARTUP |
| *CA-1213 | MOUNTAINVIEW POWER COMPANY LLC | CA | SE 04-01 | 4/21/2006 | COMBUSTION TURBINE GENERATOR | 175.7 | MW | 1991 MMBTU/HR DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 80 | LB/HR | BACT-PSD | 0 | |
| *CA-1213 | MOUNTAINVIEW POWER COMPANY LLC | CA | SE 04-01 | 4/21/2006 | COMBUSTION TURBINE GENERATOR | 175.7 | MW | 1991 MMBTU/HR DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 2 | PPMVD | BACT-PSD | 0 | |
| *CA-1213 | MOUNTAINVIEW POWER COMPANY LLC | CA | SE 04-01 | 4/21/2006 | COMBUSTION TURBINE GENERATOR | 175.7 | MW | 1991 MMBTU/HR DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 160 | LB/HR | BACT-PSD | 400 | LB/STARTUP |
| *CA-1213 | MOUNTAINVIEW POWER COMPANY LLC | CA | SE 04-01 | 4/21/2006 | COMBUSTION TURBINE GENERATOR | 175.7 | MW | 1991 MMBTU/HR DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 80 | LB/HR | BACT-PSD | 0 | |
| *CA-1213 | MOUNTAINVIEW POWER COMPANY LLC | CA | SE 04-01 | 4/21/2006 | COMBUSTION TURBINE GENERATOR | 175.7 | MW | 1991 MMBTU/HR DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 2 | PPMVD | BACT-PSD | 0 | |
| *CA-1213 | MOUNTAINVIEW POWER COMPANY LLC | CA | SE 04-01 | 4/21/2006 | COMBUSTION TURBINE GENERATOR | 175.7 | MW | 1991 MMBTU/HR DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 160 | LB/HR | BACT-PSD | 400 | LB/STARTUP |
| *CA-1213 | MOUNTAINVIEW POWER COMPANY LLC | CA | SE 04-01 | 4/21/2006 | COMBUSTION TURBINE GENERATOR | 175.7 | MW | 1991 MMBTU/HR DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 80 | LB/HR | BACT-PSD | 0 | |
| *CA-1213 | MOUNTAINVIEW POWER COMPANY LLC | CA | SE 04-01 | 4/21/2006 | COMBUSTION TURBINE GENERATOR | 175.7 | MW | 1991 MMBTU/HR DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 2 | PPMVD | BACT-PSD | 0 | |
| *CA-1213 | MOUNTAINVIEW POWER COMPANY LLC | CA | SE 04-01 | 4/21/2006 | COMBUSTION TURBINE GENERATOR | 175.7 | MW | 1991 MMBTU/HR DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 160 | LB/HR | BACT-PSD | 400 | LB/STARTUP |
| *CA-1213 | MOUNTAINVIEW POWER COMPANY LLC | CA | SE 04-01 | 4/21/2006 | COMBUSTION TURBINE GENERATOR | 175.7 | MW | 1991 MMBTU/HR DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 80 | LB/HR | BACT-PSD | 0 | |
| *CA-1195 | ELK HILLS POWER LLC | CA | SJ 99-02 | 1/12/2006 | COMBUSTION TURBINE GENERATOR | 166 | MW | SCR OR SCONOX, DRY LOW NOX COMBUSTORS | 2.5 | PPMVD | BACT-PSD | 0 | |
| *CA-1195 | ELK HILLS POWER LLC | CA | SJ 99-02 | 1/12/2006 | COMBUSTION TURBINE GENERATOR | 166 | MW | SCR OR SCONOX, DRY LOW NOX COMBUSTORS | 2.5 | PPMVD | BACT-PSD | 0 | |
| NC-0101 | FORSYTH ENERGY PLANT | NC | 00986R1 | 9/29/2005 | TURBINE, COMBINED CYCLE, NATURAL GAS, (3) | 1844.3 | MMBTU/H | DRY LOW-NOX COMBUSTORS AND SELECTIVE CATALYTIC REDUCTION (SCR) | 2.5 | PPM @ 15% O2 | BACT-PSD | 3 | PPM @ 15% O2 |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NV-0035 | TRACY SUBSTATION EXPANSION PROJECT | NV | AP4911-1504 | 8/16/2005 | TURBINE, COMBINED CYCLE COMBUSTION #2 WITH HRSG AND DUCT BURNER. | 306 | MW | SELECTIVE CATALYTIC REDUCTION WITH AMMONIA INJECTION | 2 | PPM @ 15% O2 | BACT-PSD | 2 | PPM @ 15% O2 |
| NV-0035 | TRACY SUBSTATION EXPANSION PROJECT | NV | AP4911-1504 | 8/16/2005 | TURBINE, COMBINED CYCLE COMBUSTION #1 WITH HRSG AND DUCT BURNER. | 306 | MW | SELECTIVE CATALYST REDUCTION W/ AMMONIA INJECTION | 2 | PPM @ 15% O2 | BACT-PSD | 2 | PPM @ 15% O2 |
| OR-0041 | WANAPA ENERGY CENTER | OR | R10PSD-OR-05-01 | 8/8/2005 | COMBUSTION TURBINE & HEAT RECOVERY STEAM GENERATOR | 2384.1 | MMBTU/H | DRY LOW-NOX BURNERS AND SCR. | 2 | PPMDV @ 15% O2 | BACT-PSD | 0 | |
| NY-0100 | EMPIRE POWER PLANT | NY | 4381400052 | 6/23/2005 | FUEL COMBUSTION (NATURAL GAS) | 2099 | MMBTU/H | DRY LOW NOX COMBUSTION TECHNOLOGY IN COMBINATION WITH SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM | 2 | PPMVD AT 15% O2 | LAER | 2 | PPMVD AT 15% O2 |
| NY-0100 | EMPIRE POWER PLANT | NY | 4381400052 | 6/23/2005 | FUEL COMBUSTION (NATURAL GAS) DUCT BURNING | 646 | MMBTU/H | DRY LOW NOX COMBUSTION TECHNOLOGY IN COMBINATION WITH SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM | 3 | PPMVD AT 15% O2 | LAER | 3 | PPMVD AT 15% O2 |
| FL-0265 | HINES POWER BLOCK 4 | FL | PSD-FL-342 AND 1050234-010-AC | 6/8/2005 | COMBINED CYCLE TURBINE | 530 | MW | SCR | 2.5 | PPM | BACT-PSD | 2.5 | PPM @ 15% O2 |
| MI-0366 | BERRIEN ENERGY, LLC | MI | 323-01A | 4/13/2005 | 3 COMBUSTION TURBINES AND DUCT BURNERS | 1584 | MMBTU/H | DRY LOW NOX BURNERS AND SELECTIVE CATALYTIC REDUCTION. | 2.5 | PPMDV @ 15% O2 | BACT-PSD | 2.5 | PPM @ 15% O2 |
| WA-0328 | BP CHERRY POINT COGENERATION PROJECT | WA | EFSEC/2002-01 | 1/11/2005 | GE 7FA COMBUSTION TURBINE & HEAT RECOVERY STEAM GENERATOR | 174 | MW | LEAN PRE-MIX DRY LOW-NOX BURNERS ON CT. LOW-NOX DUCT BURNERS. SCR. | 2.5 | PPMDV | BACT-PSD | 0 | |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | TURBINES (4) (MODEL GE 7FA), DUCT BURNERS ON | 172 | MW | DRY LOW NOX (DLN) BURNERS AND SELECTIVE CATALYTIC REDUCTION (SCR) | 27.8 | LB/H | BACT-PSD | 3 | PPM @ 15% O2 |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | TURBINES (4) (MODEL GE 7FA), DUCT BURNERS OFF | 172 | MW | DRY LOW NOX (DLN) BURNERS AND SELECTIVE CATALYTIC REDUCTION(SCR) | 21.1 | LB/H | BACT-PSD | 3 | PPM @ 15% O2 |
| CA-1142 | PASTORIA ENERGY FACILITY | CA | SJ 99-03 | 12/23/2004 | 3 COMBUSTION TURBINES | 168 | MW | XONON CATALYTIC COMBUSTORS OR DRY LOW NOX BURNERS WITH SCR | 2.5 | PPMVD | BACT-PSD | 0 | |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | COMBUSTION TURBINE GENERATORS AND HEAT RECOVERY STEAM GENERATORS - SW501F TURBINES OPTION | 180 | MW | LOW NOX BURNERS AND SELECTIVE CATALYTIC REDUCTION | 2 | PPM @ 15% O2 | BACT-PSD | 2 | PPM @ 15% O2 |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | COMBUSTION TURBINE GENERATORS AND HEAT RECOVERY STEAM GENERATORS - GE7FA TURBINES OPTION | 170 | MW | LOW NOX BURNERS AND SELECTIVE CATALYTIC REDUCTION | 2 | PPM AT 15% O2 | BACT-PSD | 2 | PPM AT 15% O2 |
| LA-0194 | SABINE PASS LNG TERMINAL | LA | PSD-LA-703 | 11/24/2004 | 30 MW GAS TURBINE GNERATORS (4) LOW LOAD OPERATIONS | 30 | mw each | DRY LOW NOX BURNER | 50 | PPMVD @ 15% O2 | BACT-PSD | 0 | |
| MS-0073 | RELIANT ENERGY CHOCTAW COUNTY, LLC | MS | 0444-00018 | 11/23/2004 | EMISSION POINT AA-001 GEN. ELEC. COMBUST. TURBINE | 230 | MW | SCR | 3.5 | PPMV @ 15% 02 | BACT-PSD | 3.5 | PPM @ 15% 02 |
| NV-0033 | EL DORADO ENERGY, LLC | NV | A-00652 | 8/19/2004 | COMBUSTION TURBINE, COMBINED CYCLE & COGEN(2) | 475 | MW | LOW NOX BURNER + SCR | 3.5 | PPM @ 15% O2 | BACT-PSD | 3.7 | PPM @ 15% O2 |
| CA-1143 | SUTTER POWER PLANT | CA | SAC 98-01 | 8/16/2004 | 2 COMBUSTION TURBINES | 170 | MW | DRY LOW NOX BURNERS & SCR | 2.5 | PPMVD | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UT-0066 | CURRANT CREEK | UT | DAQE-2524002-04 | 5/17/2004 | NATURAL GAS FIRED TURBINES AND HEAT RECOVERY STEAM GENERATORS | | | CONVENTIONAL SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION | 2.25 | PPMVD | BACT-PSD | 2.25 | PPM @ 15% O2 |
| NV-0037 | COPPER MOUNTAIN POWER | NV | 15347 | 5/14/2004 | LARGE COMBUSTION TURBINES, COMBINED CYCLE & COGENERATION | 600 | MW | DRY LOW-NOX COMBUSTOR, STEAM INJECTION, AND SELECTIVE CATALYTIC REDUCTION | 2 | PPMVD | BACT-PSD | 2 | PPM @ 15% O2 |
| VA-0289 | DUKE ENERGY WYTHE, LLC | VA | 11382 | 2/5/2004 | TURBINE, COMBINED CYCLE, NATURAL GAS | 170 | MW | SCR AND LOW NOX BURNERS. GOOD COMBUSTION PRACTICES. | 2.5 | PPMVD | BACT-PSD | 2.5 | PPM @ 15% O2 |
| VA-0289 | DUKE ENERGY WYTHE, LLC | VA | 11382 | 2/5/2004 | TURBINE, COMBINED CYCLE, DUCT BURNER, NATURAL GAS | 170 | MW | SCR AND LOW NOX BURNERS; GOOD COMBUSTION PRACTICES | 2.5 | PPMVD | BACT-PSD | 2.5 | PPM @ 15% O2 |
| OR-0039 | COB ENERGY FACILITY, LLC | OR | 18-0029 | 12/30/2003 | TURBINE, COMBINED CYCLE, DUCT BURNER, NAT GAS, (4) | 1150 | MW | DLN COMBUSTORS, AND SCR | 2.5 | PPMVD @ 15% O2 | BACT-PSD | 2.5 | PPM @ 15% O2 |
| NV-0038 | IVANPAH ENERGY CENTER, L.P. | NV | 1616 | 12/29/2003 | LARGE COMBUSTION TURBINES, COMBINED CYCLE & COGENERATION | 500 | MW | DRY LOW NOX COMBUSTION CONTROL IN COMBINATION WITH SELECTIVE CATALYTIC REDUCTION | 2 | PPMVD | BACT-PSD | 2 | PPM@ 15% O2 |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | COMBUSTION TURBINE, LARGE 2 EACH | 1827 | MMBTU/H | WATER INJECTION AND SCR | 5.5 | PPMVD @15% 02 | BACT-PSD | 5.5 | PPM @ 15% O2 |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | COMBUSTION TURBINE, LARGE, 2 EACH | 1916 | MMBTU/H | LEAN PRE-MIX COMBUSTION & SCR | 3 | PPMVD 15% 02 | BACT-PSD | 3 | PPM @ 15% O2 |
| VA-0287 | JAMES CITY ENERGY PARK | VA | 61442 | 12/1/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS,DUCT BURNER | 1973 | MMBTU/H | DRY LOW NOX BURNERS, SCR WITH AMMONIA INJECTION AND CEM DEVICES | 2.5 | PPM | BACT-PSD | 2.5 | PPM @ 15% O2 |
| VA-0287 | JAMES CITY ENERGY PARK | VA | 61442 | 12/1/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS | 1973 | MMBTU/H | DRY LOW NOX BURNERS SCR WITH AMMONIA INJECTION AND CEM DEVICES. | 2.5 | PPM | BACT-PSD | 2.5 | PPM @ 15% O2 |
| AZ-0043 | DUKE ENERGY ARLINGTON VALLEY (AVEFII) | AZ | S01-004 | 11/12/2003 | TURBINE, COMBINED CYCLE & DUCT BURNER | 325 | MW | SCR | 2 | PPM @ 15% O2 | BACT-PSD | 2 | PPM @ 15% O2 |
| AZ-0043 | DUKE ENERGY ARLINGTON VALLEY (AVEFII) | AZ | S01-004 | 11/12/2003 | TURBINE, COMBINED CYCLE | 325 | MW | SCR | 2 | PPM @ 15% O2 | BACT-PSD | 2 | PPM @ 15% O2 |
| FL-0256 | HINES ENERGY COMPLEX, POWER BLOCK 3 | FL | PSD-FL-330 AND 1050234-006-AC | 9/8/2003 | COMBUSTION TURBINES, COMBINED CYCLE, NATURAL GAS,2 | 1830 | MMBTU/H | DRY LOW NOX COMBUSTORS & SELECTIVE CATALYTIC REDUCTION | 2.5 | PPMVD @15% O2 | BACT-PSD | 2.5 | PPMVD @15% O2 |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | SIEMENS WESTINGHOUSE COMBUSTION TURBINES AND HEAT RECOVERY STEAM GENERATORS | 1080 | MW | LOW NOX BURNERS AND SELECTIVE CATALYTIC REDUCTION | 2 | PPMVD | BACT-PSD | 2 | PPM @ 15% O2 |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | GE COMBUSTION TURBINES AND HEAT RECOVERY STEAM GENERATORS | 1040 | MW | LOW NOX BURNERS WITH SELECTIVE CATALYTIC REDUCTION | 2 | PPMVD | BACT-PSD | 2 | PPM @ 15 O2 |
| CA-0997 | SACRAMENTO MUNICIPAL UTILITY DISTRICT | CA | 16006 | 9/1/2003 | GAS TURBINES, (2) | 1611 | MMBTU/H | SCR | 2 | PPM @ 15% O2 | LAER | 2 | PPM @ 15% O2 |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | TURBINES (2) (MODEL GE 7FA), DUCT BURNERS ON | 170 | MW | DRY LOW-NOX (DLN) COMBUSTION BURNERS AND SELECTIVE CATALYTIC REDUCTION (SCR) | 32.3 | LB/H | BACT-PSD | 3.5 | PPM @ 15% O2 |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | TURBINES (2) (MODEL GE 7FA), DUCT BURNERS OFF | 170 | MW | DRY LOW-NOX (DLN) COMBUSTION BURNERS AND SELECTIVE CATALYTIC REDUCTION (SCR) | 24.7 | LB/H | BACT-PSD | 3.5 | PPM @ 15% O2 |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OK-0096 | REDBUD POWER PLANT | OK | 2000-090-C M-3 PSD | 6/3/2003 | COMBUSTION TURBINE AND DUCT BURNERS | 1832 | MMBTU/H | SELECTIVE CATALYTIC REDUCTION (SCR) WITH DRY LOW NOX BURNERS (DLN) | 3.5 | PPMVD @ 15% O2 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| NE-0017 | BEATRICE POWER STATION | NE | 76739 | 5/29/2003 | TURBINE, COMBINED CYCLE, (2) | 80 | MW | LOW-NOX BURNERS AND SELECTIVE CATALYTIC REDUCTION. EMISSION LIMITS SPECIFIED, NOT CONTROL DEVICES. | 3.5 | PPM @ 15% O2 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| CA-1096 | VERNON CITY LIGHT & POWER | CA | 394164 | 5/27/2003 | GAS TURBINE: COMBINED CYCLE < 50 MW | 43 | MW GAS TURBINE, 55 M | SCR SYSTEM, AND OXIDATION CATALYST | 2 | PPMVD @ 15% O2 | BACT-PSD | 2 | PPM @ 15% O2 |
| CA-1097 | MAGNOLIA POWER PROJECT, SCPPA | CA | 386305 | 5/27/2003 | GAS TURBINE: COMBINED CYCLE >= 50 MW | 181 | NET MW (GAS TURBINE | SCR SYSTEM AND OXIDATION CATALYST | 2 | PPMVD @ 15% O2 | BACT-PSD | 2 | PPM @ 15% O2 |
| GA-0105 | MCINTOSH COMBINED CYCLE FACILITY | GA | 4911-103-0014-V-01-0 | 4/17/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS, (4) | 140 | MW | DRY LOW NOX COMBUSTORS, SCR | 2.5 | PPM @ 15% O2 | BACT-PSD | 2.5 | PPM @ 15% O2 |
| WA-0315 | SUMAS ENERGY 2 GENERATION FACILITY | WA | EFSEC 2001-02 | 4/17/2003 | TURBINES, COMBINED CYCLE, (2) | 660 | MW | DRY LOW NOX BURNERS, SCR | 2 | PPMVD | BACT-PSD | 2 | PPM @ 15% O2 |
| FL-0244 | FPL MARTIN PLANT | FL | PSD-FL-327 | 4/16/2003 | TURBINE, SIMPLE CYCLE, NATURAL GAS, (4) | 170 | MW | DRY LOW NOX COMBUSTORS | 9 | PPMVD @ 15% O2 | BACT-PSD | 9 | PPM @ 15% O2 |
| FL-0244 | FPL MARTIN PLANT | FL | PSD-FL-327 | 4/16/2003 | TURBINE, COMBINED CYCLE WITH DUCT BURNER, NAT GAS | 170 | MW | DRY LOW NOX COMBUSTORS AND SCR | 2.5 | PPM @ 15% O2 | BACT-PSD | 2.5 | PPM @ 15% O2 |
| FL-0244 | FPL MARTIN PLANT | FL | PSD-FL-327 | 4/16/2003 | TURBINE, COMBINED CYLE, NATURAL GAS, (4) | 170 | MW | DRY LOW NOX COMBUSTORS AND SCR | 2.5 | PPMVD @ 15% O2 | BACT-PSD | 2.5 | PPM @ 15% O2 |
| FL-0245 | FPL MANATEE PLANT - UNIT 3 | FL | PSD-FL-328 AND 0810010-006-AC | 4/15/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS (4) | 170 | MW | DRY LOW NOX COMBUSTORS WITH SCR | 2.5 | PPMVD @ 15% O2 | BACT-PSD | 2.5 | PPM @ 15% O2 |
| FL-0245 | FPL MANATEE PLANT - UNIT 3 | FL | PSD-FL-328 AND 0810010-006-AC | 4/15/2003 | TURBINE, SIMPLE CYCLE, NATURAL GAS, (4) | 170 | MW | DRY LOW NOX COMBUSTORS | 9 | PPMVD @ 15% O2 | BACT-PSD | 9 | PPM @ 15% O2 |
| WY-0061 | BLACK HILLS CORP./NEIL SIMPSON TWO | WY | MD-850 | 4/4/2003 | TURBINE, COMBINED CYCLE, & DUCT BURNER | 40 | MW | DRY LOW NOX BURNERS AND SCR | 2.5 | PPM @ 15% O2 | Other Case-by-Case | 2.5 | PPM @ 15% O2 |
| OK-0090 | DUKE ENERGY STEPHENS, LLC STEPHENS ENERGY | OK | 2001-157-C M-1 PSD | 3/21/2003 | TURBINES, COMBINED CYCLE (2) | 1701 | MMBTU/H | SCR, DRY LOW NOX COMBUSTORS | 3.5 | PPM @ 15% O2 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| OR-0040 | KLAMATH GENERATION, LLC | OR | 18-0026 | 3/12/2003 | TURBINE, COMBINED CYCLE, DUCT BURNER, NAT GAS (2) | 480 | MW | DRY LOW NOX COMBUSTION, SCR | 2.5 | PPMVD @ 15% O2 | BACT-PSD | 2.5 | PPM @ 15% O2 |
| AZ-0039 | SALT RIVER PROJECT/SANTAN GEN. PLANT | AZ | V95-008 S01-014 | 3/7/2003 | TURBINE, COMBINED CYCLE, DUCT BURNER, NATURAL GAS | 175 | MW | SCR | 2 | PPM @ 15% O2 | LAER | 2 | PPM @ 15% O2 |
| TX-0365 | TEXAS CITY OPERATIONS | TX | PSD-TX-841 | 1/23/2003 | GAS TURBINES 501-2&601-2 COMBINED STARTUP LIMITS | 14.2 | MW | LOW NOX COMBUSTORS | 48 | LB/H | Other Case-by-Case | 0 | |
| WA-0291 | WALLULA POWER PLANT | WA | EFSEC/2001-03 | 1/3/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS (4) | 1300 | MW | SCR | 2.5 | PPMDV @15%02 | Other Case-by-Case | 2.5 | PPM @ 15% O2 |
| TX-0352 | BRAZOS VALLEY ELECTRIC GENERATING FACILITY | TX | PSD-TX-966 | 12/31/2002 | (2) HRSG/TURBINES, HRSG-003 & -004 | 175 | MW | SELECTIVE CATALYTIC REDUCTION | 32.4 | LB/H | BACT-PSD | 3.5 | PPM @ 15% O2 |
| TX-0352 | BRAZOS VALLEY ELECTRIC GENERATING FACILITY | TX | PSD-TX-966 | 12/31/2002 | (2) HRSG/TURBINES, HRSG-001 & -002 | 175 | MW, EA | SELECTIVE CATALYTIC REDUCTION | 32.4 | LB/H | BACT-PSD | 3.5 | PPM @ 15% O2 |
| TX-0391 | OXY COGENERATION FACILITY | TX | PSD-276 | 12/20/2002 | COMBINED-CYCLE GAS TURBINES (2) | 87 | MW (EACH) | SCR AND NH3 INJECTION. | 55.3 | LB/H | BACT-PSD | 4 | PPM @ 15% O2 |
| TX-0391 | OXY COGENERATION FACILITY | TX | PSD-276 | 12/20/2002 | HRSG UNIT NO. 3 | 255 | MMBTU/H | SCR AND NH3 INJECTION. | 16.9 | LB/H | Other Case-by-Case | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TX-0391 | OXY COGENERATION FACILITY | TX | PSD-276 | 12/20/2002 | HRSG UNITS 1 & 2 (2) | 255 | MMBTU/H | SCR AND NH3 INJECTION. | 115 | LB/H | BACT-PSD | 0 | |
| TX-0428 | HOUSTON OPERATIONS -- BATTLEGROUND SITE | TX | PSD-TX-276 | 12/19/2002 | TURBINE, COMBINED CYCLE & DUCT BURNER | 87 | mw | SCR | 4 | PPMVD @ 15% O2 | BACT-PSD | 4 | PPM @ 15% O2 |
| TX-0407 | STERNE ELECTRIC GENERATING FACILITY | TX | PSD-TX-1015 | 12/6/2002 | TURBINES, COMBINED CYCLE, AND DUCT BURNERS (3) | 190 | MW | DRY LOW NOX COMBUSTORS FOR THE TURBINES AND LOW NOX BURNERS IN THE DUCT BURNERS. SELECTIVE CATALYTIC REDUCTION. | 45.4 | LB/H | BACT-PSD | 5 | PPMVD @ 15% O2 |
| VA-0262 | MIRANT AIRSIDE INDUSTRIAL PARK | VA | 32008 | 12/6/2002 | TURBINE, SIMPLE CYCLE, (4) | 84 | MW | LEAN PRE-MIX LOW NOX BURNERS AND GOOD COMBUSTION PRACTICES. SELECTIVE CATALYTIC REDUCTION SYSTEM AND A CONTINUOUS EMISSION MONITORING DEVICE. | 9 | PPMVD @ 15% O2 | BACT-PSD | 9 | PPM @ 15% O2 |
| GA-0101 | MURRAY ENERGY FACILITY | GA | 4911-213-0034-P-01-1 | 10/23/2002 | TURBINE, COMBINED CYCLE, (4) | 173 | MW | DRY LOW NOX BURNERS AND SELECTIVE CATALYTIC REDUCTION | 3 | PPM @ 15% O2 | BACT-PSD | 3 | PPM @ 15% O2 |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE AA-001 W/DUCT BURNER | 2168 | MMBTU/H | DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 3.5 | PPMV @ 15% O2 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE, AA-002 W /DUCT BURNER | 2168 | MMBTU/H | DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 3.5 | PPMV @ 15% O2 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE, AA-003 /DUCT BURNER | 2168 | MMBTU/H | DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR) | 3.5 | PPMV @ 15% O2 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE AA-004 W/ DUCT BURNER | 2168 | MMBTU/H | DRY LOW NOX COMBUSTORS , SELECTIVE CATALYTIC REDUCTION (SCR) | 3.5 | PPMV @ 15% O2 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | TURBINES (3), COMBINED CYCLE, DUCT BURNERS OFF | 180 | MW | DRY LOW NOX BURNERS (DLN) & LOW NOX BURNERS (LNB) & SELECTIVE CATALYTIC REDUCTION (SCR). | 24.1 | LB/H | BACT-PSD | 3 | PPM @ 15% O2 |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | TURBINES (3), COMBINED CYCLE, DUCT BURNERS ON | 180 | MW | DRY LOW NOX BURNERS (DLN)& LOW NOX BURNERS(LNB)& SELECTIVE CATALYTIC REDUCTION (SCR) | 30.5 | LB/H | BACT-PSD | 3 | PPM @ 15% O2 |
| WA-0299 | SUMAS ENERGY 2 GENERATION FACILITY | WA | EFSEC/2001-02 | 9/6/2002 | TURBINES, COMBINED CYCLE, (2) | 334.5 | MW | SCR | 0.008 | LB/MMBTU | BACT-PSD | 27 | PPM @ 15% O2 |
| VA-0261 | CPV CUNNINGHAM CREEK | VA | 81382 | 9/6/2002 | TURBINE, COMBINED CYCLE, (2) | 2132 | MMBTU/H | LOW NOX BURNERS AND GOOD COMBUSTION PRACTICE. SELECTIVE CATALYTIC REDUCTION USING AMMONIA INJECTION. CONTINUOUS EMISSION MONITORING DEVICE. | 20 | LB/H | BACT-PSD | 2.5 | PPM @ 15% O2 |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | TURBINE, COMBINED CYCLE, (2), (MHI) | 170 | MW | DRY LOW NOX COMBUSTOR/SCR | 3.5 | PPMVD @ 15% O2 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | TURBINE, COMBINED CYCLE, (2), (GE ) | 170 | MW | DRY LOW NOX COMBUSTOR/SCR | 3.5 | PPMVD @ 15% O2 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | TURBINE, COMBINED CYCLE, (2), (SWH) | 170 | MW | DRY LOW NOX COMBUSTOR/SCR | 3.5 | PPMVD @ 15% O2 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | TURBINE, COMBINED CYCLE, NATURAL GAS (4) | 1490.5 | MMBTU/H | DRY LOW NOX BURNERS AND SCR. NATURAL GAS IS ONLY FUEL. | 3 | PPMVD @ 15% O2 | BACT-PSD | 3 | PPM @ 15% O2 |
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | TURBINE, COMBINED CYCLE AND DUCT BURNER, NAT GAS | 1490.5 | MMBTU/H | LOW NOX BURNERS, SCR, NATURAL GAS FUEL | 3 | PPMVD @ 15% O2 | BACT-PSD | 3 | PPM @ 15% O2 |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | TURBINES, SIMPLE CYCLE, NATURAL GAS, (4) | 1490.5 | MMBTU/H | DRY LOW NOX COMBUSTORS, GOOD COMBUSTION PRACTICES, CLEAN FUEL -- NATURAL GAS | 9 | PPMVD @ 15% O2 | BACT-PSD | 9 | PPM @ 15% O2 |
| AL-0185 | BARTON SHOALS ENERGY | AL | X001, X002 | 7/12/2002 | FOUR (4) COMBINED CYCLE COMBUSTION TURBINE UNITS | 173 | MW | DRY LOW NOX + SCR | 0.0092 | LB/MMBTU | BACT-PSD | 2.5 | PPM @ 15% O2 |
| TX-0437 | HARTBURG POWER, LP | TX | PSD-TX-1009 | 7/5/2002 | TURBINE, COMBINED CYCLE & DUCT BURNER | 277 | mw | SCR FOR BOTH TURBINE AND DUCT BURNER, TURBINES USE STEAM INJECTION IN THE COMBUSTORS AND THE DUCT BURNERS WILL USE LOW-NOX BURNERS. | 5 | PPMVD @ 15% O2 | BACT-PSD | 5 | PPM @ 15% O2 |
| NM-0044 | CLOVIS ENERGY FACILITY | NM | PSD-NM-2605 | 6/27/2002 | TURBINES, COMBINED CYCLE, NATURAL GAS (4) | 1515 | MMBTU/H | THIS FACILITY WILL ONLY COMBUST PIPELINE QUALITY NATURAL GAS. THE COMBUSTION GAS FROM THE DUCT BURNERS AND COMBUSTION TURBINES SHALL BE DUCTED TO A SCR SYSTEM. | 24.6 | LB/H | BACT-PSD | 3.5 | PPMV @ 15% O2 |
| MS-0055 | EL PASO MERCHANT ENERGY CO. | MS | 0540-00080 | 6/24/2002 | TURBINE, COMBINED CYCLE, DUCT BURNER, NAT GAS, (2) | 1737 | MMBTU/H | LOW NOX BURNERS AND SELECTIVE CATALYTIC REDUCTION UNIT | 3.5 | PPMV @ 15% O2 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | GE COMBUSTION TURBINE & DUCT BURNERS | 1705 | MMBTU/H | SELECTIVE CATALYTIC REDUCTION (SCR) WITH DRY LOW-NOX COMBUSTORS | 3.5 | PPMVD @ 15% O2 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | SW COMBUSTION TURBINE | 1872 | MMBTU/H | SELECTIVE CATALYTIC REDUCTION (SCR) WITH DRY LOW-NOX COMBUSTORS | 3.5 | PPM @ 15% O2 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | MHI COMBUSTION TURBINE & DUCT BURNERS | 1767 | MMBTU/H | SELECTIVE CATALYTIC REDUCTION (SCR) WITH DRY LOW-NOX COMBUSTOR | 3.5 | PPM @ 15% O2 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| MT-0019 | CONTINENTAL ENERGY SERVICES, INC., SILVER BOW GEN | MT | 3165-00 | 6/7/2002 | TURBINE, COMBINED CYCLE 2 | 500 | MW | SCR | 25.2 | LB/H | BACT-PSD | 3 | PPM @ 15% O2 |
| MT-0019 | CONTINENTAL ENERGY SERVICES, INC., SILVER BOW GEN | MT | 3165-00 | 6/7/2002 | TURBINE, COMBINED CYCLE 1 | 500 | MW | SCR | 25.2 | LB/H | BACT-PSD | 3 | PPM @ 15% O2 |
| NC-0095 | MIRANT GASTONIA POWER FACILITY | NC | 09175R00 | 5/28/2002 | TURBINES, COMBINED CYCLE, GE, DUCT BURNERS | 175 | MW | DRY LOW NOX AND SCR | 2.5 | PPMVD | BACT-PSD | 3.5 | PPM @ 15% O2 |
| NC-0095 | MIRANT GASTONIA POWER FACILITY | NC | 09175R00 | 5/28/2002 | TURBINES, COMBINED CYCLE, MHI/SW, DUCT BURNERS | 175 | MW | DRY-LOW NOX AND SCR | 2.5 | PPMVD | BACT-PSD | 3.5 | PPM @ 15% O2 |
| NC-0095 | MIRANT GASTONIA POWER FACILITY | NC | 09175R00 | 5/28/2002 | TURBINES, COMBINED CYCLE, MHI/SW | 175 | MW | DRY LOW NOX AND SCR | 2.5 | PPMVD | BACT-PSD | 3.5 | PPM @ 15 % O2 |
| NC-0095 | MIRANT GASTONIA POWER FACILITY | NC | 09175R00 | 5/28/2002 | TURBINES, COMBINED CYCLE, GE | 175 | MW | DRY LOW NOX AND SCR | 2.5 | PPMVD | BACT-PSD | 3.5 | PPM @ 15% O2 |
| OH-0264 | NORTON ENERGY STORAGE, LLC | OH | 16-02110 | 5/23/2002 | COMBUSTION TURBINE (9), COMB CYCLE W/O DUCT BURNER | 300 | MW | SELECTIVE CATALYTIC REDUCTION (SCR) AND DRY LOW NOX (DLN) BURNERS | 14.5 | LB/H | BACT-PSD | 3.5 | PPM @ 15% O2 |
| OH-0264 | NORTON ENERGY STORAGE, LLC | OH | 16-02110 | 5/23/2002 | COMBUSTION TURBINES (9), COMB CYCLE W DUCT BURNER | 300 | MW | SELECTIVE CATALYTIC REDUCTION (SCR) AND DRY LOW NOX(DLN)BURNERS | 16 | LB/H | BACT-PSD | 3.5 | PPM @ 15% O2 |
| AZ-0038 | GILA BEND POWER GENERATING STATION | AZ | V00-001 | 5/15/2002 | TURBINE, COMBINED CYCLE, DUCT BURNER, NATURAL GAS | 170 | MW | SCR AND LOW NOX COMBUSTORS | 2 | PPM @ 15% O2 | BACT-PSD | 2 | PPM @ 15% O2 |
| IA-0058 | GREATER DES MOINES ENERGY CENTER | IA | 77-13-002 | 4/10/2002 | COMBUSTION TURBINES - SIMPLE CYCLE | 350 | MW | | 0.09 | LB/MMBTU | BACT-PSD | 24.4 | PPM @ 15% O2 |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IA-0058 | GREATER DES MOINES ENERGY CENTER | IA | 77-13-002 | 4/10/2002 | COMBUSTION TURBINES - COMBINED CYCLE | 350 | MW | SELECTIVE CATALYTIC REDUCTION WITH DRY LOW NOX COMBUSTION | 0.011 | LB/MMBTU | BACT-PSD | 3 | PPM @ 15% O2 |
| PA-0226 | LIMERICK POWER STATION | PA | PA-46-0203 | 4/9/2002 | TURBINE, COMBINED CYCLE | 550 | MW | LOW NOX BURNERS | 2 | PPM @15% O2 | LAER | 2 | PPM @ 15% O2 |
| AR-0051 | DUKE ENERGY-JACKSON FACILITY | AR | 1998-AOP-R0 (34-0259) | 4/1/2002 | TURBINES, COMBINED CYCLE, NATURAL GAS, (2) | 170 | MW | SELECTIVE CATALYTIC REDUCTION (SCR) AND DRY LOW- NOX COMBUSTORS. 10 PPM ALLOWABLE AMMONIA SLIP. | 3.5 | PPM @ 15% 02 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| NJ-0043 | LIBERTY GENERATING STATION | NJ | BOP990001 | 3/28/2002 | DUCT BURNER (3) | 256 | MMBTU/H | SCR | 0.2 | LB/MMBTU | Other Case-by-Case | 0.2 | LB/MMBTU |
| NJ-0043 | LIBERTY GENERATING STATION | NJ | BOP990001 | 3/28/2002 | COMBINED CYCLE TURBINE WITH DUCT BURNER | 3202 | MMBTU/H | SCR | 0.011 | LB/MMBTU | Other Case-by-Case | 2.5 | PPMVD @ 15% O2 |
| NJ-0043 | LIBERTY GENERATING STATION | NJ | BOP990001 | 3/28/2002 | COMBINED CYCLE TURBINE (3) | 2964 | MMBTU/H | SCR- AMMONIA FLOW RTE AT 11.46 GAL/H | 2.5 | PPMVD @ 15 % O2 | Other Case-by-Case | 2.5 | PPMVD @ 15% O2 |
| PA-0188 | FAIRLESS ENERGY LLC | PA | PA-09-0124B | 3/28/2002 | TURBINE, COMBINED CYCLE | 1190 | MW | SCR, DRY LOW NOX COMBUSTION | 2.5 | PPMV @ 15% O2 | LAER | 2.5 | PPM @ 15% O2 |
| FL-0239 | JEA/BRANDY BRANCH | FL | PSD-FL-310 | 3/27/2002 | TURBINES, COMBINED CYCLE, (2) | 1911 | MMBTU/H | DRY LOW NOX BURNERS FOR NATURAL GAS, SCR & WATER INJECTION WHEN FIRING FUEL OIL | 3.5 | PPMVD | BACT-PSD | 3.5 | PPM @ 15% O2 |
| OH-0268 | LIMA ENERGY COMPANY | OH | 03-13445 | 3/26/2002 | COMBUSTION TURBINE (2), COMBINED CYCLE | 170 | MW | USE OF DILUTION PRIOR TO COMBUSTION AND DILUTION INJECTION INTO THE COMBUSTION ZONE AT CONCENTRATIONS OF THE LIMIT. SCR PROVED NOT TO BE COST EFFECTIVE. | 178 | LB/H | BACT-PSD | 25 | PPM @ 15% O2 |
| TX-0411 | AMELIA ENERGY CENTER | TX | PSD-TX-982 | 3/26/2002 | TURBINE, COMBINED CYCLE, & DUCT BURNER (3) | 180 | MW | SELECTIVE CATALYTIC REDUCTION | 36.8 | LB/H | LAER | 3.5 | PPM @ 15% O2 |
| TX-0351 | WEATHERFORD ELECTRIC GENERATION FACILITY | TX | PSD-TX-933 | 3/11/2002 | (2) GE 7241FA GAS TURBINES (TEMP STACK), S-1&2 | 1910 | MMBTU/H | NONE INDICATED | 63 | LB/H | N/A | 9 | PPM @ 15% O2 |
| TX-0351 | WEATHERFORD ELECTRIC GENERATION FACILITY | TX | PSD-TX-933 | 3/11/2002 | (2) GE7121EA GAS TURBINES, S-3&4 | 1079 | MMBTU/H | NONE INDICATED | 35 | LB/H | N/A | 9 | PPM @ 15% O2 |
| LA-0157 | PERRYVILLE POWER STATION | LA | PSD-LA-655 (M-1) | 3/8/2002 | TURBINE, SIMPLE CYCLE, NAT GAS, EPN 2-1 | 170 | MW | USE OF NATURAL GAS AS FUEL AND GOOD OPERATING PRACTICES. LOW NOX BURNERS AND/OR SELECTIVE CATALYTIC REDUCTION. | 58 | LB/H | BACT-PSD | 9 | PPMV @ 15% O2 |
| LA-0157 | PERRYVILLE POWER STATION | LA | PSD-LA-655 (M-1) | 3/8/2002 | TURBINE, COMBINED CYCLE, HRSG, NAT GAS, (2) EPNS 1-1, 1-2 | 183 | MW | GOOD OPERATING PRACTICES AND USE OF NATURAL GAS AS FUEL. LOW NOX BURNERS AND/OR SELECTIVE CATALYTIC REDUCTION. | 62.7 | LB/H | BACT-PSD | 0 | |
| LA-0157 | PERRYVILLE POWER STATION | LA | PSD-LA-655 (M-1) | 3/8/2002 | TURBINES, COMBINED CYCLE, GAS, (2) EPNS 1-1, 1-2 | 170 | MW | LOW NOX BURNERS, AND/OR SELECTIVE CATALYTIC REDUCTION, GOOD OPERATING PRACTICES, AND USE OF NATURAL GAS AS FUEL. | 4.5 | PPM @ 15% O2 | BACT-PSD | 4.5 | PPM @ 15% O2 |
| LA-0120 | GEISMAR PLANT | LA | PSD-LA-647 (M-2) | 2/26/2002 | (2) COGENERATION UNITS POINT # 720-99 AND 721-99 | 40 | MW EACH | LOW NOX BURNERS AND A SELECTIVE CATALYTIC REDUCTION SYSTEM. | 14.5 | LB/H | BACT-PSD | 5 | PPM @ 15% O2 |
| WA-0289 | TRANSALTA CENTRALIA GENERATION LLC | WA | PSD-01-01 | 2/22/2002 | (4) TURBINE/HRSG | | | WATER INJECTION AND SELECTIVE CATALYTIC REDUCTION | 6.33 | LB/H | BACT-PSD | 3 | PPM @ 15% O2 |
| TX-0388 | SAND HILL ENERGY CENTER | TX | P1012 | 2/12/2002 | COMBINED CYCLE GAS TURBINE | 164 | MW | | 46 | LB/H | BACT-PSD | 5 | PPM @ 15% O2 |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OK-0056 | HORSESHOE ENERGY PROJECT | OK | 2001-156-C PSD | 2/12/2002 | TURBINES AND DUCT BURNERS | 310 | MW TOTAL | SCR | 12.5 | PPM @ 15% O2 | BACT-PSD | 12.5 | PPM @ 15% O2 |
| TX-0388 | SAND HILL ENERGY CENTER | TX | P1012 | 2/12/2002 | GAS TURBINES, SIMPLE CYCLE (4) | 48 | MW (EACH) | DRY, LOW NOX BURNERS | 5 | PPM @ 15% O2 | BACT-PSD | 5 | PPM @ 15% O2 |
| TN-0144 | HAYWOOD ENERGY CENTER, LLC | TN | 954078F | 2/1/2002 | TURBINE, COMBINED CYCLE, W/ DUCT FIRING | 1990 | MMBTU/H | DRY LOW NOX BURNERS, SCR | 28.5 | LB/H | BACT-PSD | 3.5 | PPM @ 15% O2 |
| TN-0144 | HAYWOOD ENERGY CENTER, LLC | TN | 954078F | 2/1/2002 | TURBINE, COMBINED CYCLE, W/O DUCT FIRING | 1990 | MMBTU/H | DRY LOW NOX BURNERS, SCR | 24.1 | LB/H | BACT-PSD | 3.5 | PPM @ 15% O2 |
| LA-0164 | ACADIA POWER STATION, ACADIA POWER PARTNERS LLC | LA | PSD-LA-645 (M-2) | 1/31/2002 | GAS TURBINE UNITS 1, 2, 3, 4 | 183 | MW EACH | USE OF DRY LOW NOX BURNERS AND SELECTIVE CATALYTIC REDUCTION. | 190 | LB/H | BACT-PSD | 4.5 | PPM @ 15% O2 |
| TX-0350 | ENNIS TRACTEBEL POWER | TX | PSD-TX-927 | 1/31/2002 | COMBUSTION TURBINE W/HEAT RECOVERY STEAM GENERATOR | 350 | MW | NONE INDICATED | 91.67 | LB/H | Other Case-by-Case | 9 | PPM @ 15% O2 |
| PA-0223 | DUKE ENERGY FAYETTE, LLC | PA | PA-26-00535A | 1/30/2002 | TURBINE, COMBINED CYCLE, (2) | 280 | MW | LO NOX BURNERS, SCR | 2.5 | PPMVD @ 15% O2 | LAER | 2.5 | PPM @ 15% O2 |
| FL-0241 | CPV CANA | FL | PSD-FL-323 | 1/17/2002 | TURBINE, COMBINED CYCLE, NATURAL GAS | 1680 | MMBTU/H | DRY LOW NOX, SCR, WET INJECTION | 2.5 | PPMVD @ 15% O2 | BACT-PSD | 2.5 | PPM @ 15% O2 |
| PA-0189 | CONECTIV BETHLEHEM, INC. | PA | 48-328-006 | 1/16/2002 | TURBINE, COMBINED CYCLE, (6) | 122 | MW | LAER FOR COMBINED CYCLE IS SCR,DLN COMBUSTERS, CLEAN FUEL, WATER INJECTION NG DIFFUSION MODE | 2.5 | PPMVD @ 15% O2 | LAER | 0 | |
| OR-0035 | PORT WESTWARD PLANT | OR | 05-0008 | 1/16/2002 | (2) COMBUSTION TURBINES, WITH DUCT BURNER | 325 | MW, EACH | SELECTIVE CATALYTIC REDUCTION, DRY LOW NOX COMBUSTION, AND GOOD COMBUSTION PRACTICES. | 2.5 | PPM @ 15% O2 | BACT-PSD | 2.5 | PPM @ 15% O2 |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: VOC

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *TX-0618 | CHANNEL ENERGY CENTER LLC | TX | PSDTX955M1 | 10/15/2012 | Combined Cycle Turbine | 180 | MW | Good combustion | 2 | PPMVD | | 0 | |
| *TX-0619 | DEER PARK ENERGY CENTER | TX | PSDTX979M2 | 9/26/2012 | Combined Cycle Turbine | 180 | MW | good combustion, use of natural gas | 2 | PPMVD | BACT-PSD | 0 | |
| *TX-0620 | ES JOSLIN POWER PLANT | TX | PSDTX1256 | 9/12/2012 | Combined cycle gas turbine | 195 | MW | good combustion and natural gas as fuel | 2 | PPMVD | BACT-PSD | 0 | |
| *WY-0070 | CHEYENNE PRAIRIE GENERATING STATION | WY | CT-12636 | 8/28/2012 | Simple Cycle Turbine (EP03) | 40 | MW | Oxidation Catalyst | 3 | PPMV AT 15% O2 | BACT-PSD | 14 | TONS |
| *WY-0070 | CHEYENNE PRAIRIE GENERATING STATION | WY | CT-12636 | 8/28/2012 | Combined Cycle Turbine (EP01) | 40 | MW | Oxidation Catalyst | 3 | PPMV AT 15% O2 | BACT-PSD | 14.7 | TONS |
| *WY-0070 | CHEYENNE PRAIRIE GENERATING STATION | WY | CT-12636 | 8/28/2012 | Combined Cycle Turbine (EP02) | 40 | MW | Oxidation Catalyst | 3 | PPMV AT 15% O2 | BACT-PSD | 14.7 | TONS |
| *WY-0070 | CHEYENNE PRAIRIE GENERATING STATION | WY | CT-12636 | 8/28/2012 | Simple Cycle Trubine (EP04) | 40 | MW | Oxidation Catalyst | 3 | PPMV AT 15% O2 | BACT-PSD | 14 | TONS |
| *WY-0070 | CHEYENNE PRAIRIE GENERATING STATION | WY | CT-12636 | 8/28/2012 | Simple Cycle Turbine (EP05) | 40 | MW | Oxidation Catalyst | 3 | PPMV AT 15% O2 | BACT-PSD | 14 | TONS |
| LA-0257 | SABINE PASS LNG TERMINAL | LA | PSD-LA-703(M3) | 12/6/2011 | Simple Cycle Refrigeration Compressor Turbines (16) | 286 | MMBTU/H | Good combustion practices and fueled by natural gas | 0.66 | LB/H | BACT-PSD | 0 | |
| LA-0257 | SABINE PASS LNG TERMINAL | LA | PSD-LA-703(M3) | 12/6/2011 | Simple Cycle Generation Turbines (2) | 286 | MMBTU/H | Good combustion practices and fueled by natural gas | 0.66 | LB/H | BACT-PSD | 0 | |
| TX-0600 | THOMAS C. FERGUSON POWER PLANT | TX | PSDTX1244 | 9/1/2011 | Natural gas-fired turbines | 390 | MW | Natural gas, good combustion practices and oxidation catalyst | 2 | PPMVD | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | | 2 | PPMVD | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | | 2 | PPMVD | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | | 23.9 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | | 23.9 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | | 27.7 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | | 27.7 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | | 27.7 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | | 27.7 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | | 27.7 | LB/HR | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: VOC

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | | 27.7 | LB/HR | BACT-PSD | 0 | |
| *VA-0315 | WARREN COUNTY POWER PLANT - DOMINION | VA | 81391-007 | 12/17/2010 | Combined cycle turbine and duct burner, 3 | 2996 | MMBTU/H | Oxidation catalyst and good combustion practices. | 2.6 | LB/H | BACT-PSD | 0 | |
| TX-0590 | KING POWER STATION | TX | PSDTX1125 | 8/5/2010 | Turbine | 1350 | MW | DLN burners in combination with an oxidation catalyst | 1.8 | PPMVD AT 15% O2 | LAER | 0 | |
| ID-0018 | LANGLEY GULCH POWER PLANT | ID | P-2009.0092 | 6/25/2010 | COMBUSTION TURBINE, COMBINED CYCLE W/ DUCT BURNER | 2375.28 | MMBTU/H | CATALYTIC OXIDATION (CATOX), DRY LOW NOX (DLN), GOOD COMBUSTION PRACTICES (GCP) | 2 | PPMVD | BACT-PSD | 0 | |
| GA-0138 | LIVE OAKS POWER PLANT | GA | 4911-127-0075-P-02-0 | 4/8/2010 | COMBINED CYCLE COMBUSTION TURBINE - ELECTRIC GENERATING PLANT | 600 | MW | GOOD COMBUSTION PRACTICES, CATALYTIC OXIDATION | 2 | PPM@15%02 | BACT-PSD | 0 | |
| CA-1177 | OTAY MESA ENERGY CENTER LLC | CA | 978379 | 7/22/2009 | Gas turbine combined cycle | 171.7 | MW | | 2 | PPMVD@15% OXYGEN | OTHER CASE-BY-CASE | 0 | |
| CA-1178 | APPLIED ENERGY LLC | CA | 987494 | 3/20/2009 | Gas turbine combined cycle | 0 | | Oxidation catalyst | 2 | PPM | BACT-PSD | 0 | |
| OK-0129 | CHOUTEAU POWER PLANT | OK | 2007-115-C(M-1)PSD | 1/23/2009 | COMBINED CYCLE COGENERATION >25MW | 1882 | MMBTU/H | GOOD COMBUSTION | 0.3 | PPM | BACT-PSD | 0 | |
| LA-0224 | ARSENAL HILL POWER PLANT | LA | PSD-LA-726 | 3/20/2008 | TWO COMBINED CYCLE GAS TURBINES | 2110 | MMBTU/H | PROPER OPERATING PRACTICES | 12.06 | LB/H | BACT-PSD | 4.9 | PPMVD@15%O2 |
| LA-0224 | ARSENAL HILL POWER PLANT | LA | PSD-LA-726 | 3/20/2008 | SCN-3 COLD STARTUP CTG-1 SCN-7 COLD STARTUP CTG-2 | 2110 | MMBTU/H | COMPLETE EVENTS AS QUICKLY AS POSSIBLE ACCORDING TO MANUFACTURE¿S RECOMMENDED PROCEDURES. | 214.07 | LB/H | BACT-PSD | 0 | |
| LA-0224 | ARSENAL HILL POWER PLANT | LA | PSD-LA-726 | 3/20/2008 | SCN-4 HOT STARTUP CTG-1 SCN-8 HOT STARTUP CTG-2 | 2110 | MMBTU/H | COMPLETE EVENTS AS QUICKLY AS POSSIBLE ACCORDING TO MANUFACTURE¿S RECOMMENDED PROCEDURES. | 214.07 | LB/H | BACT-PSD | 0 | |
| CT-0151 | KLEEN ENERGY SYSTEMS, LLC | CT | 104-0131 AND 104-0133 | 2/25/2008 | SIEMENS SGT6-5000F COMBUSTION TURBINE #1 AND #2 (NATURAL GAS FIRED) WITH 445 MMBTU/HR NATURAL GAS DUCT BURNER | 2.1 | MMCF/H | SOME REDUCTIONS OF VOC ARE GAINED FROM CO CATALYST BUT ARE NOT GUARANTEED. EMISSION RATES DO NOT INCORPORATE THIS POTENTIAL REDUCTION. | 10 | LB/H | BACT-PSD | 5 | PPMVD @ 15% O2 |
| MN-0071 | FAIRBAULT ENERGY PARK | MN | 13100071-003 | 6/5/2007 | COMBINED CYCLE COMBUSTION TURBINE W/DUCT BURNER | 1758 | MMBTU/H | | 1.5 | PPMVD | BACT-PSD | 3.5 | PPMVD |
| FL-0285 | PROGRESS BARTOW POWER PLANT | FL | PSD-FL-381 AND 1030011-010-AC | 1/26/2007 | COMBINED CYCLE COMBUSTION TURBINE SYSTEM (4-ON-1) | 1972 | MMBTU/H | GOOD COMBUSTION | 1.2 | PPMVD | BACT-PSD | 0 | |
| FL-0285 | PROGRESS BARTOW POWER PLANT | FL | PSD-FL-381 AND 1030011-010-AC | 1/26/2007 | SIMPLE CYCLE COMBUSTION TURBINE (ONE UNIT) | 1972 | MMBTU/H | GOOD COMBUSTION | 1.2 | PPMVD | BACT-PSD | 0 | |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | COMBINED CYCLE COMBUSTION GAS TURBINES - 6 UNITS | 2333 | MMBTU/H | | 1.5 | PPMVD @ 15 % O2 | BACT-PSD | 0 | |
| TX-0497 | INEOS CHOCOLATE BAYOU FACILITY | TX | PSD-TX 983 AND 46192 | 8/29/2006 | COGENERATION TRAIN 2 AND 3 (TURBINE AND DUCT BURNER EMISSIONS) | 35 | MW | BP AMOCO PROPOSES PROPER COMBUSTION CONTROL AS BACT FOR CO AND VOC EMISSIONS FROM THE TURBINES AND DUCT BURNERS. | 6.14 | LB/H | BACT-PSD | 0 | |
| TX-0502 | NACOGDOCHES POWER STERNE GENERATING FACILITY | TX | PSD-TX 1015 AND 49293 | 6/5/2006 | WESTINGHOUSE/SIEMENS MODEL SW501F GAS TURBINE W/ 416.5 MMBTU DUCT BURNERS | 190 | MW | STEAG POWER LLC REPRESENTS GOOD COMBUSTION PRACTICES FOR THE CONTROL OF VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS FROM THE COMBUSTION TURBINES AND DUCT FIRED HRSG. VOC EMISSIONS FROM THE COMBUSTION TURBINE WILL BE 4.3 PPMVD | 13.8 | LB/H | BACT-PSD | 0 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CO-0056 | ROCKY MOUNTAIN ENERGY CENTER, LLC | CO | 05WE0524 | 5/2/2006 | NATURAL-GAS FIRED, COMBINED-CYCLE TURBINE | 300 | MW | NATURAL GAS QUALITY GAS ONLY FUEL, GOOD COMBUSTION PRATICES AND OXIDATION CATALYST. | 0.0029 | LB/MMBTU | BACT-PSD | 0 | |
| NV-0035 | TRACY SUBSTATION EXPANSION PROJECT | NV | AP4911-1504 | 8/16/2005 | TURBINE, COMBINED CYCLE COMBUSTION #2 WITH HRSG AND DUCT BURNER. | 306 | MW | OXIDATION CATALYST FOR CO ALSO MINIMIZES VOC EMISSIONS. | 4 | PPM @ 15% O2 | BACT-PSD | 0 | |
| NV-0035 | TRACY SUBSTATION EXPANSION PROJECT | NV | AP4911-1504 | 8/16/2005 | TURBINE, COMBINED CYCLE COMBUSTION #1 WITH HRSG AND DUCT BURNER. | 306 | MW | OXIDATION CATALYST FOR CO ALSO MINIMIZES VOC EMISSIONS. | 4 | PPM @ 15% O2 | BACT-PSD | 0 | |
| MI-0366 | BERRIEN ENERGY, LLC | MI | 323-01A | 4/13/2005 | 3 COMBUSTION TURBINES AND DUCT BURNERS | 1584 | MMBTU/H | CATALYTIC OXIDIZER PROVIDES SOME CONTROL FOR VOCS. | 3.2 | LB/H | BACT-PSD | 0 | |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | TURBINES (4) (MODEL GE 7FA), DUCT BURNERS OFF | 172 | MW | | 3.2 | LB/H | BACT-PSD | 0 | |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | TURBINES (4) (MODEL GE 7FA), DUCT BURNERS ON | 172 | MW | | 20.4 | LB/H | BACT-PSD | 0 | |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | COMBUSTION TURBINE GENERATORS AND HEAT RECOVERY STEAM GENERATORS - SW501F TURBINES OPTION | 180 | MW | OXIDATION CATALYST | 3 | PPM @ 15% O2 | BACT-PSD | 0 | |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | COMBUSTION TURBINE GENERATORS AND HEAT RECOVERY STEAM GENERATORS - GE7FA TURBINES OPTION | 170 | MW | OXIDATION CATALYST | 3 | PPM @ 15% O2 | BACT-PSD | 0 | |
| MS-0073 | RELIANT ENERGY CHOCTAW COUNTY, LLC | MS | 0444-00018 | 11/23/2004 | EMISSION POINT AA-001 GEN. ELEC. COMBUST. TURBINE | 230 | MW | SCR | 3.64 | PPMV @ 15% 02 | BACT-PSD | 40.86 | T/YR |
| NV-0033 | EL DORADO ENERGY, LLC | NV | A-00652 | 8/19/2004 | COMBUSTION TURBINE, COMBINED CYCLE & COGEN(2) | 475 | MW | THE FIRING OF NATURAL GAS ONLY, IN THE CTG/HRSGS AND THE USE OF GOOD COMBUSTION CONTROL | 5.2 | LB/H | BACT-PSD | 0 | |
| NV-0037 | COPPER MOUNTAIN POWER | NV | 15347 | 5/14/2004 | LARGE COMBUSTION TURBINES, COMBINED CYCLE & COGENERATION | 600 | MW | GOOD COMBUSTION CONTROL AND OXIDATION CATALYST | 4 | PPMVD | LAER | 0 | |
| VA-0289 | DUKE ENERGY WYTHE, LLC | VA | 11382 | 2/5/2004 | TURBINE, COMBINED CYCLE, NATURAL GAS | 170 | MW | GOOD COMBUSTION PRACTICES. | 3 | LB/H | BACT-PSD | 0 | |
| VA-0289 | DUKE ENERGY WYTHE, LLC | VA | 11382 | 2/5/2004 | TURBINE, COMBINED CYCLE, DUCT BURNER, NATURAL GAS | 170 | MW | GOOD COMBUSTION PRACTICES | 21 | LB/H | BACT-PSD | 0 | |
| OR-0039 | COB ENERGY FACILITY, LLC | OR | 18-0029 | 12/30/2003 | TURBINE, COMBINED CYCLE, DUCT BURNER, NAT GAS, (4) | 1150 | MW | CATALYTIC OXIDATION AND GOOD COMBUSTION CONTROLS | 7.1 | LB/H | BACT-PSD | 0 | |
| NV-0038 | IVANPAH ENERGY CENTER, L.P. | NV | 1616 | 12/29/2003 | LARGE COMBUSTION TURBINES, COMBINED CYCLE & COGENERATION | 500 | MW | GOOD COMBUSTION CONTROL AND CATALYTIIC OXIDATION | 2.3 | PPMVD | BACT-PSD | 0 | |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | COMBUSTION TURBINE, LARGE 2 EACH | 1827 | MMBTU/H | OXIDATION CATALYST AND GOOD COMBUSTION | 7.1 | PPMVD @15% 02 | BACT-PSD | 0 | |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | COMBUSTION TURBINE, LARGE, 2 EACH | 1916 | MMBTU/H | OXIDATION CATALYST AND GOOD COMBUSITION PRACTICS | 34 | PPMVD @15% 02 | BACT-PSD | 0 | |
| VA-0287 | JAMES CITY ENERGY PARK | VA | 61442 | 12/1/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS | 1973 | MMBTU/H | GOOD COMBUSTION/DESIGN AND CLEAN FUEL | 1.4 | PPM | BACT-PSD | 0 | |
| VA-0287 | JAMES CITY ENERGY PARK | VA | 61442 | 12/1/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS,DUCT BURNER | 1973 | MMBTU/H | GOOD COMBUSTION/DESIGN AND CLEAN FUEL | 4 | PPM | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: VOC

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AZ-0043 | DUKE ENERGY ARLINGTON VALLEY (AVEFII) | AZ | S01-004 | 11/12/2003 | TURBINE, COMBINED CYCLE | 325 | MW | | 1 | PPM | BACT-PSD | 0 | |
| AZ-0043 | DUKE ENERGY ARLINGTON VALLEY (AVEFII) | AZ | S01-004 | 11/12/2003 | TURBINE, COMBINED CYCLE & DUCT BURNER | 325 | MW | | 4 | PPM | BACT-PSD | 0 | |
| FL-0256 | HINES ENERGY COMPLEX, POWER BLOCK 3 | FL | PSD-FL-330 AND 1050234-006-AC | 9/8/2003 | COMBUSTION TURBINES, COMBINED CYCLE, NATURAL GAS,2 | 1830 | MMBTU/H | COMBUSTION DESIGN, GOOD COMBUSTION PRACTICES. | 2 | PPMVD % 15 O2 | BACT-PSD | 0 | |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | SIEMENS WESTINGHOUSE COMBUSTION TURBINES AND HEAT RECOVERY STEAM GENERATORS | 1080 | MW | OXIDATION CATALYST | 2.5 | LB/MMBTU | BACT-PSD | 0 | |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | GE COMBUSTION TURBINES AND HEAT RECOVERY STEAM GENERATORS | 1040 | MW | OXIDATION CATALYST | 4.5 | PPMVD | BACT-PSD | 0 | |
| CA-0997 | SACRAMENTO MUNICIPAL UTILITY DISTRICT | CA | 16006 | 9/1/2003 | GAS TURBINES, (2) | 1611 | MMBTU/H | | 1.4 | PPM @ 15% O2 | LAER | 0 | |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | TURBINES (2) (MODEL GE 7FA), DUCT BURNERS OFF | 170 | MW | SCR HAS SOME CONTROL OF VOC | 3 | LB/H | BACT-PSD | 0 | |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | TURBINES (2) (MODEL GE 7FA), DUCT BURNERS ON | 170 | MW | SCR HAS SOME CONTROL OF VOC | 19.6 | LB/H | BACT-PSD | 0 | |
| CA-1096 | VERNON CITY LIGHT & POWER | CA | 394164 | 5/27/2003 | GAS TURBINE: COMBINED CYCLE < 50 MW | 43 | MW GAS TURBINE, 55 M | SCR SYSTEM, AND OXIDATION CATALYST | 2 | PPMVD @ 15% O2 | BACT-PSD | 0 | |
| CA-1097 | MAGNOLIA POWER PROJECT, SCPPA | CA | 386305 | 5/27/2003 | GAS TURBINE: COMBINED CYCLE >= 50 MW | 181 | NET MW (GAS TURBINE | SCR SYSTEM AND OXIDATION CATALYST | 2 | PPMVD @ 15% O2 | BACT-PSD | 0 | |
| GA-0105 | MCINTOSH COMBINED CYCLE FACILITY | GA | 4911-103-0014-V-01-0 | 4/17/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS, (4) | 140 | MW | CATALYTIC OXIDATION | 2 | PPM @ 15% O2 | BACT-PSD | 0 | |
| FL-0244 | FPL MARTIN PLANT | FL | PSD-FL-327 | 4/16/2003 | TURBINE, SIMPLE CYCLE, NATURAL GAS, (4) | 170 | MW | GOOD COMBUSTION PRACTICES | 1.3 | PPMVD @ 15% O2 | BACT-PSD | 0 | |
| FL-0244 | FPL MARTIN PLANT | FL | PSD-FL-327 | 4/16/2003 | TURBINE, COMBINED CYCLE WITH DUCT BURNER, NAT GAS | 170 | MW | GOOD COMBUSTION PRACTICES | 4 | PPMVD @ 15% O2 | BACT-PSD | 0 | |
| FL-0245 | FPL MANATEE PLANT - UNIT 3 | FL | PSD-FL-328 AND 0810010-006-AC | 4/15/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS (4) | 170 | MW | GOOD COMBUSTION PRACTICE | 1.3 | PPMVD @ 15% O2 | Other Case-by-Case | 0 | |
| FL-0245 | FPL MANATEE PLANT - UNIT 3 | FL | PSD-FL-328 AND 0810010-006-AC | 4/15/2003 | TURBINE, SIMPLE CYCLE, NATURAL GAS, (4) | 170 | MW | GOOD COMBUSTION | 1.3 | PPMVD @ 15% O2 | BACT-PSD | 0 | |
| OK-0090 | DUKE ENERGY STEPHENS, LLC STEPHENS ENERGY | OK | 2001-157-C M-1 PSD | 3/21/2003 | TURBINES, COMBINED CYCLE (2) | 1701 | MMBTU/H | GOOD COMBUSTION AND DLN TECHNOLOGY | 45.6 | LB/H | BACT-PSD | 0 | |
| OR-0040 | KLAMATH GENERATION, LLC | OR | 18-0026 | 3/12/2003 | TURBINE, COMBINED CYCLE, DUCT BURNER, NAT GAS (2) | 480 | MW | CATALYTIC OXIDATION | 7.2 | LB/H | BACT-PSD | 0 | |
| AZ-0039 | SALT RIVER PROJECT/SANTAN GEN. PLANT | AZ | V95-008 S01-014 | 3/7/2003 | TURBINE, COMBINED CYCLE, DUCT BURNER, NATURAL GAS | 175 | MW | CATALYTIC OXIDIZER | 4 | PPM @ 15% O2 | LAER | 0 | |
| MI-0357 | KALKASKA GENERATING, INC | MI | 119-02 | 2/4/2003 | TURBINE, COMBINED CYCLE, (2) | 605 | MW | OXIDATION CATALYST ALSO CONTROL VOC, MOST OF WHICH IS FORMALDEHYDE. | 3.5 | PPM | BACT-PSD | 0 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MI-0361 | SOUTH SHORE POWER LLC | MI | 342-01 | 1/30/2003 | TURBINE, COMBINED CYCLE, (2) | 172 | MW | OXIDATION CATALYST USED FOR CO CONTROL CAN ALSO ACHIEVE 1.1 PPMVD @ 15% O2 AND 2.5 PPMVD @ 15% O2 (WITH DUCT FIRING) FOR VOC. | 7.3 | LB/H | Other Case-by-Case | 0 | |
| MI-0365 | MIRANT WYANDOTTE LLC | MI | 279-98B | 1/28/2003 | TURBINE, COMBINED CYCLE, (2) | 2200 | MMBTU/H | CATALYTIC OXIDIZER PROVIDES SOME CONTROL FOR VOC EMISSIONS, AS WELL AS GOOD COMBUSTION TECHNIQUES. | 10 | PPM | Other Case-by-Case | 0 | |
| NY-0100 | EMPIRE POWER PLANT | NY | 4381400052 | 6/23/2005 | FUEL COMBUSTION (NATURAL GAS) | 2099 | MMBTU/H | OXIDATION CATALYST | 1 | PPMVD AT 15% O2 | LAER | 0 | |
| WA-0291 | WALLULA POWER PLANT | WA | EFSEC/2001-03 | 1/3/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS (4) | 1300 | MW | GOOD COMBUSTION PRACTICES | 5 | PPMDV @ 15% O2 | Other Case-by-Case | 0 | |
| TX-0352 | BRAZOS VALLEY ELECTRIC GENERATING FACILITY | TX | PSD-TX-966 | 12/31/2002 | (2) HRSG/TURBINES, HRSG-001 & -002 | 175 | MW, EA | GOOD COMBUSTION CONTROLS | 9.5 | LB/H | LAER | 0 | |
| TX-0352 | BRAZOS VALLEY ELECTRIC GENERATING FACILITY | TX | PSD-TX-966 | 12/31/2002 | (2) HRSG/TURBINES, HRSG-003 & -004 | 175 | MW | GOOD COMBUSTION CONTROLS | 10.3 | LB/H | LAER | 0 | |
| TX-0391 | OXY COGENERATION FACILITY | TX | PSD-276 | 12/20/2002 | COMBINED-CYCLE GAS TURBINES (2) | 87 | MW (EACH) | | 2.4 | LB/H | Other Case-by-Case | 0 | |
| TX-0391 | OXY COGENERATION FACILITY | TX | PSD-276 | 12/20/2002 | HRSG UNITS 1 & 2 (2) | 255 | MMBTU/H | | 2.4 | LB/H | Other Case-by-Case | 0 | |
| TX-0391 | OXY COGENERATION FACILITY | TX | PSD-276 | 12/20/2002 | HRSG UNIT NO. 3 | 255 | MMBTU/H | | 3.4 | LB/H | Other Case-by-Case | 0 | |
| TX-0428 | HOUSTON OPERATIONS -- BATTLEGROUND SITE | TX | PSD-TX-276 | 12/19/2002 | TURBINE, COMBINED CYCLE & DUCT BURNER | 87 | mw | GOOD COMBUSTION DESIGN AND OPERATIONS | 4 | PPMVD @ 15% O2 | BACT-PSD | 0 | |
| VA-0262 | MIRANT AIRSIDE INDUSTRIAL PARK | VA | 32008 | 12/6/2002 | TURBINE, SIMPLE CYCLE, (4) | 84 | MW | GOOD COMBUSTION PRACTICES. | 2.6 | PPMVD @ 15% O2 | BACT-PSD | 0 | |
| VA-0262 | MIRANT AIRSIDE INDUSTRIAL PARK | VA | 32008 | 12/6/2002 | TURBINE, COMBINED CYCLE, (2) | 170 | MW | GOOD COMBUSTION PRACTICES. | 2.7 | PPMVD @ 15% O2 | BACT-PSD | 0 | |
| TX-0407 | STERNE ELECTRIC GENERATING FACILITY | TX | PSD-TX-1015 | 12/6/2002 | TURBINES, COMBINED CYCLE, AND DUCT BURNERS (3) | 190 | MW | GOOD COMBUSTION PRACTICES. | 13.8 | LB/H | BACT-PSD | 0 | |
| GA-0101 | MURRAY ENERGY FACILITY | GA | 4911-213-0034-P-01-1 | 10/23/2002 | TURBINE, COMBINED CYCLE, (4) | 173 | MW | GOOD COMBUSTION PRACTICE | 4.5 | PPM @ 15% O2 | BACT-PSD | 0 | |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | TURBINES (3), COMBINED CYCLE, DUCT BURNERS OFF | 180 | MW | COMBUSTION CONTROL AND OXIDATION CATALYST | 4.2 | LB/H | BACT-PSD | 0 | |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE AA-001 W/DUCT BURNER | 2168 | MMBTU/H | EFFICIENT COMBUSTION PRACTICES | 22.8 | PPMV @ 15% O2 | BACT-PSD | 0 | |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE, AA-002 W /DUCT BURNER | 2168 | MMBTU/H | EFFICIENT COMBUSTION PRACTICES | 22.8 | PPMV @ 15% O2 | BACT-PSD | 0 | |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE, AA-003 /DUCT BURNER | 2168 | MMBTU/H | EFFICIENT COMBUSTION PRACTICES | 22.8 | PPMV @ 15% O2 | BACT-PSD | 0 | |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE AA-004 W/ DUCT BURNER | 2168 | MMBTU/H | EFFICIENT COMBUSTION PRACTICES | 22.8 | PPMV @ 15% O2 | BACT-PSD | 0 | |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | TURBINES (3), COMBINED CYCLE, DUCT BURNERS ON | 180 | MW | COMBUSTION CONTROLS AND OXIDATION CATALYST | 30.7 | LB/H | BACT-PSD | 0 | |
| WA-0299 | SUMAS ENERGY 2 GENERATION FACILITY | WA | EFSEC/2001-02 | 9/6/2002 | TURBINES, COMBINED CYCLE, (2) | 334.5 | MW | CLEAN FUEL -- NATURAL GAS ONLY | 0.0085 | LB/MMBTU | BACT-PSD | 0 | |
| VA-0261 | CPV CUNNINGHAM CREEK | VA | 81382 | 9/6/2002 | TURBINE, COMBINED CYCLE, (2) | 2132 | MMBTU/H | GOOD COMBUSTION PRACTICES. | 1.8 | PPMVD @ 15% O2 | BACT-PSD | 2 | PPMVD @ 15% O2 |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | TURBINE, COMBINED CYCLE, (2), (GE ) | 170 | MW | GOOD COMBUSTION PRACTICE | 1.4 | PPMVD @ 15% O2 | BACT-PSD | 0 | |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | TURBINE, COMBINED CYCLE, (2), (SWH) | 170 | MW | GOOD COMBUSTION PRACTICE | 3 | PPMVD @ 15% O2 | BACT-PSD | 0 | |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | TURBINE, COMBINED CYCLE, (2), (MHI) | 170 | MW | GOOD COMBUSTION PRACTICE/CO OXIDATION CATALYST | 8.4 | PPMVD @ 15% O2 | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: VOC

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | TURBINES, SIMPLE CYCLE, NATURAL GAS, (4) | 1490.5 | MMBTU/H | CLEAN FUEL: NATURAL GAS, GOOD COMBUSTION PRACTICE | 0.0024 | LB/MMBTU | BACT-PSD | 0 | |
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | TURBINE, COMBINED CYCLE, NATURAL GAS (4) | 1490.5 | MMBTU/H | GOOD COMBUSTION PRACTICE, NATURAL GAS FUEL | 0.0025 | LB/MMBTU | BACT-PSD | 0 | |
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | TURBINE, COMBINED CYCLE AND DUCT BURNER, NAT GAS | 1490.5 | MMBTU/H | GOOD COMBUSTION PRACTICE, NATURAL GAS FUEL | 5.3 | LB/H | BACT-PSD | 0 | |
| AL-0185 | BARTON SHOALS ENERGY | AL | X001, X002 | 7/12/2002 | FOUR (4) COMBINED CYCLE COMBUSTION TURBINE UNITS | 173 | MW | GOOD COMBUSTION PRACTICES | 0.0072 | LB/MMBTU | BACT-PSD | 5.3 | PPM |
| TX-0437 | HARTBURG POWER, LP | TX | PSD-TX-1009 | 7/5/2002 | TURBINE, COMBINED CYCLE & DUCT BURNER | 277 | mw | GOOD COMBUSTION DESIGN, PROPER DESIGN, CLEAN FUEL | 4 | PPM | BACT-PSD | 0 | |
| NM-0044 | CLOVIS ENERGY FACILITY | NM | PSD-NM-2605 | 6/27/2002 | TURBINES, COMBINED CYCLE, NATURAL GAS (4) | 1515 | MMBTU/H | THIS FACILITY SHALL ONLY USE PIPELINE QUALITY NATURAL GAS, GOOD ENGINEERING PRACTICE | 2.8 | LB/H | BACT-PSD | 0 | |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | GE COMBUSTION TURBINE & DUCT BURNERS | 1705 | MMBTU/H | GOOD COMBUSTION PRACTICES AND DRY LOW-NOX COMBUSTOR | 4.1 | PPM @ 15% O2 | BACT-PSD | 0 | |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | SW COMBUSTION TURBINE | 1872 | MMBTU/H | GOOD COMBUSTION PRACTICES AND DRY LOW-NOX COMBUSTOR | 4.2 | PPM @ 15% O2 | BACT-PSD | 0 | |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | MHI COMBUSTION TURBINE & DUCT BURNERS | 1767 | MMBTU/H | CATALYTIC OXIDATION | 8.4 | PPM @ 15%O2 | BACT-PSD | 0 | |
| MT-0019 | CONTINENTAL ENERGY SERVICES, INC., SILVER BOW GEN | MT | 3165-00 | 6/7/2002 | TURBINE, COMBINED CYCLE 2 | 500 | MW | | 17 | LB/H | Other Case-by-Case | 0 | |
| MT-0019 | CONTINENTAL ENERGY SERVICES, INC., SILVER BOW GEN | MT | 3165-00 | 6/7/2002 | TURBINE, COMBINED CYCLE 1 | 500 | MW | | 17 | LB/H | Other Case-by-Case | 0 | |
| NC-0095 | MIRANT GASTONIA POWER FACILITY | NC | 09175R00 | 5/28/2002 | TURBINES, COMBINED CYCLE, MHI/SW | 175 | MW | GOOD COMBUSTION PRACTICES | 1 | PPMVD | BACT-PSD | 0 | |
| NC-0095 | MIRANT GASTONIA POWER FACILITY | NC | 09175R00 | 5/28/2002 | TURBINES, COMBINED CYCLE, GE | 175 | MW | GOOD COMBUSTION PRACTICES | 1.3 | PPMVD | BACT-PSD | 1.3 | PPM @ 15% O2 |
| NC-0095 | MIRANT GASTONIA POWER FACILITY | NC | 09175R00 | 5/28/2002 | TURBINES, COMBINED CYCLE, MHI/SW, DUCT BURNERS | 175 | MW | GOOD COMBUSTION PRACTICES | 4.6 | PPMVD | BACT-PSD | 0 | |
| NC-0095 | MIRANT GASTONIA POWER FACILITY | NC | 09175R00 | 5/28/2002 | TURBINES, COMBINED CYCLE, GE, DUCT BURNERS | 175 | MW | GOOD COMBUSTION PRACTICES | 4.9 | PPMVD | BACT-PSD | 0 | |
| OH-0264 | NORTON ENERGY STORAGE, LLC | OH | 16-02110 | 5/23/2002 | COMBUSTION TURBINE (9), COMB CYCLE W/O DUCT BURNER | 300 | MW | | 4 | LB/H | BACT-PSD | 0 | |
| OH-0264 | NORTON ENERGY STORAGE, LLC | OH | 16-02110 | 5/23/2002 | COMBUSTION TURBINES (9), COMB CYCLE W DUCT BURNER | 300 | MW | | 7 | LB/H | BACT-PSD | 0 | |
| AZ-0038 | GILA BEND POWER GENERATING STATION | AZ | V00-001 | 5/15/2002 | TURBINE, COMBINED CYCLE, DUCT BURNER, NATURAL GAS | 170 | MW | OXIDATION CATALYST AND GOOD COMBUSTION PRACTICE | 1.4 | PPM @ 15% O2 | BACT-PSD | 0 | |
| PA-0226 | LIMERICK POWER STATION | PA | PA-46-0203 | 4/9/2002 | TURBINE, COMBINED CYCLE | 550 | MW | | 2.4 | PPM @ 15% O2 | LAER | 0 | |
| AR-0051 | DUKE ENERGY-JACKSON FACILITY | AR | 1998-AOP-R0 (34-0259) | 4/1/2002 | TURBINES, COMBINED CYCLE, NATURAL GAS, (2) | 170 | MW | GOOD COMBUSTION CONTROL | 8.4 | PPMVD | BACT-PSD | 0 | |
| PA-0188 | FAIRLESS ENERGY LLC | PA | PA-09-0124B | 3/28/2002 | TURBINE, COMBINED CYCLE | 1190 | MW | OXIDATION CATALYST | 0.002 | LB/MMBTU | LAER | 0 | |
| NJ-0043 | LIBERTY GENERATING STATION | NJ | BOP990001 | 3/28/2002 | COMBINED CYCLE TURBINE (3) | 2964 | MMBTU/H | CO CATALYST | 1 | PPMVD @ 15% O2 | Other Case-by-Case | 1 | PPMVD @ 15% O2 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NJ-0043 | LIBERTY GENERATING STATION | NJ | BOP990001 | 3/28/2002 | COMBINED CYCLE TURBINE WITH DUCT BURNER | 3202 | MMBTU/H | CO CATALYST | 1.7 | PPMVD @ 15% O2 | Other Case-by-Case | 1.7 | PPMVD @ 15% O2 |
| OH-0268 | LIMA ENERGY COMPANY | OH | 03-13445 | 3/26/2002 | COMBUSTION TURBINE (2), COMBINED CYCLE | 170 | MW | | 15 | LB/H | BACT-PSD | 0 | |
| TX-0411 | AMELIA ENERGY CENTER | TX | PSD-TX-982 | 3/26/2002 | TURBINE, COMBINED CYCLE, & DUCT BURNER (3) | 180 | MW | GOOD COMBUSTION DESIGN AND OPERATION | 23 | LB/H | BACT-PSD | 0 | |
| TX-0351 | WEATHERFORD ELECTRIC GENERATION FACILITY | TX | PSD-TX-933 | 3/11/2002 | (2) GE7121EA GAS TURBINES, S-3&4 | 1079 | MMBTU/H | NONE INDICATED | 2 | LB/H | Other Case-by-Case | 0 | |
| TX-0351 | WEATHERFORD ELECTRIC GENERATION FACILITY | TX | PSD-TX-933 | 3/11/2002 | (2) GE 7241FA GAS TURBINES (TEMP STACK), S-1&2 | 1910 | MMBTU/H | NONE INDICATED | 3 | LB/H | Other Case-by-Case | 0 | |
| LA-0157 | PERRYVILLE POWER STATION | LA | PSD-LA-655 (M-1) | 3/8/2002 | TURBINES, COMBINED CYCLE, GAS, (2) EPNS 1-1, 1-2 | 170 | MW | GOOD OPERATING PRACTICES AND USE OF NATURAL GAS AS FUEL | 1.4 | PPMV @ 15% O2 | BACT-PSD | 0 | |
| LA-0157 | PERRYVILLE POWER STATION | LA | PSD-LA-655 (M-1) | 3/8/2002 | TURBINE, SIMPLE CYCLE, NAT GAS, EPN 2-1 | 170 | MW | GOOD OPERATING PRACTICES AND USE OF NATURAL GAS AS FUEL. | 2.8 | LB/H | BACT-PSD | 0 | |
| LA-0157 | PERRYVILLE POWER STATION | LA | PSD-LA-655 (M-1) | 3/8/2002 | TURBINE, COMBINED CYCLE, HRSG, NAT GAS, (2) EPNS 1-1, 1-2 | 183 | MW | GOOD OPERATING PRACTICES AND USE OF NATURAL GAS AS FUEL. | 9 | LB/H | BACT-PSD | 0 | |
| OK-0056 | HORSESHOE ENERGY PROJECT | OK | 2001-156-C PSD | 2/12/2002 | TURBINES AND DUCT BURNERS | 310 | MW TOTAL | CATALYTIC OXIDATION | 6 | PPM | BACT-PSD | 0 | |
| TX-0388 | SAND HILL ENERGY CENTER | TX | P1012 | 2/12/2002 | GAS TURBINES, SIMPLE CYCLE (4) | 48 | MW (EACH) | GOOD COMBUSTION PRACTICE | 8 | PPM @ 15% O2 | Other Case-by-Case | 0 | |
| TX-0388 | SAND HILL ENERGY CENTER | TX | P1012 | 2/12/2002 | COMBINED CYCLE GAS TURBINE | 164 | MW | | 16.5 | LB/H | Other Case-by-Case | 0 | |
| TN-0144 | HAYWOOD ENERGY CENTER, LLC | TN | 954078F | 2/1/2002 | TURBINE, COMBINED CYCLE, W/O DUCT FIRING | 1990 | MMBTU/H | GOOD COMBUSTION PRACTICE | 3 | LB/H | BACT-PSD | 0 | |
| TN-0144 | HAYWOOD ENERGY CENTER, LLC | TN | 954078F | 2/1/2002 | TURBINE, COMBINED CYCLE, W/ DUCT FIRING | 1990 | MMBTU/H | GOOD COMBUSTION PRACTICE | 19.3 | LB/H | BACT-PSD | 0 | |
| TX-0350 | ENNIS TRACTEBEL POWER | TX | PSD-TX-927 | 1/31/2002 | COMBUSTION TURBINE W/HEAT RECOVERY STEAM GENERATOR | 350 | MW | NONE INDICATED | 7.09 | LB/H | Other Case-by-Case | 0 | |
| LA-0164 | ACADIA POWER STATION, ACADIA POWER PARTNERS LLC | LA | PSD-LA-645 (M-2) | 1/31/2002 | GAS TURBINE UNITS 1, 2, 3, 4 | 183 | MW EACH | GOOD DESIGN, PROPER OPERATING AND MAINTENANCE PRACTICES, AND USE OF CLEAN NATURAL GAS. | 28 | LB/H | BACT-PSD | 0 | |
| PA-0223 | DUKE ENERGY FAYETTE, LLC | PA | PA-26-00535A | 1/30/2002 | TURBINE, COMBINED CYCLE, (2) | 280 | MW | OXIDATION CATALYST | 5.3 | PPMVD @ 15% O2 | LAER | 0 | |
| OR-0035 | PORT WESTWARD PLANT | OR | 05-0008 | 1/16/2002 | (2) COMBUSTION TURBINES, WITH DUCT BURNER | 325 | MW, EACH | CO CATALYST, GOOD COMBUSTION | 4.9 | PPM @ 15% O2 | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: CO

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | COMBUSTION TURBINE GENERATOR | 154 | MW | OXIDATION CATALYST SYSTEM | 1.5 | PPMVD | BACT-PSD | 0 | |
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | COMBUSTION TURBINE GENERATOR | 154 | MW | CATALYST OXIDATION SYSTEM | 1.5 | PPMVD | | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | COMBUSTION TURBINE GENERATOR | 180 | MW | OXIDATION CATALYST SYSTEM | 1.5 | PPMVD | BACT-PSD | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | COMBUSTION TURBINE GENERATOR | 180 | MW | OXIDATION CATALYST SYSTEM | 1.5 | PPMVD | BACT-PSD | 0 | |
| *VA-0315 | WARREN COUNTY POWER PLANT - DOMINION | VA | 81391-007 | 12/17/2010 | Combined cycle turbine and duct burner, 3 | 2996 | MMBTU/H | Oxidation catalyst and good combustion practices. | 1.5 | PPMVD | BACT-PSD | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | COMBUSTION TURBINE GENERATOR | 180 | MW | OXIDATION CATALYST SYSTEM | 2 | PPMVD | BACT-PSD | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | COMBUSTION TURBINE GENERATOR | 180 | MW | OXIDATION CATALYST SYSTEM | 2 | PPMVD | BACT-PSD | 0 | |
| TX-0590 | KING POWER STATION | TX | PSDTX1125 | 8/5/2010 | Turbine | 1350 | MW | good combustion practices with an oxidation catalyst | 2 | PPMVD AT 15% O2 | BACT-PSD | 0 | |
| ID-0018 | LANGLEY GULCH POWER PLANT | ID | P-2009.0092 | 6/25/2010 | COMBUSTION TURBINE, COMBINED CYCLE W/ DUCT BURNER | 2375.28 | MMBTU/H | CATALYTIC OXIDATION (CATOX), DRY LOW NOX (DLN), GOOD COMBUSTION PRACTICES (GCP) | 2 | PPMVD | BACT-PSD | 2510 | LB/H |
| GA-0138 | LIVE OAKS POWER PLANT | GA | 4911-127-0075-P-02-0 | 4/8/2010 | COMBINED CYCLE COMBUSTION TURBINE - ELECTRIC GENERATING PLANT | 600 | MW | GOOD COMBUSTION PRACTICES AND CATALYTIC OXIDATION | 2 | PPM@15%02 | BACT-PSD | 208 | T/YR |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Combustion Turbine Generator | 154 | MW | OXIDATION CATALYST SYSTEM | 2 | PPMVD | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Combustion Turbine Generator | 154 | MW | OXIDATION CATALYST SYSTEM | 2 | PPMVD | BACT-PSD | 0 | |
| NY-0095 | CAITHNES BELLPORT ENERGY CENTER | NY | PSD-NY-0001 | 5/10/2006 | COMBUSTION TURBINE | 2221 | MMBUT/H | OXIDATION CATALYST | 2 | PPMVD@15%02 | BACT-PSD | 0 | |
| OR-0041 | WANAPA ENERGY CENTER | OR | R10PSD-OR-05-01 | 8/8/2005 | COMBUSTION TURBINE & HEAT RECOVERY STEAM GENERATOR | 2384.1 | MMBTU/H | OXIDATION CATALYST. | 2 | PPMDV @ 15% O2 | BACT-PSD | 2 | PPM @ 15% O2 |
| MI-0366 | BERRIEN ENERGY, LLC | MI | 323-01A | 4/13/2005 | 3 COMBUSTION TURBINES AND DUCT BURNERS | 1584 | MMBTU/H | CATALYTIC OXIDATION. | 2 | PPMDV @ 15% O2 | BACT-PSD | 2 | PPM @ 15% O2 |
| WA-0328 | BP CHERRY POINT COGENERATION PROJECT | WA | EFSEC/2002-01 | 1/11/2005 | GE 7FA COMBUSTION TURBINE & HEAT RECOVERY STEAM GENERATOR | 174 | MW | LEAN PRE-MIX CT BURNER & OXIDATION CATALYST | 2 | PPMDV | BACT-PSD | 0 | PPM@ 15 % 02 |
| OR-0039 | COB ENERGY FACILITY, LLC | OR | 18-0029 | 12/30/2003 | TURBINE, COMBINED CYCLE, DUCT BURNER, NAT GAS, (4) | 1150 | MW | CATALYTIC OXIDATION | 2 | PPMVD @ 15% O2 | BACT-PSD | 2 | PPM @ 15% O2 |
| AZ-0043 | DUKE ENERGY ARLINGTON VALLEY (AVEFII) | AZ | S01-004 | 11/12/2003 | TURBINE, COMBINED CYCLE | 325 | MW | CATALYTIC OXIDIZER | 2 | PPM @ 15% O2 | BACT-PSD | 2 | PPM @ 15% O2 |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: CO

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CA-1096 | VERNON CITY LIGHT & POWER | CA | 394164 | 5/27/2003 | GAS TURBINE: COMBINED CYCLE < 50 MW | 43 | MW GAS TURBINE, 55 M | SCR SYSTEM, AND OXIDATION CATALYST | 2 | PPMVD @ 15% O2 | BACT-PSD | 2 | PPM @ 15% O2 |
| CA-1097 | MAGNOLIA POWER PROJECT, SCPPA | CA | 386305 | 5/27/2003 | GAS TURBINE: COMBINED CYCLE >= 50 MW | 181 | NET MW (GAS TURBINE | SCR SYSTEM AND OXIDATION CATALYST | 2 | PPMVD @ 15% O2 | BACT-PSD | 2 | PPM @ 15% O2 |
| GA-0105 | MCINTOSH COMBINED CYCLE FACILITY | GA | 4911-103-0014-V-01-0 | 4/17/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS, (4) | 140 | MW | CATALYTIC OXIDATION | 2 | PPM @ 15% O2 | BACT-PSD | 2 | PPM @ 15% O2 |
| WA-0315 | SUMAS ENERGY 2 GENERATION FACILITY | WA | EFSEC 2001-02 | 4/17/2003 | TURBINES, COMBINED CYCLE, (2) | 660 | MW | OXIDATION CATALYST | 2 | PPMVD | BACT-PSD | 2 | PPM @ 15% O2 |
| NJ-0043 | LIBERTY GENERATING STATION | NJ | BOP990001 | 3/28/2002 | COMBINED CYCLE TURBINE (3) | 2964 | MMBTU/H | CO CATALYST | 2 | PPMVD @ 15% O2 | Other Case-by-Case | 2 | PPMVD @ 15% O2 |
| NV-0033 | EL DORADO ENERGY, LLC | NV | A-00652 | 8/19/2004 | COMBUSTION TURBINE, COMBINED CYCLE & COGEN(2) | 475 | MW | OXIDATION CATALYST | 2.6 | PPM @ 15% O2 | LAER | 3.5 | PPM @ 15% O2 |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | OXIDATION CATALYST SYSTEM | 3 | PPMVD | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | CATALYTIC OXIDATION SYSTEM | 3 | PPMVD | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Combustion Turbine Generator | 154 | MW | OXIDATION CATALYST SYSTEM | 3 | PPMVD | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Combustion Turbine Generator | 154 | MW | OXIDATION CATALYST SYSTEM | 3 | PPMVD | BACT-PSD | 0 | |
| CO-0056 | ROCKY MOUNTAIN ENERGY CENTER, LLC | CO | 05WE0524 | 5/2/2006 | NATURAL-GAS FIRED, COMBINED-CYCLE TURBINE | 300 | MW | USE GOOD COMBUSTION CONTROL PRACTICES AND CATALISTIC OXIDATION. | 3 | PPM @ 15% O2 | BACT-PSD | 3 | PPM @ 15 O2 |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | COMBUSTION TURBINE GENERATORS AND HEAT RECOVERY STEAM GENERATORS - SW501F TURBINES OPTION | 180 | MW | OXIDATION CATALYST | 3 | PPM @ 15% O2 | BACT-PSD | 3 | PPM @ 15% O2 |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | COMBUSTION TURBINE GENERATORS AND HEAT RECOVERY STEAM GENERATORS - GE7FA TURBINES OPTION | 170 | MW | OXIDATION CATALYST | 3 | PPM @ 15% O2 | BACT-PSD | 3 | PPM @ 15% O2 |
| UT-0066 | CURRANT CREEK | UT | DAQE-2524002-04 | 5/17/2004 | NATURAL GAS FIRED TURBINES AND HEAT RECOVERY STEAM GENERATORS | | | OXIDATINO CATALYST FOR COMBINED CYCLE MODE OF OPERATION | 3 | PPMVD | BACT-PSD | 3 | PPM @ 15% O2 |
| NV-0037 | COPPER MOUNTAIN POWER | NV | 15347 | 5/14/2004 | LARGE COMBUSTION TURBINES, COMBINED CYCLE & COGENERATION | 600 | MW | GOOD COMBUSTOR DESIGN AND AN OXIDATION CATALYST | 3 | PPMVD | LAER | 3 | PPM @ 15% O2 |
| AZ-0043 | DUKE ENERGY ARLINGTON VALLEY (AVEFII) | AZ | S01-004 | 11/12/2003 | TURBINE, COMBINED CYCLE & DUCT BURNER | 325 | MW | CATALYTIC OXIDIZER | 3 | PPM @ 15% O2 | BACT-PSD | 3 | PPM @ 15% O2 |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | SIEMENS WESTINGHOUSE COMBUSTION TURBINES AND HEAT RECOVERY STEAM GENERATORS | 1080 | MW | OXIDATION CATALYST | 3 | PPMVD | BACT-PSD | 3 | PPM @ 15% O2 |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: CO

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | GE COMBUSTION TURBINES AND HEAT RECOVERY STEAM GENERATORS | 1040 | MW | OXIDATION CATALYST | 3 | PPMVD | BACT-PSD | 3 | PPM @ 15% O2 |
| AZ-0039 | SALT RIVER PROJECT/SANTAN GEN. PLANT | AZ | V95-008 S01-014 | 3/7/2003 | TURBINE, COMBINED CYCLE, DUCT BURNER, NATURAL GAS | 175 | MW | CATALYTIC OXIDIZER | 3 | PPM @ 15% O2 | LAER | 0 | |
| PA-0188 | FAIRLESS ENERGY LLC | PA | PA-09-0124B | 3/28/2002 | TURBINE, COMBINED CYCLE | 1190 | MW | OXIDATION CATALYST | 3 | PPMVD @ 15% O2 | BACT-PSD | 3 | PPM @ 15% O2 |
| NV-0035 | TRACY SUBSTATION EXPANSION PROJECT | NV | AP4911-1504 | 8/16/2005 | TURBINE, COMBINED CYCLE COMBUSTION #2 WITH HRSG AND DUCT BURNER. | 306 | MW | OXIDATION CATALYST SYSTEM | 3.5 | PPM @ 15% O2 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| NV-0035 | TRACY SUBSTATION EXPANSION PROJECT | NV | AP4911-1504 | 8/16/2005 | TURBINE, COMBINED CYCLE COMBUSTION #1 WITH HRSG AND DUCT BURNER. | 306 | MW | OXIDATION CATALYST | 3.5 | PPM @ 15% O2 | BACT-PSD | 3.5 | PPM @ 15% O2 |
| MI-0365 | MIRANT WYANDOTTE LLC | MI | 279-98B | 1/28/2003 | TURBINE, COMBINED CYCLE, (2) | 2200 | MMBTU/H | CATALYTIC OXIDATION SYSTEM. | 3.8 | PPM | BACT-PSD | 3.8 | PPM @ 15% O2 |
| *TX-0618 | CHANNEL ENERGY CENTER LLC | TX | PSDTX955M1 | 10/15/2012 | Combined Cycle Turbine | 180 | MW | Good combustion | 4 | PPMVD | BACT-PSD | 0 | |
| *TX-0619 | DEER PARK ENERGY CENTER | TX | PSDTX979M2 | 9/26/2012 | Combined Cycle Turbine | 180 | MW | good combustion | 4 | PPMVD | BACT-PSD | 0 | |
| *TX-0620 | ES JOSLIN POWER PLANT | TX | PSDTX1256 | 9/12/2012 | Combined cycle gas turbine | 195 | MW | good combustion | 4 | PPMVD | BACT-PSD | 0 | |
| *WY-0070 | CHEYENNE PRAIRIE GENERATING STATION | WY | CT-12636 | 8/28/2012 | Combined Cycle Turbine (EP01) | 40 | MW | Oxidation Catalyst | 4 | PPMV AT 15% O2 | BACT-PSD | 32 | TONS |
| *WY-0070 | CHEYENNE PRAIRIE GENERATING STATION | WY | CT-12636 | 8/28/2012 | Combined Cycle Turbine (EP02) | 40 | MW | Oxidation Catalyst | 4 | PPMV AT 15% O2 | BACT-PSD | 32 | TONS |
| TX-0600 | THOMAS C. FERGUSON POWER PLANT | TX | PSDTX1244 | 9/1/2011 | Natural gas-fired turbines | 390 | MW | Good combustion practices and oxidation catalyst | 4 | PPMVD | BACT-PSD | 0 | |
| *CA-1209 | HIGH DESERT POWER PROJECT | CA | SE 98-01 | 3/11/2010 | COMBUSTION TURBINE GENERATOR | 190 | MW | OXIDATION CATALYST SYSTEM | 4 | PPMVD | BACT-PSD | 0 | |
| *CA-1209 | HIGH DESERT POWER PROJECT | CA | SE 98-01 | 3/11/2010 | COMBUSTION TURBINE GENERATOR | 190 | MW | CATALYST OXIATION SYSTEM | 4 | PPMVD | BACT-PSD | 0 | |
| *CA-1209 | HIGH DESERT POWER PROJECT | CA | SE 98-01 | 3/11/2010 | COMBUSTION TURBINE GENERATOR | 190 | MW | OXIDATION CATALYST SYSTEM | 4 | PPMVD | BACT-PSD | 0 | |
| CA-1144 | BLYTHE ENERGY PROJECT II | CA | SE 02-01 | 4/25/2007 | 2 COMBUSTION TURBINES | 170 | MW | | 4 | PPMVD | BACT-PSD | 0 | |
| *CA-1195 | ELK HILLS POWER LLC | CA | SJ 99-02 | 1/12/2006 | COMBUSTION TURBINE GENERATOR | 166 | MW | SCR OR SCONOX | 4 | PPMVD | BACT-PSD | 0 | |
| *CA-1195 | ELK HILLS POWER LLC | CA | SJ 99-02 | 1/12/2006 | COMBUSTION TURBINE GENERATOR | 166 | MW | SCR OR SCONOX | 4 | PPMVD | BACT-PSD | 0 | |
| CA-1143 | SUTTER POWER PLANT | CA | SAC 98-01 | 8/16/2004 | 2 COMBUSTION TURBINES | 170 | MW | OXIDATION CATALYST SYSEM | 4 | PPMVD | BACT-PSD | 0 | |
| NV-0038 | IVANPAH ENERGY CENTER, L.P. | NV | 1616 | 12/29/2003 | LARGE COMBUSTION TURBINES, COMBINED CYCLE & COGENERATION | 500 | MW | GOOD COMBUSTION CONTROL AND CATALYTIC OXIDATION | 4 | PPMVD | LAER | 4 | PPM @ 15% O2 |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | COMBUSTION TURBINE, LARGE, 2 EACH | 1916 | MMBTU/H | OXIDATION CATALYST AND GOOD COMBUSTION | 4 | PPMVD 15% 02 | BACT-PSD | 4 | PPM @ 15% O2 |
| CA-0997 | SACRAMENTO MUNICIPAL UTILITY DISTRICT | CA | 16006 | 9/1/2003 | GAS TURBINES, (2) | 1611 | MMBTU/H | GOOD COMBUSTION CONTROL | 4 | PPM @ 15% O2 | LAER | 4 | PPM @ 15% O2 |
| MI-0361 | SOUTH SHORE POWER LLC | MI | 342-01 | 1/30/2003 | TURBINE, COMBINED CYCLE, (2) | 172 | MW | CATALYTIC OXIDATION AND USE OF GOOD COMBUSTION PRACTICES. | 4 | PPMVD @ 15% O2 | BACT-PSD | 4 | PPM @ 15% O2 |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: CO

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AZ-0038 | GILA BEND POWER GENERATING STATION | AZ | V00-001 | 5/15/2002 | TURBINE, COMBINED CYCLE, DUCT BURNER, NATURAL GAS | 170 | MW | OXIDATION CATALYST | 4 | PPM @ 15% O2 | BACT-PSD | 4 | PPM @ 15% O2 |
| CT-0151 | KLEEN ENERGY SYSTEMS, LLC | CT | 104-0131 AND 104-0133 | 2/25/2008 | SIEMENS SGT6-5000F COMBUSTION TURBINE #1 AND #2 (NATURAL GAS FIRED) WITH 445 MMBTU/HR NATURAL GAS DUCT BURNER | 2.1 | MMCF/H | CO CATLYST | 4.3 | LB/H | BACT-PSD | 0.9 | PPMVD @ 15 % O2 |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | COMBUSTION TURBINE, LARGE 2 EACH | 1827 | MMBTU/H | OXIDATION CATALYST AND GOOD COMBUSTION | 4.8 | PPMVD @15% 02 | BACT-PSD | 4.8 | PPM @ 15% O2 |
| OR-0035 | PORT WESTWARD PLANT | OR | 05-0008 | 1/16/2002 | (2) COMBUSTION TURBINES, WITH DUCT BURNER | 325 | MW, EACH | CO CATALYST AND GOOD COMBUSTION PRACTICES. | 4.9 | PPM @ 15% O2 | BACT-PSD | 4.9 | PPM @ 15% O2 |
| OR-0040 | KLAMATH GENERATION, LLC | OR | 18-0026 | 3/12/2003 | TURBINE, COMBINED CYCLE, DUCT BURNER, NAT GAS (2) | 480 | MW | CATALYTIC OXIDATION | 5 | PPMVD @ 15% O2 | BACT-PSD | 5 | PPM @ 15% O2 |
| MI-0357 | KALKASKA GENERATING, INC | MI | 119-02 | 2/4/2003 | TURBINE, COMBINED CYCLE, (2) | 605 | MW | OXIDATION CATALYST. | 5 | PPMVD @15% O2 | BACT-PSD | 5 | PPM @ 15% O2 |
| PA-0223 | DUKE ENERGY FAYETTE, LLC | PA | PA-26-00535A | 1/30/2002 | TURBINE, COMBINED CYCLE, (2) | 280 | MW | OXIDATION CATALYST | 5 | PPMVD @ 15% O2 | BACT-PSD | 5 | PPM @ 15% O2 |
| *WY-0070 | CHEYENNE PRAIRIE GENERATING STATION | WY | CT-12636 | 8/28/2012 | Simple Cycle Turbine (EP03) | 40 | MW | Oxidiation Catalyst | 6 | PPMV AT 15% O2 | BACT-PSD | 32.9 | TONS |
| *WY-0070 | CHEYENNE PRAIRIE GENERATING STATION | WY | CT-12636 | 8/28/2012 | Simple Cycle Trubine (EP04) | 40 | MW | Oxidation Catalyst | 6 | PPMV AT 15% O2 | BACT-PSD | 32.9 | TONS |
| *WY-0070 | CHEYENNE PRAIRIE GENERATING STATION | WY | CT-12636 | 8/28/2012 | Simple Cycle Turbine (EP05) | 40 | MW | Oxidation Catalyst | 6 | PPMV AT 15% O2 | BACT-PSD | 32.9 | TONS |
| FL-0304 | CANE ISLAND POWER PARK | FL | PSD-FL-400 (0970043-014-AC) | 9/8/2008 | 300 MW COMBINED CYCLE COMBUSTION TURBINE | 1860 | MMBTU/H | GOOD COMBUSTION PRACTICES | 6 | PPMVD | BACT-PSD | 0 | |
| CA-1142 | PASTORIA ENERGY FACILITY | CA | SJ 99-03 | 12/23/2004 | 3 COMBUSTION TURBINES | 168 | MW | XONON CATALYTIC COMBUSTORS OR DRY LOW NOX BURNERS & SCR | 6 | PPMVD | BACT-PSD | 0 | |
| PA-0189 | CONECTIV BETHLEHEM, INC. | PA | 48-328-006 | 1/16/2002 | TURBINE, COMBINED CYCLE, (6) | 122 | MW | BACT FOR CO IS GOOD COMBUSTION PRACTICE | 6 | PPM @ 15% O2 | BACT-PSD | 0 | |
| FL-0245 | FPL MANATEE PLANT - UNIT 3 | FL | PSD-FL-328 AND 0810010-006-AC | 4/15/2003 | TURBINE, SIMPLE CYCLE, NATURAL GAS, (4) | 170 | MW | GOOD COMBUSTION DESIGN AND PRACTICES | 7.4 | PPMVD @ 15% O2 | BACT-PSD | 7.4 | PPM @ 15% O2 |
| FL-0285 | PROGRESS BARTOW POWER PLANT | FL | PSD-FL-381 AND 1030011-010-AC | 1/26/2007 | COMBINED CYCLE COMBUSTION TURBINE SYSTEM (4-ON-1) | 1972 | MMBTU/H | GOOD COMBUSTION | 8 | PPMVD | BACT-PSD | 0 | |
| FL-0285 | PROGRESS BARTOW POWER PLANT | FL | PSD-FL-381 AND 1030011-010-AC | 1/26/2007 | SIMPLE CYCLE COMBUSTION TURBINE (ONE UNIT) | 1972 | MMBTU/H | GOOD COMBUSTION | 8 | PPMVD | BACT-PSD | 0 | |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | COMBINED CYCLE COMBUSTION GAS TURBINES - 6 UNITS | 2333 | MMBTU/H | | 8 | PPMVD @15%O2 | BACT-PSD | 0 | |
| FL-0265 | HINES POWER BLOCK 4 | FL | PSD-FL-342 AND 1050234-010-AC | 6/8/2005 | COMBINED CYCLE TURBINE | 530 | MW | GOOD COMBUSTION | 8 | PPM | BACT-PSD | 8 | PPM @ 15% O2 |
| FL-0244 | FPL MARTIN PLANT | FL | PSD-FL-327 | 4/16/2003 | TURBINE, SIMPLE CYCLE, NATURAL GAS, (4) | 170 | MW | GOOD COMBUSTION DESIGN AND PRACTICES | 8 | PPMVD @ 15% O2 | BACT-PSD | 8 | PPM @ 15% O2 |
| FL-0241 | CPV CANA | FL | PSD-FL-323 | 1/17/2002 | TURBINE, COMBINED CYCLE, NATURAL GAS | 1680 | MMBTU/H | COMBUSTION CONTROLS | 8 | PPMVD @ 15% O2 | BACT-PSD | 8 | PPM @ 15% O2 |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | TURBINE, COMBINED CYCLE, (2), (GE ) | 170 | MW | GOOD COMBUSTION PRACTICE | 8.2 | PPMVD @ 15% O2 | BACT-PSD | 8.2 | PPM @ 15% O2 |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | GE COMBUSTION TURBINE & DUCT BURNERS | 1705 | MMBTU/H | COMBUSTION CONTROL | 8.2 | PPM @ 15% O2 | BACT-PSD | 8.2 | PPM @ 15% O2 |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: CO

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MN-0071 | FAIRBAULT ENERGY PARK | MN | 13100071-003 | 6/5/2007 | COMBINED CYCLE COMBUSTION TURBINE W/DUCT BURNER | 1758 | MMBTU/H | GOOD COMBUSTION | 9 | PPMVD | BACT-PSD | 11 | PPMVD |
| VA-0289 | DUKE ENERGY WYTHE, LLC | VA | 11382 | 2/5/2004 | TURBINE, COMBINED CYCLE, NATURAL GAS | 170 | MW | GOOD COMBUSTION PRACTICES. | 9 | PPMVD | BACT-PSD | 9 | PPM @ 15% O2 |
| VA-0287 | JAMES CITY ENERGY PARK | VA | 61442 | 12/1/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS | 1973 | MMBTU/H | GOOD COMBUSTION PRACTICES | 9 | PPM | BACT-PSD | 9 | PPM @ 15% O2 |
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | TURBINE, COMBINED CYCLE, NATURAL GAS (4) | 1490.5 | MMBTU/H | GOOD COMBUSTION PRACTICES, NATURAL GAS AS FUEL. | 9 | PPMVD @ 15% O2 | BACT-PSD | 9 | PPM @ 15% O2 |
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | TURBINES, SIMPLE CYCLE, NATURAL GAS, (4) | 1490.5 | MMBTU/H | GOOD COMBUSTION PRACTICES, CLEAN FUEL -- NATURAL GAS. | 9 | PPMVD @ 15% O2 | BACT-PSD | 9 | PPM @ 15% O2 |
| NC-0095 | MIRANT GASTONIA POWER FACILITY | NC | 09175R00 | 5/28/2002 | TURBINES, COMBINED CYCLE, GE | 175 | MW | GOOD COMBUSTION PRACTICES | 9 | PPMVD | BACT-PSD | 9 | PPM @ 15% O2 |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | TURBINES (3), COMBINED CYCLE, DUCT BURNERS OFF | 180 | MW | GOOD COMBUSTION PRACTICES (GCP) AND OXIDATION CATALYST | 9.8 | LB/H | BACT-PSD | 2 | PPM @ 15% O2 |
| FL-0256 | HINES ENERGY COMPLEX, POWER BLOCK 3 | FL | PSD-FL-330 AND 1050234-006-AC | 9/8/2003 | COMBUSTION TURBINES, COMBINED CYCLE, NATURAL GAS,2 | 1830 | MMBTU/H | COMBUSTION DESIGN, GOOD COMBUSTION PRACTICES. | 10 | PPMVD @15% O2 | BACT-PSD | 10 | PPMVD @15% O2 |
| FL-0244 | FPL MARTIN PLANT | FL | PSD-FL-327 | 4/16/2003 | TURBINE, COMBINED CYLE, NATURAL GAS, (4) | 170 | MW | GOOD COMBUSTION DESIGN AND PRACTICES | 10 | PPMVD @ 15% O2 | BACT-PSD | 10 | PPM @ 15% O2 |
| FL-0245 | FPL MANATEE PLANT - UNIT 3 | FL | PSD-FL-328 AND 0810010-006-AC | 4/15/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS (4) | 170 | MW | GOOD COMBUSTION DESIGN AND PRACTICES | 10 | PPMVD @ 15% O2 | BACT-PSD | 7.4 | PPM @ 15% O2 |
| OK-0090 | DUKE ENERGY STEPHENS, LLC STEPHENS ENERGY | OK | 2001-157-C M-1 PSD | 3/21/2003 | TURBINES, COMBINED CYCLE (2) | 1701 | MMBTU/H | COMBUSTION CONTROL | 10 | PPM @ 15% O2 | BACT-PSD | 10 | PPM @ 15% O2 |
| VA-0261 | CPV CUNNINGHAM CREEK | VA | 81382 | 9/6/2002 | TURBINE, COMBINED CYCLE, (2) | 2132 | MMBTU/H | GOOD COMBUSTION PRACTICES. | 10 | LB/H | BACT-PSD | 3.1 | PPM @ 15% O2 |
| NC-0095 | MIRANT GASTONIA POWER FACILITY | NC | 09175R00 | 5/28/2002 | TURBINES, COMBINED CYCLE, MHI/SW | 175 | MW | GOOD COMBUSTION PRACTICES | 10 | PPMVD | BACT-PSD | 10 | PPM @ 15% O2 |
| PA-0226 | LIMERICK POWER STATION | PA | PA-46-0203 | 4/9/2002 | TURBINE, COMBINED CYCLE | 550 | MW | | 10 | PPM @ 15% O2 | BACT-PSD | 10 | PPM @ 15% O2 |
| AR-0052 | THOMAS B. FITZHUGH GENERATING STATION | AR | 1165-AOP-R1 (24-0012) | 2/15/2002 | TURBINE, COMBINED CYCLE, NATURAL GAS | 170.6 | MW | GOOD COMBUSTION PRACTICES. DRY LOW NOX COMBUSTORS | 10 | PPM @ 15% O2 | BACT-PSD | 10 | PPM @ 15% O2 |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | TURBINE, COMBINED CYCLE, (2), (MHI) | 170 | MW | GOOD COMBUSTION PRACTICE/CO OXIDATION CATALYST | 10.2 | PPMVD @ 15% O2 | BACT-PSD | 10.2 | PPM @ 15% O2 |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | MHI COMBUSTION TURBINE & DUCT BURNERS | 1767 | MMBTU/H | CATALYTIC OXIDATION | 10.2 | PPM @ 15% O2 | BACT-PSD | 10.2 | PPM @ 15% O2 |
| VA-0262 | MIRANT AIRSIDE INDUSTRIAL PARK | VA | 32008 | 12/6/2002 | TURBINE, COMBINED CYCLE, (2) | 170 | MW | GOOD COMBUSTION PRACTICES. | 10.3 | PPMVD @ 15% O2 | BACT-PSD | 10.3 | PPM @ 15% O2 |
| NC-0101 | FORSYTH ENERGY PLANT | NC | 00986R1 | 9/29/2005 | TURBINE, COMBINED CYCLE, NATURAL GAS, (3) | 1844.3 | MMBTU/H | GOOD COMBUSTION PRACTICES AND EFFICIENT PROCESS DESIGN. | 11.6 | PPM @ 15% O2 | BACT-PSD | 11.6 | PPM @ 15% O2 |
| VA-0287 | JAMES CITY ENERGY PARK | VA | 61442 | 12/1/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS,DUCT BURNER | 1973 | MMBTU/H | GOOD COMBUSTION PRACTICES | 12 | PPM | BACT-PSD | 12 | PPM @ 15% O2 |
| GA-0101 | MURRAY ENERGY FACILITY | GA | 4911-213-0034-P-01-1 | 10/23/2002 | TURBINE, COMBINED CYCLE, (4) | 173 | MW | GOOD COMBUSTION PRACTICE | 12 | PPM @ 15% O2 | BACT-PSD | 12 | PPM @ 15% O2 |
| FL-0239 | JEA/BRANDY BRANCH | FL | PSD-FL-310 | 3/27/2002 | TURBINES, COMBINED CYCLE, (2) | 1911 | MMBTU/H | GOOD COMBUSTION | 12.21 | PPMVD | BACT-PSD | 12.21 | PPM @ 15% O2 |
| MS-0055 | EL PASO MERCHANT ENERGY CO. | MS | 0540-00080 | 6/24/2002 | TURBINE, COMBINED CYCLE, DUCT BURNER, NAT GAS, (2) | 1737 | MMBTU/H | GOOD COMBUSTION PRACTICE | 13.8 | PPMV @ 15% O2 | BACT-PSD | 13.8 | PPM @ 15% O2 |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: CO

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | TURBINE, COMBINED CYCLE AND DUCT BURNER, NAT GAS | 1490.5 | MMBTU/H | GOOD COMBUSTION PRACTICE, NATURAL GAS AS FUEL. | 14 | PPMVD @ 15% O2 | BACT-PSD | 14 | PPM @ 15% O2 |
| VA-0289 | DUKE ENERGY WYTHE, LLC | VA | 11382 | 2/5/2004 | TURBINE, COMBINED CYCLE, DUCT BURNER, NATURAL GAS | 170 | MW | GOOD COMBUSTION PRACTICES | 14.6 | PPMVD | BACT-PSD | 14.6 | PPM @ 15% O2 |
| TX-0437 | HARTBURG POWER, LP | TX | PSD-TX-1009 | 7/5/2002 | TURBINE, COMBINED CYCLE & DUCT BURNER | 277 | mw | GOOD COMBUSTION PRACTICES, DESIGN, PROPER OPERATION | 15 | PPM | BACT-PSD | 15 | PPM @ 15% O2 |
| NJ-0043 | LIBERTY GENERATING STATION | NJ | BOP990001 | 3/28/2002 | COMBINED CYCLE TURBINE WITH DUCT BURNER | 3202 | MMBTU/H | CO CATALYST | 15.4 | LB/H | Other Case-by-Case | 2 | PPMVD @ 15% O2 |
| OK-0096 | REDBUD POWER PLANT | OK | 2000-090-C M-3 PSD | 6/3/2003 | COMBUSTION TURBINE AND DUCT BURNERS | 1832 | MMBTU/H | GOOD COMBUSTION PRACTICES/DESIGN | 17.2 | PPMVD | BACT-PSD | 17.2 | PPM @ 15% O2 |
| LA-0257 | SABINE PASS LNG TERMINAL | LA | PSD-LA-703(M3) | 12/6/2011 | Simple Cycle Generation Turbines (2) | 286 | MMBTU/H | Good combustion practices and fueled by natural gas | 17.46 | LB/H | BACT-PSD | 25 | PPMV |
| NE-0017 | BEATRICE POWER STATION | NE | 76739 | 5/29/2003 | TURBINE, COMBINED CYCLE, (2) | 80 | MW | GOOD COMBUSTION & CATALYTIC OXIDATION. EMISSION LIMITS SPECIFIED, NOT CONTROL DEVICES. | 18.4 | LB/H | Other Case-by-Case | 0 | |
| NC-0095 | MIRANT GASTONIA POWER FACILITY | NC | 09175R00 | 5/28/2002 | TURBINES, COMBINED CYCLE, GE, DUCT BURNERS | 175 | MW | GOOD COMBUSTION PRACTICES | 20 | PPMVD | BACT-PSD | 20 | PPM @ 15% O2 |
| NC-0095 | MIRANT GASTONIA POWER FACILITY | NC | 09175R00 | 5/28/2002 | TURBINES, COMBINED CYCLE, MHI/SW, DUCT BURNERS | 175 | MW | GOOD COMBUSTION PRACTICES | 20.6 | PPMVD | BACT-PSD | 20.6 | PPM @ 15% O2 |
| OH-0264 | NORTON ENERGY STORAGE, LLC | OH | 16-02110 | 5/23/2002 | COMBUSTION TURBINE (9), COMB CYCLE W/O DUCT BURNER | 300 | MW | CATALYTIC OXIDATION WAS NOT CONSIDERED COST EFFECTIVE. | 23 | LB/H | BACT-PSD | 11 | PPM @ 15% O2 |
| AR-0051 | DUKE ENERGY-JACKSON FACILITY | AR | 1998-AOP-R0 (34-0259) | 4/1/2002 | TURBINES, COMBINED CYCLE, NATURAL GAS, (2) | 170 | MW | GOOD OPERATING PRACTICE | 23.6 | PPM @ 15% O2 | BACT-PSD | 23.6 | PPM @ 15% O2 |
| TX-0428 | HOUSTON OPERATIONS -- BATTLEGROUND SITE | TX | PSD-TX-276 | 12/19/2002 | TURBINE, COMBINED CYCLE & DUCT BURNER | 87 | mw | GOOD COMBUSTION PRACTICES | 25 | PPMVD @ 15% O2 | BACT-PSD | 25 | PPM @ 15% O2 |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | TURBINES (4) (MODEL GE 7FA), DUCT BURNERS OFF | 172 | MW | | 25.7 | LB/H | BACT-PSD | 6 | PPM @ 15% O2 |
| LA-0157 | PERRYVILLE POWER STATION | LA | PSD-LA-655 (M-1) | 3/8/2002 | TURBINE, SIMPLE CYCLE, NAT GAS, EPN 2-1 | 170 | MW | GOOD OPERATING PRACTICES AND USE OF NATURAL GAS AS FUEL. BACT FOR NOX, LOW NOX BURNERS AND/OR SELECTIVE CATALYTIC REDUCTION, IS ALSO BACT FOR CO. | 28 | LB/H | BACT-PSD | 9 | PPMV @ 15% O2 |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | TURBINE, COMBINED CYCLE, (2), (SWH) | 170 | MW | GOOD COMBUSTION PRACTICE | 30 | PPMVD @ 15% O2 | BACT-PSD | 30 | PPM @ 15% O2 |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | SW COMBUSTION TURBINE | 1872 | MMBTU/H | COMBUSTION CONTROL | 30 | PPM @ 15% O2 | BACT-PSD | 30 | PPM @ 15% O2 |
| TX-0351 | WEATHERFORD ELECTRIC GENERATION FACILITY | TX | PSD-TX-933 | 3/11/2002 | (2) GE 7241FA GAS TURBINES (TEMP STACK), S-1&2 | 1910 | MMBTU/H | NONE INDICATED | 31 | LB/H | Other Case-by-Case | 25 | PPM @ 15% O2 |
| WY-0061 | BLACK HILLS CORP./NEIL SIMPSON TWO | WY | MD-850 | 4/4/2003 | TURBINE, COMBINED CYCLE, & DUCT BURNER | 40 | MW | GOOD COMBUSTION PRACTICE | 37.2 | PPMV @ 15% O2 | BACT-PSD | 37.2 | PPM @ 15% O2 |
| NM-0044 | CLOVIS ENERGY FACILITY | NM | PSD-NM-2605 | 6/27/2002 | TURBINES, COMBINED CYCLE, NATURAL GAS (4) | 1515 | MMBTU/H | GOOD COMBUSTOR DESIGN. THIS FACILITY WILL ONLY COMBUST ''SWEET'' NATURAL GAS. | 37.6 | LB/H | BACT-PSD | 10 | PPM @ 15% O2 |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: CO

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OH-0264 | NORTON ENERGY STORAGE, LLC | OH | 16-02110 | 5/23/2002 | COMBUSTION TURBINES (9), COMB CYCLE W DUCT BURNER | 300 | MW | CATALYTIC OXIDATION WAS NOT CONSIDERED COST EFFECTIVE. | 38 | LB/H | BACT-PSD | 17 | PPM @ 15% O2 |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE AA-001 W/DUCT BURNER | 2168 | MMBTU/H | EFFICIENT COMBUSTION PRACTICES | 40 | PPMV @ 15% O2 | BACT-PSD | 40 | PPM @ 15% O2 |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE, AA-002 W /DUCT BURNER | 2168 | MMBTU/H | EFFICIENT COMBUSTION PRACTICES | 40 | PPMV @ 15% O2 | BACT-PSD | 40 | PPM @ 15% O2 |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE, AA-003 /DUCT BURNER | 2168 | MMBTU/H | EFFICIENT COMBUSTION PRACTICES | 40 | PPMV @ 15% O2 | BACT-PSD | 40 | PPM @ 15% O2 |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE AA-004 W/ DUCT BURNER | 2168 | MMBTU/H | EFFICIENT COMBUSTION PRACTICES | 40 | PPMV @ 15% O2 | BACT-PSD | 40 | PPM @ 15% O2 |
| OK-0056 | HORSESHOE ENERGY PROJECT | OK | 2001-156-C PSD | 2/12/2002 | TURBINES AND DUCT BURNERS | 310 | MW TOTAL | GOOD COMBUSTION CONTROL | 40 | PPM @ 15% 02 | BACT-PSD | 40 | PPM @ 15% O2 |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | TURBINES (2) (MODEL GE 7FA), DUCT BURNERS OFF | 170 | MW | | 43 | LB/H | BACT-PSD | 10 | PPM @ 15% O2 |
| TX-0388 | SAND HILL ENERGY CENTER | TX | P1012 | 2/12/2002 | GAS TURBINES, SIMPLE CYCLE (4) | 48 | MW (EACH) | LIMITED TO 2,750 HOURS PER YEAR. SEE NOTE | 43 | PPM @ 15% O2 | BACT-PSD | 43 | PPM @ 15% O2 |
| LA-0257 | SABINE PASS LNG TERMINAL | LA | PSD-LA-703(M3) | 12/6/2011 | Simple Cycle Refrigeration Compressor Turbines (16) | 286 | MMBTU/H | Good combustion practices and fueled by natural gas | 43.6 | LB/H | BACT-PSD | 58.4 | PPMV |
| LA-0120 | GEISMAR PLANT | LA | PSD-LA-647 (M-2) | 2/26/2002 | (2) COGENERATION UNITS POINT # 720-99 AND 721-99 | 40 | MW EACH | GOOD COMBUSTION PRACTICES WITH NATURAL GAS AS FUEL. | 44 | LB/H | BACT-PSD | 24.8 | PPM @ 15% O2 |
| TN-0144 | HAYWOOD ENERGY CENTER, LLC | TN | 954078F | 2/1/2002 | TURBINE, COMBINED CYCLE, W/O DUCT FIRING | 1990 | MMBTU/H | GOOD COMBUSTION PRACTICE | 46 | LB/H | BACT-PSD | 28.3 | PPM @ 15% O2 |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | TURBINES (4) (MODEL GE 7FA), DUCT BURNERS ON | 172 | MW | | 50.3 | LB/H | BACT-PSD | 9 | PPM @ 15% O2 |
| VA-0262 | MIRANT AIRSIDE INDUSTRIAL PARK | VA | 32008 | 12/6/2002 | TURBINE, SIMPLE CYCLE, (4) | 84 | MW | GOOD COMBUSTION PRACTICES. | 51 | PPMVD @ 15% O2 | BACT-PSD | 25 | PPM @ 15% O2 |
| TX-0351 | WEATHERFORD ELECTRIC GENERATION FACILITY | TX | PSD-TX-933 | 3/11/2002 | (2) GE7121EA GAS TURBINES, S-3&4 | 1079 | MMBTU/H | NONE INDICATED | 58 | LB/H | Other Case-by-Case | 25 | PPM @ 15% O2 |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | TURBINES (3), COMBINED CYCLE, DUCT BURNERS ON | 180 | MW | GOOD COMBUSTION PRACTICES (GCP) AND OXIDATION CATALYST | 61.9 | LB/H | BACT-PSD | 10 | PPM @ 15% O2 |
| TX-0391 | OXY COGENERATION FACILITY | TX | PSD-276 | 12/20/2002 | HRSG UNIT NO. 3 | 255 | MMBTU/H | GOOD COMBUSTION PRACTICES. | 64.3 | LB/H | Other Case-by-Case | 0 | |
| TX-0497 | INEOS CHOCOLATE BAYOU FACILITY | TX | PSD-TX 983 AND 46192 | 8/29/2006 | COGENERATION TRAIN 2 AND 3 (TURBINE AND DUCT BURNER EMISSIONS) | 35 | MW | BP AMOCO PROPOSES PROPER COMBUSTION CONTROL AS BACT FOR CO AND VOC EMISSIONS FROM THE TURBINES AND DUCT BURNERS. CO EMISSIONS FROM EACH TURBINE WILL NOT EXCEED 15 PPMVD AT 85% TO 100% OF BASE LOAD. CO EMISSIONS FROM EACH TU | 66.81 | LB/H | BACT-PSD | 0 | |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | TURBINES (2) (MODEL GE 7FA), DUCT BURNERS ON | 170 | MW | | 78 | LB/H | BACT-PSD | 14 | PPM @ 15% O2 |
| LA-0194 | SABINE PASS LNG TERMINAL | LA | PSD-LA-703 | 11/24/2004 | 30 MW GAS TURBINE GNERATORS (4) LOW LOAD OPERATIONS | 30 | mw each | GOOD COMBUSTION PRACTICES | 80 | PPMVD @ 15% O2 | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: CO

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TX-0352 | BRAZOS VALLEY ELECTRIC GENERATING FACILITY | TX | PSD-TX-966 | 12/31/2002 | (2) HRSG/TURBINES, HRSG-003 & -004 | 175 | MW | GOOD COMBUSTION CONTROLS | 92.4 | LB/H | BACT-PSD | 17 | PPM @ 15% O2 |
| TX-0352 | BRAZOS VALLEY ELECTRIC GENERATING FACILITY | TX | PSD-TX-966 | 12/31/2002 | (2) HRSG/TURBINES, HRSG-001 & -002 | 175 | MW, EA | GOOD COMBUSTION CONTROLS | 92.4 | LB/H | BACT-PSD | 17 | PPM @ 15% O2 |
| TX-0388 | SAND HILL ENERGY CENTER | TX | P1012 | 2/12/2002 | COMBINED CYCLE GAS TURBINE | 164 | MW | | 98.2 | LB/H | Other Case-by-Case | 17.5 | PPM @ 15% O2 |
| LA-0157 | PERRYVILLE POWER STATION | LA | PSD-LA-655 (M-1) | 3/8/2002 | TURBINE, COMBINED CYCLE, HRSG, NAT GAS, (2) EPNS 1-1, 1-2 | 183 | MW | GOOD OPERATING PRACTICES AND USE OF NATURAL GAS AS FUEL. BACT FOR NOX, LOW NOX BURNERS AND/OR SELECTIVE CATALYTIC REDUCTION, IS ALSO BACT FOR CO. | 108.2 | LB/H | BACT-PSD | 0 | |
| TX-0502 | NACOGDOCHES POWER STERNE GENERATING FACILITY | TX | PSD-TX 1015 AND 49293 | 6/5/2006 | WESTINGHOUSE/SIEMENS MODEL SW501F GAS TURBINE W/ 416.5 MMBTU DUCT BURNERS | 190 | MW | STEAG POWER LLC REPRESENTS GOOD COMBUSTION PRACTICES FOR THE CONTROL OF CO EMISSIONS FROM THE COMBUSTION TURBINES AND HRSG DUCT BURNERS. COMBINED CO WILL BE 20.2 PPMVD CORRECTED TO 15% O2. | 109.4 | LB/H | BACT-PSD | 0 | |
| TX-0407 | STERNE ELECTRIC GENERATING FACILITY | TX | PSD-TX-1015 | 12/6/2002 | TURBINES, COMBINED CYCLE, AND DUCT BURNERS (3) | 190 | MW | GOOD COMBUSTION PRACTICES. | 109.4 | LB/H | BACT-PSD | 20.2 | PPMVD @ 15% O2 |
| TX-0391 | OXY COGENERATION FACILITY | TX | PSD-276 | 12/20/2002 | COMBINED-CYCLE GAS TURBINES (2) | 87 | MW (EACH) | GOOD COMBUSTION PRACTICES | 112 | LB/H | BACT-PSD | 25 | PPM @ 15% O2 |
| TX-0391 | OXY COGENERATION FACILITY | TX | PSD-276 | 12/20/2002 | HRSG UNITS 1 & 2 (2) | 255 | MMBTU/H | GOOD COMBUSTION PRACTICES. | 117 | LB/H | BACT-PSD | 25 | PPM @ 15% O2 |
| TX-0350 | ENNIS TRACTEBEL POWER | TX | PSD-TX-927 | 1/31/2002 | COMBUSTION TURBINE W/HEAT RECOVERY STEAM GENERATOR | 350 | MW | NONE INDICATED | 124 | LB/H | Other Case-by-Case | 20 | PPM @ 15% O2 |
| TN-0144 | HAYWOOD ENERGY CENTER, LLC | TN | 954078F | 2/1/2002 | TURBINE, COMBINED CYCLE, W/ DUCT FIRING | 1990 | MMBTU/H | GOOD COMBUSTION PRACTICE | 129.3 | LB/H | BACT-PSD | 28.3 | PPM @ 15% O2 |
| MT-0019 | CONTINENTAL ENERGY SERVICES, INC., SILVER BOW GEN | MT | 3165-00 | 6/7/2002 | TURBINE, COMBINED CYCLE 2 | 500 | MW | | 139.9 | LB/H | Other Case-by-Case | 5.27 | PPM @ 15% O2 |
| MT-0019 | CONTINENTAL ENERGY SERVICES, INC., SILVER BOW GEN | MT | 3165-00 | 6/7/2002 | TURBINE, COMBINED CYCLE 1 | 500 | MW | | 139.9 | LB/H | Other Case-by-Case | 5.27 | PPM @ 15% O2 |
| LA-0224 | ARSENAL HILL POWER PLANT | LA | PSD-LA-726 | 3/20/2008 | TWO COMBINED CYCLE GAS TURBINES | 2110 | MMBTU/H | PROPER OPERATING PRACTICES | 143.31 | LB/H | BACT-PSD | 10 | PPMVD@15%O2 |
| TX-0411 | AMELIA ENERGY CENTER | TX | PSD-TX-982 | 3/26/2002 | TURBINE, COMBINED CYCLE, & DUCT BURNER (3) | 180 | MW | GOOD COMBUSTION PRACTICE | 208 | LB/H | BACT-PSD | 25 | PPM @ 15% O2 |
| LA-0136 | PLAQUEMINE COGENERATION FACILITY | LA | PSD-LA-659(M2) | 7/23/2008 | (4) GAS TURBINES/DUCT BURNERS | 2876 | MMBTU/H | GOOD COMBUSTION PRACTICES | 212.5 | LB/H | BACT-PSD | 25 | PPMVD @ 15% O2 |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Combustion Turbine Generator | 154 | MW | OXIDATION CATALYST SYSTEM | 224 | LB/HR | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Combustion Turbine Generator | 154 | MW | OXIDATION CATALYST SYSTEM | 224 | LB/HR | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Combustion Turbine Generator | 154 | MW | OXIDATION CATALYST SYSTEM | 247 | LB/HR | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: CO

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Combustion Turbine Generator | 154 | MW | OXIDATION CATALYST SYSTEM | 247 | LB/HR | BACT-PSD | 0 | |
| OH-0268 | LIMA ENERGY COMPANY | OH | 03-13445 | 3/26/2002 | COMBUSTION TURBINE (2), COMBINED CYCLE | 170 | MW | CATALYTIC OXIDATION PROVED NOT COST EFFECTIVE. | 251 | LB/H | BACT-PSD | 25 | PPM @ 15% O2 |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | CATALYST OXIDATION SYSTEM | 370.3 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | CATALYST OXIDATION SYSTEM | 370.3 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | CATALYST OXIDATION SYSTEM | 373.6 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | CATALYTIC OXIDATION SYSTEM | 373.6 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | CATALYTIC OXIDATION SYSTEM | 429.6 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | CATALYTIC OXIDATION SYSTEM | 429.6 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | CATALYTIC OXIDATION SYSTEM | 483.5 | LB/HR | BACT-PSD | 0 | |
| *CA-1211 | COLUSA GENERATING STATION | CA | SAC 06-01 | 3/11/2011 | COMBUSTION TURBINE GENERATOR | 172 | MW | CATALYTIC OXIDATION SYSTEM | 483.5 | LB/HR | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Combustion Turbine Generator | 154 | MW | OXIDATION CATALYST SYSTEM | 674 | LB/HR | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Combustion Turbine Generator | 154 | MW | OXIDATION CATALYST SYSTEM | 674 | LB/HR | BACT-PSD | 0 | |
| LA-0224 | ARSENAL HILL POWER PLANT | LA | PSD-LA-726 | 3/20/2008 | SCN-5 SHUTDOWN CTG-1 / SCN-9 SHUTDOWN CTG-2 | 2110 | MMBTU/H | COMPLETE EVENTS AS QUICKLY AS POSSIBLE ACCORDING TO MANUFACTURE¿S RECOMMENDED PROCEDURES. | 964.57 | LB/H | BACT-PSD | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | COMBUSTION TURBINE GENERATOR | 180 | MW | OXIDATION CATALYST SYSTEM | 1000 | LB/HR | BACT-PSD | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | COMBUSTION TURBINE GENERATOR | 180 | MW | OXIDATION CATALYST SYSTEM | 1000 | LB/HR | BACT-PSD | 0 | |
| LA-0164 | ACADIA POWER STATION, ACADIA POWER PARTNERS LLC | LA | PSD-LA-645 (M-2) | 1/31/2002 | GAS TURBINE UNITS 1, 2, 3, 4 | 183 | MW EACH | GOOD DESIGN, PROPER OPERATING AND MAINTENANCE PRACTICES, AND USE OF CLEAN NATURAL GAS. | 1225 | LB/H | BACT-PSD | 25 | PPM @ 15% O2 |
| LA-0224 | ARSENAL HILL POWER PLANT | LA | PSD-LA-726 | 3/20/2008 | SCN-3 COLD STARTUP CTG-1 SCN-7 COLD STARTUP CTG-2 | 2110 | MMBTU/H | COMPLETE EVENTS AS QUICKLY AS POSSIBLE ACCORDING TO MANUFACTURE¿S RECOMMENDED PROCEDURES. | 1508.15 | LB/H | BACT-PSD | 0 | |
| LA-0224 | ARSENAL HILL POWER PLANT | LA | PSD-LA-726 | 3/20/2008 | SCN-4 HOT STARTUP CTG-1 SCN-8 HOT STARTUP CTG-2 | 2110 | MMBTU/H | COMPLETE EVENTS AS QUICKLY AS POSSIBLE ACCORDING TO MANUFACTURE¿S RECOMMENDED PROCEDURES. | 1575.8 | LB/H | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: PM, PM10, PM2.5

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGH PUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LA-0257 | SABINE PASS LNG TERMINAL | LA | PSD-LA-703(M3) | 12/6/2011 | Simple Cycle Generation Turbines (2) | 286 | MMBTU/H | Particulate matter, total (TPM) | Good combustion practices and fueled by natural gas | 2.08 | LB/H | BACT-PSD | 0.007 | LB/MMBTU |
| LA-0256 | COGENERATION PLANT | LA | PSD-LA-754 | 12/6/2011 | COGENERATION TRAINS 1-3 (1-10, 2-10, 3-10) | 475 | MMBTU/H | Particulate matter, total < 10 µ (TPM10) | USE OF NATURAL GAS AS FUEL AND GOOD COMBUSTION PRACTICES | 3.72 | LB/H | BACT-PSD | 0.008 | LB/MMBTU |
| LA-0256 | COGENERATION PLANT | LA | PSD-LA-754 | 12/6/2011 | COGENERATION TRAINS 1-3 (1-10, 2-10, 3-10) | 475 | MMBTU/H | Particulate matter, total < 2.5 µ (TPM2.5) | USE OF NATURAL GAS AS FUEL AND GOOD COMBUSTION PRACTICES | 3.72 | LB/H | BACT-PSD | 0.008 | LB/MMBTU |
| *MI-0402 | SUMPTER POWER PLANT | MI | 81-11 | 11/17/2011 | Combined cycle combustion turbine w/ HRSG | 130 | MW electrical output | Particulate matter, total < 10 µ (TPM10) | | 0.0066 | LB/MMBTU | OTHER CASE-BY-CASE | 0 | |
| *MI-0402 | SUMPTER POWER PLANT | MI | 81-11 | 11/17/2011 | Combined cycle combustion turbine w/ HRSG | 130 | MW electrical output | Particulate matter, total < 2.5 µ (TPM2.5) | | 0.0066 | LB/MMBTU | BACT-PSD | 0 | |
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | COMBUSTION TURBINE GENERATOR | 154 | MW | Particulate matter, total (TPM) | USE PUC QUALITY NATURAL GAS | 0.0048 | LB/MMBTU | BACT-PSD | 0 | |
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | COMBUSTION TURBINE GENERATOR | 154 | MW | Particulate matter, total < 10 µ (TPM10) | USE PUC QUALITY NATURAL GAS | 0.0048 | LB/MMBTU | BACT-PSD | 0 | |
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | COMBUSTION TURBINE GENERATOR | 154 | MW | Particulate matter, total < 2.5 µ (TPM2.5) | USE PUC QUALITY NATURAL GAS | 0.0048 | LB/MMBTU | BACT-PSD | 0 | |
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | COMBUSTION TURBINE GENERATOR | 154 | MW | Particulate matter, total (TPM) | USE PUC QUALITY NATURAL GAS | 0.0048 | LB/MMBTU | BACT-PSD | 0 | |
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | COMBUSTION TURBINE GENERATOR | 154 | MW | Particulate matter, total < 10 µ (TPM10) | USE PUC QUALITY NATURAL GAS | 0.0048 | LB/MMBTU | BACT-PSD | 0 | |
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | COMBUSTION TURBINE GENERATOR | 154 | MW | Particulate matter, total < 2.5 µ (TPM2.5) | USE PUC QUALITY NATURAL GAS | 0.0048 | LB/MMBTU | BACT-PSD | 0 | |
| TX-0600 | THOMAS C. FERGUSON POWER PLANT | TX | PSDTX1244 | 9/1/2011 | Natural gas-fired turbines | 390 | MW | Particulate matter, total < 2.5 µ (TPM2.5) | pipeline quality natural gas | 33.43 | LB/H | BACT-PSD | 0.086 | |
| LA-0254 | NINEMILE POINT ELECTRIC GENERATING PLANT | LA | PSD-LA-752 | 8/16/2011 | COMBINED CYCLE TURBINE GENERATORS (UNITS 6A & 6B) | 7146 | MMBTU/H | Particulate matter, total < 2.5 µ (TPM2.5) | WHILE FIRING NATURAL GAS: USE OF PIPELINE QUALITY NATURAL GAS AND GOOD COMBUSTION PRACTICES WHILE FIRING FUEL OIL: USE OF ULTRA LOW SULFUR FUEL OIL AND GOOD COMBUSTION PRACTICES | 26.23 | LB/H | BACT-PSD | 0.004 | LB/MMBTU |
| LA-0254 | NINEMILE POINT ELECTRIC GENERATING PLANT | LA | PSD-LA-752 | 8/16/2011 | COMBINED CYCLE TURBINE GENERATORS (UNITS 6A & 6B) | 7146 | MMBTU/H | Particulate matter, total < 10 µ (TPM10) | WHILE FIRING NATURAL GAS: USE OF PIPELINE QUALITY NATURAL GAS AND GOOD COMBUSTION PRACTICES WHILE FIRING FUEL OIL: USE OF ULTRA LOW SULFUR FUEL OIL AND GOOD COMBUSTION PRACTICES | 26.23 | LB/H | BACT-PSD | 0.004 | LB/MMBTU |
| OR-0048 | CARTY PLANT | OR | 25-0016-ST-02 | 12/29/2010 | COMBINED CYCLE NATURAL GAS-FIRED ELECTRIC GENERATING UNIT | 2866 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUEL | 2.5 | LB/MMCF | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: PM, PM10, PM2.5

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGH PUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *AK-0073 | INTERNATIONAL STATION POWER PLANT | AK | AQ0164CPT01 | 12/20/2010 | Fuel Combustion | 59900 | HP | Particulate matter, filterable < 10 µ (FPM10) | Combustion Turbines EU IDs 5-8 use good combustion practices involve increasing the residence time and excess oxygen to ensure complete combustion which in turn minimize particulates without an add-on control technology. | 0.0066 | LB/MMBTU | BACT-PSD | 0 | |
| AK-0071 | INTERNATIONAL STATION POWER PLANT | AK | AQ0164CPT01 | 12/20/2010 | GE LM6000PF-25 Turbines (4) | 59900 | hp ISO | Particulate matter, total (TPM) | Good Combustion Practices | 0.0066 | LB/MMBTU | BACT-PSD | 0 | |
| AK-0071 | INTERNATIONAL STATION POWER PLANT | AK | AQ0164CPT01 | 12/20/2010 | GE LM6000PF-25 Turbines (4) | 59900 | hp ISO | Particulate matter, total < 10 µ (TPM10) | Good Combustion Practices | 0.0066 | LB/MMBTU | BACT-PSD | 0 | |
| AK-0071 | INTERNATIONAL STATION POWER PLANT | AK | AQ0164CPT01 | 12/20/2010 | GE LM6000PF-25 Turbines (4) | 59900 | hp ISO | Particulate matter, total < 2.5 µ (TPM2.5) | Good Combustion Practices | 0.0066 | LB/MMBTU | BACT-PSD | 0 | |
| *AK-0073 | INTERNATIONAL STATION POWER PLANT | AK | AQ0164CPT01 | 12/20/2010 | Fuel Combustion | 140 | MMBTU/H | Particulate matter, total < 10 µ (TPM10) | Combustion Turbines EU IDs 9-12 use good combustion practices involve increasing the residence time and excess oxygen to ensure complete combustion which in turn minimize particulates without an add-on control technology. | 7.6 | LB/MMBTU | BACT-PSD | 0 | |
| *VA-0315 | WARREN COUNTY POWER PLANT - DOMINION | VA | 81391-007 | 12/17/2010 | Combined cycle turbine and duct burner, 3 | 2996 | MMBTU/H | Particulate matter, total < 10 µ (TPM10) | Natural Gas only, fuel has maximum sulfur content of 0.0003% by weight. | 8 | LB/H | BACT-PSD | 0.003 | LB/MMBTU |
| *VA-0315 | WARREN COUNTY POWER PLANT - DOMINION | VA | 81391-007 | 12/17/2010 | Combined cycle turbine and duct burner, 3 | 2996 | MMBTU/H | Particulate matter, total < 2.5 µ (TPM2.5) | Natural Gas only, fuel has maximum sulfur content of 0.0003% by weight. | 8 | LB/H | BACT-PSD | 0.003 | LB/MMBTU |
| TX-0590 | KING POWER STATION | TX | PSDTX1125 | 8/5/2010 | Turbine | 1350 | MW | Particulate matter, total (TPM) | use low ash fuel (natural gas or low sulfur diesel as a backup) and good combustion practices | 11.1 | LB/H | BACT-PSD | 0 | |
| TX-0590 | KING POWER STATION | TX | PSDTX1125 | 8/5/2010 | Turbine | 1350 | MW | Particulate matter, total < 10 µ (TPM10) | use of low ash fuel (natural gas or low sulfur diesel as a backup) | 11.1 | LB/H | BACT-PSD | 0 | |
| TX-0590 | KING POWER STATION | TX | PSDTX1125 | 8/5/2010 | Turbine | 1350 | MW | Particulate matter, total < 2.5 µ (TPM2.5) | use of low ash fuel (natural gas or low sulfur diesel as a backup) | 11.1 | LB/H | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Combustion Turbine Generator | 154 | MW | Particulate matter, total (TPM) | PUC QUALITY NATURAL GAS | 12 | LB/H | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Combustion Turbine Generator | 154 | MW | Particulate matter, total < 2.5 µ (TPM2.5) | PUC QUALITY NATURAL GAS | 12 | LB/H | BACT-PSD | 0 | |
| OK-0129 | CHOUTEAU POWER PLANT | OK | 2007-115-C(M-1)PSD | 1/23/2009 | COMBINED CYCLE COGENERATION >25MW | 1882 | MMBTU/H | Particulate matter, total < 10 µ (TPM10) | NATURAL GAS FUEL | 6.59 | LB/H | N/A | 0.004 | LB/MMBTU |
| FL-0304 | CANE ISLAND POWER PARK | FL | PSD-FL-400 (0970043-014-AC) | 9/8/2008 | 300 MW COMBINED CYCLE COMBUSTION TURBINE | 1860 | MMBTU/H | Particulate matter, total < 10 µ (TPM10) | FUEL SPECIFICATIONS : 2 GR S/100 SCF OF GAS | 2 | GR S/100 SCF GAS | BACT-PSD | 0 | |
| LA-0136 | PLAQUEMINE COGENERATION FACILITY | LA | PSD-LA-659(M2) | 7/23/2008 | (4) GAS TURBINES/DUCT BURNERS | 2876 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | USE OF CLEAN BURNING FUELS | 33.5 | LB/H | BACT-PSD | 0.012 | LB/MMBTU |
| LA-0224 | ARSENAL HILL POWER PLANT | LA | PSD-LA-726 | 3/20/2008 | TWO COMBINED CYCLE GAS TURBINES | 2110 | MMBTU/H | Particulate Matter (PM) | GOOD COMBUSTION DESIGN/ PROPER OPERATING PRACTICES/ PIPELINE QUALITY NATURAL GAS AS FUEL | 24.23 | LB/H | BACT-PSD | 0.011 | LB/MMBTU |

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGH PUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CT-0151 | KLEEN ENERGY SYSTEMS, LLC | CT | 104-0131 AND 104-0133 | 2/25/2008 | SIEMENS SGT6-5000F COMBUSTION TURBINE #1 AND #2 (NATURAL GAS FIRED) WITH 445 MMBTU/HR NATURAL GAS DUCT BURNER | 2.1 | MMCF/H | Particulate matter, filterable < 10 µ (FPM10) | | 11 | LB/H | BACT-PSD | 0 | |
| MN-0071 | FAIRBAULT ENERGY PARK | MN | 13100071-003 | 6/5/2007 | COMBINED CYCLE COMBUSTION TURBINE W/DUCT BURNER | 1758 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.01 | LB/MMBTU | BACT-PSD | 0.03 | LB/MMBTU |
| CA-1144 | BLYTHE ENERGY PROJECT II | CA | SE 02-01 | 4/25/2007 | 2 COMBUSTION TURBINES | 170 | MW | Particulate matter, filterable < 10 µ (FPM10) | USE PUBLIC UTILITY COMMISSION QUALITY NATURAL GAS W/ SULFUR CONTENT LESS THAN OR EQUAL TO 0.5 GRAINS PER 100 SCF | 6 | LB/H | BACT-PSD | 0 | |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | COMBINED CYCLE COMBUSTION GAS TURBINES - 6 UNITS | 2333 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 2 | GS/100 SCF GAS | BACT-PSD | 0 | |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO 99.8 MMBTU/H GAS-FUELED AUXILIARY BOILERS | 99.8 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 2 | GS/100 SCF GAS | BACT-PSD | 0 | |
| TX-0497 | INEOS CHOCOLATE BAYOU FACILITY | TX | PSD-TX 983 AND 46192 | 8/29/2006 | COGENERATION TRAIN 2 AND 3 (TURBINE AND DUCT BURNER EMISSIONS) | 35 | MW | Particulate matter, filterable < 10 µ (FPM10) | THE USE OF PROPER COMBUSTION CONTROL AND FIRING ONLY GASEOUS FUELS CONTAINING NO ASH IS BACT FOR PARTICULATE MATTER FROM THE GAS FIRED TURBINES AND DUCT BURNERS. | 10.03 | LB/H | BACT-PSD | 0 | |
| TX-0502 | NACOGDOCHES POWER STERNE GENERATING FACILITY | TX | PSD-TX 1015 AND 49293 | 6/5/2006 | WESTINGHOUSE/SIEMENS MODEL SW501F GAS TURBINE W/ 416.5 MMBTU DUCT BURNERS | 190 | MW | Particulate matter, filterable < 10 µ (FPM10) | STEAG POWER LLC REPRESENTS THE FIRING OF PIPELINE NATURAL GAS IN THE COMBUSTION TURBINES AND DUCT FIRED HRSGS AS BACT FOR PM10. | 26.9 | LB/H | BACT-PSD | 0 | |
| NY-0095 | CAITHNES BELLPORT ENERGY CENTER | NY | PSD-NY-0001 | 5/10/2006 | COMBUSTION TURBINE | 2221 | MMBUT/H | Particulate matter, filterable < 10 µ (FPM10) | LOW SULFUR FUEL | 0.0055 | LB/MMBTU | BACT-PSD | 0 | |
| CO-0056 | ROCKY MOUNTAIN ENERGY CENTER, LLC | CO | 05WE0524 | 5/2/2006 | NATURAL-GAS FIRED, COMBINED-CYCLE TURBINE | 300 | MW | Particulate matter, filterable < 10 µ (FPM10) | NATURAL GAS QUALITY FUEL ONLY AND GOOD COMBUSTION CONTROL PRACTICES. | 0.0074 | LB/MMBTU | BACT-PSD | 0 | |
| NC-0101 | FORSYTH ENERGY PLANT | NC | 00986R1 | 9/29/2005 | TURBINE, COMBINED CYCLE, NATURAL GAS, (3) | 1844.3 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | USE OF ONLY CLEAN-BURNING LOW-SULFUR FUELS AND GOOD COMBUSTION PRACTICES. | 0.019 | LB/MMBTU | BACT-PSD | 0 | |
| NC-0101 | FORSYTH ENERGY PLANT | NC | 00986R1 | 9/29/2005 | TURBINE & DUCT BURNER, COMBINED CYCLE, NAT GAS, 3 | 1844.3 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN BURNING LOW-SULFUR FUELS AND GOOD COMBUSTION PRACTICES | 0.021 | LB/MMBTU | BACT-PSD | 0 | |
| NV-0035 | TRACY SUBSTATION EXPANSION PROJECT | NV | AP4911-1504 | 8/16/2005 | TURBINE, COMBINED CYCLE COMBUSTION #2 WITH HRSG AND DUCT BURNER. | 306 | MW | Particulate matter, filterable < 10 µ (FPM10) | BEST COMBUSTION PRACTICES. | 0.011 | LB/MMBTU | BACT-PSD | 0 | |
| NV-0035 | TRACY SUBSTATION EXPANSION PROJECT | NV | AP4911-1504 | 8/16/2005 | TURBINE, COMBINED CYCLE COMBUSTION #1 WITH HRSG AND DUCT BURNER. | 306 | MW | Particulate matter, filterable < 10 µ (FPM10) | BEST COMBUSTION PRACTICES. | 0.011 | LB/MMBTU | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: PM, PM10, PM2.5

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGH PUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MI-0366 | BERRIEN ENERGY, LLC | MI | 323-01A | 4/13/2005 | 3 COMBUSTION TURBINES AND DUCT BURNERS | 1584 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | STATE OF THE ART COMBUSTION TECHNIQUES AND USE OF NATURAL GAS ARE BACT FOR PM10. | 19 | LB/H | BACT-PSD | 0.012 | LB/MMBTU |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | TURBINES (4) (MODEL GE 7FA), DUCT BURNERS OFF | 172 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 15 | LB/H | BACT-PSD | 0 | |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | TURBINES (4) (MODEL GE 7FA), DUCT BURNERS ON | 172 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 23.3 | LB/H | BACT-PSD | 0 | |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | COMBUSTION TURBINE GENERATORS AND HEAT RECOVERY STEAM GENERATORS - GE7FA TURBINES OPTION | 170 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 29.8 | LB/H | BACT-PSD | 0 | |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | COMBUSTION TURBINE GENERATORS AND HEAT RECOVERY STEAM GENERATORS - SW501F TURBINES OPTION | 180 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 33.1 | LB/H | BACT-PSD | 0 | |
| MS-0073 | RELIANT ENERGY CHOCTAW COUNTY, LLC | MS | 0444-00018 | 11/23/2004 | EMISSION POINT AA-001 GEN. ELEC. COMBUST. TURBINE | 230 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 20.59 | LB/H | BACT-PSD | 0 | |
| NV-0033 | EL DORADO ENERGY, LLC | NV | A-00652 | 8/19/2004 | COMBUSTION TURBINE, COMBINED CYCLE & COGEN(2) | 475 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 9 | LB/H | LAER | 0 | |
| CA-1143 | SUTTER POWER PLANT | CA | SAC 98-01 | 8/16/2004 | 2 COMBUSTION TURBINES | 170 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 11.5 | LB/H | BACT-PSD | 0 | |
| MN-0053 | FAIRBAULT ENERGY PARK | MN | 13100071-001 | 7/15/2004 | TURBINE, SIMPLE CYCLE, NATURAL GAS (1) | 1663 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUEL AND GOOD COMBUSTION PRACTICES. | 0.01 | LB/MMBTU | BACT-PSD | 0 | |
| MN-0053 | FAIRBAULT ENERGY PARK | MN | 13100071-001 | 7/15/2004 | TURBINE, COMBINED CYCLE, NATURAL GAS (1) | 1876 | MMBTU/H | Particulate Matter (PM) | CLEAN FUEL AND GOOD COMBUSTION PRACTICES. | 0.01 | LB/MMBTU | BACT-PSD | 0 | |
| UT-0066 | CURRANT CREEK | UT | DAQE-2524002-04 | 5/17/2004 | NATURAL GAS FIRED TURBINES AND HEAT RECOVERY STEAM GENERATORS | | | Particulate matter, filterable < 10 µ (FPM10) | | 0.066 | LB/MMBTU | BACT-PSD | 0 | |
| NV-0037 | COPPER MOUNTAIN POWER | NV | 15347 | 5/14/2004 | LARGE COMBUSTION TURBINES, COMBINED CYCLE & COGENERATION | 600 | MW | Particulate matter, filterable < 10 µ (FPM10) | USE OF LOW-SULFUR NATURAL GAS | 21.3 | LB/H | LAER | 21.3 | LB/H |
| VA-0289 | DUKE ENERGY WYTHE, LLC | VA | 11382 | 2/5/2004 | TURBINE, COMBINED CYCLE, NATURAL GAS | 170 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES. | 17.5 | LB/H | BACT-PSD | 0 | |
| VA-0289 | DUKE ENERGY WYTHE, LLC | VA | 11382 | 2/5/2004 | TURBINE, COMBINED CYCLE, DUCT BURNER, NATURAL GAS | 170 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES | 23.7 | LB/H | BACT-PSD | 0 | |

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGH PUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OR-0039 | COB ENERGY FACILITY, LLC | OR | 18-0029 | 12/30/2003 | DUCT BURNERS, NATURAL GAS, (4) | 654 | MMBTU/H | Particulate Matter (PM) | CLEAN FUEL | 0.03 | LB/MMBTU | N/A | 0.03 | LB/MMBTU |
| OR-0039 | COB ENERGY FACILITY, LLC | OR | 18-0029 | 12/30/2003 | TURBINE, COMBINED CYCLE, DUCT BURNER, NAT GAS, (4) | 1150 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION AND FIRING NATURAL GAS | 14 | LB/H | BACT-PSD | 0 | |
| NV-0038 | IVANPAH ENERGY CENTER, L.P. | NV | 1616 | 12/29/2003 | LARGE COMBUSTION TURBINES, COMBINED CYCLE & COGENERATION | 500 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION CONTROL AND USE OF PIPELINE-QUALITY NATURAL GAS | 11.25 | LB/H | LAER | 0 | |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | DUCT BURNER, 2 EACH | 800 | MMBTU/H | Particulate Matter (PM) | CLEAN FUEL AND GOOD COMBUSTION | 0.009 | LB/MMBTU | BACT-PSD | 0.009 | LB/MMBTU |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | DUCT BURNER, 2 EACH | 800 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUEL AND GOOD COMBUSTION | 0.009 | LB/MMBTU | BACT-PSD | 0.009 | LM/MMBTU |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | COMBUSTION TURBINE, LARGE, 2 EACH | 1916 | MMBTU/H | Particulate Matter (PM) | CLEAN FUELS AND GOOD COMBUSTION PRACTICES | 0.009 | LB/MMBTU | BACT-PSD | 0 | |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | COMBUSTION TURBINE, LARGE, 2 EACH | 1916 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUELS AND GOOD COMBUSTION PRACTICES | 0.009 | LB/MMBTU | BACT-PSD | 0 | |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | COMBUSTION TURBINE, LARGE 2 EACH | 1827 | MMBTU/H | Particulate Matter (PM) | CLEAN FUELS AND GOOD COMBUSTION | 0.057 | LB/MMBTU | BACT-PSD | 0 | |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | COMBUSTION TURBINE, LARGE 2 EACH | 1827 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUELS AND GOOD COMBUSTION | 0.057 | LB/MMBTU | BACT-PSD | 0 | |
| VA-0287 | JAMES CITY ENERGY PARK | VA | 61442 | 12/1/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS | 1973 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES/DESIGN AND CLEAN FUEL | 18 | LB/H | BACT-PSD | 0.009 | LB/MMBTU |
| VA-0287 | JAMES CITY ENERGY PARK | VA | 61442 | 12/1/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS | 1973 | MMBTU/H | Particulate Matter (PM) | GOOD COMBUSTION/DESIGN AND CLEAN FUEL | 18 | LB/H | BACT-PSD | 0.009 | LB/MMBTU |
| VA-0287 | JAMES CITY ENERGY PARK | VA | 61442 | 12/1/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS,DUCT BURNER | 1973 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION/DESIGN AND CLEAN FUEL | 24.7 | LB/H | BACT-PSD | 0.013 | LB/MMBTU |
| VA-0287 | JAMES CITY ENERGY PARK | VA | 61442 | 12/1/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS,DUCT BURNER | 1973 | MMBTU/H | Particulate Matter (PM) | GOOD COMBUSTION/DESIGN AND CLEAN FUEL | 24.7 | LB/H | BACT-PSD | 0.013 | LB/MMBTU |
| AZ-0043 | DUKE ENERGY ARLINGTON VALLEY (AVEFII) | AZ | S01-004 | 11/12/2003 | TURBINE, COMBINED CYCLE | 325 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 18 | LB/H | BACT-PSD | 0 | |
| AZ-0043 | DUKE ENERGY ARLINGTON VALLEY (AVEFII) | AZ | S01-004 | 11/12/2003 | TURBINE, COMBINED CYCLE & DUCT BURNER | 325 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 25 | LB/H | BACT-PSD | 0 | |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | SIEMENS WESTINGHOUSE COMBUSTION TURBINES AND HEAT RECOVERY STEAM GENERATORS | 1080 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 30.3 | LB/H | BACT-PSD | 0 | |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | GE COMBUSTION TURBINES AND HEAT RECOVERY STEAM GENERATORS | 1040 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 45.5 | LB/H | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: PM, PM10, PM2.5

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGH PUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CA-0997 | SACRAMENTO MUNICIPAL UTILITY DISTRICT | CA | 16006 | 9/1/2003 | GAS TURBINES, (2) | 1611 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION CONTROL | 9 | LB/H | LAER | 0.006 | LB/MMBTU |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | TURBINES (2) (MODEL GE 7FA), DUCT BURNERS OFF | 170 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 19 | LB/H | BACT-PSD | 0 | |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | TURBINES (2) (MODEL GE 7FA), DUCT BURNERS ON | 170 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 28 | LB/H | BACT-PSD | 0 | |
| OK-0096 | REDBUD POWER PLANT | OK | 2000-090-C M-3 PSD | 6/3/2003 | COMBUSTION TURBINE AND DUCT BURNERS | 1832 | MMBTU/H | Particulate Matter (PM) | USE OF LOW ASH FUEL AND EFFICIENT COMBUSTION | 0.012 | LB/MMBTU | BACT-PSD | 0 | |
| NE-0017 | BEATRICE POWER STATION | NE | 76739 | 5/29/2003 | TURBINE, COMBINED CYCLE, (2) | 80 | MW | Particulate Matter (PM) | | 10.8 | LB/H | Other Case-by-Case | 0 | |
| CA-1096 | VERNON CITY LIGHT & POWER | CA | 394164 | 5/27/2003 | GAS TURBINE: COMBINED CYCLE < 50 MW | 43 | MW GAS TURBINE, 55 M | Particulate Matter (PM) | | 0.01 | G/SCF | BACT-PSD | 0 | |
| CA-1097 | MAGNOLIA POWER PROJECT, SCPPA | CA | 386305 | 5/27/2003 | GAS TURBINE: COMBINED CYCLE >= 50 MW | 181 | NET MW (GAS TURBINE | Particulate Matter (PM) | | 0.01 | G/SCF | BACT-PSD | 0 | |
| GA-0105 | MCINTOSH COMBINED CYCLE FACILITY | GA | 4911-103-0014-V-01-0 | 4/17/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS, (4) | 140 | MW | Particulate Matter (PM) | CLEAN FUEL, GOOD COMBUSTION PRACTICE | 0.009 | LB/MMBTU | BACT-PSD | 0 | |
| WA-0315 | SUMAS ENERGY 2 GENERATION FACILITY | WA | EFSEC 2001-02 | 4/17/2003 | TURBINES, COMBINED CYCLE, (2) | 660 | MW | Particulate matter, filterable (FPM) | GOOD COMBUSTION PRACTICE, LOW SULFUR FUEL | 194 | LB/D | BACT-PSD | 0 | |
| WA-0315 | SUMAS ENERGY 2 GENERATION FACILITY | WA | EFSEC 2001-02 | 4/17/2003 | TURBINES, COMBINED CYCLE, (2) | 660 | MW | Particulate Matter (PM) | GOOD COMBUSTION PRACTICE, CLEAN FUEL | 377 | LB/D | BACT-PSD | 0 | |
| OK-0090 | DUKE ENERGY STEPHENS, LLC STEPHENS ENERGY | OK | 2001-157-C M-1 PSD | 3/21/2003 | TURBINES, COMBINED CYCLE (2) | 1701 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUEL AND EFFICIENT COMBUSTION | 0.015 | LB/MMBTU | Other Case-by-Case | 0 | |
| OR-0040 | KLAMATH GENERATION, LLC | OR | 18-0026 | 3/12/2003 | TURBINE, COMBINED CYCLE, DUCT BURNER, NAT GAS (2) | 480 | MW | Particulate matter, filterable < 10 µ (FPM10) | NATURAL GAS < 1 GR S/100 SCF OF GAS | 0.0042 | LB/MMBTU | BACT-PSD | 0 | |
| AZ-0039 | SALT RIVER PROJECT/SANTAN GEN. PLANT | AZ | V95-008 S01-014 | 3/7/2003 | TURBINE, COMBINED CYCLE, DUCT BURNER, NATURAL GAS | 175 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 0.01 | LB/MMBTU | LAER | 0 | |
| MI-0357 | KALKASKA GENERATING, INC | MI | 119-02 | 2/4/2003 | DUCT BURNERS ON HRSGS, (2) | 620 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES AND CLEAN FUEL. | 0.01 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |
| MI-0357 | KALKASKA GENERATING, INC | MI | 119-02 | 2/4/2003 | TURBINE, COMBINED CYCLE, (2) | 605 | MW | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUEL AND GOOD COMBUSTION PRACTICES. | 38 | LB/H | BACT-PSD | 0 | |
| MI-0361 | SOUTH SHORE POWER LLC | MI | 342-01 | 1/30/2003 | TURBINE, COMBINED CYCLE, (2) | 172 | MW | Particulate matter, filterable < 10 µ (FPM10) | USE OF NATURAL GAS AND STATE OF THE ART COMBUSTION TECHNIQUES. | 24 | LB/H | BACT-PSD | 0 | |
| MI-0365 | MIRANT WYANDOTTE LLC | MI | 279-98B | 1/28/2003 | TURBINE, COMBINED CYCLE, (2) | 2200 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES AND USE OF PIPELINE QUALITY NATURAL GAS REPRESENT BACT. | 5.6 | MG/CM | BACT-PSD | 0 | |
| WA-0291 | WALLULA POWER PLANT | WA | EFSEC/2001-03 | 1/3/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS (4) | 1300 | MW | Particulate Matter (PM) | | 0.0029 | GR/DSCF | Other Case-by-Case | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: PM, PM10, PM2.5

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGH PUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WA-0291 | WALLULA POWER PLANT | WA | EFSEC/2001-03 | 1/3/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS (4) | 1300 | MW | Particulate matter, filterable < 10 µ (FPM10) | EXCLUSIVE USE OF NATURAL GAS HAS BEEN SELECTED TO BE THE LOWEST AVAILABLE EMISSION RATE (LAER) FOR THE CONTROL OF PM10 EMISSIONS FROM EACH PGU. | 0.0029 | GR/DSCF | LAER | 0 | |
| TX-0352 | BRAZOS VALLEY ELECTRIC GENERATING FACILITY | TX | PSD-TX-966 | 12/31/2002 | (2) HRSG/TURBINES, HRSG-003 & -004 | 175 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION CONTROLS | 38.6 | LB/H | BACT-PSD | 0 | |
| TX-0352 | BRAZOS VALLEY ELECTRIC GENERATING FACILITY | TX | PSD-TX-966 | 12/31/2002 | (2) HRSG/TURBINES, HRSG-001 & -002 | 175 | MW, EA | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION CONTROLS | 38.6 | LB/H | BACT-PSD | 0 | |
| TX-0391 | OXY COGENERATION FACILITY | TX | PSD-276 | 12/20/2002 | COMBINED-CYCLE GAS TURBINES (2) | 87 | MW (EACH) | Particulate matter, filterable < 10 µ (FPM10) | | 5 | LB/H | Other Case-by-Case | 0 | |
| TX-0391 | OXY COGENERATION FACILITY | TX | PSD-276 | 12/20/2002 | HRSG UNIT NO. 3 | 255 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 20 | LB/H | Other Case-by-Case | 0.078 | LB/MMBTU |
| TX-0391 | OXY COGENERATION FACILITY | TX | PSD-276 | 12/20/2002 | HRSG UNITS 1 & 2 (2) | 255 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 20 | LB/H | Other Case-by-Case | 0.078 | LB/MMBTU |
| VA-0262 | MIRANT AIRSIDE INDUSTRIAL PARK | VA | 32008 | 12/6/2002 | TURBINE, SIMPLE CYCLE, (4) | 84 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES. DRIFT ELIMINATORS. | 10 | LB/H | BACT-PSD | 0 | |
| VA-0262 | MIRANT AIRSIDE INDUSTRIAL PARK | VA | 32008 | 12/6/2002 | TURBINE, COMBINED CYCLE, (2) | 170 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES. DRIFT ELIMINATORS. | 18 | LB/H | BACT-PSD | 0 | |
| TX-0407 | STERNE ELECTRIC GENERATING FACILITY | TX | PSD-TX-1015 | 12/6/2002 | TURBINES, COMBINED CYCLE, AND DUCT BURNERS (3) | 190 | MW | Particulate matter, filterable < 10 µ (FPM10) | USAGE OF PIPELINE NATURAL GAS. | 26.9 | LB/H | BACT-PSD | 0 | |
| VA-0260 | HENRY COUNTY POWER | VA | 21389 | 11/21/2002 | TURBINE, COMBINED CYCLE, (4), 70% LOAD | 171 | MW | Particulate Matter (PM) | GOOD COMBUSTION AND DESIGN. CLEAN BURNING FUEL. | 0.014 | LB/MMBTU | BACT-PSD | 0 | |
| VA-0260 | HENRY COUNTY POWER | VA | 21389 | 11/21/2002 | TURBINE, COMBINED CYCLE, (4), 70% LOAD | 171 | MW | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUEL. GOOD COMBUSTION AND DESIGN. | 0.014 | LB/MMBTU | BACT-PSD | 0 | |
| VA-0260 | HENRY COUNTY POWER | VA | 21389 | 11/21/2002 | TURBINE, COMBINED CYCLE, (4), 100% LOAD | 171 | MW | Particulate Matter (PM) | GOOD COMBUSTION DESIGN AND CLEAN FUEL | 25.3 | LB/H | BACT-PSD | 0 | |
| VA-0260 | HENRY COUNTY POWER | VA | 21389 | 11/21/2002 | TURBINE, COMBINED CYCLE, (4), 100% LOAD | 171 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION DESIGN AND CLEAN FUEL. | 25.3 | LB/H | BACT-PSD | 0 | |
| VA-0255 | VA POWER - POSSUM POINT | VA | 70225 | 11/18/2002 | DUCT BURNERS | 385 | MMBTU/H | Particulate Matter (PM) | | 0.03 | LB/MMBTU | BACT-PSD | 0.03 | LB/MMBTU |
| VA-0255 | VA POWER - POSSUM POINT | VA | 70225 | 11/18/2002 | TURBINE, NATURAL GAS, NO DUCT BURNER FIRING | 1937 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 18.3 | LB/H | BACT-PSD | 0.009 | LB/MMBTU |
| VA-0255 | VA POWER - POSSUM POINT | VA | 70225 | 11/18/2002 | TURBINE, COMBINED CYCLE, NATURAL GAS, DUCT BURNER | 1937 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 22.2 | LB/H | BACT-PSD | 0.011 | LB/MMBTU |
| GA-0101 | MURRAY ENERGY FACILITY | GA | 4911-213-0034-P-01-1 | 10/23/2002 | TURBINE, COMBINED CYCLE, (4) | 173 | MW | Particulate Matter (PM) | GOOD COMBUSTION PRACTICE, CLEAN FUEL | 25 | LB/H | BACT-PSD | 0 | |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | TURBINES (3), COMBINED CYCLE, DUCT BURNERS ON | 180 | MW | Particulate matter, filterable < 10 µ (FPM10) | BURNING NATURAL GAS | 0.0101 | LB/MMBTU | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: PM, PM10, PM2.5

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGH PUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | TURBINES (3), COMBINED CYCLE, DUCT BURNERS OFF | 180 | MW | Particulate matter, filterable < 10 µ (FPM10) | BURNING NATURAL GAS | 12.7 | LB/H | BACT-PSD | 0 | |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE AA-001 W/DUCT BURNER | 2168 | MMBTU/H | Particulate Matter (PM) | LOW ASH FUEL AND GOOD COMBUSTION PRACTICES | 44.2 | LB/H | BACT-PSD | 0.020 | LB/MMBTU |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE AA-001 W/DUCT BURNER | 2168 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | LOW ASH FUEL AND GOOD COMBUSTION PRACTICES | 44.2 | LB/H | BACT-PSD | 0.020 | LB/MMBTU |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE, AA-002 W /DUCT BURNER | 2168 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | LOW ASH FUEL AND GOOD COMBUSTION PRACTICES | 44.2 | LB/H | BACT-PSD | 0.020 | LB/MMBTU |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE, AA-002 W /DUCT BURNER | 2168 | MMBTU/H | Particulate Matter (PM) | LOW ASH FUEL AND GOOD COMBUSTION PRACTICES | 44.2 | LB/H | BACT-PSD | 0.020 | LB/MMBTU |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE, AA-003 /DUCT BURNER | 2168 | MMBTU/H | Particulate Matter (PM) | LOW ASH FUEL AND GOOD COMBUSTION PRACTICES | 44.2 | LB/H | BACT-PSD | 0.020 | LB/MMBTU |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE, AA-003 /DUCT BURNER | 2168 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | LOW ASH FUEL AND GOOD COMBUSTION PRACTICES | 44.2 | LB/H | BACT-PSD | 0.020 | LB/MMBTU |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE AA-004 W/ DUCT BURNER | 2168 | MMBTU/H | Particulate Matter (PM) | LOW ASH FUEL AND GOOD COMBUSTION PRACTICES | 44.2 | LB/H | BACT-PSD | 0.020 | LB/MMBTU |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE AA-004 W/ DUCT BURNER | 2168 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | LOW ASH FUEL AND GOOD COMBUSTION PRACTICES | 44.2 | LB/H | BACT-PSD | 0.020 | LB/MMBTU |
| WA-0299 | SUMAS ENERGY 2 GENERATION FACILITY | WA | EFSEC/2001-02 | 9/6/2002 | TURBINES, COMBINED CYCLE, (2) | 334.5 | MW | Particulate matter, filterable (FPM) | CLEAN FUEL -- NATURAL GAS ONLY | 0.0039 | LB/MMBTU | BACT-PSD | 0 | |
| WA-0299 | SUMAS ENERGY 2 GENERATION FACILITY | WA | EFSEC/2001-02 | 9/6/2002 | TURBINES, COMBINED CYCLE, (2) | 334.5 | MW | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUEL -- NATURAL GAS ONLY | 0.0115 | LB/MMBTU | BACT-PSD | 0 | |
| VA-0261 | CPV CUNNINGHAM CREEK | VA | 81382 | 9/6/2002 | TURBINE, COMBINED CYCLE, (2) | 2132 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.0119 | LB/MMBTU | BACT-PSD | 0 | |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | DUCT BURNERS | 200 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICE | 0.02 | LB/MMBTU | BACT-PSD | 0.02 | LB/MMBTU |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | TURBINE, COMBINED CYCLE, (2), (SWH) | 170 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICE/CLEAN FUEL | 17 | LB/H | BACT-PSD | 0 | |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | TURBINE, COMBINED CYCLE, (2), (MHI) | 170 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICE | 18.5 | LB/H | BACT-PSD | 0 | |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | TURBINE, COMBINED CYCLE, (2), (GE ) | 170 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES/CLEAN FUEL | 19.5 | LB/H | BACT-PSD | 0 | |
| CO-0052 | ROCKY MOUNTAIN ENERGY CENTER, LLC. | CO | 02WE0228 | 8/11/2002 | TWO (2) NATURAL GAS FIRED, COMBINED-CYCLE, TURBINE | 2311 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | USE OF PIPELINE QUALITY NATURAL GAS AND APPLICATION OF GOOD COMBUSTION CONTROL PRACTICES | 0.0065 | LB/MMBTU | BACT-PSD | 0 | |
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | DUCT BURNER, NATURAL GAS, (4) | 300 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.0075 | LB/MMBTU | BACT-PSD | 0.0075 | LB/MMBTU |
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | TURBINE, COMBINED CYCLE, NATURAL GAS (4) | 1490.5 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.012 | LB/MMBTU | BACT-PSD | 0 | |
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | TURBINES, SIMPLE CYCLE, NATURAL GAS, (4) | 1490.5 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.012 | LB/MMBTU | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: PM, PM10, PM2.5

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGH PUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | TURBINE, COMBINED CYCLE AND DUCT BURNER, NAT GAS | 1490.5 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 20.2 | LB/H | BACT-PSD | 0.014 | LB/MMBTU |
| AL-0185 | BARTON SHOALS ENERGY | AL | X001, X002 | 7/12/2002 | FOUR (4) COMBINED CYCLE COMBUSTION TURBINE UNITS | 173 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES | 0.006 | LB/MMBTU | BACT-PSD | 0 | |
| NM-0044 | CLOVIS ENERGY FACILITY | NM | PSD-NM-2605 | 6/27/2002 | TURBINES, COMBINED CYCLE, NATURAL GAS (4) | 1515 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 19 | LB/H | BACT-PSD | 0.013 | LB/MMBTU |
| MS-0055 | EL PASO MERCHANT ENERGY CO. | MS | 0540-00080 | 6/24/2002 | TURBINE, COMBINED CYCLE, DUCT BURNER, NAT GAS, (2) | 1737 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | USE OF LOW ASH FUEL | 20.5 | LB/H | BACT-PSD | 0.012 | LB/MMBTU |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | SW COMBUSTION TURBINE | 1872 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | LOW ASH FUEL AND EFFICIENT COMBUSTION | 0.0092 | LB/MMBTU | BACT-PSD | 0 | |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | MHI COMBUSTION TURBINE & DUCT BURNERS | 1767 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | LOW ASH FUEL AND EFFICIENT COMBUSTION | 0.01 | LB/MMBTU | BACT-PSD | 0 | |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | GE COMBUSTION TURBINE & DUCT BURNERS | 1705 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | LOW SULFUR FUEL AND EFFICIENT COMBUSTION | 0.019 | LB/MMBTU | BACT-PSD | 0 | |
| MT-0019 | CONTINENTAL ENERGY SERVICES, INC., SILVER BOW GEN | MT | 3165-00 | 6/7/2002 | TURBINE, COMBINED CYCLE 2 | 500 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 32.4 | LB/H | Other Case-by-Case | 0 | |
| MT-0019 | CONTINENTAL ENERGY SERVICES, INC., SILVER BOW GEN | MT | 3165-00 | 6/7/2002 | TURBINE, COMBINED CYCLE 1 | 500 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 32.4 | LB/H | Other Case-by-Case | 0 | |
| NC-0095 | MIRANT GASTONIA POWER FACILITY | NC | 09175R00 | 5/28/2002 | TURBINES, COMBINED CYCLE, GE | 175 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES | 14.1 | LB/H | BACT-PSD | 0 | |
| NC-0095 | MIRANT GASTONIA POWER FACILITY | NC | 09175R00 | 5/28/2002 | TURBINES, COMBINED CYCLE, GE, DUCT BURNERS | 175 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES | 16.85 | LB/H | BACT-PSD | 0 | |
| NC-0095 | MIRANT GASTONIA POWER FACILITY | NC | 09175R00 | 5/28/2002 | TURBINES, COMBINED CYCLE, MHI/SW | 175 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES | 18.79 | LB/H | Other Case-by-Case | 0 | |
| NC-0095 | MIRANT GASTONIA POWER FACILITY | NC | 09175R00 | 5/28/2002 | TURBINES, COMBINED CYCLE, MHI/SW, DUCT BURNERS | 175 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES | 21.32 | LB/H | BACT-PSD | 0 | |
| OH-0264 | NORTON ENERGY STORAGE, LLC | OH | 16-02110 | 5/23/2002 | COMBUSTION TURBINE (9), COMB CYCLE W/O DUCT BURNER | 300 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 12 | LB/H | BACT-PSD | 0 | |
| OH-0264 | NORTON ENERGY STORAGE, LLC | OH | 16-02110 | 5/23/2002 | COMBUSTION TURBINES (9), COMB CYCLE W DUCT BURNER | 300 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 13 | LB/H | BACT-PSD | 0 | |
| AZ-0038 | GILA BEND POWER GENERATING STATION | AZ | V00-001 | 5/15/2002 | TURBINE, COMBINED CYCLE, DUCT BURNER, NATURAL GAS | 170 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 0.014 | LB/MMBTU | BACT-PSD | 0 | |
| IA-0058 | GREATER DES MOINES ENERGY CENTER | IA | 77-13-002 | 4/10/2002 | COMBUSTION TURBINES -SIMPLE CYCLE | 350 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 0.0094 | LB/MMBTU | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: PM, PM10, PM2.5

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGH PUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IA-0058 | GREATER DES MOINES ENERGY CENTER | IA | 77-13-002 | 4/10/2002 | COMBUSTION TURBINES - COMBINED CYCLE | 350 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 0.0108 | LB/MMBTU | BACT-PSD | 0 | |
| PA-0226 | LIMERICK POWER STATION | PA | PA-46-0203 | 4/9/2002 | TURBINE, COMBINED CYCLE | 550 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 0.014 | LB/MMBTU | Other Case-by-Case | 0 | |
| AR-0051 | DUKE ENERGY-JACKSON FACILITY | AR | 1998-AOP-R0 (34-0259) | 4/1/2002 | TURBINES, COMBINED CYCLE, NATURAL GAS, (2) | 170 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION CONTROL, CLEAN FUEL | 32.2 | LB/H | BACT-PSD | 0 | |
| PA-0188 | FAIRLESS ENERGY LLC | PA | PA-09-0124B | 3/28/2002 | TURBINE, COMBINED CYCLE | 1190 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 0.014 | LB/MMBTU | BACT-PSD | 0 | |
| NJ-0043 | LIBERTY GENERATING STATION | NJ | BOP990001 | 3/28/2002 | DUCT BURNER (3) | 256 | MMBTU/H | Particulate Matter (PM) | NONE LISTED | 0.03 | LB/MMBTU | BACT-PSD | 0.03 | LB/MMBTU |
| NJ-0043 | LIBERTY GENERATING STATION | NJ | BOP990001 | 3/28/2002 | COMBINED CYCLE TURBINE (3) | 2964 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | NONE LISTED | 35.8 | LB/H | BACT-PSD | 0.012 | LB/MMBTU |
| NJ-0043 | LIBERTY GENERATING STATION | NJ | BOP990001 | 3/28/2002 | COMBINED CYCLE TURBINE WITH DUCT BURNER | 3202 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | NONE LISTED | 38.8 | LB/H | Other Case-by-Case | 0.012 | LB/MMBTU |
| OH-0268 | LIMA ENERGY COMPANY | OH | 03-13445 | 3/26/2002 | COMBUSTION TURBINE (2), COMBINED CYCLE | 170 | MW | Particulate matter, filterable < 10 µ (FPM10) | USE OF CLEAN BURNING FUELS. | 18 | LB/H | BACT-PSD | 0 | |
| TX-0411 | AMELIA ENERGY CENTER | TX | PSD-TX-982 | 3/26/2002 | TURBINE, COMBINED CYCLE, & DUCT BURNER (3) | 180 | MW | Particulate matter, filterable < 10 µ (FPM10) | NATURAL GAS COMBUSTION | 25.6 | LB/H | BACT-PSD | 0 | |
| TX-0351 | WEATHERFORD ELECTRIC GENERATION FACILITY | TX | PSD-TX-933 | 3/11/2002 | (2) GE7121EA GAS TURBINES, S-3&4 | 1079 | MMBTU/H | Particulate Matter (PM) | NONE INDICATED | 14 | LB/H | Other Case-by-Case | 0.013 | LB/MMBTU |
| TX-0351 | WEATHERFORD ELECTRIC GENERATION FACILITY | TX | PSD-TX-933 | 3/11/2002 | (2) GE 7241FA GAS TURBINES (TEMP STACK), S-1&2 | 1910 | MMBTU/H | Particulate Matter (PM) | NONE INDICATED | 18 | LB/H | Other Case-by-Case | 0.009 | LB/MMBTU |
| LA-0157 | PERRYVILLE POWER STATION | LA | PSD-LA-655 (M-1) | 3/8/2002 | DUCT BURNERS, (2) EPNS 1-1, 1-2 | 310 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD OPERATING PRACTICES AND USE OF NATURAL GAS AS FUEL. | 0.01 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |
| LA-0157 | PERRYVILLE POWER STATION | LA | PSD-LA-655 (M-1) | 3/8/2002 | TURBINE, SIMPLE CYCLE, NAT GAS, EPN 2-1 | 170 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD OPERATING PRACTICES AND USE OF NATURAL GAS AS FUEL. | 18 | LB/H | BACT-PSD | 0 | |
| LA-0157 | PERRYVILLE POWER STATION | LA | PSD-LA-655 (M-1) | 3/8/2002 | TURBINES, COMBINED CYCLE, GAS, (2) EPNS 1-1, 1-2 | 170 | MW | Particulate matter, filterable < 10 µ (FPM10) | PROPER OPERATING INSTRUCTIONS AND USE OF NATURAL GAS AS FUEL | 23 | LB/H | BACT-PSD | 0 | |
| LA-0157 | PERRYVILLE POWER STATION | LA | PSD-LA-655 (M-1) | 3/8/2002 | TURBINE, COMBINED CYCLE, HRSG, NAT GAS, (2) EPNS 1-1, 1-2 | 183 | MW | Particulate matter, filterable < 10 µ (FPM10) | GOOD OPERATING PRACTICES AND USE OF NATURAL GAS AS FUEL. | 26.2 | LB/H | BACT-PSD | 0 | |
| LA-0120 | GEISMAR PLANT | LA | PSD-LA-647 (M-2) | 2/26/2002 | (2) COGENERATION UNITS POINT # 720-99 AND 721-99 | 40 | MW EACH | Particulate matter, filterable < 10 µ (FPM10) | USE OF CLEAN NATURAL GAS WITH GOOD COMBUSTION PRACTICES AND NO ADD-ON CONTROLS. | 10.8 | LB/H | BACT-PSD | 0 | |
| WA-0289 | TRANSALTA CENTRALIA GENERATION LLC | WA | PSD-01-01 | 2/22/2002 | (4) TURBINE/HRSG | | | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES AND NATURAL GAS AS FUEL | 4.1 | LB/H | BACT-PSD | 0 | |
| WA-0289 | TRANSALTA CENTRALIA GENERATION LLC | WA | PSD-01-01 | 2/22/2002 | (4) TURBINE/HRSG | | | Particulate Matter (PM) | GOOD COMBUSTION PRACTICES | 4.1 | LB/H | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: PM, PM10, PM2.5

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGH PUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AR-0052 | THOMAS B. FITZHUGH GENERATING STATION | AR | 1165-AOP-R1 (24-0012) | 2/15/2002 | HEAT RECOVERY STEAM GENERATOR (DUCT BURNER) | 220 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUELS | 4.4 | LB/H | BACT-PSD | 0.02 | LB/MMBTU |
| AR-0052 | THOMAS B. FITZHUGH GENERATING STATION | AR | 1165-AOP-R1 (24-0012) | 2/15/2002 | TURBINE, COMBINED CYCLE, NATURAL GAS | 170.6 | MW | Particulate matter, filterable < 10 µ (FPM10) | LOW ASH FUELS, GOOD COMBUSTION PRACTICE | 5.9 | LB/H | BACT-PSD | 0 | |
| OK-0055 | MUSTANG ENERGY PROJECT | OK | 2001-132-C PSD | 2/12/2002 | COMBUSTION TURBINES W/DUCT BURNERS | 0 | | Particulate matter, filterable < 10 µ (FPM10) | USE OF NO-ASH FUEL AND EFFICIENT COMBUSTION | 0.007 | LB/MMBTU | BACT-PSD | 0 | |
| OK-0056 | HORSESHOE ENERGY PROJECT | OK | 2001-156-C PSD | 2/12/2002 | TURBINES AND DUCT BURNERS | 310 | MW TOTAL | Particulate matter, filterable < 10 µ (FPM10) | LOW ASH FUEL (NATURAL GAS) | 0.0117 | LB/MMBTU | BACT-PSD | 0 | |
| TX-0388 | SAND HILL ENERGY CENTER | TX | P1012 | 2/12/2002 | GAS TURBINES, SIMPLE CYCLE (4) | 48 | MW (EACH) | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICE | 4.5 | LB/H | Other Case-by-Case | 0 | |
| TX-0388 | SAND HILL ENERGY CENTER | TX | P1012 | 2/12/2002 | COMBINED CYCLE GAS TURBINE | 164 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 32 | LB/H | Other Case-by-Case | 0 | |
| TN-0144 | HAYWOOD ENERGY CENTER, LLC | TN | 954078F | 2/1/2002 | TURBINE, COMBINED CYCLE, W/O DUCT FIRING | 1990 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUELS, GOOD COMBUSTION PRACTICES | 12.5 | LB/H | BACT-PSD | 0.006 | LB/MMBTU |
| TN-0144 | HAYWOOD ENERGY CENTER, LLC | TN | 954078F | 2/1/2002 | TURBINE, COMBINED CYCLE, W/ DUCT FIRING | 1990 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUELS, GOOD COMBUSTION PRACTICES | 17.5 | LB/H | BACT-PSD | 0.009 | LB/MMBTU |
| LA-0164 | ACADIA POWER STATION, ACADIA POWER PARTNERS LLC | LA | PSD-LA-645 (M-2) | 1/31/2002 | GAS TURBINE UNITS 1, 2, 3, 4 | 183 | MW EACH | Particulate matter, filterable < 10 µ (FPM10) | GOOD DESIGN, PROPER OPERATING AND MAINTENANCE PRACTICES, USE OF CLEAN NATURAL GAS. | 20 | LB/H | BACT-PSD | 0 | |
| TX-0350 | ENNIS TRACTEBEL POWER | TX | PSD-TX-927 | 1/31/2002 | COMBUSTION TURBINE W/HEAT RECOVERY STEAM GENERATOR | 350 | MW | Particulate matter, filterable < 10 µ (FPM10) | NONE INDICATED | 25.62 | LB/H | Other Case-by-Case | 0 | |
| PA-0223 | DUKE ENERGY FAYETTE, LLC | PA | PA-26-00535A | 1/30/2002 | TURBINE, COMBINED CYCLE, (2) | 280 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 34.8 | LB/H | BACT-PSD | 0 | |
| FL-0241 | CPV CANA | FL | PSD-FL-323 | 1/17/2002 | TURBINE, COMBINED CYCLE, NATURAL GAS | 1680 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUELS GOOD COMBUSTION | 11 | LB/H | BACT-PSD | 0.007 | LB/MMBTU |
| PA-0189 | CONECTIV BETHLEHEM, INC. | PA | 48-328-006 | 1/16/2002 | TURBINE, COMBINED CYCLE, (6) | 122 | MW | Particulate matter, filterable < 10 µ (FPM10) | | 0.0135 | PPM | Other Case-by-Case | 0 | |
| OR-0035 | PORT WESTWARD PLANT | OR | 05-0008 | 1/16/2002 | (2) COMBUSTION TURBINES, WITH DUCT BURNER | 325 | MW, EACH | Particulate Matter (PM) | USE OF PIPELINE QUALITY NATURAL GAS | 0.1 | GR/DSCF | Other Case-by-Case | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: SO2

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *VA-0315 | WARREN COUNTY POWER PLANT - DOMINION | VA | 81391-007 | 12/17/2010 | Combined cycle turbine and duct burner, 3 | 2996 | MMBTU/H | Natural Gas only, fuel has maximum sulfur content of 0.0003% by weight. | 0.98 | LB/H | OTHER CASE-BY-CASE | 0.0003 | LB/MMBTU |
| OK-0129 | CHOUTEAU POWER PLANT | OK | 2007-115-C(M-1)PSD | 1/23/2009 | COMBINED CYCLE COGENERATION >25MW | 1882 | MMBTU/H | NATURAL GAS FUEL | 1.06 | LB/H | N/A | 0.0006 | LB/MMBTU |
| FL-0304 | CANE ISLAND POWER PARK | FL | PSD-FL-400 (0970043-014-AC) | 9/8/2008 | 300 MW COMBINED CYCLE COMBUSTION TURBINE | 1860 | MMBTU/H | FUEL SPECIFICATIONS. | 2 | GR S/100 SCF GAS | BACT-PSD | 0 | |
| FL-0303 | FPL WEST COUNTY ENERGY CENTER UNIT 3 | FL | 0990646-002-AC (PSD-FL-396) | 7/30/2008 | THREE NOMINAL 250 MW CTG (EACH) WITH SUPPLEMENTARY-FIRED HRSG | 2333 | MMBTU/H | | 2 | GR S/100SCF | BACT-PSD | 0 | |
| LA-0136 | PLAQUEMINE COGENERATION FACILITY | LA | PSD-LA-659(M2) | 7/23/2008 | (4) GAS TURBINES/DUCT BURNERS | 2876 | MMBTU/H | LOW SULFUR FUELS WITH MAXIMUM SULFUR CONTENT OF 5 GR/100 SCF. | 40.7 | LB/H | BACT-PSD | 3.3 | PPMVD @ 15% O2 |
| LA-0224 | ARSENAL HILL POWER PLANT | LA | PSD-LA-726 | 3/20/2008 | TWO COMBINED CYCLE GAS TURBINES | 2110 | MMBTU/H | USE LOW-SULFUR PIPELINE-QUALITY NATURAL GAS AS FUEL | 12.06 | LB/H | BACT-PSD | 0.0057 | LB/MMBTU |
| FL-0285 | PROGRESS BARTOW POWER PLANT | FL | PSD-FL-381 AND 1030011-010-AC | 1/26/2007 | COMBINED CYCLE COMBUSTION TURBINE SYSTEM (4-ON-1) | 1972 | MMBTU/H | | 2 | GR/100SCF | BACT-PSD | 0 | |
| FL-0285 | PROGRESS BARTOW POWER PLANT | FL | PSD-FL-381 AND 1030011-010-AC | 1/26/2007 | SIMPLE CYCLE COMBUSTION TURBINE (ONE UNIT) | 1972 | MMBTU/H | | 2 | GR/100SCF | BACT-PSD | 0 | |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | COMBINED CYCLE COMBUSTION GAS TURBINES - 6 UNITS | 2333 | MMBTU/H | LOW SULFUR FUELS | 2 | GS/100 SCF GAS | BACT-PSD | 0 | |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO 99.8 MMBTU/H GAS-FUELED AUXILIARY BOILERS | 99.8 | MMBTU/H | | 2 | GS/100 SCF GAS | BACT-PSD | 0 | |
| NC-0101 | FORSYTH ENERGY PLANT | NC | 00986R1 | 9/29/2005 | TURBINE, COMBINED CYCLE, NATURAL GAS, (3) | 1844.3 | MMBTU/H | USE OF VERY LOW-SULFUR FUEL (NATURAL GAS) | 0.0006 | LB/MMBTU | BACT-PSD | 0 | |
| NC-0101 | FORSYTH ENERGY PLANT | NC | 00986R1 | 9/29/2005 | TURBINE & DUCT BURNER, COMBINED CYCLE, NAT GAS, 3 | 1844.3 | MMBTU/H | LOW SULFUR FUEL (NATURAL GAS) | 0.0006 | LB/MMBTU | BACT-PSD | 0 | |
| OR-0041 | WANAPA ENERGY CENTER | OR | R10PSD-OR-05-01 | 8/8/2005 | COMBUSTION TURBINE & HEAT RECOVERY STEAM GENERATOR | 2384.1 | MMBTU/H | | 0 | | BACT-PSD | 0 | |
| MN-0053 | FAIRBAULT ENERGY PARK | MN | 13100071-001 | 7/15/2004 | TURBINE, COMBINED CYCLE, NATURAL GAS (1) | 1876 | MMBTU/H | LOW SULFUR FUEL. | 0.8 | GR/SCF | BACT-PSD | 0 | |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | COMBUSTION TURBINE, LARGE 2 EACH | 1827 | MMBTU/H | LOW SULFLUR FUEL | 0.05 | % S BY WT | BACT-PSD | 0 | |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | COMBUSTION TURBINE, LARGE, 2 EACH | 1916 | MMBTU/H | LOW SULFUR FUEL | 0.8 | GR/100SCF | BACT-PSD | 0 | |
| VA-0287 | JAMES CITY ENERGY PARK | VA | 61442 | 12/1/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS,DUCT BURNER | 1973 | MMBTU/H | LOW SULFUR FUELS | 11.3 | LB/H | BACT-PSD | 0.0057 | LB/MMBTU |
| VA-0287 | JAMES CITY ENERGY PARK | VA | 61442 | 12/1/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS | 1973 | MMBTU/H | LOW SULFUR FUELS | 11.4 | LB/H | BACT-PSD | 0.0058 | LB/MMBTU |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: SO2

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FL-0256 | HINES ENERGY COMPLEX, POWER BLOCK 3 | FL | PSD-FL-330 AND 1050234-006-AC | 9/8/2003 | COMBUSTION TURBINES, COMBINED CYCLE, NATURAL GAS,2 | 1830 | MMBTU/H | PERMIT LIMIT IS LOW SULFUR FUELS | 0 | | BACT-PSD | 0 | |
| CA-0997 | SACRAMENTO MUNICIPAL UTILITY DISTRICT | CA | 16006 | 9/1/2003 | GAS TURBINES, (2) | 1611 | MMBTU/H | LOW SULFUR NATURAL GAS | 1 | GR/100 SCF | LAER | 0 | |
| OK-0096 | REDBUD POWER PLANT | OK | 2000-090-C M-3 PSD | 6/3/2003 | COMBUSTION TURBINE AND DUCT BURNERS | 1832 | MMBTU/H | VERY LOW SO2 EMISSION RATE-LOW SULFUR FUEL | 0.003 | LB/MMBTU | BACT-PSD | 0 | |
| MI-0362 | MIDLAND COGENERATION (MCV) | MI | 209-02 | 4/21/2003 | TURBINE, COMBINED CYCLE, (11) | 984 | MMBTU/H | USE OF NATURAL GAS WITH SULFUR CONTENT OF 0.2 GRAINS/100 CUBIC FEET OF GAS. | 0.2 | GR/100 SCF | BACT-PSD | 0 | |
| OK-0090 | DUKE ENERGY STEPHENS, LLC STEPHENS ENERGY | OK | 2001-157-C M-1 PSD | 3/21/2003 | TURBINES, COMBINED CYCLE (2) | 1701 | MMBTU/H | USE OF PIPELINE-QUALITY NATURAL GAS (VERY LOW SULFUR FUEL) MAXIMUM 0.8 % S BY WT. | 0.006 | LB/MMBTU | BACT-PSD | 0 | |
| MI-0365 | MIRANT WYANDOTTE LLC | MI | 279-98B | 1/28/2003 | TURBINE, COMBINED CYCLE, (2) | 2200 | MMBTU/H | USE OF SWEET NATURAL GAS WITH SULFUR CONTENT NOT TO EXCEED 0.8 GRAINS PER 100 SCF. | 53.4 | T/YR | BACT-PSD | 0 | |
| TX-0391 | OXY COGENERATION FACILITY | TX | PSD-276 | 12/20/2002 | HRSG UNIT NO. 3 | 255 | MMBTU/H | LOW SULFUR NG LIMITED TO 5 GRAINS/100 DSCF. | 0.2 | LB/H | Other Case-by-Case | 0.0008 | LB/MMBTU |
| TX-0391 | OXY COGENERATION FACILITY | TX | PSD-276 | 12/20/2002 | HRSG UNITS 1 & 2 (2) | 255 | MMBTU/H | SULFUR CONTENT LIMITED TO LESS THAN 5 GRAINS/100 DSCF. | 0.84 | LB/H | BACT-PSD | 0.0033 | LB/MMBTU |
| VA-0255 | VA POWER - POSSUM POINT | VA | 70225 | 11/18/2002 | TURBINE, COMBINED CYCLE, NATURAL GAS, DUCT BURNER | 1937 | MMBTU/H | | 2.08 | LB/H | BACT-PSD | 0 | |
| VA-0255 | VA POWER - POSSUM POINT | VA | 70225 | 11/18/2002 | TURBINE, NATURAL GAS, NO DUCT BURNER FIRING | 1937 | MMBTU/H | | 1.74 | LB/H | BACT-PSD | 0 | |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE AA-001 W/DUCT BURNER | 2168 | MMBTU/H | LOW SULFUR FUEL | 15.6 | LB/H | BACT-PSD | 0.0072 | LB/MMBTU |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE, AA-002 W /DUCT BURNER | 2168 | MMBTU/H | LOW SULFUR FUEL | 15.6 | LB/H | BACT-PSD | 0.0072 | LB/MMBTU |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE, AA-003 /DUCT BURNER | 2168 | MMBTU/H | LOW SULFUR FUEL | 15.6 | LB/H | BACT-PSD | 0.0072 | LB/MMBTU |
| MS-0059 | PIKE GENERATION FACILITY | MS | 2280-00062 | 9/24/2002 | TURBINE AA-004 W/ DUCT BURNER | 2168 | MMBTU/H | LOW SULFUR FUEL | 15.6 | LB/H | BACT-PSD | 0.0072 | LB/MMBTU |
| VA-0261 | CPV CUNNINGHAM CREEK | VA | 81382 | 9/6/2002 | TURBINE, COMBINED CYCLE, (2) | 2132 | MMBTU/H | | 0.0119 | LB/MMBTU | BACT-PSD | 0 | |
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | TURBINE, COMBINED CYCLE, NATURAL GAS (4) | 1490.5 | MMBTU/H | LOW SULFUR NATURAL GAS: 0.007 % S BY WT (2 GR/100 SCF), GOOD COMBUSTION PRACTICE | 0.0028 | LB/MMBTU | BACT-PSD | 0 | |
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | TURBINES, SIMPLE CYCLE, NATURAL GAS, (4) | 1490.5 | MMBTU/H | LOW SULFUR NATURAL GAS: < 0.007 % S BY WT (2 GR/100 SCF), GOOD COMBUSTION PRACTICES. | 0.0028 | LB/MMBTU | BACT-PSD | 0 | |
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | TURBINE, COMBINED CYCLE AND DUCT BURNER, NAT GAS | 1490.5 | MMBTU/H | LOW SULFUR NATURAL GAS: < .007 %S BY WT (2 GR/100 SCF), GOOD COMBUSTION PRACTICE. | 4.4 | LB/H | BACT-PSD | 0.0030 | LB/MMBTU |
| NM-0044 | CLOVIS ENERGY FACILITY | NM | PSD-NM-2605 | 6/27/2002 | TURBINES, COMBINED CYCLE, NATURAL GAS (4) | 1515 | MMBTU/H | PIPELINE QUALITY NATURAL GAS, GOOD ENGINEERING PRACTICE | 4.3 | LB/H | BACT-PSD | 0.0028 | LB/MMBTU |
| MS-0055 | EL PASO MERCHANT ENERGY CO. | MS | 0540-00080 | 6/24/2002 | TURBINE, COMBINED CYCLE, DUCT BURNER, NAT GAS, (2) | 1737 | MMBTU/H | LOW SULFUR FUEL | 32.2 | LB/H | BACT-PSD | 0.0185 | LB/MMBTU |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: SO2

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NJ-0043 | LIBERTY GENERATING STATION | NJ | BOP990001 | 3/28/2002 | COMBINED CYCLE TURBINE WITH DUCT BURNER | 3202 | MMBTU/H | NONE LISTED | 0.004 | LB/MMBTU | Other Case-by-Case | 0.8 | PPM @ 15% O2 |
| NJ-0043 | LIBERTY GENERATING STATION | NJ | BOP990001 | 3/28/2002 | COMBINED CYCLE TURBINE (3) | 2964 | MMBTU/H | ONLY USE NATURAL GAS WITH SULFUR CONTENT 0.8% | 0.004 | LB/MMBTU | Other Case-by-Case | 0.8 | PPM @ 15% O2 |
| NJ-0043 | LIBERTY GENERATING STATION | NJ | BOP990001 | 3/28/2002 | DUCT BURNER (3) | 256 | MMBTU/H | NONE LISTED | 0.2 | LB/MMBTU | BACT-PSD | 0.2 | LB/MMBTU |
| FL-0239 | JEA/BRANDY BRANCH | FL | PSD-FL-310 | 3/27/2002 | TURBINES, COMBINED CYCLE, (2) | 1911 | MMBTU/H | CLEAN FUELS, SULFUR FUEL LIMIT. | 2 | GR/100SCF | Other Case-by-Case | 0 | |
| TX-0351 | WEATHERFORD ELECTRIC GENERATION FACILITY | TX | PSD-TX-933 | 3/11/2002 | (2) GE7121EA GAS TURBINES, S-3&4 | 1079 | MMBTU/H | PIPELINE-QUALITY, SWEET NAT GAS CONTAINING NO MORE THAN 2.0 GR S/100 DSCF | 6 | LB/H | N/A | 0.0056 | LB/MMBTU |
| TX-0351 | WEATHERFORD ELECTRIC GENERATION FACILITY | TX | PSD-TX-933 | 3/11/2002 | (2) GE 7241FA GAS TURBINES (TEMP STACK), S-1&2 | 1910 | MMBTU/H | PIPELINE-QUALITY, SWEET NAT GAS CONTAINING NO MORE THAN 2.0 GR S/100 DSCF | 10.5 | LB/H | N/A | 0.0055 | LB/MMBTU |
| AR-0052 | THOMAS B. FITZHUGH GENERATING STATION | AR | 1165-AOP-R1 (24-0012) | 2/15/2002 | HEAT RECOVERY STEAM GENERATOR (DUCT BURNER) | 220 | MMBTU/H | GOOD COMBUSTION PRACTICES AND DESIGN. | 1 | PPM @ 15% O2 | BACT-PSD | 0 | |
| TN-0144 | HAYWOOD ENERGY CENTER, LLC | TN | 954078F | 2/1/2002 | TURBINE, COMBINED CYCLE, W/O DUCT FIRING | 1990 | MMBTU/H | LOW SULFUR FUEL (<2.0 GR SULFUR PER 100 SCF OF NATURAL GAS) | 9.8 | LB/H | BACT-PSD | 0.0049 | LB/MMBTU |
| TN-0144 | HAYWOOD ENERGY CENTER, LLC | TN | 954078F | 2/1/2002 | TURBINE, COMBINED CYCLE, W/ DUCT FIRING | 1990 | MMBTU/H | LOW SULFUR FUEL (<2.0 GR SULFUR PER 100 SCF OF NATURAL GAS) | 11.7 | LB/H | BACT-PSD | 0.0059 | LB/MMBTU |
| FL-0241 | CPV CANA | FL | PSD-FL-323 | 1/17/2002 | TURBINE, COMBINED CYCLE, NATURAL GAS | 1680 | MMBTU/H | CLEAN FUELS, FUEL SULFUR LIMIT: .0065% S | 0 | | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: H2SO4

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TX-0600 | THOMAS C. FERGUSON POWER PLANT | TX | PSDTX1244 | 9/1/2011 | Natural gas-fired turbines | 390 | MW | pipeline quality natural gas | 13.68 | LB/H | BACT-PSD | 0 | |
| *VA-0315 | WARREN COUNTY POWER PLANT - DOMINION | VA | 81391-007 | 12/17/2010 | Combined cycle turbine and duct burner, 3 | 2996 | MMBTU/H | Natural Gas burning. | 0.0001 | LB/MMBTU | BACT-PSD | 0 | |
| LA-0224 | ARSENAL HILL POWER PLANT | LA | PSD-LA-726 | 3/20/2008 | TWO COMBINED CYCLE GAS TURBINES | 2110 | MMBTU/H | USE OF LOW-SULFUR PIPELINE QUALITY NATURAL GAS AS FUEL AND PROPER SCR DESIGN | 1.85 | LB/H | BACT-PSD | 0.0009 | LB/MMBTU |
| FL-0256 | HINES ENERGY COMPLEX, POWER BLOCK 3 | FL | PSD-FL-330 AND 1050234-006-AC | 9/8/2003 | COMBUSTION TURBINES, COMBINED CYCLE, NATURAL GAS,2 | 1830 | MMBTU/H | PERMIT LIMIT IS LOW SULFUR FUELS-NATURAL GAS | 0 | | Other Case-by-Case | 0 | |
| TX-0497 | INEOS CHOCOLATE BAYOU FACILITY | TX | PSD-TX 983 AND 46192 | 8/29/2006 | COGENERATION TRAIN 2 AND 3 (TURBINE AND DUCT BURNER EMISSIONS) | 35 | MW | THE TURBINES WILL FIRE NATURAL GAS AND THE DUCT BURNERS WILL FIRE NATURAL GAS AND COMPLEX GAS WITH A SULFUR CONTENT LESS THAN FIVE GRAINS PER 100 STANDARD CUBIC FEET ON AN HOURLY BASIS | 1.94 | LB/H | BACT-PSD | 0 | |
| TX-0502 | NACOGDOCHES POWER STERNE GENERATING FACILITY | TX | PSD-TX 1015 AND 49293 | 6/5/2006 | WESTINGHOUSE/SIEMENS MODEL SW501F GAS TURBINE W/ 416.5 MMBTU DUCT BURNERS | 190 | MW | | 1.3 | LB/H | BACT-PSD | 0 | |
| MI-0365 | MIRANT WYANDOTTE LLC | MI | 279-98B | 1/28/2003 | TURBINE, COMBINED CYCLE, (2) | 2200 | MMBTU/H | USE OF NATURAL GAS. LOW SULFUR FUEL | 12.3 | T/YR | Other Case-by-Case | 0 | |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | COMBUSTION TURBINE, LARGE 2 EACH | 1827 | MMBTU/H | LOW SULFUR FUEL | 0.05 | % S BY WT | BACT-PSD | 0 | |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | COMBUSTION TURBINE, LARGE, 2 EACH | 1916 | MMBTU/H | LOW SULFUR FUEL | 0.8 | GR/100 SCT | BACT-PSD | 0 | |
| MS-0055 | EL PASO MERCHANT ENERGY CO. | MS | 0540-00080 | 6/24/2002 | TURBINE, COMBINED CYCLE, DUCT BURNER, NAT GAS, (2) | 1737 | MMBTU/H | USE OF LOW SULFUR FUEL | 10 | T/YR | BACT-PSD | 0 | |
| NC-0101 | FORSYTH ENERGY PLANT | NC | 00986R1 | 9/29/2005 | TURBINE, COMBINED CYCLE, NATURAL GAS, (3) | 1844.3 | MMBTU/H | VERY LOW-SULFUR FUEL (NATURAL GAS) OR NO. 2 FUEL OIL (0.015% SULFUR CONTENT BY WEIGHT). | 0 | | BACT-PSD | 0 | |
| NY-0095 | CAITHNES BELLPORT ENERGY CENTER | NY | PSD-NY-0001 | 5/10/2006 | COMBUSTION TURBINE | 2221 | MMBUT/H | LOWSULFUR FUEL | 0.0004 | LB/MMBTU | BACT-PSD | 0 | |
| NV-0035 | TRACY SUBSTATION EXPANSION PROJECT | NV | AP4911-1504 | 8/16/2005 | TURBINE, COMBINED CYCLE COMBUSTION #2 WITH HRSG AND DUCT BURNER. | 306 | MW | BEST COMBUSTION PRACTICES. | 1 | LB/H | BACT-PSD | 0 | |
| NV-0035 | TRACY SUBSTATION EXPANSION PROJECT | NV | AP4911-1504 | 8/16/2005 | TURBINE, COMBINED CYCLE COMBUSTION #1 WITH HRSG AND DUCT BURNER. | 306 | MW | BEST COMBUSTION PRACTICES. | 1 | LB/H | BACT-PSD | 0 | |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | TURBINES (4) (MODEL GE 7FA), DUCT BURNERS ON | 172 | MW | | 2.2 | LB/H | BACT-PSD | 0 | |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | TURBINES (4) (MODEL GE 7FA), DUCT BURNERS OFF | 172 | MW | | 1.68 | LB/H | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: H2SO4

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | TURBINES (2) (MODEL GE 7FA), DUCT BURNERS ON | 170 | MW | | 2.2 | LB/H | N/A | 0 | |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | TURBINES (2) (MODEL GE 7FA), DUCT BURNERS OFF | 170 | MW | | 1.7 | LB/H | N/A | 0 | |
| FL-0245 | FPL MANATEE PLANT - UNIT 3 | FL | PSD-FL-328 AND 0810010-006-AC | 4/15/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS (4) | 170 | MW | LOW SULFUR FUEL | 2 | GR/100 SCF | BACT-PSD | 0 | |
| FL-0245 | FPL MANATEE PLANT - UNIT 3 | FL | PSD-FL-328 AND 0810010-006-AC | 4/15/2003 | TURBINE, SIMPLE CYCLE, NATURAL GAS, (4) | 170 | MW | LOW SULFUR FUEL | 2 | GR/100 SCF | BACT-PSD | 0 | |
| MI-0357 | KALKASKA GENERATING, INC | MI | 119-02 | 2/4/2003 | TURBINE, COMBINED CYCLE, (2) | 605 | MW | USE OF LOW SULFUR FUEL. | 4.5 | LB/H | Other Case-by-Case | 0 | |
| TX-0352 | BRAZOS VALLEY ELECTRIC GENERATING FACILITY | TX | PSD-TX-966 | 12/31/2002 | (2) HRSG/TURBINES, HRSG-003 & -004 | 175 | MW | PIPELINE QUALITY NATURAL GAS | 1.3 | LB/H | Other Case-by-Case | 0 | |
| TX-0352 | BRAZOS VALLEY ELECTRIC GENERATING FACILITY | TX | PSD-TX-966 | 12/31/2002 | (2) HRSG/TURBINES, HRSG-001 & -002 | 175 | MW, EA | FIRING PIPELINE QUALITY NATURAL GAS | 1.3 | LB/H | Other Case-by-Case | 0 | |
| TX-0407 | STERNE ELECTRIC GENERATING FACILITY | TX | PSD-TX-1015 | 12/6/2002 | TURBINES, COMBINED CYCLE, AND DUCT BURNERS (3) | 190 | MW | | 1.3 | LB/H | BACT-PSD | 0 | |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | TURBINES (3), COMBINED CYCLE, DUCT BURNERS OFF | 180 | MW | | 1.82 | LB/H | BACT-PSD | 0 | |
| PA-0189 | CONECTIV BETHLEHEM, INC. | PA | 48-328-006 | 1/16/2002 | TURBINE, COMBINED CYCLE, (6) | 122 | MW | BACT FOR H2SO4 IS GOOD COMBUSTION AND LOW SULFUR FUELS | 0.0002 | PPM | Other Case-by-Case | 0 | |
| TN-0144 | HAYWOOD ENERGY CENTER, LLC | TN | 954078F | 2/1/2002 | TURBINE, COMBINED CYCLE, W/ DUCT FIRING | 1990 | MMBTU/H | LOW SULFUR FUEL (<2.0 GR SULFUR PER 100 SCF OF NATURAL GAS) | 20.1 | T/YR | BACT-PSD | 0 | |
| TN-0144 | HAYWOOD ENERGY CENTER, LLC | TN | 954078F | 2/1/2002 | TURBINE, COMBINED CYCLE, W/O DUCT FIRING | 1990 | MMBTU/H | LOW SULFUR FUEL (<2.0 GR SULFUR PER 100 SCF OF NATURAL GAS) | 20.1 | T/YR | BACT-PSD | 0 | |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | TURBINES (3), COMBINED CYCLE, DUCT BURNERS ON | 180 | MW | | 3.71 | LB/H | BACT-PSD | 0 | |
| VA-0261 | CPV CUNNINGHAM CREEK | VA | 81382 | 9/6/2002 | TURBINE, COMBINED CYCLE, (2) | 2132 | MMBTU/H | GOOD COMBUSTION PRACTICES. | 0.0012 | LB/MMBTU | BACT-PSD | 0 | |
| WA-0299 | SUMAS ENERGY 2 GENERATION FACILITY | WA | EFSEC/2001-02 | 9/6/2002 | TURBINES, COMBINED CYCLE, (2) | 334.5 | MW | LOW SULFUR FUEL -- NATURAL GAS ONLY | 0.0008 | LB/MMBTU | BACT-PSD | 0 | |
| AL-0185 | BARTON SHOALS ENERGY | AL | X001, X002 | 7/12/2002 | FOUR (4) COMBINED CYCLE COMBUSTION TURBINE UNITS | 173 | MW | NATURAL GAS ONLY | 0.0011 | LB/MMBTU | BACT-PSD | 0 | |
| OH-0264 | NORTON ENERGY STORAGE, LLC | OH | 16-02110 | 5/23/2002 | COMBUSTION TURBINE (9), COMB CYCLE W/O DUCT BURNER | 300 | MW | | 0.198 | LB/H | N/A | 0 | |
| OH-0264 | NORTON ENERGY STORAGE, LLC | OH | 16-02110 | 5/23/2002 | COMBUSTION TURBINES (9), COMB CYCLE W DUCT BURNER | 300 | MW | | 0.255 | LB/H | N/A | 0 | |
| NJ-0043 | LIBERTY GENERATING STATION | NJ | BOP990001 | 3/28/2002 | COMBINED CYCLE TURBINE WITH DUCT BURNER | 3202 | MMBTU/H | NONE | 7.8 | LB/H | Other Case-by-Case | 0.0024 | LB/MMBTU |
| TX-0428 | HOUSTON OPERATIONS -- BATTLEGROUND SITE | TX | PSD-TX-276 | 12/19/2002 | TURBINE, COMBINED CYCLE & DUCT BURNER | 87 | mw | LOW SULFUR PIPELINE NATURAL GAS AND PLANT FUEL GAS | 0 | | BACT-PSD | 0 | |
| TX-0437 | HARTBURG POWER, LP | TX | PSD-TX-1009 | 7/5/2002 | TURBINE, COMBINED CYCLE & DUCT BURNER | 277 | mw | USE OF PROPER COMBUSTION CONTROL AND LOW SULFUR FUEL: < 5 GR S/100 SCF HOURLY BASIS, < .25 GR S/100 SCF ANNUAL BASIS. | 0 | | BACT-PSD | 0 | |

# RBLC REVIEW FOR COMBINED CYLCE COMBUSTION TURBINES: H2SO4

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NJ-0043 | LIBERTY GENERATING STATION | NJ | BOP990001 | 3/28/2002 | COMBINED CYCLE TURBINE (3) | 2964 | MMBTU/H | NONE LISTED | 7.2 | LB/H | Other Case-by-Case | 0.0024 | LB/MMBTU |
| OH-0268 | LIMA ENERGY COMPANY | OH | 03-13445 | 3/26/2002 | COMBUSTION TURBINE (2), COMBINED CYCLE | 170 | MW | | 0.53 | LB/H | N/A | 0 | |
| TX-0411 | AMELIA ENERGY CENTER | TX | PSD-TX-982 | 3/26/2002 | TURBINE, COMBINED CYCLE, & DUCT BURNER (3) | 180 | MW | LOW SULFUR FUEL | 2.08 | LB/H | BACT-PSD | 0 | |
| TX-0351 | WEATHERFORD ELECTRIC GENERATION FACILITY | TX | PSD-TX-933 | 3/11/2002 | (2) GE 7241FA GAS TURBINES (TEMP STACK), S-1&2 | 1910 | MMBTU/H | PIPELINE-QUALITY, SWEET NAT GAS CONTAINING NO MORE THAN 2.0 GR S/100 DSCF | 0.8 | LB/H | Other Case-by-Case | 0.0004 | LB/MMBTU |
| TX-0351 | WEATHERFORD ELECTRIC GENERATION FACILITY | TX | PSD-TX-933 | 3/11/2002 | (2) GE7121EA GAS TURBINES, S-3&4 | 1079 | MMBTU/H | PIPELINE-QUALITY, SWEET NAT GAS CONTAINING NO MORE THAN 2.0 GR S/100 DSCF | 0.5 | LB/H | Other Case-by-Case | 0.0005 | LB/MMBTU |
| WA-0291 | WALLULA POWER PLANT | WA | EFSEC/2001-03 | 1/3/2003 | TURBINE, COMBINED CYCLE, NATURAL GAS (4) | 1300 | MW | EXCLUSIVE USE OF NATURAL GAS | 0.0002 | GR/DSCF | Other Case-by-Case | 0 | |
| TX-0350 | ENNIS TRACTEBEL POWER | TX | PSD-TX-927 | 1/31/2002 | COMBUSTION TURBINE W/HEAT RECOVERY STEAM GENERATOR | 350 | MW | NONE INDICATED | 2.37 | LB/H | Other Case-by-Case | 0 | |
| WA-0315 | SUMAS ENERGY 2 GENERATION FACILITY | WA | EFSEC 2001-02 | 4/17/2003 | TURBINES, COMBINED CYCLE, (2) | 660 | MW | LOW SULFUR FUEL: < 2 GR/100 CF 7 DAY AVG, 1.1 GR/100 CF 12 MO AVG | 39 | LB/D | BACT-PSD | 0 | |
| WA-0328 | BP CHERRY POINT COGENERATION PROJECT | WA | EFSEC/2002-01 | 1/11/2005 | GE 7FA COMBUSTION TURBINE & HEAT RECOVERY STEAM GENERATOR | 174 | MW | LIMIT FUEL TYPE TO NATURAL GAS | 0 | | BACT-PSD | 0 | |

# RBLC REVIEW FOR COOLING TOWERS IN POWER PLANTS: PM

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | COOLING TOWER | 130000 | GAL/MIN CIRCULATION RATE | Particulate matter, total (TPM) | | 1.6 | LB/HR | BACT-PSD | 5000 | PPM TDS |
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | COOLING TOWER | 130000 | GAL/MIN CIRCULATION RATE | Particulate matter, total < 10 µ (TPM10) | | 1.6 | LB/HR | BACT-PSD | 5000 | 5000 PPM TDS |
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | COOLING TOWER | 130000 | GAL/MIN CIRCULATION RATE | Particulate matter, total < 2.5 µ (TPM2.5) | | 1.6 | LB/HR | BACT-PSD | 5000 | PPM TDS |
| LA-0254 | NINEMILE POINT ELECTRIC GENERATING PLANT | LA | PSD-LA-752 | 8/16/2011 | CHILLER COOLING TOWER (CHILL CT) | 12000 | GALS/MIN | Particulate matter, total < 10 µ (TPM10) | HIGH EFFICIENCY MIST ELIMINATOR | 0.001 | PERCENT DRIFT | BACT-PSD | 0.001 | PERCENT DRIFT |
| LA-0254 | NINEMILE POINT ELECTRIC GENERATING PLANT | LA | PSD-LA-752 | 8/16/2011 | CHILLER COOLING TOWER (CHILL CT) | 12000 | GALS/MIN | Particulate matter, total < 2.5 µ (TPM2.5) | HIGH EFFICIENCY MIST ELIMINATOR | 0.001 | PERCENT DRIFT | BACT-PSD | 0.001 | PERCENT DRIFT |
| LA-0254 | NINEMILE POINT ELECTRIC GENERATING PLANT | LA | PSD-LA-752 | 8/16/2011 | UNIT 6 COOLING TOWER | 115847 | GALS/MIN | Particulate matter, total < 10 µ (TPM10) | HIGH EFFICIENCY MIST ELIMINATOR | 0.0005 | PERCENT DRIFT | BACT-PSD | 0.0005 | PERCENT DRIFT |
| LA-0254 | NINEMILE POINT ELECTRIC GENERATING PLANT | LA | PSD-LA-752 | 8/16/2011 | UNIT 6 COOLING TOWER | 115847 | GALS/MIN | Particulate matter, total < 2.5 µ (TPM2.5) | HIGH EFFICIENCY MIST ELIMINATOR | 0.0005 | PERCENT DRIFT | BACT-PSD | 0.0005 | PERCENT DRIFT |
| ID-0018 | LANGLEY GULCH POWER PLANT | ID | P-2009.0092 | 6/25/2010 | COOLING TOWER | 63200 | GAL/MIN | Particulate Matter (PM) | DRIFT ELIMINATORS, GOOD OPERATING PRACTICES | 0 | | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Cooling Tower | 130000 | gpm | Particulate matter, total (TPM) | | 1.6 | LB/H | BACT-PSD | 5000 | PPM TDS |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Cooling Tower | 130000 | gpm | Particulate matter, total < 2.5 µ (TPM2.5) | | 1.6 | LB/H | BACT-PSD | 5000 | PPM TDS |
| OK-0129 | CHOUTEAU POWER PLANT | OK | 2007-115-C(M-1)PSD | 1/23/2009 | COOLING TOWER | 9 | CELLS | Particulate matter, total (TPM) | DRIFT ELIMINATORS | 0.4 | LB/H/CELL | BACT-PSD | 0 | |
| FL-0304 | CANE ISLAND POWER PARK | FL | PSD-FL-400 (0970043-014-AC) | 9/8/2008 | AN EIGHT-CELL MECHANICAL COOLING TOWER | | | Particulate matter, total < 10 µ (TPM10) | | 0 | | BACT-PSD | 0 | |
| FL-0303 | FPL WEST COUNTY ENERGY CENTER UNIT 3 | FL | 0990646-002-AC (PSD-FL-396) | 7/30/2008 | ONE 26-CELL MECHANICAL DRAFT COOLING TOWER | | | Particulate Matter (PM) | THE PERMITTEE SHALL CERTIFY THAT THE COOLING TOWER WAS CONSTRUCTED TO ACHIEVE THE SPECIFIED DRIFT RATE OF NO MORE THAN 0.0005 PERCENT OF THE CIRCULATING WATER FLOW RATE. | 0.0005 | % | BACT-PSD | 0 | |
| LA-0136 | PLAQUEMINE COGENERATION FACILITY | LA | PSD-LA-659(M2) | 7/23/2008 | COOLING TOWER | 0.01 | % DRIFT RATE | Particulate matter, filterable < 10 µ (FPM10) | GOOD OPERATING PRACTICES | 1.4 | LB/H | BACT-PSD | 0.005 | % DRIFT RATE |
| LA-0224 | ARSENAL HILL POWER PLANT | LA | PSD-LA-726 | 3/20/2008 | COOLING TOWER | 140000 | GAL/MIN | Particulate matter, filterable < 10 µ (FPM10) | USE OF MIST ELIMINATORS | 1.4 | LB/H | BACT-PSD | 0 | |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO 26- CELL MECHANICAL DRAFT | 306000 | GAL/MIN | Particulate Matter (PM) | | 0 | | BACT-PSD | 0 | |
| NC-0101 | FORSYTH ENERGY PLANT | NC | 00986R1 | 9/29/2005 | COOLING TOWER | 3834 | GAL/MIN | Particulate Matter (PM) | | 0.007 | LB/H | BACT-PSD | 0 | |
| NC-0101 | FORSYTH ENERGY PLANT | NC | 00986R1 | 9/29/2005 | COOLING TOWER | 3834 | GAL/MIN | Particulate matter, filterable < 10 µ (FPM10) | | 0.002 | LB/H | BACT-PSD | 0 | |
| OR-0041 | WANAPA ENERGY CENTER | OR | R10PSD-OR-05-01 | 8/8/2005 | COOLING TOWER | 6.2 | CF/SEC | Particulate Matter (PM) | INSTALLATION OF HIGH EFFICIENCY 0.0005% DRIFT ELIMINATORS. LIMIT TOTAL DISSOLVED SOLIDS IN THE WATER TO LESS THAN 3,532 PPMW. | 3532 | PPMW | BACT-PSD | 0 | |
| LA-0192 | CRESCENT CITY POWER | LA | PSD-LA-704 | 6/6/2005 | MAIN COOLING TOWER | 290200 | GAL/MIN | Particulate matter, filterable < 10 µ (FPM10) | MARLEY EXCEL DRIFT ELIMINATORS | 2.61 | LB/H | BACT-PSD | 0 | |

# RBLC REVIEW FOR COOLING TOWERS IN POWER PLANTS: PM

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LA-0192 | CRESCENT CITY POWER | LA | PSD-LA-704 | 6/6/2005 | CHILLER COOLING TOWER | 35000 | GAL H20/MIN | Particulate matter, filterable < 10 µ (FPM10) | | 1.75 | LB/H | BACT-PSD | 0 | |
| WA-0328 | BP CHERRY POINT COGENERATION PROJECT | WA | EFSEC/2002-01 | 1/11/2005 | COOLING TOWER | | | Particulate Matter (PM) | INSTALLATION OF DRIFT ELIMINATORS WITH DRIFT LOSS OF LESS THAN 0.001% OF THE RECIRCULATING WATER FLOW RATE. | 0 | | BACT-PSD | 0 | |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | COOLING TOWER, (2) 10 CELL MECHANICAL DRAFT | | | Particulate matter, filterable < 10 µ (FPM10) | DRIFT ELIMINATORS | 2.6 | LB/H | BACT-PSD | 0 | |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | MECHANICAL DRAFT COOLING TOWERS | 170000 | Gal/Min | Particulate matter, filterable < 10 µ (FPM10) | DRIFT ELIMINATORS (NOT TO EXCEED A TOTAL DRIFT RATE OF 0.0005 PERCENT OF CIRCULATING WATER FLOW) | 3 | LB/H | BACT-PSD | 0 | |
| MD-0032 | DICKERSON | MD | CPCN CASE NO. 8888 | 11/5/2004 | COOLING TOWER | 10 | CELLS | Particulate Matter (PM) | MIST ELIMINATORS | 0.001 | % | BACT-PSD | 0 | |
| LA-0191 | MICHOUD ELECTRIC GENERATING PLANT | LA | PSD-LA-700 | 10/12/2004 | COOLING TOWERS (2) | 1728 | Gal/min | Particulate matter, filterable < 10 µ (FPM10) | DRIFT ELIMINATORS AND GOOD OPERATING PRACTICES | 0.052 | LB/H | BACT-PSD | 0 | |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | MECHANICAL DRAFT COOLING TOWERS FOR GE TURBINES | 173870 | GAL/MIN | Particulate matter, filterable < 10 µ (FPM10) | DRIFT ELIMINATORS | 0.0005 | % BY VOL | BACT-PSD | 0 | |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | MECHANICAL DRAFT COOLING TOWERS FOR SIEMENS TURBINES | 141400 | GAL/MIN | Particulate matter, filterable < 10 µ (FPM10) | DRIFT ELIMINATORS | 0.0005 | % BY VOL | BACT-PSD | 0 | |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | COOLING TOWER | | | Particulate Matter (PM) | | 2.08 | LB/H | BACT-PSD | 0 | |
| TX-0374 | CHOCOLATE BAYOU PLANT | TX | PSD-TX-983 | 3/24/2003 | COOLING WATER TOWER (2 CELLS), COGENCWT | | | Particulate matter, filterable < 10 µ (FPM10) | NONE INDICATED | 0.54 | LB/H | Other Case-by-Case | 0 | |
| OK-0090 | DUKE ENERGY STEPHENS, LLC STEPHENS ENERGY | OK | 2001-157-C M-1 PSD | 3/21/2003 | COOLING TOWER | | | Particulate matter, filterable < 10 µ (FPM10) | DRIFT ELIMINATORS | 1.2 | LB/H | BACT-PSD | 0 | |
| WA-0291 | WALLULA POWER PLANT | WA | EFSEC/2001-03 | 1/3/2003 | COOLING TOWER | | | Particulate matter, filterable < 10 µ (FPM10) | WATER TREATMENT PLUS A 0.0005% DRIFT RATE HAS BEEN SELECTED TO BE LAER FOR THE CONTROL OF PM10 EMISSIONS FROM THE COOLING TOWERS. | 3.7 | LB/H | LAER | 0 | |
| WA-0291 | WALLULA POWER PLANT | WA | EFSEC/2001-03 | 1/3/2003 | COOLING TOWER | | | Particulate Matter (PM) | WATER PRETREATMENT PLUS A 0.0005% DRIFT RATE | 3.7 | LB/H | Other Case-by-Case | 0 | |
| TX-0352 | BRAZOS VALLEY ELECTRIC GENERATING FACILITY | TX | PSD-TX-966 | 12/31/2002 | (2) COOLING TOWERS, CT-001& -002 | | | Particulate matter, filterable < 10 µ (FPM10) | NONE INDICATED | 1.58 | LB/H | BACT-PSD | 0 | |
| TX-0407 | STERNE ELECTRIC GENERATING FACILITY | TX | PSD-TX-1015 | 12/6/2002 | COOLING TOWERS, (3) | | | Particulate matter, filterable < 10 µ (FPM10) | CHROMIUM BASED SOLUTIONS SHALL NOT BE USED. | 1.01 | LB/H | BACT-PSD | 0 | |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | 22 CELL MECHANICAL DRAFT COOLING TOWER | | | Particulate matter, filterable < 10 µ (FPM10) | HIGH EFFICIENCY DRIFT ELIMINATORS | 1.69 | LB/H | N/A | 0 | |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | COOLING TOWER | 11.4 | MMGAL/H | Particulate matter, filterable < 10 µ (FPM10) | DRIFT ELIMINATORS | 0.001 | % DRIFT LOSS | BACT-PSD | 0 | |
| CO-0052 | ROCKY MOUNTAIN ENERGY CENTER, LLC. | CO | 02WE0228 | 8/11/2002 | EVAPORATIVE WATER COOLING TOWER | | | Particulate matter, filterable < 10 µ (FPM10) | HIGH EFFICIENCY DRIFT ELIMINATOR | 0.42 | LB/MM GAL CIRCULATED | BACT-PSD | 0 | |
| IN-0114 | MIRANT SUGAR CREEK LLC | IN | 167-15295-00123-4911 | 7/24/2002 | COOLING TOWERS, (2) | | | Particulate matter, filterable < 10 µ (FPM10) | GOOD DESIGN AND OPERATION PRATICES | 1.41 | LB/H | BACT-PSD | 0 | |

# RBLC REVIEW FOR COOLING TOWERS IN POWER PLANTS: PM

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NM-0044 | CLOVIS ENERGY FACILITY | NM | PSD-NM-2605 | 6/27/2002 | COOLING TOWER (CT-1 AND CT-2) | 130000 | GPM | Particulate matter, filterable < 10 µ (FPM10) | DRIFT ELIMINATORS | 0.7 | LB/H | BACT-PSD | 0 | |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | COOLING TOWER | 12 | CELLS | Particulate matter, filterable < 10 µ (FPM10) | DRIFT ELIMINATORS | 0.307 | LB/H PER CELL | BACT-PSD | 0 | |
| OH-0264 | NORTON ENERGY STORAGE, LLC | OH | 16-02110 | 5/23/2002 | COOLING TOWERS (3), MECHANICAL INDUCED DRAFT | | | Particulate matter, filterable < 10 µ (FPM10) | | 5.62 | LB/H | BACT-PSD | 0 | |
| AR-0051 | DUKE ENERGY-JACKSON FACILITY | AR | 1998-AOP-R0 (34-0259) | 4/1/2002 | TOWER, COOLING | | | Particulate matter, filterable < 10 µ (FPM10) | DRIFT ELIMINATOR. | 0.7 | LB/H | BACT-PSD | 0 | |
| NJ-0043 | LIBERTY GENERATING STATION | NJ | BOP990001 | 3/28/2002 | COOLING TOWER (3)-MECHANICAL DRAFT | | | Particulate matter, filterable < 10 µ (FPM10) | NONE | 7.93 | T/YR | Other Case-by-Case | 0 | |
| OH-0268 | LIMA ENERGY COMPANY | OH | 03-13445 | 3/26/2002 | COOLING TOWER | | | Particulate matter, filterable < 10 µ (FPM10) | IMPLEMENTATION OF HIGH EFFICIENCY DRIFT ELIMINATORS. | 1.88 | LB/H | BACT-PSD | 0 | |
| TX-0351 | WEATHERFORD ELECTRIC GENERATION FACILITY | TX | PSD-TX-933 | 3/11/2002 | COOLING TOWER, C-1 | | | Particulate Matter (PM) | NONE INDICATED | 1.45 | LB/H | Other Case-by-Case | 0 | |
| LA-0157 | PERRYVILLE POWER STATION | LA | PSD-LA-655 (M-1) | 3/8/2002 | COOLING TOWER | | | Particulate matter, filterable < 10 µ (FPM10) | DRIFT ELIMINATORS | 3.3 | LB/H | BACT-PSD | 0 | |
| LA-0120 | GEISMAR PLANT | LA | PSD-LA-647 (M-2) | 2/26/2002 | COOLING WATER TOWER, #343-99 | 23000 | GAL/MIN | Particulate matter, filterable < 10 µ (FPM10) | DRIFT ELIMINATORS | 1.72 | LB/H | BACT-PSD | 0 | |
| AR-0052 | THOMAS B. FITZHUGH GENERATING STATION | AR | 1165-AOP-R1 (24-0012) | 2/15/2002 | COOLING TOWER | | | Particulate matter, filterable < 10 µ (FPM10) | DRIFT ELIMINATORS | 0.4 | LB/H | BACT-PSD | 0 | |
| OK-0055 | MUSTANG ENERGY PROJECT | OK | 2001-132-C PSD | 2/12/2002 | COOLING TOWERS | | | Particulate matter, filterable < 10 µ (FPM10) | DRIFT ELIMINATORS | 3.78 | LB/H | BACT-PSD | 0 | |
| OK-0056 | HORSESHOE ENERGY PROJECT | OK | 2001-156-C PSD | 2/12/2002 | COOLING TOWERS | 111438 | GPM TOTAL | Particulate matter, filterable < 10 µ (FPM10) | DRIFT ELIMINATORS DESIGN | 0.001 | % DRIFT | BACT-PSD | 0 | |
| LA-0164 | ACADIA POWER STATION, ACADIA POWER PARTNERS LLC | LA | PSD-LA-645 (M-2) | 1/31/2002 | COOLING WATER TOWER NO. 1 & 2 | 152000 | GAL/MIN EACH | Particulate matter, filterable < 10 µ (FPM10) | INTEGRATED DRIFT ELIMINATORS | 0.76 | LB/H | BACT-PSD | 0 | |
| TX-0350 | ENNIS TRACTEBEL POWER | TX | PSD-TX-927 | 1/31/2002 | COOLING TOWER, CT-1 | | | Particulate matter, filterable < 10 µ (FPM10) | NONE INDICATED | 0.5 | LB/H | Other Case-by-Case | 0 | |

# RBLC REVIEW FOR AUXILIARY BOILERS AT POWER PLANTS: NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | AUXILIARY HEATER | 40 | MMBTU/HR | | 9 | PPMVD | BACT-PSD | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | AUXILIARY BOILER | 37.4 | MMBTU/HR | ULTRA LOW NOX BURNER, USE PUC QUALITY NATURAL GAS, OPERATIONAL RESTRICTION OF 46, 675 MMBTU/YR | 9 | PPMVD | BACT-PSD | 0 | |
| OR-0048 | CARTY PLANT | OR | 25-0016-ST-02 | 12/29/2010 | NATURAL GAS-FIRED BOILER | 91 | MMBTU/H | LOW NOX BURNERS | 4.5 | LB/H | BACT-PSD | 0.05 | LB/MMBTU |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Auxiliary Heater | 40 | MMBtu/hr | OPERATIONAL RESTRICTION OF 1000 HR/YR | 9 | PPMVD | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Auxiliary Boiler | 35 | MMBtu/hr | OPERATIONAL RESTRICTION OF 500 HR/YR | 9 | PPMVD | BACT-PSD | 0 | |
| OK-0129 | CHOUTEAU POWER PLANT | OK | 2007-115-C(M-1)PSD | 1/23/2009 | AUXILIARY BOILER | 33.5 | MMBTU/H | LOW-NOX BURNERS | 0.07 | LB/MMBTU | BACT-PSD | 0 | |
| FL-0303 | FPL WEST COUNTY ENERGY CENTER UNIT 3 | FL | 0990646-002-AC (PSD-FL-396) | 7/30/2008 | TWO NOMINAL 10 MMBTU/H NATURAL GAS-FIRED PROCESS HEATERS | 10 | MMBTU/H | GOOD COMBUSTION | 0.095 | LB/MMBTU | BACT-PSD | 0 | |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO 99.8 MMBTU/H GAS-FUELED AUXILIARY BOILERS | 99.8 | MMBTU/H | | 0.05 | LB/MMBTU | BACT-PSD | 0 | |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO GAS-FUELED 10 MMBTU/H PROCESS HEATERS | 10 | MMBTU/H | | 0.095 | LB/MMBTU | BACT-PSD | 0 | |
| NY-0095 | CAITHNES BELLPORT ENERGY CENTER | NY | PSD-NY-0001 | 5/10/2006 | AUXILIARY BOILER | 29.4 | MMBTU/H | LOW NOX BURNERS & FLUE GAS RECIRCULATION | 0.011 | LB/MMBTU | BACT-PSD | 0 | |
| NV-0035 | TRACY SUBSTATION EXPANSION PROJECT | NV | AP4911-1504 | 8/16/2005 | BOILER, AUXILIARY | 37.7 | MMBTU/H | BEST COMBUSTION PRACTICES. | 0.037 | LB/MMBTU | BACT-PSD | 0.037 | LB/MMBTU |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | BOILERS (2) | 30.6 | MMBTU/H | | 1.07 | LB/H | BACT-PSD | 0.035 | LB/MMBTU |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | AUXILIARY BOILER | 38 | MMBTU/H | LOW NOX BURNERS | 0.37 | LB/MMBTU | BACT-PSD | 0.37 | LB/MMBTU |
| NV-0037 | COPPER MOUNTAIN POWER | NV | 15347 | 5/14/2004 | AUXILIARY BOILER | 60 | MMBTU/H | LOW NOX BURNER (WITH EITHER INTERNAL OR EXTERNAL FLUE GAS RECIRCULATION) | 0.035 | LB/MMBTU | BACT-PSD | 0.035 | LB/MMBTU |
| OR-0039 | COB ENERGY FACILITY, LLC | OR | 18-0029 | 12/30/2003 | BOILERS, AUXILIARY, NATURAL GAS, (2) | 80 | MMBTU/H | LOW NOX BURNERS AND FLUE GAS RECIRCULATION | 0.035 | LB/MMBTU | BACT-PSD | 0.035 | LB/MMBTU |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | BOILER, COMMERCIAL | 70 | MMBTU/H | DRY LOW NOX AND FLUE GAS RECIRCULATION | 0.036 | LB/MMBTU | | 0.036 | LB/MMBTU |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR GE TURBINE | 41 | MMBTU/H | LOW NOX BURNERS | 0.027 | LB/MMBTU | BACT-PSD | 0.027 | LB/MMBTU |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR SIEMENS TURBINES | 55.34 | MMBTU/H | LOW NOX BURNERS | 0.036 | LB/MMBTU | BACT-PSD | 0.036 | LB/MMBTU |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | BOILER | 30.6 | MMBTU/H | | 1.08 | LB/H | BACT-PSD | 0.035 | LB/MMBTU |
| OK-0090 | DUKE ENERGY STEPHENS, LLC STEPHENS ENERGY | OK | 2001-157-C M-1 PSD | 3/21/2003 | BOILER, AUXILIARY | 33 | MMBTU/H | LOW-NOX BURNERS | 0.05 | LB/MMBTU | BACT-PSD | 0.05 | LB/MMBTU |
| VA-0260 | HENRY COUNTY POWER | VA | 21389 | 11/21/2002 | AUXILIARY BOILER, (2) | 40 | MMBTU/H | LOW NOX BURNERS AND CLEAN FUEL. | 3.2 | LB/H | BACT-PSD | 0.08 | LB/MMBTU |

# RBLC REVIEW FOR AUXILIARY BOILERS AT POWER PLANTS: NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | BOILER | 99 | MMBTU/H | LOW NOX BURNERS | 4.95 | LB/H | BACT-PSD | 0.05 | LB/MMBTU |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | AUXILIARY BOILER | 33 | MMBTU/H | LOW NOX OPTION (LOW NOX BURNER AND/OR FLUE GAS RECIRCULATION) | 0.04 | LB/MMBTU | BACT-PSD | 0.04 | LB/MMBTU |
| AL-0185 | BARTON SHOALS ENERGY | AL | X001, X002 | 7/12/2002 | TWO (2) 40 MMBTU/H AUXILIARY BOILERS | 40 | MMBTU/H | LOW NOX BURNERS | 0.05 | LB/MMBTU | BACT-PSD | 0 | |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | AUXILIARY BOILER | 33 | MMBTU/H | LOW NOX BURNERS | 0.035 | LB/MMBTU | BACT-PSD | 0.035 | LB/MMBTU |
| IA-0058 | GREATER DES MOINES ENERGY CENTER | IA | 77-13-002 | 4/10/2002 | AUXILIARY BOILER | 68 | MMBTU/H | | 0.05 | LB/MMBTU | BACT-PSD | 0.05 | LB/MMBTU |
| AR-0051 | DUKE ENERGY-JACKSON FACILITY | AR | 1998-AOP-R0 (34-0259) | 4/1/2002 | BOILER, AUXILIARY | 33 | MMBTU/H | | 0.035 | LB/MMBTU | BACT-PSD | 0.035 | LB/MMBTU |
| OK-0055 | MUSTANG ENERGY PROJECT | OK | 2001-132-C PSD | 2/12/2002 | AUXILIARY BOILER | 31 | MMBTU/H | COMBUSTION CONTROL | 0.01 | LB/MMBTU | Other Case-by-Case | 0.01 | LB/MMBTU |

# RBLC REVIEW FOR AUXILIARY BOILERS AT POWER PLANTS: VOC

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OK-0129 | CHOUTEAU POWER PLANT | OK | 2007-115-C(M-1)PSD | 1/23/2009 | AUXILIARY BOILER | 33.5 | MMBTU/H | GOOD COMBUSTION | 0.54 | LB/H | BACT-PSD | 0.016 | LB/MMBTU |
| FL-0303 | FPL WEST COUNTY ENERGY CENTER UNIT 3 | FL | 0990646-002-AC (PSD-FL-396) | 7/30/2008 | TWO NOMINAL 10 MMBTU/H NATURAL GAS-FIRED PROCESS HEATERS | 10 | MMBTU/H | | 2 | GS/100 SCF | BACT-PSD | 0.003 | LB/MMBTU |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO 99.8 MMBTU/H GAS-FUELED AUXILIARY BOILERS | 99.8 | MMBTU/H | | 2 | GS/100 SCF GAS | BACT-PSD | 0.003 | LB/MMBTU |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO GAS-FUELED 10 MMBTU/H PROCESS HEATERS | 10 | MMBTU/H | | 2 | GR S/100 SCF GAS | BACT-PSD | 0.003 | LB/MMBTU |
| NV-0035 | TRACY SUBSTATION EXPANSION PROJECT | NV | AP4911-1504 | 8/16/2005 | BOILER, AUXILIARY | 37.7 | MMBTU/H | BEST COMBUSTION PRACTICES. | 0.005 | LB/MMBTU | BACT-PSD | 0 | |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | BOILERS (2) | 30.6 | MMBTU/H | | 0.49 | LB/H | BACT-PSD | 0.016 | LB/MMBTU |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | AUXILIARY BOILER | 38 | MMBTU/H | | 0.0033 | LB/MMBTU | BACT-PSD | 0 | |
| NV-0037 | COPPER MOUNTAIN POWER | NV | 15347 | 5/14/2004 | AUXILIARY BOILER | 60 | MMBTU/H | EFFECTIVE COMBUSTION SYSTEM DESIGN, 10:1 TURNDOWN CAPABILITY AND LOW NOX BURNER TECHNOLOGY | 0.4 | LB/H | LAER | 0.007 | LB/MMBTU |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | BOILER, COMMERCIAL | 70 | MMBTU/H | GOOD COMBUSTION | 0.007 | LB/MMBTU | BACT-PSD | 0 | |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR GE TURBINE | 41 | MMBTU/H | | 0.01 | LB/MMBTU | BACT-PSD | 0 | |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR SIEMENS TURBINES | 55.34 | MMBTU/H | | 0.01 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | BOILER | 30.6 | MMBTU/H | | 0.49 | LB/H | BACT-PSD | 0.016 | LB/MMBTU |
| OK-0090 | DUKE ENERGY STEPHENS, LLC STEPHENS ENERGY | OK | 2001-157-C M-1 PSD | 3/21/2003 | BOILER, AUXILIARY | 33 | MMBTU/H | BOILER DESIGN AND GOOD OPERATING PRACTICES | 0.016 | LB/MMBTU | BACT-PSD | 0 | |
| VA-0255 | VA POWER - POSSUM POINT | VA | 70225 | 11/18/2002 | BOILER, AUXILIARY | 99 | MMBTU/H | GOOD COMBUSTION PRACTICES. | 0.4 | LB/H | Other Case-by-Case | 0.004 | LB/MMBTU |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | BOILER | 99 | MMBTU/H | | 0.545 | LB/H | BACT-PSD | 0.0055 | LB/MMBTU |
| VA-0261 | CPV CUNNINGHAM CREEK | VA | 81382 | 9/6/2002 | AUXILIARY BOILER | 80 | MMBTU/H | GOOD COMBUSTION PRACTICES. | 0.42 | LB/H | BACT-PSD | 0.005 | LB/MMBTU |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | AUXILIARY BOILER | 33 | MMBTU/H | GOOD COMBUSTION PRACTICE | 0.018 | LB/MMBTU | BACT-PSD | 0 | |
| AL-0185 | BARTON SHOALS ENERGY | AL | X001, X002 | 7/12/2002 | TWO (2) 40 MMBTU/H AUXILIARY BOILERS | 40 | MMBTU/H | GOOD COMBUSTION PRACTICES | 0.0054 | LB/MMBTU | BACT-PSD | 0 | |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | AUXILIARY BOILER | 33 | MMBTU/H | BOILER DESIGN AND GOOD COMBUSTION PRACTICES | 0.016 | LB/MMBTU | BACT-PSD | 0 | |
| AR-0051 | DUKE ENERGY-JACKSON FACILITY | AR | 1998-AOP-R0 (34-0259) | 4/1/2002 | BOILER, AUXILIARY | 33 | MMBTU/H | GOOD OPERATING PRACTICE | 0.016 | LB/MMBTU | BACT-PSD | 0.016 | LB/MMBTU |
| OK-0055 | MUSTANG ENERGY PROJECT | OK | 2001-132-C PSD | 2/12/2002 | AUXILIARY BOILER | 31 | MMBTU/H | COMBUSTION CONTROL | 0.0055 | LB/MMBTU | Other Case-by-Case | 0 | |

# RBLC REVIEW FOR AUXILIARY BOILERS AT POWER PLANTS: CO

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | AUXILIARY HEATER | 40 | MMBTU/HR | | 50 | PPMVD | BACT-PSD | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | AUXILIARY BOILER | 37.4 | MMBTU/HR | ULTRA LOW NOX BURNER, USE PUC QUALITY NATURAL GAS, OPERATIONAL RESTRICTION OF 46, 675 MMBTU/YR | 50 | PPMVD | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Auxiliary Heater | 40 | MMBtu/hr | OPERATIONAL RESTRICTION OF 1000 HR/YR | 50 | PPMVD | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Auxiliary Boiler | 35 | MMBtu/hr | OPERATIONAL RESTRICTION OF 500 HR/YR | 50 | PPMVD | BACT-PSD | 0 | |
| OK-0129 | CHOUTEAU POWER PLANT | OK | 2007-115-C(M-1)PSD | 1/23/2009 | AUXILIARY BOILER | 33.5 | MMBTU/H | GOOD COMBUSTION | 5.02 | LB/H | N/A | 0.150 | LB/MMBTU |
| FL-0303 | FPL WEST COUNTY ENERGY CENTER UNIT 3 | FL | 0990646-002-AC (PSD-FL-396) | 7/30/2008 | TWO NOMINAL 10 MMBTU/H NATURAL GAS-FIRED PROCESS HEATERS | 10 | MMBTU/H | GOOD COMBUSTION | 0.08 | LB/MMBTU | BACT-PSD | 0 | |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO 99.8 MMBTU/H GAS-FUELED AUXILIARY BOILERS | 99.8 | MMBTU/H | | 0.08 | LB/MMBTU | BACT-PSD | 0 | |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO GAS-FUELED 10 MMBTU/H PROCESS HEATERS | 10 | MMBTU/H | | 0.08 | LB/MMBTU | BACT-PSD | 0 | |
| NY-0095 | CAITHNES BELLPORT ENERGY CENTER | NY | PSD-NY-0001 | 5/10/2006 | AUXILIARY BOILER | 29.4 | MMBTU/H | GOOD COMBUSTION PRACTICES | 0.036 | LB/MMBTU | BACT-PSD | 0 | |
| NV-0035 | TRACY SUBSTATION EXPANSION PROJECT | NV | AP4911-1504 | 8/16/2005 | BOILER, AUXILIARY | 37.7 | MMBTU/H | BEST COMBUSTION PRACTICES | 0.036 | LB/MMBTU | BACT-PSD | 0.036 | LB/MMBTU |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | BOILERS (2) | 30.6 | MMBTU/H | | 1.13 | LB/H | BACT-PSD | 0.037 | LB/MMBTU |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | AUXILIARY BOILER | 38 | MMBTU/H | | 0.08 | LB/MMBTU | BACT-PSD | 0.08 | LB/MMBTU |
| NV-0037 | COPPER MOUNTAIN POWER | NV | 15347 | 5/14/2004 | AUXILIARY BOILER | 60 | MMBTU/H | DESIGN, 10:1 TURNDOWN CAPABILITY, AND LNB TECHNOLOGY | 0.08 | LB/MMBTU | LAER | 0.08 | LB/MMBTU |
| OR-0039 | COB ENERGY FACILITY, LLC | OR | 18-0029 | 12/30/2003 | BOILERS, AUXILIARY, NATURAL GAS, (2) | 80 | MMBTU/H | GOOD COMBUSTION | 0.037 | LB/MMBTU | BACT-PSD | 0.037 | LB/MMBTU |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | BOILER, COMMERCIAL | 70 | MMBTU/H | GOOD COMBUSTION | 0.06 | LB/MMBTU | BACT-PSD | 0.06 | LB/MMBTU |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR GE TURBINE | 41 | MMBTU/H | | 0.09 | LB/MMBTU | BACT-PSD | 0.09 | LB/MMBTU |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR SIEMENS TURBINES | 55.34 | MMBTU/H | | 0.14 | LB/MMBTU | BACT-PSD | 0.14 | LB/MMBTU |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | BOILER | 30.6 | MMBTU/H | | 3.34 | LB/H | BACT-PSD | 0.109 | LB/MMBTU |
| OK-0090 | DUKE ENERGY STEPHENS, LLC STEPHENS ENERGY | OK | 2001-157-C M-1 PSD | 3/21/2003 | BOILER, AUXILIARY | 33 | MMBTU/H | BOILER DESIGN AND GOOD OPERATING PRACTICES | 0.085 | LB/MMBTU | BACT-PSD | 0.085 | LB/MMBTU |
| VA-0260 | HENRY COUNTY POWER | VA | 21389 | 11/21/2002 | AUXILIARY BOILER, (2) | 40 | MMBTU/H | GOOD COMBUSTION AND DESIGN. CLEAN FUEL. | 2.9 | LB/H | BACT-PSD | 0.073 | LB/MMBTU |
| VA-0255 | VA POWER - POSSUM POINT | VA | 70225 | 11/18/2002 | BOILER, AUXILIARY | 99 | MMBTU/H | GOOD COMBUSTION PRACTICES. | 14.9 | LB/H | Other Case-by-Case | 0.15 | LB/MMBTU |

# RBLC REVIEW FOR AUXILIARY BOILERS AT POWER PLANTS: CO

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | BOILER | 99 | MMBTU/H | | 8.32 | LB/H | BACT-PSD | 0.084 | LB/MMBTU |
| VA-0261 | CPV CUNNINGHAM CREEK | VA | 81382 | 9/6/2002 | AUXILIARY BOILER | 80 | MMBTU/H | GOOD COMBUSTION PRACTICES. | 6.42 | LB/H | BACT-PSD | 0.08 | LB/MMBTU |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | AUXILIARY BOILER | 33 | MMBTU/H | GOOD COMBUSTION PRACTICE | 0.04 | LB/MMBTU | BACT-PSD | 0.04 | LB/MMBTU |
| AL-0185 | BARTON SHOALS ENERGY | AL | X001, X002 | 7/12/2002 | TWO (2) 40 MMBTU/H AUXILIARY BOILERS | 40 | MMBTU/H | GOOD COMBUSTION PRACTICES | 0.082 | LB/MMBTU | BACT-PSD | 0 | |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | AUXILIARY BOILER | 33 | MMBTU/H | BOILER DESIGN AND GOOD OPERATING PRACTICES | 0.037 | LB/MMBTU | BACT-PSD | 0.037 | LB/MMBTU |
| IA-0058 | GREATER DES MOINES ENERGY CENTER | IA | 77-13-002 | 4/10/2002 | AUXILIARY BOILER | 68 | MMBTU/H | | 0.084 | LB/MMBTU | Other Case-by-Case | 0.084 | LB/MMBTU |
| AR-0051 | DUKE ENERGY-JACKSON FACILITY | AR | 1998-AOP-R0 (34-0259) | 4/1/2002 | BOILER, AUXILIARY | 33 | MMBTU/H | GOOD OPERATING PRACTICE | 0.15 | LB/MMBTU | BACT-PSD | 0.15 | LB/MMBTU |
| OK-0055 | MUSTANG ENERGY PROJECT | OK | 2001-132-C PSD | 2/12/2002 | AUXILIARY BOILER | 31 | MMBTU/H | COMBUSTION CONTROL | 0.084 | LB/MMBTU | BACT-PSD | 0.084 | LB/MMBTU |

# RBLC REVIEW FOR AUXILIARY BOILERS AT POWER PLANTS: PM, PM10, PM2.5

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | AUXILIARY HEATER | 40 | MMBTU/HR | Particulate matter, total (TPM) | USE PUC QUALITY PIPELINE NATURAL GAS | 0.3 | LB/HR | BACT-PSD | 0.008 | LB/MMBTU |
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | AUXILIARY HEATER | 40 | MMBTU/HR | Particulate matter, total < 2.5 µ (TPM2.5) | USE PUC QUALITY PIPELINE NATURAL GAS | 0.3 | LB/HR | BACT-PSD | 0.008 | LB/MMBTU |
| *CA-1212 | PALMDALE HYBRID POWER PROJECT | CA | SE 09-01 | 10/18/2011 | AUXILIARY HEATER | 40 | MMBTU/HR | Particulate matter, total < 10 µ (TPM10) | USE PUC QUALITY PIPELINE NATURAL GAS | 0.3 | LB/HR | BACT-PSD | 0.008 | LB/MMBTU |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | AUXILIARY BOILER | 37.4 | MMBTU/HR | Particulate matter, total (TPM) | USE PUC QUALITY NATURAL GAS, OPERATIONAL LIMIT OF 46,675 MMBTU/YR | 0.0034 | GR/DSCF | BACT-PSD | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | AUXILIARY BOILER | 37.4 | MMBTU/HR | Particulate matter, total < 10 µ (TPM10) | USE PUC QUALITY NATURAL GAS, OPERATIONAL LIMIT OF 46,675 MMBTU/YR | 0.0034 | GR/DSCF | BACT-PSD | 0 | |
| OR-0048 | CARTY PLANT | OR | 25-0016-ST-02 | 12/29/2010 | NATURAL GAS-FIRED BOILER | 91 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUEL | 2.5 | LB/MMCF | BACT-PSD | 0.0025 | LB/MMBTU |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Auxiliary Heater | 40 | MMBtu/hr | Particulate matter, total (TPM) | OPERATIONAL RESTRICTION OF 1000 HR/YR, USE PUC QUALITY NATURAL GAS | 0.2 | GRANS PER 100 DSCF | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Auxiliary Heater | 40 | MMBtu/hr | Particulate matter, total < 2.5 µ (TPM2.5) | OPERATIONAL RESTRICTION OF 1000 HR/YR | 0.2 | GRAINS PER 100 DSCF | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Auxiliary Boiler | 35 | MMBtu/hr | Particulate matter, total (TPM) | OPERATIONAL RESTRICTION OF 500 HR/YR, USE PUC QUALITY NATURAL GAS | 0.2 | GRAINS PER 100 DSCF | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Auxiliary Boiler | 35 | MMBtu/hr | Particulate matter, total < 2.5 µ (TPM2.5) | OPERATIONAL RESTRICTION OF 500 HR/YR, USE PUC QUALITY NATURAL GAS | 0.2 | GRAINS PER 100 DSCF | BACT-PSD | 0 | |
| FL-0303 | FPL WEST COUNTY ENERGY CENTER UNIT 3 | FL | 0990646-002-AC (PSD-FL-396) | 7/30/2008 | TWO NOMINAL 10 MMBTU/H NATURAL GAS-FIRED PROCESS HEATERS | 10 | MMBTU/H | Particulate Matter (PM) | | 2 | GS/100 SCF | BACT-PSD | 0 | |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO 99.8 MMBTU/H GAS-FUELED AUXILIARY BOILERS | 99.8 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 2 | GS/100 SCF GAS | BACT-PSD | 0 | |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO GAS-FUELED 10 MMBTU/H PROCESS HEATERS | 10 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 2 | GR S/100 SCF GAS | BACT-PSD | 0 | |
| NY-0095 | CAITHNES BELLPORT ENERGY CENTER | NY | PSD-NY-0001 | 5/10/2006 | AUXILIARY BOILER | 29.4 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | LOW SULFUR FUEL | 0.0033 | LB/MMBTU | BACT-PSD | 0 | |
| NV-0035 | TRACY SUBSTATION EXPANSION PROJECT | NV | AP4911-1504 | 8/16/2005 | BOILER, AUXILIARY | 37.7 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | BEST COMBUSTION PRACTICES. | 0.004 | LB/MMBTU | BACT-PSD | 0.004 | LB/MMBTU |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | BOILERS (2) | 30.6 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.31 | LB/H | BACT-PSD | 0.01 | LB/MMBTU |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | AUXILIARY BOILER | 38 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.0033 | LB/MMBTU | BACT-PSD | 0.0033 | LB/MMBTU |
| NV-0037 | COPPER MOUNTAIN POWER | NV | 15347 | 5/14/2004 | AUXILIARY BOILER | 60 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | RESTRICTION OF OPERATION TO NATURAL GAS | 0.5 | LB/H | LAER | 0.008 | LB/MMBTU |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | BOILER, COMMERCIAL | 70 | MMBTU/H | Particulate Matter (PM) | CLEAN FUELS | 0.008 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | BOILER, COMMERCIAL | 70 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUELS | 0.008 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR GE TURBINE | 41 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.015 | LB/MMBTU | BACT-PSD | 0.015 | LB/MMBTU |

# RBLC REVIEW FOR AUXILIARY BOILERS AT POWER PLANTS: PM, PM10, PM2.5

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR SIEMENS TURBINES | 55.34 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.015 | LB/MMBTU | BACT-PSD | 0.015 | LB/MMBTU |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | BOILER | 30.6 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.31 | LB/H | BACT-PSD | 0.01 | LB/MMBTU |
| OK-0090 | DUKE ENERGY STEPHENS, LLC STEPHENS ENERGY | OK | 2001-157-C M-1 PSD | 3/21/2003 | BOILER, AUXILIARY | 33 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | USE OF LOW ASH FUEL AND EFFICIENT COMBUSTION | 0.01 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |
| VA-0255 | VA POWER - POSSUM POINT | VA | 70225 | 11/18/2002 | BOILER, AUXILIARY | 99 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUEL AND GOOD COMBUSTION PRACTICES. | 0.7 | LB/H | Other Case-by-Case | 0.007 | LB/MMBTU |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | BOILER | 99 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.76 | LB/H | BACT-PSD | 0.0076 | LB/MMBTU |
| VA-0261 | CPV CUNNINGHAM CREEK | VA | 81382 | 9/6/2002 | AUXILIARY BOILER | 80 | MMBTU/H | Particulate Matter (PM) | GOOD COMBUSTION PRACTICES. | 0.58 | LB/H | BACT-PSD | 0.007 | LB/MMBTU |
| VA-0261 | CPV CUNNINGHAM CREEK | VA | 81382 | 9/6/2002 | AUXILIARY BOILER | 80 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES. | 0.58 | LB/H | BACT-PSD | 0.007 | LB/MMBTU |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | AUXILIARY BOILER | 33 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICE | 0.012 | LB/MMBTU | BACT-PSD | 0.012 | LB/MMBTU |
| AL-0185 | BARTON SHOALS ENERGY | AL | X001, X002 | 7/12/2002 | TWO (2) 40 MMBTU/H AUXILIARY BOILERS | 40 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | NATURAL GAS ONLY | 0.0075 | LB/MMBTU | BACT-PSD | 0 | |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | AUXILIARY BOILER | 33 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | LOW ASH FUEL AND EFFICIENT COMBUSTION | 0.01 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |
| IA-0058 | GREATER DES MOINES ENERGY CENTER | IA | 77-13-002 | 4/10/2002 | AUXILIARY BOILER | 68 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.0076 | LB/MMBTU | BACT-PSD | 0.0076 | LB/MMBTU |
| AR-0051 | DUKE ENERGY-JACKSON FACILITY | AR | 1998-AOP-R0 (34-0259) | 4/1/2002 | BOILER, AUXILIARY | 33 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD OPERATING PRACTICE | 0.01 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |

# RBLC REVIEW FOR AUXILIARY BOILERS AT POWER PLANTS: SO2 AND H2SO4

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGH PUT | THROUGHPUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OK-0129 | CHOUTEAU POWER PLANT | OK | 2007-115-C(M-1)PSD | 1/23/2009 | AUXILIARY BOILER | 33.5 | MMBTU/H | Sulfur Dioxide (SO2) | LOW SULFUR FUEL | 0.03 | LB/H | N/A | 0.001 | LB/MMBTU |
| FL-0303 | FPL WEST COUNTY ENERGY CENTER UNIT 3 | FL | 0990646-002-AC (PSD-FL-396) | 7/30/2008 | TWO NOMINAL 10 MMBTU/H NATURAL GAS-FIRED PROCESS HEATERS | 10 | MMBTU/H | Sulfur Dioxide (SO2) | | 2 | GS/100 SCF | BACT-PSD | 0.003 | LB/MMBTU |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO 99.8 MMBTU/H GAS-FUELED AUXILIARY BOILERS | 99.8 | MMBTU/H | Sulfur Dioxide (SO2) | | 2 | GS/100 SCF GAS | BACT-PSD | 0.003 | LB/MMBTU |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO GAS-FUELED 10 MMBTU/H PROCESS HEATERS | 10 | MMBTU/H | Sulfur Dioxide (SO2) | | 2 | GS/100 SCF GAS | BACT-PSD | 0.003 | LB/MMBTU |
| NY-0095 | CAITHNES BELLPORT ENERGY CENTER | NY | PSD-NY-0001 | 5/10/2006 | AUXILIARY BOILER | 29.4 | MMBTU/H | Sulfur Dioxide (SO2) | LOW SULFUR FUEL | 0.0005 | LB/MMBTU | BACT-PSD | 0 | |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | BOILERS (2) | 30.6 | MMBTU/H | Sulfur Dioxide (SO2) | THE MAXIMUM S CONTENT OF THE NATURAL GAS SHALL NOT EXCEED 2 GRAINS PER 100 CUBIC FEET. | 0.031 | LB/H | BACT-PSD | 0.001 | LB/MMBTU |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | AUXILIARY BOILER | 38 | MMBTU/H | Sulfur Dioxide (SO2) | | 0.0023 | LB/MMBTU | BACT-PSD | 0.0023 | LB/MMBTU |
| NV-0037 | COPPER MOUNTAIN POWER | NV | 15347 | 5/14/2004 | AUXILIARY BOILER | 60 | MMBTU/H | Sulfur Dioxide (SO2) | USE OF LOW-SULFUR NATURAL GAS | 0.04 | LB/H | BACT-PSD | 0.0007 | LB/MMBTU |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | BOILER, COMMERCIAL | 70 | MMBTU/H | Sulfur Dioxide (SO2) | LOW SULFUR FUEL | 0.001 | LB/MMBTU | BACT-PSD | 0.001 | LB/MMBTU |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | BOILER, COMMERCIAL | 70 | MMBTU/H | Sulfuric Acid (mist, vapors, etc) | LOW SULFUR FUEL | 0.8 | GR/100 SCF | BACT-PSD | 0.001 | LB/MMBTU |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR GE TURBINE | 41 | MMBTU/H | Sulfur Dioxide (SO2) | | 0.0025 | LB/MMBTU | BACT-PSD | 0.0025 | LB/MMBTU |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR SIEMENS TURBINES | 55.34 | MMBTU/H | Sulfur Dioxide (SO2) | | 0.0025 | LB/MMBTU | BACT-PSD | 0.0025 | LB/MMBTU |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | BOILER | 30.6 | MMBTU/H | Sulfur Dioxide (SO2) | | 0.031 | LB/H | BACT-PSD | 0.001 | LB/MMBTU |
| OK-0090 | DUKE ENERGY STEPHENS, LLC STEPHENS ENERGY | OK | 2001-157-C M-1 PSD | 3/21/2003 | BOILER, AUXILIARY | 33 | MMBTU/H | Sulfur Dioxide (SO2) | BACT IS USE OF PIPE-LINE QUALITY NATURAL GAS | 0.2 | LB/H | BACT-PSD | 0.006 | LB/MMBTU |
| VA-0255 | VA POWER - POSSUM POINT | VA | 70225 | 11/18/2002 | BOILER, AUXILIARY | 99 | MMBTU/H | Sulfur Dioxide (SO2) | LOW SULFUR FUEL AND GOOD COMBUSTION PRACTICES. | 0.1 | LB/H | Other Case-by-Case | 0.001 | LB/MMBTU |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | BOILER | 99 | MMBTU/H | Sulfur Dioxide (SO2) | | 0.56 | LB/H | BACT-PSD | 0.0057 | LB/MMBTU |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *FL-0335 | SUWANNEE MILL | FL | 1210468-001-AC(PSD-FL-417) | 9/5/2012 | Four(4) Natural Gas Boilers - 46 MMBtu/hour | 46 | MMBtu/hr | Low NOx Burner and Flue Gas Recirculation | 0.036 | LB/MMBTU | BACT-PSD | 0 | |
| *OH-0350 | REPUBLIC STEEL | OH | P0109191 | 7/18/2012 | Steam Boiler | 65 | MMBtu/H | | 0.07 | LB/MMBTU | N/A | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | AUXILIARY BOILER | 37.4 | MMBTU/HR | ULTRA LOW NOX BURNER, USE PUC QUALITY NATURAL GAS, OPERATIONAL RESTRICTION OF 46, 675 MMBTU/YR | 9 | PPMVD | BACT-PSD | 0 | |
| OR-0048 | CARTY PLANT | OR | 25-0016-ST-02 | 12/29/2010 | NATURAL GAS-FIRED BOILER | 91 | MMBTU/H | LOW NOX BURNERS | 4.5 | LB/H | BACT-PSD | 0.05 | LB/MMBTU |
| AK-0071 | INTERNATIONAL STATION POWER PLANT | AK | AQ0164CPT01 | 12/20/2010 | Sigma Thermal Auxiliary Heater (1) | 12.5 | MMBTU/H | Low NOx Burners and Flue Gas Recirculation | 32 | LB/MMSCF | BACT-PSD | 0 | |
| LA-0240 | FLOPAM INC. | LA | PSD-LA-747/1280-00141-V0 | 6/14/2010 | Boilers | 25.1 | MMBTU/H | Ultra Low NOx Burners | 0.38 | LB/H | LAER | 0.015 | LB/MMBTU |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Auxiliary Heater | 40 | MMBtu/hr | OPERATIONAL RESTRICTION OF 1000 HR/YR | 9 | PPMVD | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Auxiliary Boiler | 35 | MMBtu/hr | OPERATIONAL RESTRICTION OF 500 HR/YR | 9 | PPMVD | BACT-PSD | 0 | |
| NV-0050 | MGM MIRAGE | NV | 825 | 11/30/2009 | BOILERS - UNITS CC026, CC027 AND CC028 AT CITY CENTER | 44 | MMBTU/H | LOW NOX BURNER AND GOOD COMBUSTION PRACTICES | 0.0109 | LB/MMBTU | Other Case-by-Case | 0.0109 | LB/MMBTU |
| NV-0050 | MGM MIRAGE | NV | 825 | 11/30/2009 | BOILERS - UNITS CC001, CC002, AND CC003 AT CITY CENTER | 41.64 | MMBTU/H | LOW NOX BURNER AND FLUE GAS RECIRCULATION | 0.011 | LB/MMBTU | Other Case-by-Case | 0.011 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT CP01 | 35.4 | MMBTU/H | LOW NOX BURNER | 0.035 | LB/MMBTU | BACT-PSD | 0.035 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT CP03 | 33.48 | MMBTU/H | LOW NOX BURNER | 0.0367 | LB/MMBTU | BACT-PSD | 0.0367 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT BA03 | 31.38 | MMBTU/H | LOW-NOX BURNER | 0.0306 | LB/MMBTU | BACT-PSD | 0.0306 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT CP26 | 24 | MMBTU/H | LOW NOX BURNER | 0.0108 | LB/MMBTU | BACT-PSD | 0.0108 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT PA15 | 21 | MMBTU/H | LOW NOX BURNER | 0.0366 | LB/MMBTU | BACT-PSD | 0.0366 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT BA01 | 16.8 | MMBTU/H | LOW-NOX BURNER AND BLUE GAS RECIRCULATION | 0.03 | LB/MMBTU | BACT-PSD | 0.03 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT IP04 | 16.7 | MMBTU/H | LOW NOX BURNER | 0.049 | LB/MMBTU | BACT-PSD | 0.0049 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT FL01 | 14.34 | MMBTU/H | LOW NOX BURNER AND FLUE GAS RECIRCULATION | 0.0353 | LB/MMBTU | BACT-PSD | 0.0353 | LB/MMBTU |
| NH-0015 | CONCORD STEAM CORPORATION | NH | TP-0014 | 2/27/2009 | BOILER 3 (AUXILIARY) | 76.8 | MMBTU/H | LOW NOX BURNERS, FLUE GAS RECIRCULATION, AND LESS THAN 700 HOURS OF OPERATION PER CONSECUTIVE 12 MONTH PERIOD. | 0.049 | LB/MMBTU | LAER | 0 | |
| NH-0015 | CONCORD STEAM CORPORATION | NH | TP-0014 | 2/27/2009 | BOILER 2 (AUXILIARY) | 76.8 | MMBTU/H | LOW NOX BURNERS, FLUE GAS RECIRCULATION, AND LESS THAN 700 HOURS OPERATION PER CONSECUTIVE 12 MONTH PERIOD. | 0.049 | LB/MMBTU | LAER | 0 | |
| OK-0135 | PRYOR PLANT CHEMICAL | OK | 2008-100-C PSD | 2/23/2009 | BOILERS #1 AND #2 | 80 | MMBTU/H | LOW-NOX BURNERS AND GOOD COMBUSTION PRACTICES | 4 | LB/H | BACT-PSD | 0.050 | LB/MMBTU |
| SC-0115 | GP CLARENDON LP | SC | 0680-0046-CB | 2/10/2009 | NATURAL GAS SPACE HEATERS - 14 UNITS (ID 17) | 20.89 | MMBTU/H | | 1.99 | LB/H | BACT-PSD | 0.095 | LB/MMBTU |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OK-0136 | PONCA CITY REFINERY | OK | 2007-042-C PSD | 2/9/2009 | TB-1, TB-2, TB-3 | 95 | MMBTU/H | ULTRA-LOW NOX BURNERS; 0.036 LB/MMBTU. | 3.42 | LB/H | BACT-PSD | 0.036 | LB/MMBTU |
| OK-0137 | PONCA CITY REFINERY | OK | 2007-042-C PSD | 2/9/2009 | TB-1 Leased Boiler No. 1 | 95 | MMBTU/H | Ultra-low NOx burners (0.036lb/mmbtu) | 3.42 | LB/H | BACT-PSD | 0.036 | LB/MMBTU |
| OK-0137 | PONCA CITY REFINERY | OK | 2007-042-C PSD | 2/9/2009 | TB-2 Leased Boiler No.2 | 95 | MMBTU/H | ULNB- Ultra-low NOx burners , 0.036lb/mmbtu | 3.42 | LB/H | BACT-PSD | 0.036 | LB/MMBTU |
| OK-0129 | CHOUTEAU POWER PLANT | OK | 2007-115-C(M-1)PSD | 1/23/2009 | AUXILIARY BOILER | 33.5 | MMBTU/H | LOW-NOX BURNERS | 0.07 | LB/MMBTU | BACT-PSD | 0 | |
| SC-0114 | GP ALLENDALE LP | SC | 0160-0020-CB | 11/25/2008 | NATURAL GAS SPACE HEATERS - 14 UNITS (ID 18) | 20.89 | MMBTU/H | | 1.99 | LB/H | BACT-PSD | 0.095 | LB/MMBTU |
| MD-0040 | CPV ST CHARLES | MD | CPCN CASE NO. 9129 | 11/12/2008 | BOILER | 93 | MMBTU/H | LOW NOX WITH FGR | 0.011 | LB/MMBTU | BACT-PSD | 0 | |
| OH-0323 | TITAN TIRE CORPORATION OF BRYAN | OH | 03-17392 | 6/5/2008 | BOILER | 50.4 | MMBTU/H | | 2.47 | LB/H | BACT-PSD | 50 | LB/MMSCF |
| MD-0037 | MEDIMMUNE FREDERICK CAMPUS | MD | NSR-2007-01 | 1/28/2008 | FOUR (4) NATURAL GAS BOILERS EACH RATED AT 29.4 MILLION BTU PER HOUR | 29.4 | MMBTU/H | ULTRA LOW NOX BURNERS ON EACH OF THE FOUR IDENTICAL BOILERS | 9 | PPM | LAER | 0.011 | LB/MMBTU |
| MN-0070 | MINNESOTA STEEL INDUSTRIES, LLC | MN | 06100067-001 | 9/7/2007 | SMALL BOILERS & HEATERS(<100 MMBTU/H) | 99 | MMBTU/H | | 0.0035 | LB/MMBTU | BACT-PSD | 0 | |
| AL-0230 | THYSSENKRUPP STEEL AND STAINLESS USA, LLC | AL | 503-0095-X001 THRU X026 | 8/17/2007 | 3 NATURAL GAS-FIRED BOILERS WITH ULNB & EGR (537-539) | 64.9 | MMBTU each | ULNB & EGR (ULTRA-LOW NOX BURNERS (ULNB)(EXHAUST GAS RECIRCULATION (EGR) ¿ SAME FLUE GAS RECIRCULATION (FGR) | 0.035 | LB/MMBTU | BACT-PSD | 0 | |
| OH-0309 | TOLEDO SUPPLIER PARK-PAINT SHOP | OH | 04-01358 | 5/3/2007 | BOILER (2), NATURAL GAS | 20.4 | MMBTU/H | LOW NOX BURNERS AND FLUE GAS RECIRCULATION | 0.72 | LB/H | LAER | 0.035 | LB/MMBTU |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO GAS-FUELED 10 MMBTU/H PROCESS HEATERS | 10 | MMBTU/H | | 0.095 | LB/MMBTU | BACT-PSD | 0 | |
| NV-0044 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 1/4/2007 | COMMERCIAL/INSTITUTIONAL-SIZE BOILERS | 35.4 | MMBTU/H | LOW-NOX BURNER AND FLUE GAS RECIRCULATION | 0.035 | LB/MMBTU | BACT-PSD | 0.035 | LB/MMBTU |
| TX-0501 | TEXSTAR GAS PROCESS FACILITY | TX | PSD-TX 55M3 AND 6051 | 7/11/2006 | POWER STEAM BOILER | 93 | MMBTU/H | | 8.39 | LB/H | BACT-PSD | 0.1 | LB/MMBTU |
| WA-0316 | NORTHWEST PIPELINE CORP.-MT VERNON COMPRESSOR | WA | PSD-01-09 AMENDMENT 5 | 6/14/2006 | BOILER, NATURAL GAS | 4.19 | MMBTU/H | GOOD COMBUSTION PRACTICE | 34 | PPMDV @ 3% O2 | BACT-PSD | 0.04 | LB/MMBTU |
| CA-1128 | COTTAGE HEALTH CARE - PUEBLO STREET | CA | 11974 | 5/16/2006 | BOILER: 5 TO < 33.5 MMBTU/H | 25 | MMBTU/H (75 MMBTU/H | ULTRA-LOW NOX BURNER | 9 | PPMV AT 3% O2 | BACT-PSD | 0 | |
| NY-0095 | CAITHNES BELLPORT ENERGY CENTER | NY | PSD-NY-0001 | 5/10/2006 | AUXILIARY BOILER | 29.4 | MMBTU/H | LOW NOX BURNERS & FLUE GAS RECIRCULATION | 0.011 | LB/MMBTU | BACT-PSD | 0 | |
| AR-0090 | NUCOR STEEL, ARKANSAS | AR | 1139-AOP-R6 | 4/3/2006 | PICKLE LINE BOILERS, SN-52 | 12.6 | MMBTU EACH | LOW NOX BURNERS | 2.9 | LB/H | BACT-PSD | 0.075 | LB/MMBTU |
| CA-1127 | GENENTECH, INC. | CA | 12680 | 9/27/2005 | BOILER: >= 50 MMBTU/H | 97 | MMBTU/H | ULTRA LOW NOX BURNERS: NATCOM P-97-LOG-35-2127 | 9 | PPMVD @ 3% O2 | BACT-PSD | 0 | |
| LA-0203 | OAKDALE OSB PLANT | LA | PSD-LA-710 | 6/13/2005 | AUXILIARY THERMAL OIL HEATER | 66.5 | MMBTU/H | USE OF NATURAL GAS AS FUEL AND GOOD COMBUSTION PRACTICES | 7.82 | LB/H | BACT-PSD | 0.118 | LB/MMBTU |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | BOILERS (2) | 30.6 | MMBTU/H | | 1.07 | LB/H | BACT-PSD | 0.035 | LB/MMBTU |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | AUXILIARY BOILER | 38 | MMBTU/H | LOW NOX BURNERS | 0.37 | LB/MMBTU | BACT-PSD | 0.37 | LB/MMBTU |
| AL-0212 | HYUNDAI MOTOR MANUFACTURING ALABAMA, LLC | AL | 209-0090-X001,X002 | 11/22/2004 | BOILER, NATURAL GAS (2) | 24.5 | mmbtu/h | LOW NOX BURNERS | 0.35 | LB/MMBTU | BACT-PSD | 0.35 | LB/MMBTU |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - NOx

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WI-0227 | PORT WASHINGTON GENERATING STATION | WI | 04-RV-175 | 10/13/2004 | NATURAL GAS FIRED AUXILLIARY BOILER | 97.1 | MMBTU/H | NATURAL GAS FUEL, COMBUSTION OPTIMIZATION (BASED ON CAPACITY FACTOR DURING OZONE SEASON EXCEEDING 20%) | 13.7 | LB/H | N/A | 0.141 | LB/MMBTU |
| WI-0226 | WPS - WESTON PLANT | WI | 04-RV-128 | 8/27/2004 | NATURAL GAS FIRED BOILER | 46.2 | MMBTU/H | BURNER DESIGN, NATURAL GAS FUELED | 1.67 | LB/H | N/A | 0.036 | LB/MMBTU |
| AR-0077 | BLUEWATER PROJECT | AR | 2062-AOP-R0 | 7/22/2004 | BOILERS | 22 | MMBTU/H | LOW NOX BURNERS | 0.08 | LB/MMBTU | BACT-PSD | 0.08 | LB/MMBTU |
| CO-0058 | CHEYENNE STATION | CO | 03WE0910303- | 6/12/2004 | HEATERS | 45 | MMBTU/H | LOW NOX BURNERS | 0.035 | LB/MMBTU | BACT-PSD | 0.035 | LB/MMBTU |
| OH-0276 | CHARTER STEEL | OH | 13-04176 | 6/10/2004 | BOILER FOR VACUUM OXYGEN DEGASSER VESSEL | 28.6 | MMBTU/H | LOW NOX BURNER | 2.8 | LB/H | BACT-PSD | 0.098 | LB/MMBTU |
| NV-0037 | COPPER MOUNTAIN POWER | NV | 15347 | 5/14/2004 | AUXILIARY BOILER | 60 | MMBTU/H | LOW NOX BURNER (WITH EITHER INTERNAL OR EXTERNAL FLUE GAS RECIRCULATION) | 0.035 | LB/MMBTU | BACT-PSD | 0.035 | LB/MMBTU |
| ID-0015 | J R SIMPLOT COMPANY - DON SIDING PLANT | ID | T1-9507-114-1 | 4/5/2004 | BOILER, 64 MMBTU/H | 64 | MMBTU/H | LOW-NOX BURNER | 2.88 | LB/H | RACT | 0.045 | LB/MMBTU |
| AL-0191 | HYUNDAI MOTOR MANUFACTURING OF ALABAMA, LLC | AL | 209-0090-X001,X002,X003 | 3/23/2004 | BOILERS, NATURAL GAS, (3) | 50 | MMBTU/H | NATURAL GAS ONLY; LOW NOX BURNERS | 1.75 | LB/H | BACT-PSD | 0.035 | LB/MMBTU |
| WI-0207 | ACE ETHANOL - STANLEY | WI | 03-DCF-184 | 1/21/2004 | BOILER, S51/B51, 80 MMBTU/H | 80 | MMBTU/H | NAT. GAS / PROPANE, LOW NOX BURNER | 0.04 | LB/MMBTU | BACT-PSD | 0.04 | LB/MMTU |
| WI-0207 | ACE ETHANOL - STANLEY | WI | 03-DCF-184 | 1/21/2004 | BOILER, S50/B50, 60 MMBTU/H | 60 | MMBTU/H | LOW NOX BURNER | 0.04 | LB/MMBTU | BACT-PSD | 0.04 | LB/MMBTU |
| WI-0207 | ACE ETHANOL - STANLEY | WI | 03-DCF-184 | 1/21/2004 | BOILER, S53 / B53, 34 MMBTU/H | 34 | MMBTU/H | NATURAL GAS / PROPANE; LOW NOX BURNER | 0.04 | LB/MMBTU | BACT-PSD | 0.04 | LB/MMBTU |
| WI-0207 | ACE ETHANOL - STANLEY | WI | 03-DCF-184 | 1/21/2004 | BOILER, S52/B52, 11 MMBTU/H | 11 | MMBTU/H | NATURAL GAS / PROPANE; LOW NOX BURNER | 0.04 | LB/MMBTU | BACT-PSD | 0.04 | LB/MMBTU |
| OR-0039 | COB ENERGY FACILITY, LLC | OR | 18-0029 | 12/30/2003 | BOILERS, AUXILIARY, NATURAL GAS, (2) | 80 | MMBTU/H | LOW NOX BURNERS AND FLUE GAS RECIRCULATION | 0.035 | LB/MMBTU | BACT-PSD | 0.035 | LB/MMBTU |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | BOILER, COMMERCIAL | 70 | MMBTU/H | DRY LOW NOX AND FLUE GAS RECIRCULATION | 0.036 | LB/MMBTU | | 0.036 | LB/MMBTU |
| IN-0108 | NUCOR STEEL | IN | 107-16823-00038 | 11/21/2003 | BOILER, NATURAL GAS, (2) | 34 | MMBTU/H | LOW NOX BURNERS, NATURAL GAS | 0.035 | LB/MMBTU | BACT-PSD | 0.035 | LB/MMBTU |
| MI-0355 | ABBOTT LABORATORIES, STURGIS PLANT | MI | 64-03 | 9/16/2003 | BOILER, GAS-FIRED | 98.51 | MMBTU/H | LOW NOX BURNERS AND FLUE GAS RECIRCULATION. | 0.08 | LB/MMBTU | BACT-PSD | 0.08 | LB/MMBTU |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR SIEMENS TURBINES | 55.34 | MMBTU/H | LOW NOX BURNERS | 0.036 | LB/MMBTU | BACT-PSD | 0.036 | LB/MMBTU |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR GE TURBINE | 41 | MMBTU/H | LOW NOX BURNERS | 0.027 | LB/MMBTU | BACT-PSD | 0.027 | LB/MMBTU |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | BOILER | 30.6 | MMBTU/H | | 1.08 | LB/H | BACT-PSD | 0.035 | LB/MMBTU |
| TX-0458 | JACK COUNTY POWER PLANT | TX | P1026 | 7/22/2003 | AUXILIARY BOILER | 36 | mmbtu/h | | 1.3 | LB/H | BACT-PSD | 0.036 | LB/MMBTU |
| GA-0098 | RINCON POWER PLANT | GA | 4911-103-0011-P-01-0 | 3/24/2003 | AUXILIARY BOILER | 83 | MMBTU/H | | 0.055 | LB/MMBTU | Other Case-by-Case | 0.055 | LB/MMBTU |
| OK-0090 | DUKE ENERGY STEPHENS, LLC STEPHENS ENERGY | OK | 2001-157-C M-1 PSD | 3/21/2003 | BOILER, AUXILIARY | 33 | MMBTU/H | LOW-NOX BURNERS | 0.05 | LB/MMBTU | BACT-PSD | 0.05 | LB/MMBTU |
| PA-0216 | J & L SPECIALTY STEEL, INC. | PA | PA-04-00013B | 1/13/2003 | BOILER, DRAP LINE | 33.5 | MMBTU/H | ULTRA LOW NOX BURNER | 30 | PPM @ 3% O2 | Other Case-by-Case | 0.04 | LB/MMBTU |
| WA-0291 | WALLULA POWER PLANT | WA | EFSEC/2001-03 | 1/3/2003 | BOILER, AUXILIARY | 55.3 | MMBTU/H | LNB PLUS FGR | 30 | PPMDV @ 3% O2 | Other Case-by-Case | 0.23 | LB/MMBTU |
| TX-0389 | BAYTOWN CARBON BLACK PLANT | TX | PSD-1010 | 12/31/2002 | BACK-UP BOILER | 13.4 | MMBUT/H | | 1.4 | LB/H | Other Case-by-Case | 0.104 | LB/MMBTU |
| TX-0354 | ATOFINA CHEMICALS INCORPORATED | TX | PSD-TX-1016 | 12/19/2002 | (2) STEAM BOILERS, X-426A AND X-426B | 15.8 | MMBTU/H | LOW NOX BURNERS | 2.05 | LB/H | Other Case-by-Case | 0.13 | LB/MMBTU |
| TX-0408 | INDIAN ROCK GATHERING COMPANY LP | TX | PSD-TX-1002 | 11/22/2002 | AUXILIARY BOILER, (2) | 6 | MMBTU/H | | 0.59 | LB/H | BACT-PSD | 0.098 | LB/MMBTU |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VA-0260 | HENRY COUNTY POWER | VA | 21389 | 11/21/2002 | AUXILIARY BOILER, (2) | 40 | MMBTU/H | LOW NOX BURNERS AND CLEAN FUEL. | 3.2 | LB/H | BACT-PSD | 0.08 | LB/MMBTU |
| GA-0101 | MURRAY ENERGY FACILITY | GA | 4911-213-0034-P-01-1 | 10/23/2002 | BOILER, AUXILIARY | 31.4 | MMBTU/H | DRY LOW NOX BURNERS, FLUE GAS RECIRCULATION | 30 | PPM @ 3% O2 | BACT-PSD | 0.037 | LB/MMBTU |
| AL-0192 | HONDA MANUFACTURING OF ALABAMA, LLC | AL | 309-0050 (X010-X014) | 10/18/2002 | BOILERS, NATURAL GAS, (3) | 30 | MMBTU/H | LOW NOX BURNERS, CLEAN FUEL, GOOD COMBUSTION | 1.05 | LB/H | BACT-PSD | 0.035 | LB/MMBTU |
| CA-1023 | LA COUNTY INTERNAL SERVICES DEPT. | CA | 405470 | 10/8/2002 | BOILER, 39 MMBTU/H | 39 | MMBTU/H | ULTRA-LOW NOX BURNER WITH FGR | 9 | PPMVD @ 3% O2 | N/A | 0 | |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | BOILER | 99 | MMBTU/H | LOW NOX BURNERS | 4.95 | LB/H | BACT-PSD | 0.05 | LB/MMBTU |
| WA-0297 | NORTHWEST PIPELINE CORPORATION MT. VERNON | WA | PSD 01-09 | 8/30/2002 | BOILER | 4.19 | MMBTU/H | GOOD COMBUSTION PRACTICE | 34 | PPM @ 3% O2 | BACT-PSD | 0 | |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | AUXILIARY BOILER | 33 | MMBTU/H | LOW NOX OPTION (LOW NOX BURNER AND/OR FLUE GAS RECIRCULATION) | 0.04 | LB/MMBTU | BACT-PSD | 0.04 | LB/MMBTU |
| AL-0185 | BARTON SHOALS ENERGY | AL | X001, X002 | 7/12/2002 | TWO (2) 40 MMBTU/H AUXILIARY BOILERS | 40 | MMBTU/H | LOW NOX BURNERS | 0.05 | LB/MMBTU | BACT-PSD | 0 | |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | AUXILIARY BOILER | 33 | MMBTU/H | LOW NOX BURNERS | 0.035 | LB/MMBTU | BACT-PSD | 0.035 | LB/MMBTU |
| OK-0072 | REDBUD POWER PLT | OK | 2000-090-C M-1 PSD | 5/6/2002 | AUXILIARY BOILER | 93 | MMBUT/H | LOW NOX BURNERS | 0.075 | LB/MMBTU | BACT-PSD | 0.075 | LB/MMBTU |
| IA-0058 | GREATER DES MOINES ENERGY CENTER | IA | 77-13-002 | 4/10/2002 | AUXILIARY BOILER | 68 | MMBTU/H | | 0.05 | LB/MMBTU | BACT-PSD | 0.05 | LB/MMBTU |
| TN-0153 | WILLIAMS REFINING & MARKETING, L.L.C. | TN | 0101-08PC AND 1010-05PCR | 4/3/2002 | BOILER, NO. 9 | 95 | MMBTU/H | | 0.084 | LB/MMBTU | BACT-PSD | 0.084 | LB/MMBTU |
| TN-0153 | WILLIAMS REFINING & MARKETING, L.L.C. | TN | 0101-08PC AND 1010-05PCR | 4/3/2002 | HEATERS, (5) | 50 | MMBTU/H | | 0.03 | LB/MMBTU | BACT-PSD | 0.03 | LB/MMBTU |
| AR-0051 | DUKE ENERGY-JACKSON FACILITY | AR | 1998-AOP-R0 (34-0259) | 4/1/2002 | BOILER, AUXILIARY | 33 | MMBTU/H | | 0.035 | LB/MMBTU | BACT-PSD | 0.035 | LB/MMBTU |
| OK-0056 | HORSESHOE ENERGY PROJECT | OK | 2001-156-C PSD | 2/12/2002 | AUXILIARY BOILERS | 0 | | GOOD COMBUSTION PRACTICES AND DESIGN | 0.1 | LB/MMBTU | BACT-PSD | 0.1 | LB/MMBTU |
| OK-0055 | MUSTANG ENERGY PROJECT | OK | 2001-132-C PSD | 2/12/2002 | AUXILIARY BOILER | 31 | MMBTU/H | COMBUSTION CONTROL | 0.01 | LB/MMBTU | Other Case-by-Case | 0.01 | LB/MMBTU |
| LA-0174 | PORT HUDSON OPERATIONS | LA | PSD-LA-581 (M-2) | 1/25/2002 | POWER BOILER NO. 2 | 65.5 | MMBTU/H | LOW-NOX BURNERS | 61.34 | LB/H | Other Case-by-Case | 0.1 | LB/MMBTU |
| NC-0094 | GENPOWER EARLEYS, LLC | NC | 09159R00 | 1/9/2002 | BOILER, AUXILIARY, NATURAL GAS | 83 | MMBTU/H | LOW NOX BURNERS | 4.07 | LB/H | BACT-PSD | 0.049 | LB/MMBTU |
| OH-0257 | JACKSON COUNTY POWER, LLC | OH | 06-06313 | 12/27/2001 | AUXILIARY BOILER | 76 | MMBTU/H | LOW NOX BURNERS INSTALLED | 6.69 | LB/H | BACT-PSD | 0.08 | LB/MMBTU |
| PA-0210 | DART CONTAINER CORP OF PA | PA | 36-05117 | 12/14/2001 | BOILER, (2) | 33.5 | MMBTU/H | LO-NOX BURNERS | 30 | PPMDV @ 3% O2 | N/A | 0 | |
| AL-0180 | DUKE ENERGY DALE, LLC | AL | 604-0023-X001, X002 | 12/11/2001 | 35 MMBTU/HR NAT. GAS FIRED AUXILIARY BOILER | 35 | MMBTU/H | LOW NOX BURNERS | 0.108 | LB/MMBTU | BACT-PSD | 0 | |
| IN-0095 | ALLEGHENY ENERGY SUPPLY CO. LLC | IN | 141-14198-00543 | 12/7/2001 | AUXILLIARY BOILER | 21 | MMBTU/H | LOW NOX BURNERS | 0.049 | LB/MMBTU | BACT-PSD | 0.049 | LB/MMBTU |
| OH-0251 | CENTRAL SOYA COMPANY INC. | OH | 03-13369 | 11/29/2001 | BOILER, NATURAL GAS | 91.2 | MMBTU/H | USE OF LOW-NOX BURNERS. | 3.21 | LB/H | N/A | 0.0352 | LB/MMBTU |
| TX-0378 | LA PORTE POLYPROPYLENE PLANT | TX | PSD-TX-989 | 11/5/2001 | PACKAGE BOILER BO-4 | 60 | MMBTU/H | ULTRA LOW-NOX BURNERS | 0.9 | LB/H | Other Case-by-Case | 0.015 | LB/MMBTU |
| OK-0071 | MCCLAIN ENERGY FACILITY | OK | 99-213-C M-1 PSD | 10/25/2001 | AUXILIARY BOILER | 22 | MMBTU/H | NATURAL GAS FUEL AND GOOD COMBUSTION CONTROL | 0.036 | LB/MMBTU | BACT-PSD | 0.036 | LB/MMBTU |
| AL-0181 | DUKE ENERGY AUTAUGA, LLC | AL | 201-0012-X001, X002 | 10/23/2001 | 31.4 MMBTU/HR NATURAL GAS FIRED BOILER | 31.4 | MMBTU/H | LOW NOX BURNERS | 0.108 | LB/MMBTU | BACT-PSD | 0 | |

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| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WA-0292 | SATSOP COMBUSTION TURBINE PROJECT | WA | EFSEC/2001-01 | 10/23/2001 | AUXILIARY BOILER | 29.3 | MMBTU/H | FGR AND LOW-NOX BURNERS | 1.03 | LB/H | BACT-PSD | 0.035 | LB/MMBTU |
| OK-0043 | WEBERS FALLS ENERGY FACILITY | OK | 2000-278-C PSD | 10/22/2001 | AUXILIARY BOILER | 30 | MMBTU/H | LOW NOX BURNERS | 0.05 | LB/MMBTU | BACT-PSD | 0.05 | LB/MMBTU |
| OH-0265 | DRESDEN ENERGY LLC | OH | 06-06238 | 10/16/2001 | BOILER, NATURAL GAS | 49 | MMBTU/H | | 4.9 | LB/H | BACT-PSD | 0.1 | LB/MMBTU |
| IN-0110 | COGENTRIX LAWRENCE CO., LLC | IN | 093-12432-00021-4911 | 10/5/2001 | BOILER, AUXILIARY, NATURAL GAS | 35 | MMBTU/H | CLEAN FUEL, LOW NOX BURNERS | 0.08 | LB/MMBTU | BACT-PSD | 0.08 | LB/MMBTU |
| AL-0179 | TENASKA TALLADEGA GENERATING STATION | AL | 309-0052-X001 | 10/3/2001 | 30 MMBTU/HR AUXILIARY BOILER | 30 | MMBTU/H | LOW NOX COMBUSTION | 0.096 | LB/MMBTU | BACT-PSD | 0.096 | LB/MMBTU |
| CA-1099 | COSMETIC LABORATORIES | CA | 385770 | 9/4/2001 | BOILER: 5 TO < 33.5 MMBTU/HR | 21.46 | MMBTU/H | ULTRA LOW-NOX BURNER | 9 | PPMD @ 3% O2 | BACT-PSD | 0 | |
| WV-0013 | MARTINSBURG PLANT | WV | R14-12B | 8/30/2001 | BOILERS, 3 | 65.78 | MMBTU/H | LOW-NOX BURNERS AND FLUE-GAS RECIRCULATION | 0.035 | LB/MMBTU | BACT-PSD | 0.035 | LB/MMBTU |
| WV-0013 | MARTINSBURG PLANT | WV | R14-12B | 8/30/2001 | BOILER | 54.4 | MMBTU/H | LOW NOX BURNERS AND FLUE-GAS RECIRCULATION | 0.035 | LB/MMBTU | BACT-PSD | 0.035 | LB/MMBTU |
| OK-0054 | QUAD GRAPHICS OKC FACILITY | OK | 2000-306-C PSD | 8/21/2001 | BOILERS | 62.77 | MMBTU/H | LOW NOX BURNERS | 0.035 | LB/MMBTU | BACT-PSD | 0.035 | LB/MMBTU |
| OK-0044 | SMITH POCOLA ENERGY PROJECT | OK | 2000-115-C PSD | 8/16/2001 | AUXILIARY BOILERS, (2) | 48 | MMBTU/H | DRY LOW NOX BURNERS, OPERATES IN PRE-MIX MODE. | 9.41 | LB/H | BACT-PSD | 0.1 | LB/MMBTU |
| OH-0263 | FREMONT ENERGY CENTER, LLC | OH | 03-13549 | 8/9/2001 | AUXILIARY BOILER | 80 | MMBTU/H | LOW NOX BURNERS | 2.72 | LB/H | BACT-PSD | 0.034 | LB/MMBTU |
| AK-0047 | MILNE POINT PRODUCTION FACILITY | AK | 0073-AC023 | 7/13/2001 | HEATERS (2), H-5302A AND H-5302B | 35 | MMBTU/H EA | LIMIT EXTENDED FROM PREVIOUS PERMIT TO AVOID PSD REVIEW. | 0.05 | LB/MMBTU | N/A | 0.05 | LB/MMBTU |
| AK-0047 | MILNE POINT PRODUCTION FACILITY | AK | 0073-AC023 | 7/13/2001 | HEATERS (2), H-5701A AND H-5701B | 29 | MMBTU/H EACH | BACT LIMIT EXTENDED FROM PREVIOUS PERMIT TO AVOID PSD REVIEW. | 11.3 | LB/H | Other Case-by-Case | 0.08 | LB/MMBTU |
| AK-0047 | MILNE POINT PRODUCTION FACILITY | AK | 0073-AC023 | 7/13/2001 | HEATERS (2), H-2001A AND H-2001B | 17.5 | MMBTU/H EACH | BACT LIMIT EXTENDED FROM PREVIOUS PERMIT TO AVOID PSD REVIEW. DO NOT OPERATE HEATERS ON FUEL OIL AT ANY TIME. REPLACE BOTH HEATERS WITH LOW NOX BURNERS NO LATER THAN 180 D AFTER PERMIT ISSUANCE. | 0.08 | LB/MMBTU | Other Case-by-Case | 0.08 | LB/MMBTU |
| AK-0047 | MILNE POINT PRODUCTION FACILITY | AK | 0073-AC023 | 7/13/2001 | HEATERS (2), H-4510A AND H-4510B | 14.4 | MMBTU/H EACH | LIMIT EXTENDED FROM PREVIOUS PERMIT TO AVOID PSD REVIEW. | 0.08 | LB/MMBTU | N/A | 0.08 | LB/MMBTU |
| IN-0087 | DUKE ENERGY, VIGO LLC | IN | 167-12481-00125 | 6/6/2001 | AUXILARY BOILER, NATURAL GAS (2) | 46 | MMBTU/H | GOOD COMBUSTION. LOW NOX BURNERS. LIMIT IS FOR EACH BOILER. | 0.049 | LB/MMBTU | BACT-PSD | 0.049 | LB/MMBTU |
| NV-0039 | CHUCK LENZIE GENERATING STATION | NV | 1513 | 6/1/2001 | AUXILIARY BOILERS | 44.1 | MMBTU/H | GOOD COMBUSTION CONTROL | 30 | PPMVD@3% O2 | BACT-PSD | 0.118 | LB/MMBTU |
| OK-0046 | THUNDERBIRD POWER PLT | OK | 2000-116-C PSD | 5/17/2001 | AUXILIARY BOILER | 20 | MMBTU/H | LOW NOX BURNERS | 0.049 | LB/MMBTU | BACT-PSD | 0.049 | LB/MMBTU |
| IN-0086 | MIRANT SUGAR CREEK, LLC | IN | 167-12208-00123 | 5/9/2001 | AUXILARY BOILER, NATURAL GAS (2) | 35 | MMBTU/H | LOW NOX BURNERS. GOOD COMBUSTION. NATURAL GAS. LB/H LIMIT IS FOR EACH BOILER. | 0.049 | LB/MMBTU | BACT-PSD | 0.049 | LB/MMBTU |
| OK-0074 | KIAMICHI ENERGY FACILITY | OK | 2000-103-C M-1 PSD | 5/1/2001 | AUXILIARY BOILER | 27.5 | MMBTU/H | LOW NOX BURNERS | 0.1 | LB/MMBTU | BACT-PSD | 0.1 | LB/MMBTU |
| MS-0045 | NISSAN NORTH AMERICA, INC. | MS | 1720-00073 | 4/2/2001 | BOILER | 35 | MMBTU | LOW NOX BURNERS | 0.12 | LB/MMBTU | BACT-PSD | 0.12 | LB/MMBTU |
| OH-0255 | AEP WATERFORD ENERGY LLC | OH | 06-06739 | 3/29/2001 | BOILER, NATURAL GAS | 85.2 | MMBTU/H | | 3.07 | LB/H | BACT-PSD | 0.036 | LB/MMBTU |
| OH-0258 | PRO TEC COATING COMPANY | OH | 03-10957 | 2/15/2001 | BOILERS (4) | 20.9 | MMBTU/H | LOW NOX BURNERS. | 0.69 | LB/H | N/A | 0.033 | LB/MMBTU |
| AL-0169 | BLOUNT MEGAWATT FACILITY | AL | 402-0010-X001 AND X002 | 2/5/2001 | AUXILIARY BOILER | 40 | MMBTU/H | LOW NOX BURNERS | 0.08 | LB/MMBTU | BACT-PSD | 0.08 | LB/MMBTU |
| AL-0168 | GENPOWER KELLEY LLC | AL | 414-0014-X001 AND X002 | 1/12/2001 | BOILER | 83 | MMBTU/H | LOW NOX BURNERS | 0.05 | LB/MMBTU | BACT-PSD | 0.05 | LB/MMBTU |
| AL-0178 | ANNISTON ARMY DEPOT | AL | 301-0050 | 1/5/2001 | TWO (2) 13.4 MMBTU/H BOILERS | 13.4 | MMBTU/H | LOW NOX BURNERS | 0.036 | LB/MMBTU | BACT-PSD | 0 | |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - NOx

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AL-0178 | ANNISTON ARMY DEPOT | AL | 301-0050 | 1/5/2001 | TWO (2) 11.7 MMBTU/H BOILERS | 11.7 | MMBTU/H | LOW NOX BURNERS | 0.036 | LB/MMBTU | BACT-PSD | 0 | |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - VOC

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *FL-0335 | SUWANNEE MILL | FL | 1210468-001-AC(PSD-FL-417) | 9/5/2012 | Four(4) Natural Gas Boilers - 46 MMBtu/hour | 46 | MMBtu/hr | Good Combustion Practice | 0.003 | LB/MMBTU | BACT-PSD | 0 | |
| *OH-0350 | REPUBLIC STEEL | OH | P0109191 | 7/18/2012 | Steam Boiler | 65 | MMBtu/H | Proper burner design and good combustion practices | 0.35 | LB/H | BACT-PSD | 0.0054 | LB/MMBTU |
| LA-0240 | FLOPAM INC. | LA | PSD-LA-747/1280-00141-V0 | 6/14/2010 | Boilers | 25.1 | MMBTU/H | Good equipment design and proper combustion techniques | 0.003 | LB/MMBTU | LAER | 0 | |
| NV-0050 | MGM MIRAGE | NV | 825 | 11/30/2009 | BOILERS - UNITS CC001, CC002, AND CC003 AT CITY CENTER | 41.64 | MMBTU/H | LIMITING THE FUEL TO NATURAL GAS ONLY AND GOOD COMBUSTION PRACTICES | 0.0024 | LB/MMBTU | Other Case-by-Case | 0.0024 | LB/MMBTU |
| NV-0050 | MGM MIRAGE | NV | 825 | 11/30/2009 | BOILERS - UNITS CC026, CC027 AND CC028 AT CITY CENTER | 44 | MMBTU/H | LIMITING THE FUEL TO NATURAL GAS ONLY AND GOOD COMBUSTION PRACTICES | 0.0055 | LB/MMBTU | Other Case-by-Case | 0.0055 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT IP04 | 16.7 | MMBTU/H | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.0053 | LB/MMBTU | Other Case-by-Case | 0.0053 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT FL01 | 14.34 | MMBTU/H | FLUE GAS RECIRCULATION | 0.0054 | LB/MMBTU | OTHER CASE-BY-CASE | 0.0054 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT BA01 | 16.8 | MMBTU/H | FLUE GAS RECIRCULATION | 0.0054 | LB/MMBTU | Other Case-by-Case | 0.0054 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT BA03 | 31.38 | MMBTU/H | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.0054 | LB/MMBTU | Other Case-by-Case | 0.0054 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT CP01 | 35.4 | MMBTU/H | FLUE GAS RECIRCULATION AND OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.0054 | LB/MMBTU | Other Case-by-Case | 0.0054 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT CP03 | 33.48 | MMBTU/H | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.0054 | LB/MMBTU | Other Case-by-Case | 0.0054 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT CP26 | 24 | MMBTU/H | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.0054 | LB/MMBTU | Other Case-by-Case | 0.0054 | LB/MMBTU |
| OK-0135 | PRYOR PLANT CHEMICAL | OK | 2008-100-C PSD | 2/23/2009 | BOILERS #1 AND #2 | 80 | MMBTU/H | | 0.5 | LB/H | BACT-PSD | 0.0063 | LB/MMBTU |
| SC-0115 | GP CLARENDON LP | SC | 0680-0046-CB | 2/10/2009 | NATURAL GAS SPACE HEATERS - 14 UNITS (ID 17) | 20.89 | MMBTU/H | | 0.11 | LB/H | BACT-PSD | 0.0053 | LB/MMBTU |
| OK-0129 | CHOUTEAU POWER PLANT | OK | 2007-115-C(M-1)PSD | 1/23/2009 | AUXILIARY BOILER | 33.5 | MMBTU/H | GOOD COMBUSTION | 0.54 | LB/H | BACT-PSD | 0.0161 | LB/MMBTU |
| SC-0114 | GP ALLENDALE LP | SC | 0160-0020-CB | 11/25/2008 | NATURAL GAS SPACE HEATERS - 14 UNITS (ID 18) | 20.89 | MMBTU/H | | 0.11 | LB/H | BACT-PSD | 0.0053 | LB/MMBTU |
| MD-0040 | CPV ST CHARLES | MD | CPCN CASE NO. 9129 | 11/12/2008 | BOILER | 93 | MMBTU/H | | 0.002 | LB/MMBTU | LAER | 0 | |
| OH-0323 | TITAN TIRE CORPORATION OF BRYAN | OH | 03-17392 | 6/5/2008 | BOILER | 50.4 | MMBTU/H | | 0.27 | LB/H | BACT-PSD | 0.0054 | LB/MMBTU |
| AL-0230 | THYSSENKRUPP STEEL AND STAINLESS USA, LLC | AL | 503-0095-X001 THRU X026 | 8/17/2007 | 3 NATURAL GAS-FIRED BOILERS WITH ULNB & EGR (537-539) | 64.9 | MMBTU each | | 0.0055 | LB/MMBTU | BACT-PSD | 0 | |
| OH-0309 | TOLEDO SUPPLIER PARK-PAINT SHOP | OH | 04-01358 | 5/3/2007 | BOILER (2), NATURAL GAS | 20.4 | MMBTU/H | | 0.11 | LB/H | LAER | 0.0054 | LB/MMBTU |
| MS-0085 | DART CONTAINER CORPORATION LLC | MS | 0440-00053 | 1/31/2007 | NATURAL GAS FIRED BOILER | 33.5 | MMBTU/h | | 0.81 | TONS/YR | BACT-PSD | 0.0055 | LB/MMBTU |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - VOC

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO GAS-FUELED 10 MMBTU/H PROCESS HEATERS | 10 | MMBTU/H | | 2 | GR S/100 SCF GAS | BACT-PSD | 0 | |
| NV-0044 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 1/4/2007 | COMMERCIAL/INSTITUTIONAL-SIZE BOILERS | 35.4 | MMBTU/H | GOOD COMBUSTION DESIGN | 0.005 | LB/MMBTU | BACT-PSD | 0.005 | LB/MMBTU |
| TX-0501 | TEXSTAR GAS PROCESS FACILITY | TX | PSD-TX 55M3 AND 6051 | 7/11/2006 | POWER STEAM BOILER | 93 | MMBTU/H | | 0.46 | LB/H | BACT-PSD | 0.0049 | LB/MMBTU |
| AR-0090 | NUCOR STEEL, ARKANSAS | AR | 1139-AOP-R6 | 4/3/2006 | PICKLE LINE BOILERS, SN-52 | 12.6 | MMBTU EACH | GOOD COMBUSTION PRACTICE | 0.2 | LB/H | BACT-PSD | 0.0055 | LB/MMBTU |
| LA-0203 | OAKDALE OSB PLANT | LA | PSD-LA-710 | 6/13/2005 | AUXILIARY THERMAL OIL HEATER | 66.5 | MMBTU/H | USE OF NATURAL GAS AS FUEL AND GOOD COMBUSTION PRACTICES | 0.43 | LB/H | BACT-PSD | 0.0065 | LB/MMBTU |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | BOILERS (2) | 30.6 | MMBTU/H | | 0.49 | LB/H | BACT-PSD | 0.016 | LB/MMBTU |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | AUXILIARY BOILER | 38 | MMBTU/H | | 0.0033 | LB/MMBTU | BACT-PSD | 0 | |
| WI-0227 | PORT WASHINGTON GENERATING STATION | WI | 04-RV-175 | 10/13/2004 | NATURAL GAS FIRED AUXILLIARY BOILER | 97.1 | MMBTU/H | NATURAL GAS FUEL, GOOD COMBUSTION PRACTICES | 0.53 | LB/H | BACT-PSD | 0.0055 | LB/MMBTU |
| AR-0077 | BLUEWATER PROJECT | AR | 2062-AOP-R0 | 7/22/2004 | BOILERS | 22 | MMBTU/H | NATURAL GAS COMBUSTION ONLY | 0.0055 | LB/MMBTU | BACT-PSD | 0 | |
| CO-0058 | CHEYENNE STATION | CO | 03WE0910303- | 6/12/2004 | HEATERS | 45 | MMBTU/H | GOOD COMBUSTION PRACTICES | 0.016 | LB/MMBTU | BACT-PSD | 0.016 | LB/MMBTU |
| OH-0276 | CHARTER STEEL | OH | 13-04176 | 6/10/2004 | BOILER FOR VACUUM OXYGEN DEGASSER VESSEL | 28.6 | MMBTU/H | | 0.15 | LB/H | BACT-PSD | 0.0052 | LB/MMBTU |
| NV-0037 | COPPER MOUNTAIN POWER | NV | 15347 | 5/14/2004 | AUXILIARY BOILER | 60 | MMBTU/H | EFFECTIVE COMBUSTION SYSTEM DESIGN, 10:1 TURNDOWN CAPABILITY AND LOW NOX BURNER TECHNOLOGY | 0.4 | LB/H | LAER | 0.0067 | LB/MMBTU |
| WI-0207 | ACE ETHANOL - STANLEY | WI | 03-DCF-184 | 1/21/2004 | BOILER, S52/B52, 11 MMBTU/H | 11 | MMBTU/H | NATURAL GAS / PROPANE; GOOD COMBUSTION CONTROL | 0.0054 | LB/MMBTU | BACT-PSD | 0 | |
| WI-0207 | ACE ETHANOL - STANLEY | WI | 03-DCF-184 | 1/21/2004 | BOILER, S53 / B53, 34 MMBTU/H | 34 | MMBTU/H | NATURAL GAS / PROPANE; GOOD COMBUSTION CONTROL | 0.0054 | LB/MMBTU | BACT-PSD | 0 | |
| WI-0207 | ACE ETHANOL - STANLEY | WI | 03-DCF-184 | 1/21/2004 | BOILER, S50/B50, 60 MMBTU/H | 60 | MMBTU/H | NATURAL GAS / PROPANE, GOOD COMBUSTION CONTROLS | 0.0054 | LB/MMBTU | BACT-PSD | 0 | |
| WI-0207 | ACE ETHANOL - STANLEY | WI | 03-DCF-184 | 1/21/2004 | BOILER, S51/B51, 80 MMBTU/H | 80 | MMBTU/H | NAT. GAS / PROPANE; GOOD COMBUSTION CONTROL | 0.0054 | LB/MMBTU | BACT-PSD | 0 | |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | BOILER, COMMERCIAL | 70 | MMBTU/H | GOOD COMBUSTION | 0.007 | LB/MMBTU | BACT-PSD | 0 | |
| IN-0108 | NUCOR STEEL | IN | 107-16823-00038 | 11/21/2003 | BOILER, NATURAL GAS, (2) | 34 | MMBTU/H | COMPLIANCE BY USING NATURAL GAS | 0.0026 | LB/MMBTU | BACT-PSD | 0.0026 | LB/MMBTU |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR GE TURBINE | 41 | MMBTU/H | | 0.01 | LB/MMBTU | BACT-PSD | 0 | |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR SIEMENS TURBINES | 55.34 | MMBTU/H | | 0.01 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | BOILER | 30.6 | MMBTU/H | | 0.49 | LB/H | BACT-PSD | 0.016 | LB/MMBTU |
| TX-0458 | JACK COUNTY POWER PLANT | TX | P1026 | 7/22/2003 | AUXILIARY BOILER | 36 | mmbtu/h | | 0.6 | LB/H | BACT-PSD | 0.0167 | LB/MMBTU |
| GA-0098 | RINCON POWER PLANT | GA | 4911-103-0011-P-01-0 | 3/24/2003 | AUXILIARY BOILER | 83 | MMBTU/H | | 0.004 | LB/MMBTU | Other Case-by-Case | 0 | |
| OK-0090 | DUKE ENERGY STEPHENS, LLC STEPHENS ENERGY | OK | 2001-157-C M-1 PSD | 3/21/2003 | BOILER, AUXILIARY | 33 | MMBTU/H | BOILER DESIGN AND GOOD OPERATING PRACTICES | 0.016 | LB/MMBTU | BACT-PSD | 0 | |
| TX-0389 | BAYTOWN CARBON BLACK PLANT | TX | PSD-1010 | 12/31/2002 | BACK-UP BOILER | 13.4 | MMBUT/H | | 0.08 | LB/H | Other Case-by-Case | 0.0060 | LB/MMBTU |
| IA-0062 | EMERY GENERATING STATION | IA | 02-357 | 12/20/2002 | AUXILIARY BOILER | 68 | MMBTU/H | CATALYTIC OXIDATION | 0.0054 | LB/MMBTU | Other Case-by-Case | 0 | |
| TX-0354 | ATOFINA CHEMICALS INCORPORATED | TX | PSD-TX-1016 | 12/19/2002 | (2) STEAM BOILERS, X-426A AND X-426B | 15.8 | MMBTU/H | NONE INDICATED. | 0.09 | LB/H | Other Case-by-Case | 0.0057 | LB/MMBTU |
| VA-0255 | VA POWER - POSSUM POINT | VA | 70225 | 11/18/2002 | BOILER, AUXILIARY | 99 | MMBTU/H | GOOD COMBUSTION PRACTICES. | 0.4 | LB/H | Other Case-by-Case | 0.004 | LB/MMBTU |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - VOC

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GA-0101 | MURRAY ENERGY FACILITY | GA | 4911-213-0034-P-01-1 | 10/23/2002 | BOILER, AUXILIARY | 31.4 | MMBTU/H | GOOD COMBUSTION PRACTICE | 0.0127 | LB/MMBTU | BACT-PSD | 0 | |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | BOILER | 99 | MMBTU/H | | 0.545 | LB/H | BACT-PSD | 0.0055 | LB/MMBTU |
| VA-0261 | CPV CUNNINGHAM CREEK | VA | 81382 | 9/6/2002 | AUXILIARY BOILER | 80 | MMBTU/H | GOOD COMBUSTION PRACTICES. | 0.42 | LB/H | BACT-PSD | 0.0053 | |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | AUXILIARY BOILER | 33 | MMBTU/H | GOOD COMBUSTION PRACTICE | 0.018 | LB/MMBTU | BACT-PSD | 0 | |
| AL-0185 | BARTON SHOALS ENERGY | AL | X001, X002 | 7/12/2002 | TWO (2) 40 MMBTU/H AUXILIARY BOILERS | 40 | MMBTU/H | GOOD COMBUSTION PRACTICES | 0.0054 | LB/MMBTU | BACT-PSD | 0 | |
| TX-0437 | HARTBURG POWER, LP | TX | PSD-TX-1009 | 7/5/2002 | BOILERS, AUXILIARY | 40 | mmbtu/h | GOOD COMBUSTION PRACTICES PROPER DESIGN, CLEAN FUEL | 0.02 | LB/MMBTU | BACT-PSD | 0 | |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | AUXILIARY BOILER | 33 | MMBTU/H | BOILER DESIGN AND GOOD COMBUSTION PRACTICES | 0.016 | LB/MMBTU | BACT-PSD | 0 | |
| OK-0072 | REDBUD POWER PLT | OK | 2000-090-C M-1 PSD | 5/6/2002 | AUXILIARY BOILER | 93 | MMBUT/H | BOILER DESIGN AND GOOD OPERATING PRACTICES | 0.0075 | LB/MMBTU | BACT-PSD | 0 | |
| AR-0051 | DUKE ENERGY-JACKSON FACILITY | AR | 1998-AOP-R0 (34-0259) | 4/1/2002 | BOILER, AUXILIARY | 33 | MMBTU/H | GOOD OPERATING PRACTICE | 0.016 | LB/MMBTU | BACT-PSD | 0.016 | LB/MMBTU |
| OK-0055 | MUSTANG ENERGY PROJECT | OK | 2001-132-C PSD | 2/12/2002 | AUXILIARY BOILER | 31 | MMBTU/H | COMBUSTION CONTROL | 0.0055 | LB/MMBTU | Other Case-by-Case | 0 | |
| NC-0094 | GENPOWER EARLEYS, LLC | NC | 09159R00 | 1/9/2002 | BOILER, AUXILIARY, NATURAL GAS | 83 | MMBTU/H | GOOD COMBUSTION PRACTICES AND DESIGN | 0.45 | LB/H | BACT-PSD | 0.0054 | LB/MMBTU |
| OH-0257 | JACKSON COUNTY POWER, LLC | OH | 06-06313 | 12/27/2001 | AUXILIARY BOILER | 76 | MMBTU/H | | 0.92 | LB/H | BACT-PSD | 0.011 | LB/MMBTU |
| AL-0180 | DUKE ENERGY DALE, LLC | AL | 604-0023-X001, X002 | 12/11/2001 | 35 MMBTU/HR NAT. GAS FIRED AUXILIARY BOILER | 35 | MMBTU/H | GOOD COMBUSTION | 0.014 | LB/MMBTU | BACT-PSD | 0 | |
| IN-0095 | ALLEGHENY ENERGY SUPPLY CO. LLC | IN | 141-14198-00543 | 12/7/2001 | AUXILLIARY BOILER | 21 | MMBTU/H | GOOD COMBUSTION PRACTICES | 0.0054 | LB/MMBTU | BACT-PSD | 0.0054 | LB/MMBTU |
| OH-0251 | CENTRAL SOYA COMPANY INC. | OH | 03-13369 | 11/29/2001 | BOILER, NATURAL GAS | 91.2 | MMBTU/H | | 0.65 | LB/H | BACT-PSD | 0.0071 | LB/MMBTU |
| TX-0378 | LA PORTE POLYPROPYLENE PLANT | TX | PSD-TX-989 | 11/5/2001 | PACKAGE BOILER BO-4 | 60 | MMBTU/H | NONE INDICATED | 0.35 | LB/H | Other Case-by-Case | 0.0058 | LB/MMBTU |
| AL-0181 | DUKE ENERGY AUTAUGA, LLC | AL | 201-0012-X001, X002 | 10/23/2001 | 31.4 MMBTU/HR NATURAL GAS FIRED BOILER | 31.4 | MMBTU/H | EFFICIENT COMBUSTION. | 0.0104 | LB/MMBTU | BACT-PSD | 0 | |
| WA-0292 | SATSOP COMBUSTION TURBINE PROJECT | WA | EFSEC/2001-01 | 10/23/2001 | AUXILIARY BOILER | 29.3 | MMBTU/H | | 0.16 | LB/H | BACT-PSD | 0.0055 | LB/MMBTU |
| OK-0043 | WEBERS FALLS ENERGY FACILITY | OK | 2000-278-C PSD | 10/22/2001 | AUXILIARY BOILER | 30 | MMBTU/H | | 0.016 | LB/MMBTU | BACT-PSD | 0.016 | LB/MMBTU |
| OH-0265 | DRESDEN ENERGY LLC | OH | 06-06238 | 10/16/2001 | BOILER, NATURAL GAS | 49 | MMBTU/H | | 0.29 | LB/H | BACT-PSD | 0.006 | LB/MMBTU |
| IN-0110 | COGENTRIX LAWRENCE CO., LLC | IN | 093-12432-00021-4911 | 10/5/2001 | BOILER, AUXILIARY, NATURAL GAS | 35 | MMBTU/H | CLEAN FUEL, GOOD COMBUSTION PRACTICE | 0.011 | LB/MMBTU | BACT-PSD | 0 | |
| AL-0179 | TENASKA TALLADEGA GENERATING STATION | AL | 309-0052-X001 | 10/3/2001 | 30 MMBTU/HR AUXILIARY BOILER | 30 | MMBTU/H | EFFICIENT COMBUSTION | 0.004 | LB/MMBTU | BACT-PSD | 0.004 | LB/MMBTU |
| MD-0033 | KELSON RIDGE | MD | CPCN CASE NO. 8843 | 9/27/2001 | AUXILIARY BOILER | 40 | MMBTU/H | EXCLUSIVE USE OF NATURAL GAS, ADVANCED DRY LOW-NOX BURNERS; GOOD COMBUSTION CONTROLS HEAT INPUT TO THE AUXILIARY BOILERS (2) SHALL BE LIMITED TO 210,240 MMBTU FOR ANY CONSECUTIVE 12-MONTH PERIOD | 0 | | LAER | 0 | |
| OK-0054 | QUAD GRAPHICS OKC FACILITY | OK | 2000-306-C PSD | 8/21/2001 | BOILERS | 62.77 | MMBTU/H | GOOD COMBUSTION/MAINTENANCE | 4.38 | T/YR | BACT-PSD | 0 | |
| OK-0044 | SMITH POCOLA ENERGY PROJECT | OK | 2000-115-C PSD | 8/16/2001 | AUXILIARY BOILERS, (2) | 48 | MMBTU/H | COMBUSTION CONTROL | 0.52 | LB/H | BACT-PSD | 0.0055 | LB/MMBTU |
| OH-0263 | FREMONT ENERGY CENTER, LLC | OH | 03-13549 | 8/9/2001 | AUXILIARY BOILER | 80 | MMBTU/H | | 0.44 | LB/H | BACT-PSD | 0.0055 | |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - VOC

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IN-0087 | DUKE ENERGY, VIGO LLC | IN | 167-12481-00125 | 6/6/2001 | AUXILARY BOILER, NATURAL GAS (2) | 46 | MMBTU/H | GOOD COMBUSTION. LIMIT IS FOR EACH BOILER. | 0.0054 | LB/MMBTU | BACT-PSD | 0.0054 | LB/MMBTU |
| NV-0039 | CHUCK LENZIE GENERATING STATION | NV | 1513 | 6/1/2001 | AUXILIARY BOILERS | 44.1 | MMBTU/H | GOOD COMBUSTION CONTROL | 0.8 | LB/H | BACT-PSD | 0.018 | LB/MMBTU |
| OK-0046 | THUNDERBIRD POWER PLT | OK | 2000-116-C PSD | 5/17/2001 | AUXILIARY BOILER | 20 | MMBTU/H | | 0.005 | LB/MMBTU | BACT-PSD | 0.005 | LB/MMBTU |
| IN-0086 | MIRANT SUGAR CREEK, LLC | IN | 167-12208-00123 | 5/9/2001 | AUXILARY BOILER, NATURAL GAS (2) | 35 | MMBTU/H | GOOD COMBUSTION. LB/H LIMIT IS FOR EACH BOILER. | 0.0054 | LB/MMBTU | BACT-PSD | 0.0054 | LB/MMBTU |
| OK-0074 | KIAMICHI ENERGY FACILITY | OK | 2000-103-C M-1 PSD | 5/1/2001 | AUXILIARY BOILER | 27.5 | MMBTU/H | GOOD COMBUSTION PRACTICES AND DESIGN | 0.0055 | LB/MMBTU | BACT-PSD | 0 | |
| OH-0255 | AEP WATERFORD ENERGY LLC | OH | 06-06739 | 3/29/2001 | BOILER, NATURAL GAS | 85.2 | MMBTU/H | | 0.35 | LB/H | BACT-PSD | 0.0041 | LB/MMBTU |
| OH-0258 | PRO TEC COATING COMPANY | OH | 03-10957 | 2/15/2001 | BOILERS (4) | 20.9 | MMBTU/H | | 0.11 | LB/H | N/A | 0.005 | LB/MMBTU |
| AL-0169 | BLOUNT MEGAWATT FACILITY | AL | 402-0010-X001 AND X002 | 2/5/2001 | AUXILIARY BOILER | 40 | MMBTU/H | GOOD COMBUSTION PRACTICES | 0.02 | LB/MMBTU | BACT-PSD | 0.02 | LB/MMBTU |
| AL-0168 | GENPOWER KELLEY LLC | AL | 414-0014-X001 AND X002 | 1/12/2001 | BOILER | 83 | MMBTU/H | EFFICIENT COMBUSTION | 0.006 | LB/MMBTU | BACT-PSD | 0.006 | LB/MMBTU |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - CO

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *FL-0335 | SUWANNEE MILL | FL | 1210468-001-AC(PSD-FL-417) | 9/5/2012 | Four(4) Natural Gas Boilers - 46 MMBtu/hour | 46 | MMBtu/hr | Good Combustion Practice | 0.039 | LB/MMBTU | BACT-PSD | 0 | |
| *OH-0350 | REPUBLIC STEEL | OH | P0109191 | 7/18/2012 | Steam Boiler | 65 | MMBtu/H | Proper burner design and good combustion practices | 0.04 | LB/MMBTU | BACT-PSD | 0 | |
| LA-0240 | FLOPAM INC. | LA | PSD-LA-747/1280-00141-V0 | 6/14/2010 | Boilers | 25.1 | MMBTU/H | Good equipment design and proper combustion practices | 0.93 | LB/H | BACT-PSD | 0.037 | LB/MMBTU |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Auxiliary Heater | 40 | MMBtu/hr | OPERATIONAL RESTRICTION OF 1000 HR/YR | 50 | PPMVD | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Auxiliary Boiler | 35 | MMBtu/hr | OPERATIONAL RESTRICTION OF 500 HR/YR | 50 | PPMVD | BACT-PSD | 0 | |
| NV-0050 | MGM MIRAGE | NV | 825 | 11/30/2009 | BOILERS - UNITS CC026, CC027 AND CC028 AT CITY CENTER | 44 | MMBTU/H | GOOD COMBUSTION PRACTICES INCLUDING THE USE OF PROPER AIR TO FUEL RATIO | 0.0148 | LB/MMBTU | LAER | 0.0148 | LB/MMBTU |
| NV-0050 | MGM MIRAGE | NV | 825 | 11/30/2009 | BOILERS - UNITS CC001, CC002, AND CC003 AT CITY CENTER | 41.64 | MMBTU/H | GOOD COMBUSTION PROACTICES AND LIMITING THE FUEL TO NATURAL GAS ONLY | 0.0184 | LB/MMBTU | LAER | 0.0184 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT CP01 | 35.4 | MMBTU/H | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.0073 | LB/MMBTU | Other Case-by-Case | 0.0073 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT IP04 | 16.7 | MMBTU/H | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.0074 | LB/MMBTU | Other Case-by-Case | 0.0074 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT CP03 | 33.48 | MMBTU/H | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.0075 | LB/MMBTU | Other Case-by-Case | 0.0075 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT BA03 | 31.38 | MMBTU/H | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION. | 0.0172 | LB/MMBTU | Other Case-by-Case | 0.0172 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT BA01 | 16.8 | MMBTU/H | FLUE GAS RECIRCULATION | 0.0173 | LB/MMBTU | Other Case-by-Case | 0.0173 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT CP26 | 24 | MMBTU/H | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.037 | LB/MMBTU | Other Case-by-Case | 0.037 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT FL01 | 14.34 | MMBTU/H | FLUE GAS RECIRCULATION | 0.0705 | LB/MMBTU | Other Case-by-Case | 0.0705 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT PA15 | 21 | MMBTU/H | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.848 | LB/MMBTU | Other Case-by-Case | 0.848 | LB/MMBTU |
| OK-0135 | PRYOR PLANT CHEMICAL | OK | 2008-100-C PSD | 2/23/2009 | BOILERS #1 AND #2 | 80 | MMBTU/H | GOOD COMBUSTION PRACTICES | 6.6 | LB/H | BACT-PSD | 0.083 | LB/MMBTU |
| SC-0115 | GP CLARENDON LP | SC | 0680-0046-CB | 2/10/2009 | NATURAL GAS SPACE HEATERS - 14 UNITS (ID 17) | 20.89 | MMBTU/H | | 1.67 | LB/H | BACT-PSD | 0.080 | LB/MMBTU |
| OK-0129 | CHOUTEAU POWER PLANT | OK | 2007-115-C(M-1)PSD | 1/23/2009 | AUXILIARY BOILER | 33.5 | MMBTU/H | GOOD COMBUSTION | 5.02 | LB/H | N/A | 0.150 | LB/MMBTU |
| SC-0114 | GP ALLENDALE LP | SC | 0160-0020-CB | 11/25/2008 | NATURAL GAS SPACE HEATERS - 14 UNITS (ID 18) | 20.89 | MMBTU/H | | 1.67 | LB/H | BACT-PSD | 0.080 | LB/MMBTU |
| MD-0040 | CPV ST CHARLES | MD | CPCN CASE NO. 9129 | 11/12/2008 | BOILER | 93 | MMBTU/H | | 0.02 | LB/MMBTU | BACT-PSD | 0 | |
| OH-0323 | TITAN TIRE CORPORATION OF BRYAN | OH | 03-17392 | 6/5/2008 | BOILER | 50.4 | MMBTU/H | | 4.15 | LB/H | BACT-PSD | 84 | LB/MMSCF |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - CO

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MN-0070 | MINNESOTA STEEL INDUSTRIES, LLC | MN | 06100067-001 | 9/7/2007 | SMALL BOILERS & HEATERS(<100 MMBTU/H) | 99 | MMBTU/H | | 0.08 | LB/MMBTU | BACT-PSD | 0 | |
| AL-0230 | THYSSENKRUPP STEEL AND STAINLESS USA, LLC | AL | 503-0095-X001 THRU X026 | 8/17/2007 | 3 NATURAL GAS-FIRED BOILERS WITH ULNB & EGR (537-539) | 64.9 | MMBTU each | | 0.04 | LB/MMBTU | BACT-PSD | 0 | |
| OH-0309 | TOLEDO SUPPLIER PARK-PAINT SHOP | OH | 04-01358 | 5/3/2007 | BOILER (2), NATURAL GAS | 20.4 | MMBTU/H | | 1.7 | LB/H | BACT-PSD | 0.083 | LB/MMBTU |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO GAS-FUELED 10 MMBTU/H PROCESS HEATERS | 10 | MMBTU/H | | 0.08 | LB/MMBTU | BACT-PSD | 0 | |
| NV-0044 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 1/4/2007 | COMMERCIAL/INSTITUTIONAL-SIZE BOILERS | 35.4 | MMBTU/H | GOOD COMBUSTION DESIGN | 0.036 | LB/MMBTU | BACT-PSD | 0.036 | LB/MMBTU |
| TX-0501 | TEXSTAR GAS PROCESS FACILITY | TX | PSD-TX 55M3 AND 6051 | 7/11/2006 | POWER STEAM BOILER | 93 | MMBTU/H | | 7.05 | LB/H | BACT-PSD | 0.076 | LB/MMBTU |
| AR-0090 | NUCOR STEEL, ARKANSAS | AR | 1139-AOP-R6 | 4/3/2006 | PICKLE LINE BOILERS, SN-52 | 12.6 | MMBTU EACH | GOOD COMBUSTION PRACTICE | 3.2 | LB/H | BACT-PSD | 0.084 | LB/MMBTU |
| LA-0203 | OAKDALE OSB PLANT | LA | PSD-LA-710 | 6/13/2005 | AUXILIARY THERMAL OIL HEATER | 66.5 | MMBTU/H | USE OF NATURAL GAS AS FUEL AND GOOD COMBUSTION PRACTICES | 6.57 | LB/H | BACT-PSD | 0.099 | LB/MMBTU |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | BOILERS (2) | 30.6 | MMBTU/H | | 1.13 | LB/H | BACT-PSD | 0.037 | LB/MMBTU |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | AUXILIARY BOILER | 38 | MMBTU/H | | 0.08 | LB/MMBTU | BACT-PSD | 0.08 | LB/MMBTU |
| WI-0227 | PORT WASHINGTON GENERATING STATION | WI | 04-RV-175 | 10/13/2004 | NATURAL GAS FIRED AUXILLIARY BOILER | 97.1 | MMBTU/H | NATURAL GAS FUEL, GOOD COMBUSTION PRACTICES | 7.77 | LB/H | BACT-PSD | 0.08 | LB/MMBTU |
| AR-0077 | BLUEWATER PROJECT | AR | 2062-AOP-R0 | 7/22/2004 | BOILERS | 22 | MMBTU/H | GOOD COMBUSTION PRACTICE | 0.84 | LB/MMBTU | BACT-PSD | 0.84 | LB/MMBTU |
| CO-0058 | CHEYENNE STATION | CO | 03WE0910303- | 6/12/2004 | HEATERS | 45 | MMBTU/H | GOOD COMBUSTION PRACTICES | 0.037 | LB/MMBTU | BACT-PSD | 0.037 | LB/MMBTU |
| OH-0276 | CHARTER STEEL | OH | 13-04176 | 6/10/2004 | BOILER FOR VACUUM OXYGEN DEGASSER VESSEL | 28.6 | MMBTU/H | | 2.35 | LB/H | BACT-PSD | 0.082 | LB/MMBTU |
| NV-0037 | COPPER MOUNTAIN POWER | NV | 15347 | 5/14/2004 | AUXILIARY BOILER | 60 | MMBTU/H | EFFECTIVE COMBUSTION SYSTEM DESIGN, 10:1 TURNDOWN CAPABILITY, AND LNB TECHNOLOGY | 0.08 | LB/MMBTU | LAER | 0.08 | LB/MMBTU |
| WI-0207 | ACE ETHANOL - STANLEY | WI | 03-DCF-184 | 1/21/2004 | BOILER, S52/B52, 11 MMBTU/H | 11 | MMBTU/H | NATURAL GAS / PROPANE ; GOOD COMBUSTION CONTROL | 0.08 | LB/MMBTU | BACT-PSD | 0.08 | LB/MMBTU |
| WI-0207 | ACE ETHANOL - STANLEY | WI | 03-DCF-184 | 1/21/2004 | BOILER, S53 / B53, 34 MMBTU/H | 34 | MMBTU/H | NATURAL GAS / PROPANE; GOOD COMBUSTION CONTROL | 0.08 | LB/MMBTU | BACT-PSD | 0.08 | LB/MMBTU |
| WI-0207 | ACE ETHANOL - STANLEY | WI | 03-DCF-184 | 1/21/2004 | BOILER, S50/B50, 60 MMBTU/H | 60 | MMBTU/H | NATURAL GAS / PROPANE; GOOD COMBUSTION CONTROL | 0.08 | LB/MMBTU | BACT-PSD | 0.08 | LB/MMBTU |
| WI-0207 | ACE ETHANOL - STANLEY | WI | 03-DCF-184 | 1/21/2004 | BOILER, S51/B51, 80 MMBTU/H | 80 | MMBTU/H | NAT. GAS / PROPANE, GOOD COMBUSTION CONTROL | 0.08 | LB/MMBTU | BACT-PSD | 0.08 | LB/MMBTU |
| OR-0039 | COB ENERGY FACILITY, LLC | OR | 18-0029 | 12/30/2003 | BOILERS, AUXILIARY, NATURAL GAS, (2) | 80 | MMBTU/H | GOOD COMBUSTION | 0.037 | LB/MMBTU | BACT-PSD | 0.037 | LB/MMBTU |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | BOILER, COMMERCIAL | 70 | MMBTU/H | GOOD COMBUSTION | 0.06 | LB/MMBTU | BACT-PSD | 0.06 | LB/MMBTU |
| IN-0108 | NUCOR STEEL | IN | 107-16823-00038 | 11/21/2003 | BOILER, NATURAL GAS, (2) | 34 | MMBTU/H | GOOD COMBUSTION PRACTICES, NATURAL GAS | 0.061 | LB/MMBTU | BACT-PSD | 0.061 | LB/MMBTU |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR GE TURBINE | 41 | MMBTU/H | | 0.09 | LB/MMBTU | BACT-PSD | 0.09 | LB/MMBTU |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR SIEMENS TURBINES | 55.34 | MMBTU/H | | 0.14 | LB/MMBTU | BACT-PSD | 0.14 | LB/MMBTU |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | BOILER | 30.6 | MMBTU/H | | 3.34 | LB/H | BACT-PSD | 0.109 | LB/MMBTU |
| TX-0458 | JACK COUNTY POWER PLANT | TX | P1026 | 7/22/2003 | AUXILIARY BOILER | 36 | mmbtu/h | | 1.4 | LB/H | BACT-PSD | 0.039 | LB/MMBTU |
| GA-0098 | RINCON POWER PLANT | GA | 4911-103-0011-P-01-0 | 3/24/2003 | AUXILIARY BOILER | 83 | MMBTU/H | | 0.093 | LB/MMBTU | Other Case-by-Case | 0.093 | LB/MMBTU |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - CO

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OK-0090 | DUKE ENERGY STEPHENS, LLC STEPHENS ENERGY | OK | 2001-157-C M-1 PSD | 3/21/2003 | BOILER, AUXILIARY | 33 | MMBTU/H | BOILER DESIGN AND GOOD OPERATING PRACTICES | 0.085 | LB/MMBTU | BACT-PSD | 0.085 | LB/MMBTU |
| PA-0216 | J & L SPECIALTY STEEL, INC. | PA | PA-04-00013B | 1/13/2003 | BOILER, DRAP LINE | 33.5 | MMBTU/H | | 2.75 | LB/H | Other Case-by-Case | 0.08 | LB/MMBTU |
| TX-0389 | BAYTOWN CARBON BLACK PLANT | TX | PSD-1010 | 12/31/2002 | BACK-UP BOILER | 13.4 | MMBUT/H | | 1.11 | LB/H | Other Case-by-Case | 0.083 | LB/MMBTU |
| IA-0062 | EMERY GENERATING STATION | IA | 02-357 | 12/20/2002 | AUXILIARY BOILER | 68 | MMBTU/H | CATALYTIC OXIDATION | 0.0164 | LB/MMBTU | Other Case-by-Case | 0.0164 | LB/MMBTU |
| TX-0354 | ATOFINA CHEMICALS INCORPORATED | TX | PSD-TX-1016 | 12/19/2002 | (2) STEAM BOILERS, X-426A AND X-426B | 15.8 | MMBTU/H | NONE INDICATED | 1.33 | LB/H | Other Case-by-Case | 0.08 | LB/MMBTU |
| VA-0260 | HENRY COUNTY POWER | VA | 21389 | 11/21/2002 | AUXILIARY BOILER, (2) | 40 | MMBTU/H | GOOD COMBUSTION AND DESIGN. CLEAN FUEL. | 2.9 | LB/H | BACT-PSD | 0.073 | LB/MMBTU |
| VA-0255 | VA POWER - POSSUM POINT | VA | 70225 | 11/18/2002 | BOILER, AUXILIARY | 99 | MMBTU/H | GOOD COMBUSTION PRACTICES. | 14.9 | LB/H | Other Case-by-Case | 0.15 | LB/MMBTU |
| GA-0101 | MURRAY ENERGY FACILITY | GA | 4911-213-0034-P-01-1 | 10/23/2002 | BOILER, AUXILIARY | 31.4 | MMBTU/H | GOOD COMBUSTION PRACTICE | 0.037 | LB/MMBTU | BACT-PSD | 0.037 | LB/MMBTU |
| AL-0192 | HONDA MANUFACTURING OF ALABAMA, LLC | AL | 309-0050 (X010-X014) | 10/18/2002 | BOILERS, NATURAL GAS, (3) | 30 | MMBTU/H | CLEAN FUEL, GOOD COMBUSTION PRACTICES. | 2.52 | LB/H | BACT-PSD | 0.084 | LB/MMBTU |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | BOILER | 99 | MMBTU/H | | 8.32 | LB/H | BACT-PSD | 0.084 | LB/MMBTU |
| VA-0261 | CPV CUNNINGHAM CREEK | VA | 81382 | 9/6/2002 | AUXILIARY BOILER | 80 | MMBTU/H | GOOD COMBUSTION PRACTICES. | 6.42 | LB/H | BACT-PSD | 0.08 | LB/MMBTU |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | AUXILIARY BOILER | 33 | MMBTU/H | GOOD COMBUSTION PRACTICE | 0.04 | LB/MMBTU | BACT-PSD | 0.04 | LB/MMBTU |
| AL-0185 | BARTON SHOALS ENERGY | AL | X001, X002 | 7/12/2002 | TWO (2) 40 MMBTU/H AUXILIARY BOILERS | 40 | MMBTU/H | GOOD COMBUSTION PRACTICES | 0.082 | LB/MMBTU | BACT-PSD | 0 | |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | AUXILIARY BOILER | 33 | MMBTU/H | BOILER DESIGN AND GOOD OPERATING PRACTICES | 0.037 | LB/MMBTU | BACT-PSD | 0.037 | LB/MMBTU |
| OK-0072 | REDBUD POWER PLT | OK | 2000-090-C M-1 PSD | 5/6/2002 | AUXILIARY BOILER | 93 | MMBUT/H | BOILER DESIGN AND GOOD OPERATING PRACTICES | 0.07 | LB/MMBTU | BACT-PSD | 0.07 | LB/MMBTU |
| IA-0058 | GREATER DES MOINES ENERGY CENTER | IA | 77-13-002 | 4/10/2002 | AUXILIARY BOILER | 68 | MMBTU/H | | 0.084 | LB/MMBTU | Other Case-by-Case | 0.084 | LB/MMBTU |
| AR-0051 | DUKE ENERGY-JACKSON FACILITY | AR | 1998-AOP-R0 (34-0259) | 4/1/2002 | BOILER, AUXILIARY | 33 | MMBTU/H | GOOD OPERATING PRACTICE | 0.15 | LB/MMBTU | BACT-PSD | 0.15 | LB/MMBTU |
| OK-0055 | MUSTANG ENERGY PROJECT | OK | 2001-132-C PSD | 2/12/2002 | AUXILIARY BOILER | 31 | MMBTU/H | COMBUSTION CONTROL | 0.084 | LB/MMBTU | BACT-PSD | 0.084 | LB/MMBTU |
| NC-0094 | GENPOWER EARLEYS, LLC | NC | 09159R00 | 1/9/2002 | BOILER, AUXILIARY, NATURAL GAS | 83 | MMBTU/H | GOOD C OMBUSTION PRACTICES AND DESIGN | 6.84 | LB/H | BACT-PSD | 0.082 | LB/MMBTU |
| OH-0257 | JACKSON COUNTY POWER, LLC | OH | 06-06313 | 12/27/2001 | AUXILIARY BOILER | 76 | MMBTU/H | | 6.86 | LB/H | BACT-PSD | 0.082 | LB/MMBTU |
| PA-0210 | DART CONTAINER CORP OF PA | PA | 36-05117 | 12/14/2001 | BOILER, (2) | 33.5 | MMBTU/H | GOOD COMBUSTION PRACTICE | 400 | PPMDV @ 3% O2 | Other Case-by-Case | 0 | |
| AL-0180 | DUKE ENERGY DALE, LLC | AL | 604-0023-X001, X002 | 12/11/2001 | 35 MMBTU/HR NAT. GAS FIRED AUXILIARY BOILER | 35 | MMBTU/H | GOOD COMBUSTION | 0.135 | LB/MMBTU | BACT-PSD | 0 | |
| IN-0095 | ALLEGHENY ENERGY SUPPLY CO. LLC | IN | 141-14198-00543 | 12/7/2001 | AUXILLIARY BOILER | 21 | MMBTU/H | GOOD COMBUSTION PRACTICES | 0.082 | LB/MMBTU | BACT-PSD | 0.082 | LB/MMBTU |
| OH-0251 | CENTRAL SOYA COMPANY INC. | OH | 03-13369 | 11/29/2001 | BOILER, NATURAL GAS | 91.2 | MMBTU/H | | 12.2 | LB/H | N/A | 0.13 | LB/MMBTU |
| TX-0378 | LA PORTE POLYPROPYLENE PLANT | TX | PSD-TX-989 | 11/5/2001 | PACKAGE BOILER BO-4 | 60 | MMBTU/H | NONE INDICATED | 4.84 | LB/H | Other Case-by-Case | 0.08 | LB/MMBTU |
| OK-0071 | MCCLAIN ENERGY FACILITY | OK | 99-213-C M-1 PSD | 10/25/2001 | AUXILIARY BOILER | 22 | MMBTU/H | USE OF NATURAL GAS FUEL | 0.37 | LB/MMBTU | BACT-PSD | 0.37 | LB/MMBTU |
| AL-0181 | DUKE ENERGY AUTAUGA, LLC | AL | 201-0012-X001, X002 | 10/23/2001 | 31.4 MMBTU/HR NATURAL GAS FIRED BOILER | 31.4 | MMBTU/H | EFFICIENT COMBUSTION. | 0.135 | LB/MMBTU | BACT-PSD | 0 | |
| WA-0292 | SATSOP COMBUSTION TURBINE PROJECT | WA | EFSEC/2001-01 | 10/23/2001 | AUXILIARY BOILER | 29.3 | MMBTU/H | | 50 | PPM @ 3% O2 | BACT-PSD | 0.037 | LB/MMBTU |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - CO

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OK-0043 | WEBERS FALLS ENERGY FACILITY | OK | 2000-278-C PSD | 10/22/2001 | AUXILIARY BOILER | 30 | MMBTU/H | BOILER DESIGN & GOOD OPERATING PRACTICES | 0.085 | LB/MMBTU | BACT-PSD | 0.085 | LB/MMBTU |
| OH-0265 | DRESDEN ENERGY LLC | OH | 06-06238 | 10/16/2001 | BOILER, NATURAL GAS | 49 | MMBTU/H | | 4.12 | LB/H | BACT-PSD | 0.084 | LB/MMBTU |
| IN-0110 | COGENTRIX LAWRENCE CO., LLC | IN | 093-12432-00021-4911 | 10/5/2001 | BOILER, AUXILIARY, NATURAL GAS | 35 | MMBTU/H | CLEAN FUEL, GOOD COMBUSTION PRACTICE | 0.082 | LB/MMBTU | BACT-PSD | 0.082 | LB/MMBTU |
| AL-0179 | TENASKA TALLADEGA GENERATING STATION | AL | 309-0052-X001 | 10/3/2001 | 30 MMBTU/HR AUXILIARY BOILER | 30 | MMBTU/H | EFFICIENT COMBUSTION | 0.073 | LB/MMBTU | BACT-PSD | 0.073 | LB/MMBTU |
| OK-0054 | QUAD GRAPHICS OKC FACILITY | OK | 2000-306-C PSD | 8/21/2001 | BOILERS | 62.77 | MMBTU/H | GOOD COMBUSTION/MAINTENANCE | 10.81 | T/YR | BACT-PSD | 0 | |
| OK-0044 | SMITH POCOLA ENERGY PROJECT | OK | 2000-115-C PSD | 8/16/2001 | AUXILIARY BOILERS, (2) | 48 | MMBTU/H | COMBUSTION CONTROL | 7.91 | LB/H | BACT-PSD | 0.084 | LB/MMBTU |
| OH-0263 | FREMONT ENERGY CENTER, LLC | OH | 03-13549 | 8/9/2001 | AUXILIARY BOILER | 80 | MMBTU/H | | 7.84 | LB/H | BACT-PSD | 0.098 | LB/MMBTU |
| AK-0047 | MILNE POINT PRODUCTION FACILITY | AK | 0073-AC023 | 7/13/2001 | HEATERS (2), H-5302A AND H-5302B | 35 | MMBTU/H EA | LIMIT EXTENDED FROM PREVIOUS PERMIT TO AVOID PSD REVIEW. FOLLOW PREVENTATIVE MAINTENANCE PROCEDURES. | 0.2 | LB/MMBTU | N/A | 0.2 | LB/MMBTU |
| IN-0087 | DUKE ENERGY, VIGO LLC | IN | 167-12481-00125 | 6/6/2001 | AUXILARY BOILER, NATURAL GAS (2) | 46 | MMBTU/H | GOOD COMBUSTION. LIMIT IS FOR EACH BOILER. | 0.082 | LB/MMBTU | BACT-PSD | 0.082 | LB/MMBTU |
| NV-0039 | CHUCK LENZIE GENERATING STATION | NV | 1513 | 6/1/2001 | AUXILIARY BOILERS | 44.1 | MMBTU/H | GOOD COMBUSTION CONTROL | 100 | PPMVD@3% O2 | BACT-PSD | 0.036 | LB/MMBTU |
| IN-0086 | MIRANT SUGAR CREEK, LLC | IN | 167-12208-00123 | 5/9/2001 | AUXILARY BOILER, NATURAL GAS (2) | 35 | MMBTU/H | GOOD COMBUSTION. LB/H LIMIT IS FOR EACH BOILER. | 0.824 | LB/MMBTU | BACT-PSD | 0.824 | LB/MMBTU |
| OK-0074 | KIAMICHI ENERGY FACILITY | OK | 2000-103-C M-1 PSD | 5/1/2001 | AUXILIARY BOILER | 27.5 | MMBTU/H | GOOD OPERATING PRACTICES AND DESIGN | 0.084 | LB/MMBTU | BACT-PSD | 0.084 | LB/MMBTU |
| OH-0255 | AEP WATERFORD ENERGY LLC | OH | 06-06739 | 3/29/2001 | BOILER, NATURAL GAS | 85.2 | MMBTU/H | | 6.3 | LB/H | BACT-PSD | 0.074 | LB/MMBTU |
| OH-0258 | PRO TEC COATING COMPANY | OH | 03-10957 | 2/15/2001 | BOILERS (4) | 20.9 | MMBTU/H | | 0.23 | LB/H | N/A | 0.011 | LB/MMBTU |
| AL-0169 | BLOUNT MEGAWATT FACILITY | AL | 402-0010-X001 AND X002 | 2/5/2001 | AUXILIARY BOILER | 40 | MMBTU/H | GOOD COMBUSTION PRACTICES | 0.08 | LB/MMBTU | BACT-PSD | 0.08 | LB/MMBTU |
| AL-0168 | GENPOWER KELLEY LLC | AL | 414-0014-X001 AND X002 | 1/12/2001 | BOILER | 83 | MMBTU/H | EFFICIENT COMBUSTION | 0.085 | LB/MMBTU | BACT-PSD | 0.085 | LB/MMBTU |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - PM, PM10 PM2.5

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *FL-0335 | SUWANNEE MILL | FL | 1210468-001-AC(PSD-FL-417) | 9/5/2012 | Four(4) Natural Gas Boilers - 46 MMBtu/hour | 46 | MMBtu/hr | Particulate matter, total (TPM) | Good Combustion Practice | 2 | GR OF S/100 SCF | BACT-PSD | 0 | |
| *FL-0335 | SUWANNEE MILL | FL | 1210468-001-AC(PSD-FL-417) | 9/5/2012 | Four(4) Natural Gas Boilers - 46 MMBtu/hour | 46 | MMBtu/hr | Particulate matter, total < 10 µ (TPM10) | Good Combustion Practice | 2 | GR OF S/100 SCF | BACT-PSD | 0 | |
| *FL-0335 | SUWANNEE MILL | FL | 1210468-001-AC(PSD-FL-417) | 9/5/2012 | Four(4) Natural Gas Boilers - 46 MMBtu/hour | 46 | MMBtu/hr | Particulate matter, total < 2.5 µ (TPM2.5) | Good Combustion Practice | 2 | GR OF S/100 SCF | BACT-PSD | 0 | |
| *OH-0350 | REPUBLIC STEEL | OH | P0109191 | 7/18/2012 | Steam Boiler | 65 | MMBtu/H | Particulate matter, total < 10 µ (TPM10) | | 0.48 | LB/H | N/A | 0.007 | LB/MMBTU |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | AUXILIARY BOILER | 37.4 | MMBTU/HR | Particulate matter, total (TPM) | USE PUC QUALITY NATURAL GAS, OPERATIONAL LIMIT OF 46,675 MMBTU/YR | 0.0034 | GR/DSCF | BACT-PSD | 0 | |
| *CA-1192 | AVENAL ENERGY PROJECT | CA | SJ 08-01 | 6/21/2011 | AUXILIARY BOILER | 37.4 | MMBTU/HR | Particulate matter, total < 10 µ (TPM10) | USE PUC QUALITY NATURAL GAS, OPERATIONAL LIMIT OF 46,675 MMBTU/YR | 0.0034 | GR/DSCF | BACT-PSD | 0 | |
| OR-0048 | CARTY PLANT | OR | 25-0016-ST-02 | 12/29/2010 | NATURAL GAS-FIRED BOILER | 91 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUEL | 2.5 | LB/MMCF | BACT-PSD | 0.0025 | LB/MMBTU |
| AK-0071 | INTERNATIONAL STATION POWER PLANT | AK | AQ0164CPT01 | 12/20/2010 | Sigma Thermal Auxiliary Heater (1) | 12.5 | MMBTU/H | Particulate matter, total (TPM) | Good Combustion Practices | 7.6 | LB/MMSCF | BACT-PSD | 0.0076 | LB/MMBTU |
| AK-0071 | INTERNATIONAL STATION POWER PLANT | AK | AQ0164CPT01 | 12/20/2010 | Sigma Thermal Auxiliary Heater (1) | 12.5 | MMBTU/H | Particulate matter, total < 10 µ (TPM10) | Good Combustion Practices | 7.6 | LB/MMSCF | BACT-PSD | 0.0076 | LB/MMBTU |
| AK-0071 | INTERNATIONAL STATION POWER PLANT | AK | AQ0164CPT01 | 12/20/2010 | Sigma Thermal Auxiliary Heater (1) | 12.5 | MMBTU/H | Particulate matter, total < 2.5 µ (TPM2.5) | Good Combustion Practices | 7.6 | LB/MMSCF | BACT-PSD | 0.0076 | LB/MMBTU |
| LA-0240 | FLOPAM INC. | LA | PSD-LA-747/1280-00141-V0 | 6/14/2010 | Boilers | 25.1 | MMBTU/H | Particulate matter, total < 10 µ (TPM10) | Good equipment design and proper combustion practices, fueled by natural gas/alcohol | 0.1 | LB/H | BACT-PSD | 0.004 | LB/MMBTU |
| LA-0240 | FLOPAM INC. | LA | PSD-LA-747/1280-00141-V0 | 6/14/2010 | Boilers | 25.1 | MMBTU/H | Particulate matter, total (TPM) | Good equipment design and proper combustion practices, fueled by natural gas/alcohol | 0.13 | LB/H | BACT-PSD | 0.005 | LB/MMBTU |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Auxiliary Heater | 40 | MMBtu/hr | Particulate matter, total (TPM) | OPERATIONAL RESTRICTION OF 1000 HR/YR, USE PUC QUALITY NATURAL GAS | 0.2 | GRANS PER 100 DSCF | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Auxiliary Heater | 40 | MMBtu/hr | Particulate matter, total < 2.5 µ (TPM2.5) | OPERATIONAL RESTRICTION OF 1000 HR/YR | 0.2 | GRAINS PER 100 DSCF | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Auxiliary Boiler | 35 | MMBtu/hr | Particulate matter, total (TPM) | OPERATIONAL RESTRICTION OF 500 HR/YR, USE PUC QUALITY NATURAL GAS | 0.2 | GRAINS PER 100 DSCF | BACT-PSD | 0 | |
| *CA-1191 | VICTORVILLE 2 HYBRID POWER PROJECT | CA | SE 07-02 | 3/11/2010 | Auxiliary Boiler | 35 | MMBtu/hr | Particulate matter, total < 2.5 µ (TPM2.5) | OPERATIONAL RESTRICTION OF 500 HR/YR, USE PUC QUALITY NATURAL GAS | 0.2 | GRAINS PER 100 DSCF | BACT-PSD | 0 | |
| NV-0050 | MGM MIRAGE | NV | 825 | 11/30/2009 | BOILERS - UNITS CC026, CC027 AND CC028 AT CITY CENTER | 44 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | LIMITING THE FUEL TO NATURAL GAS ONLY AND GOOD COMBUSTION PRACTICES | 0.0075 | LB/MMBTU | LAER | 0.0075 | LB/MMBTU |
| NV-0050 | MGM MIRAGE | NV | 825 | 11/30/2009 | BOILERS - UNITS CC001, CC002, AND CC003 AT CITY CENTER | 41.64 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | LIMITING THE FUEL TO NATURAL GAS ONLY AND GOOD COMBUSTION PRACTICES | 0.0077 | LB/MMBTU | Other Case-by-Case | 0.0077 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT FL01 | 14.34 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | FLUE GAS RECIRCULATION AND OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.0075 | LB/MMBTU | Other Case-by-Case | 0.0075 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT CP03 | 33.48 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.0075 | LB/MMBTU | Other Case-by-Case | 0.0075 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT CP26 | 24 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.0075 | LB/MMBTU | Other Case-by-Case | 0.0075 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT BA03 | 31.38 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.0076 | LB/MMBTU | Other Case-by-Case | 0.0076 | LB/MMBTU |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - PM, PM10 PM2.5

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT CP01 | 35.4 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.0076 | LB/MMBTU | Other Case-by-Case | 0.0076 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT PA15 | 21 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.0076 | LB/MMBTU | BACT-PSD | 0.0076 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT BA01 | 16.8 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.0077 | LB/MMBTU | Other Case-by-Case | 0.0077 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT IP04 | 16.7 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | OPERATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION | 0.0078 | LB/MMBTU | Other Case-by-Case | 0.0078 | LB/MMBTU |
| OK-0135 | PRYOR PLANT CHEMICAL | OK | 2008-100-C PSD | 2/23/2009 | BOILERS #1 AND #2 | 80 | MMBTU/H | Particulate matter, total < 10 µ (TPM10) | | 0.5 | LB/H | BACT-PSD | 0.006 | LB/MMBTU |
| OK-0135 | PRYOR PLANT CHEMICAL | OK | 2008-100-C PSD | 2/23/2009 | BOILERS #1 AND #2 | 80 | MMBTU/H | Particulate matter, total (TPM) | | 0.6 | LB/H | BACT-PSD | 0.008 | LB/MMBTU |
| SC-0115 | GP CLARENDON LP | SC | 0680-0046-CB | 2/10/2009 | NATURAL GAS SPACE HEATERS - 14 UNITS (ID 17) | 20.89 | MMBTU/H | Particulate matter, total (TPM) | | 0.15 | LB/H | BACT-PSD | 0.007 | LB/MMBTU |
| SC-0115 | GP CLARENDON LP | SC | 0680-0046-CB | 2/10/2009 | NATURAL GAS SPACE HEATERS - 14 UNITS (ID 17) | 20.89 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.15 | LB/H | BACT-PSD | 0.007 | LB/MMBTU |
| SC-0114 | GP ALLENDALE LP | SC | 0160-0020-CB | 11/25/2008 | NATURAL GAS SPACE HEATERS - 14 UNITS (ID 18) | 20.89 | MMBTU/H | Particulate matter, total (TPM) | | 0.15 | LB/H | BACT-PSD | 0.007 | LB/MMBTU |
| SC-0114 | GP ALLENDALE LP | SC | 0160-0020-CB | 11/25/2008 | NATURAL GAS SPACE HEATERS - 14 UNITS (ID 18) | 20.89 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.15 | LB/H | BACT-PSD | 0.007 | LB/MMBTU |
| MD-0040 | CPV ST CHARLES | MD | CPCN CASE NO. 9129 | 11/12/2008 | BOILER | 93 | MMBTU/H | Particulate Matter (PM) | | 0.005 | LB/MMBTU | BACT-PSD | 0 | |
| MD-0040 | CPV ST CHARLES | MD | CPCN CASE NO. 9129 | 11/12/2008 | BOILER | 93 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.005 | LB/MMBTU | BACT-PSD | 0 | |
| MD-0040 | CPV ST CHARLES | MD | CPCN CASE NO. 9129 | 11/12/2008 | BOILER | 93 | MMBTU/H | Particulate matter, filterable < 2.5 µ (FPM2.5) | | 0.005 | LB/MMBTU | LAER | 0 | |
| OH-0323 | TITAN TIRE CORPORATION OF BRYAN | OH | 03-17392 | 6/5/2008 | BOILER | 50.4 | MMBTU/H | Particulate Matter (PM) | | 0.02 | LB/MMBTU | N/A | 0 | |
| OH-0323 | TITAN TIRE CORPORATION OF BRYAN | OH | 03-17392 | 6/5/2008 | BOILER | 50.4 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.094 | LB/H | N/A | 1.9 | LB/MMSCF |
| MN-0070 | MINNESOTA STEEL INDUSTRIES, LLC | MN | 06100067-001 | 9/7/2007 | SMALL BOILERS & HEATERS(<100 MMBTU/H) | 99 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.0025 | GR/DSCF | BACT-PSD | 0 | |
| AL-0230 | THYSSENKRUPP STEEL AND STAINLESS USA, LLC | AL | 503-0095-X001 THRU X026 | 8/17/2007 | 3 NATURAL GAS-FIRED BOILERS WITH ULNB & EGR (537-539) | 64.9 | MMBTU each | Particulate matter, filterable < 10 µ (FPM10) | | 0.0076 | LB/MMBTU | BACT-PSD | 0 | |
| OH-0309 | TOLEDO SUPPLIER PARK-PAINT SHOP | OH | 04-01358 | 5/3/2007 | BOILER (2), NATURAL GAS | 20.4 | MMBTU/H | Particulate Matter (PM) | | 0.04 | LB/H | BACT-PSD | 0.0019 | LB/MMBTU |
| OH-0309 | TOLEDO SUPPLIER PARK-PAINT SHOP | OH | 04-01358 | 5/3/2007 | BOILER (2), NATURAL GAS | 20.4 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.15 | LB/H | BACT-PSD | 0.0075 | LB/MMBTU |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO GAS-FUELED 10 MMBTU/H PROCESS HEATERS | 10 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 2 | GR S/100 SCF GAS | BACT-PSD | 0 | |
| NV-0044 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 1/4/2007 | COMMERCIAL/INSTITUTIONAL-SIZE BOILERS | 35.4 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | USE OF NATURAL GAS AS THE ONLY FUEL | 0.0075 | LB/MMBTU | BACT-PSD | 0.0075 | LB/MMBTU |
| TX-0501 | TEXSTAR GAS PROCESS FACILITY | TX | PSD-TX 55M3 AND 6051 | 7/11/2006 | POWER STEAM BOILER | 93 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.64 | LB/H | BACT-PSD | 0 | LB/MMBTU |
| NY-0095 | CAITHNES BELLPORT ENERGY CENTER | NY | PSD-NY-0001 | 5/10/2006 | AUXILIARY BOILER | 29.4 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | LOW SULFUR FUEL | 0.0033 | LB/MMBTU | BACT-PSD | 0 | |
| AR-0090 | NUCOR STEEL, ARKANSAS | AR | 1139-AOP-R6 | 4/3/2006 | PICKLE LINE BOILERS, SN-52 | 12.6 | MMBTU EACH | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICE | 0.3 | LB/H | BACT-PSD | 0.0076 | LB/MMBTU |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - PM, PM10 PM2.5

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LA-0203 | OAKDALE OSB PLANT | LA | PSD-LA-710 | 6/13/2005 | AUXILIARY THERMAL OIL HEATER | 66.5 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | USE OF NATURAL GAS AS FUEL AND GOOD COMBUSTION PRACTICES | 0.59 | LB/H | BACT-PSD | 0.009 | LB/MMBTU |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | BOILERS (2) | 30.6 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.31 | LB/H | BACT-PSD | 0.01 | LB/MMBTU |
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | AUXILIARY BOILER | 38 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.0033 | LB/MMBTU | BACT-PSD | 0.0033 | LB/MMBTU |
| WI-0227 | PORT WASHINGTON GENERATING STATION | WI | 04-RV-175 | 10/13/2004 | NATURAL GAS FIRED AUXILLIARY BOILER | 97.1 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | NATURAL GAS FUEL, GOOD COMBUSTION PRACTICES | 0.74 | LB/H | BACT-PSD | 0.0076 | LB/MMBTU |
| WI-0226 | WPS - WESTON PLANT | WI | 04-RV-128 | 8/27/2004 | NATURAL GAS FIRED BOILER | 46.2 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | NATURAL GAS | 0.8 | LB/H | N/A | 0.017 | LB/MMBTU |
| AR-0077 | BLUEWATER PROJECT | AR | 2062-AOP-R0 | 7/22/2004 | BOILERS | 22 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | NATURAL GAS COMBUSTION ONLY | 0.0076 | LB/MMBTU | BACT-PSD | 0.0076 | LB/MMBTU |
| OH-0276 | CHARTER STEEL | OH | 13-04176 | 6/10/2004 | BOILER FOR VACUUM OXYGEN DEGASSER VESSEL | 28.6 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.21 | LB/H | BACT-PSD | 0.007 | LB/MMBTU |
| NV-0037 | COPPER MOUNTAIN POWER | NV | 15347 | 5/14/2004 | AUXILIARY BOILER | 60 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | RESTRICTION OF OPERATION TO NATURAL GAS | 0.5 | LB/H | LAER | 0.008 | LB/MMBTU |
| AL-0191 | HYUNDAI MOTOR MANUFACTURING OF ALABAMA, LLC | AL | 209-0090-X001,X002,X003 | 3/23/2004 | BOILERS, NATURAL GAS, (3) | 50 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUEL | 0.38 | LB/H | BACT-PSD | 0.0075 | LB/MMBTU |
| WI-0207 | ACE ETHANOL - STANLEY | WI | 03-DCF-184 | 1/21/2004 | BOILER, S52/B52, 11 MMBTU/H | 11 | MMBTU/H | Particulate Matter (PM) | NATURAL GAS / PROPANE; GOOD COMBUSTION CONTROL | 0.0075 | LB/MMBTU | BACT-PSD | 0.0075 | LB/MMBTU |
| WI-0207 | ACE ETHANOL - STANLEY | WI | 03-DCF-184 | 1/21/2004 | BOILER, S53 / B53, 34 MMBTU/H | 34 | MMBTU/H | Particulate Matter (PM) | NATURAL GAS / PROPANE; GOOD COMBUSTION CONTROL | 0.0075 | LB/MMBTU | BACT-PSD | 0.0075 | LB/MMBTU |
| WI-0207 | ACE ETHANOL - STANLEY | WI | 03-DCF-184 | 1/21/2004 | BOILER, S50/B50, 60 MMBTU/H | 60 | MMBTU/H | Particulate Matter (PM) | NATURAL GAS/ PROPANE; GOOD COMBUSTION CONTROL | 0.0075 | LB/MMBTU | BACT-PSD | 0.0075 | LB/MMBTU |
| WI-0207 | ACE ETHANOL - STANLEY | WI | 03-DCF-184 | 1/21/2004 | BOILER, S51/B51, 80 MMBTU/H | 80 | MMBTU/H | Particulate Matter (PM) | NATURAL GAS, GOOD COMBUSTION CONTROL | 0.0075 | LB/MMBTU | BACT-PSD | 0.0075 | LB/MMBTU |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | BOILER, COMMERCIAL | 70 | MMBTU/H | Particulate Matter (PM) | CLEAN FUELS | 0.008 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | BOILER, COMMERCIAL | 70 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUELS | 0.008 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |
| IN-0108 | NUCOR STEEL | IN | 107-16823-00038 | 11/21/2003 | BOILER, NATURAL GAS, (2) | 34 | MMBTU/H | Particulate matter, filterable (FPM) | COMPLIANCE IS BY USING NATURAL GAS | 0.0019 | LB/MMBTU | BACT-PSD | 0.0019 | LB/MMBTU |
| IN-0108 | NUCOR STEEL | IN | 107-16823-00038 | 11/21/2003 | BOILER, NATURAL GAS, (2) | 34 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | COMPLIANCE BY USING NATURAL GAS | 0.0076 | LB/MMBTU | BACT-PSD | 0.0076 | LB/MMBTU |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR GE TURBINE | 41 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.015 | LB/MMBTU | BACT-PSD | 0.015 | LB/MMBTU |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR SIEMENS TURBINES | 55.34 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.015 | LB/MMBTU | BACT-PSD | 0.015 | LB/MMBTU |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | BOILER | 30.6 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.31 | LB/H | BACT-PSD | 0.01 | LB/MMBTU |
| TX-0458 | JACK COUNTY POWER PLANT | TX | P1026 | 7/22/2003 | AUXILIARY BOILER | 36 | mmbtu/h | Particulate matter, filterable < 10 µ (FPM10) | | 0.4 | LB/H | BACT-PSD | 0.011 | LB/MMBTU |
| GA-0098 | RINCON POWER PLANT | GA | 4911-103-0011-P-01-0 | 3/24/2003 | AUXILIARY BOILER | 83 | MMBTU/H | Particulate Matter (PM) | | 0.0084 | LB/MMBTU | Other Case-by-Case | 0.0084 | LB/MMBTU |
| OK-0090 | DUKE ENERGY STEPHENS, LLC STEPHENS ENERGY | OK | 2001-157-C M-1 PSD | 3/21/2003 | BOILER, AUXILIARY | 33 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | USE OF LOW ASH FUEL AND EFFICIENT COMBUSTION | 0.01 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |
| TX-0389 | BAYTOWN CARBON BLACK PLANT | TX | PSD-1010 | 12/31/2002 | BACK-UP BOILER | 13.4 | MMBUT/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.1 | LB/H | Other Case-by-Case | 0.007 | LB/MMBTU |
| IA-0062 | EMERY GENERATING STATION | IA | 02-357 | 12/20/2002 | AUXILIARY BOILER | 68 | MMBTU/H | Particulate Matter (PM) | LOW ASH FUEL, NG | 0.0075 | LB/MMBTU | Other Case-by-Case | 0.0075 | LB/MMBTU |
| IA-0062 | EMERY GENERATING STATION | IA | 02-357 | 12/20/2002 | AUXILIARY BOILER | 68 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | LOW ASH FUEL, NG | 0.0075 | LB/MMBTU | Other Case-by-Case | 0.0075 | LB/MMBTU |
| TX-0354 | ATOFINA CHEMICALS INCORPORATED | TX | PSD-TX-1016 | 12/19/2002 | (2) STEAM BOILERS, X-426A AND X-426B | 15.8 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | NONE INDICATED | 0.12 | LB/H | Other Case-by-Case | 0.008 | LB/MMBTU |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - PM, PM10 PM2.5

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TX-0408 | INDIAN ROCK GATHERING COMPANY LP | TX | PSD-TX-1002 | 11/22/2002 | AUXILIARY BOILER, (2) | 6 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.05 | LB/H | BACT-PSD | 0.0083 | LB/MMBTU |
| VA-0255 | VA POWER - POSSUM POINT | VA | 70225 | 11/18/2002 | BOILER, AUXILIARY | 99 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUEL AND GOOD COMBUSTION PRACTICES. | 0.7 | LB/H | Other Case-by-Case | 0.007 | LB/MMBTU |
| GA-0101 | MURRAY ENERGY FACILITY | GA | 4911-213-0034-P-01-1 | 10/23/2002 | BOILER, AUXILIARY | 31.4 | MMBTU/H | Particulate Matter (PM) | GOOD COMBUSTION PRACTICE, CLEAN FUEL | 0.01 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |
| AL-0192 | HONDA MANUFACTURING OF ALABAMA, LLC | AL | 309-0050 (X010-X014) | 10/18/2002 | BOILERS, NATURAL GAS, (3) | 30 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUEL, GOOD COMBUSTION | 0.228 | LB/H | BACT-PSD | 0.0076 | LB/MMBTU |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | BOILER | 99 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.76 | LB/H | BACT-PSD | 0.0076 | LB/MMBTU |
| VA-0261 | CPV CUNNINGHAM CREEK | VA | 81382 | 9/6/2002 | AUXILIARY BOILER | 80 | MMBTU/H | Particulate Matter (PM) | GOOD COMBUSTION PRACTICES. | 0.58 | LB/H | BACT-PSD | 0.007 | LB/MMBTU |
| VA-0261 | CPV CUNNINGHAM CREEK | VA | 81382 | 9/6/2002 | AUXILIARY BOILER | 80 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES. | 0.58 | LB/H | BACT-PSD | 0.007 | LB/MMBTU |
| AR-0070 | GENOVA ARKANSAS I, LLC | AR | 2009-AOP-R0 | 8/23/2002 | AUXILIARY BOILER | 33 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICE | 0.012 | LB/MMBTU | BACT-PSD | 0.012 | LB/MMBTU |
| AL-0185 | BARTON SHOALS ENERGY | AL | X001, X002 | 7/12/2002 | TWO (2) 40 MMBTU/H AUXILIARY BOILERS | 40 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | NATURAL GAS ONLY | 0.0075 | LB/MMBTU | BACT-PSD | 0 | |
| OK-0070 | GENOVA OK I POWER PROJECT | OK | 2001-223-C PSD | 6/13/2002 | AUXILIARY BOILER | 33 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | LOW ASH FUEL AND EFFICIENT COMBUSTION | 0.01 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |
| OK-0072 | REDBUD POWER PLT | OK | 2000-090-C M-1 PSD | 5/6/2002 | AUXILIARY BOILER | 93 | MMBUT/H | Particulate matter, filterable < 10 µ (FPM10) | USE OF NATURAL GAS/LOW ASH FUEL AND EFFICIENT COMBUSTION | 0.0053 | LB/MMBTU | BACT-PSD | 0.0053 | LB/MMBTU |
| IA-0058 | GREATER DES MOINES ENERGY CENTER | IA | 77-13-002 | 4/10/2002 | AUXILIARY BOILER | 68 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.0076 | LB/MMBTU | BACT-PSD | 0.0076 | LB/MMBTU |
| TN-0153 | WILLIAMS REFINING & MARKETING, L.L.C. | TN | 0101-08PC AND 1010-05PCR | 4/3/2002 | HEATERS, (5) | 50 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.005 | LB/MMBTU | BACT-PSD | 0.005 | LB/MMBTU |
| TN-0153 | WILLIAMS REFINING & MARKETING, L.L.C. | TN | 0101-08PC AND 1010-05PCR | 4/3/2002 | BOILER, NO. 9 | 95 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.0075 | LB/MMBTU | BACT-PSD | 0.0075 | LB/MMBTU |
| AR-0051 | DUKE ENERGY-JACKSON FACILITY | AR | 1998-AOP-R0 (34-0259) | 4/1/2002 | BOILER, AUXILIARY | 33 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD OPERATING PRACTICE | 0.01 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |
| OK-0056 | HORSESHOE ENERGY PROJECT | OK | 2001-156-C PSD | 2/12/2002 | AUXILIARY BOILERS | 0 | | Particulate matter, filterable < 10 µ (FPM10) | LOW ASH FUEL (NATURAL GAS) | 0.0076 | LB/MMBTU | BACT-PSD | 0.0076 | LB/MMBTU |
| LA-0174 | PORT HUDSON OPERATIONS | LA | PSD-LA-581 (M-2) | 1/25/2002 | POWER BOILER NO. 2 | 65.5 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | FIRED BY NATURAL GAS | 3.33 | LB/H | BACT-PSD | 0.05 | LB/MMBTU |
| LA-0174 | PORT HUDSON OPERATIONS | LA | PSD-LA-581 (M-2) | 1/25/2002 | POWER BOILER NO. 2 | 65.5 | MMBTU/H | Particulate Matter (PM) | FIRED BY NATURAL GAS | 3.33 | LB/H | BACT-PSD | 0.05 | LB/MMBTU |
| NC-0094 | GENPOWER EARLEYS, LLC | NC | 09159R00 | 1/9/2002 | BOILER, AUXILIARY, NATURAL GAS | 83 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION AND DESIGN | 0.62 | LB/H | BACT-PSD | 0.0075 | LB/MMBTU |
| OH-0257 | JACKSON COUNTY POWER, LLC | OH | 06-06313 | 12/27/2001 | AUXILIARY BOILER | 76 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 1.52 | LB/H | BACT-PSD | 0.02 | LB/MMBTU |
| PA-0210 | DART CONTAINER CORP OF PA | PA | 36-05117 | 12/14/2001 | BOILER, (2) | 33.5 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.4 | LB/MMBTU | N/A | 0 | |
| AL-0180 | DUKE ENERGY DALE, LLC | AL | 604-0023-X001, X002 | 12/11/2001 | 35 MMBTU/HR NAT. GAS FIRED AUXILIARY BOILER | 35 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | NATURAL GAS AS EXCLUSIVE FUEL. | 0.009 | LB/MMBTU | BACT-PSD | 0 | |
| IN-0095 | ALLEGHENY ENERGY SUPPLY CO. LLC | IN | 141-14198-00543 | 12/7/2001 | AUXILLIARY BOILER | 21 | MMBTU/H | Particulate Matter (PM) | NATURAL GAS AS SOLE FUEL | 0.0075 | LB/MMBTU | BACT-PSD | 0.0075 | LB/MMBTU |
| OH-0251 | CENTRAL SOYA COMPANY INC. | OH | 03-13369 | 11/29/2001 | BOILER, NATURAL GAS | 91.2 | MMBTU/H | Particulate Matter (PM) | | 0.46 | LB/H | BACT-PSD | 0.005 | LB/MMBTU |
| TX-0378 | LA PORTE POLYPROPYLENE PLANT | TX | PSD-TX-989 | 11/5/2001 | PACKAGE BOILER BO-4 | 60 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | NONE INDICATED | 0.48 | LB/H | N/A | 0.008 | LB/MMBTU |
| OK-0071 | MCCLAIN ENERGY FACILITY | OK | 99-213-C M-1 PSD | 10/25/2001 | AUXILIARY BOILER | 22 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | USE OF LOW ASH FUELS | 0.009 | LB/MMBTU | BACT-PSD | 0.009 | LB/MMBTU |
| AL-0181 | DUKE ENERGY AUTAUGA, LLC | AL | 201-0012-X001, X002 | 10/23/2001 | 31.4 MMBTU/HR NATURAL GAS FIRED BOILER | 31.4 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | NATURAL GAS IS EXCLUSIVE FUEL. | 0.009 | LB/MMBTU | BACT-PSD | 0 | |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - PM, PM10 PM2.5

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | POLLUTANT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WA-0292 | SATSOP COMBUSTION TURBINE PROJECT | WA | EFSEC/2001-01 | 10/23/2001 | AUXILIARY BOILER | 29.3 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 7 | LB/D | Other Case-by-Case | 0 | |
| OK-0043 | WEBERS FALLS ENERGY FACILITY | OK | 2000-278-C PSD | 10/22/2001 | AUXILIARY BOILER | 30 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | USE OF LOW ASH FUEL & EFFICIENT COMBUSTION | 0.01 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |
| OH-0265 | DRESDEN ENERGY LLC | OH | 06-06238 | 10/16/2001 | BOILER, NATURAL GAS | 49 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.38 | LB/H | BACT-PSD | 0.0077 | LB/MMBTU |
| IN-0110 | COGENTRIX LAWRENCE CO., LLC | IN | 093-12432-00021-4911 | 10/5/2001 | BOILER, AUXILIARY, NATURAL GAS | 35 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | CLEAN FUEL, GOOD COMBUSTION PRACTICES | 0.02 | LB/MMBTU | Other Case-by-Case | 0.02 | LB/MMBTU |
| AL-0179 | TENASKA TALLADEGA GENERATING STATION | AL | 309-0052-X001 | 10/3/2001 | 30 MMBTU/HR AUXILIARY BOILER | 30 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | NATURAL GAS AS EXCLUSIVE FUEL | 0.005 | LB/MMBTU | BACT-PSD | 0.005 | LB/MMBTU |
| OK-0054 | QUAD GRAPHICS OKC FACILITY | OK | 2000-306-C PSD | 8/21/2001 | BOILERS | 62.77 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | NATURAL GAS FUEL, GOOD COMBUSTION PRACTICE | 0.63 | LB/H | BACT-PSD | 0 | |
| OK-0044 | SMITH POCOLA ENERGY PROJECT | OK | 2000-115-C PSD | 8/16/2001 | AUXILIARY BOILERS, (2) | 48 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | USE OF LOW ASH FUEL AND EFFICIENT COMBUSTION | 0.72 | LB/H | BACT-PSD | 0.0076 | LB/MMBTU |
| OH-0263 | FREMONT ENERGY CENTER, LLC | OH | 03-13549 | 8/9/2001 | AUXILIARY BOILER | 80 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.41 | LB/H | BACT-PSD | 0.0051 | LB / MMBTU |
| AK-0047 | MILNE POINT PRODUCTION FACILITY | AK | 0073-AC023 | 7/13/2001 | HEATERS (2), H-5701A AND H-5701B | 29 | MMBTU/H EACH | Particulate Matter (PM) | | 0.05 | GR/DSCF | N/A | 0.0071 | LB/MMBTU |
| AK-0047 | MILNE POINT PRODUCTION FACILITY | AK | 0073-AC023 | 7/13/2001 | HEATERS (2), H-4510A AND H-4510B | 14.4 | MMBTU/H EACH | Particulate Matter (PM) | | 0.05 | GR/DSCF | N/A | 0.0071 | LB/MMBTU |
| AK-0047 | MILNE POINT PRODUCTION FACILITY | AK | 0073-AC023 | 7/13/2001 | HEATERS (2), H-5302A AND H-5302B | 35 | MMBTU/H EA | Particulate Matter (PM) | | 0.05 | GR/DSCF | N/A | 0.0071 | LB/MMBTU |
| IN-0087 | DUKE ENERGY, VIGO LLC | IN | 167-12481-00125 | 6/6/2001 | AUXILARY BOILER, NATURAL GAS (2) | 46 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION. LB/H LIMIT IS FOR EACH BOILER. | 0.0075 | LB/MMBTU | BACT-PSD | 0.0075 | LB/MMBTU |
| NV-0039 | CHUCK LENZIE GENERATING STATION | NV | 1513 | 6/1/2001 | AUXILIARY BOILERS | 44.1 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | USE OF PIPELINE-QUALITY NATURAL GAS AND GOOD COMBUSTION CONTROL | 0.4 | LB/H | BACT-PSD | 0.009 | LB/MMBTU |
| OK-0046 | THUNDERBIRD POWER PLT | OK | 2000-116-C PSD | 5/17/2001 | AUXILIARY BOILER | 20 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | USE OF LOW ASH FUEL | 0.0074 | LB/MMBTU | BACT-PSD | 0.0074 | LB/MMBTU |
| IN-0086 | MIRANT SUGAR CREEK, LLC | IN | 167-12208-00123 | 5/9/2001 | AUXILARY BOILER, NATURAL GAS (2) | 35 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION. LB/H LIMIT IS FOR EACH BOILER. | 0.008 | LB/MMBTU | BACT-PSD | 0.008 | LB/MMBTU |
| OK-0074 | KIAMICHI ENERGY FACILITY | OK | 2000-103-C M-1 PSD | 5/1/2001 | AUXILIARY BOILER | 27.5 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES AND DESIGN | 0.0076 | LB/MMBTU | BACT-PSD | 0.0076 | LB/MMBTU |
| OH-0255 | AEP WATERFORD ENERGY LLC | OH | 06-06739 | 3/29/2001 | BOILER, NATURAL GAS | 85.2 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.43 | LB/H | BACT-PSD | 0.005 | LB/MMBTU |
| OH-0258 | PRO TEC COATING COMPANY | OH | 03-10957 | 2/15/2001 | BOILERS (4) | 20.9 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | | 0.04 | LB/H | N/A | 0.02 | LB/MMBTU |
| AL-0169 | BLOUNT MEGAWATT FACILITY | AL | 402-0010-X001 AND X002 | 2/5/2001 | AUXILIARY BOILER | 40 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | GOOD COMBUSTION PRACTICES | 0.02 | LB/MMBTU | BACT-PSD | 0.02 | LB/MMBTU |
| AL-0168 | GENPOWER KELLEY LLC | AL | 414-0014-X001 AND X002 | 1/12/2001 | BOILER | 83 | MMBTU/H | Particulate matter, filterable < 10 µ (FPM10) | EFFICIENT COMBUSTION | 0.01 | LB/MMBTU | BACT-PSD | 0.01 | LB/MMBTU |
| AL-0178 | ANNISTON ARMY DEPOT | AL | 301-0050 | 1/5/2001 | TWO (2) 13.4 MMBTU/H BOILERS | 13.4 | MMBTU/H | Particulate Matter (PM) | | 0.0076 | LB/MMBTU | BACT-PSD | 0 | |
| AL-0178 | ANNISTON ARMY DEPOT | AL | 301-0050 | 1/5/2001 | TWO (2) 11.7 MMBTU/H BOILERS | 11.7 | MMBTU/H | Particulate Matter (PM) | | 0.0076 | LB/MMBTU | BACT-PSD | 0 | |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - SO2

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *FL-0335 | SUWANNEE MILL | FL | 1210468-001-AC(PSD-FL-417) | 9/5/2012 | Four(4) Natural Gas Boilers - 46 MMBtu/hour | 46 | MMBtu/hr | Good Combustion Practice | 2 | GR OF S/100 SCF | OTHER CASE-BY-CASE | 0.003 | LB/MMBTU |
| *OH-0350 | REPUBLIC STEEL | OH | P0109191 | 7/18/2012 | Steam Boiler | 65 | MMBtu/H | | 0.037 | LB/H | N/A | 0.0006 | LB/MMBTU |
| NV-0050 | MGM MIRAGE | NV | 825 | 11/30/2009 | BOILERS - UNITS CC001, CC002, AND CC003 AT CITY CENTER | 41.64 | MMBTU/H | LIMITING THE FUEL TO NATURAL GAS ONLY. | 0.0007 | LB/MMBTU | BACT-PSD | 0.0007 | LB/MMBTU |
| NV-0050 | MGM MIRAGE | NV | 825 | 11/30/2009 | BOILERS - UNITS CC026, CC027 AND CC028 AT CITY CENTER | 44 | MMBTU/H | LIMITING THE FUEL TO NATURAL GAS ONLY | 0.0007 | LB/MMBTU | BACT-PSD | 0.0007 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT FL01 | 14.34 | MMBTU/H | FUEL IS LIMITED TO NATURAL GAS. | 0.0006 | LB/MMBTU | BACT-PSD | 0.0006 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT BA01 | 16.8 | MMBTU/H | FUEL IS LIMITED TO NATURAL GAS. | 0.0042 | LB/MMBTU | BACT-PSD | 0.0042 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT BA03 | 31.38 | MMBTU/H | FUEL IS LIMITED TO NATURAL GAS. | 0.0006 | LB/MMBTU | BACT-PSD | 0.0006 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT CP01 | 35.4 | MMBTU/H | FUEL IS LIMITED TO NATURAL GAS. | 0.0006 | LB/MMBTU | BACT-PSD | 0.0006 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT CP03 | 33.48 | MMBTU/H | FUEL IS LIMITED TO NATURAL GAS. | 0.0006 | LB/MMBTU | BACT-PSD | 0.0006 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT CP26 | 24 | MMBTU/H | FUEL IS LIMITED TO NATURAL GAS. | 0.0006 | LB/MMBTU | BACT-PSD | 0.0006 | LB/MMBTU |
| NV-0049 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 8/20/2009 | BOILER - UNIT IP04 | 16.7 | MMBTU/H | FUEL IS LIMITED TO NATURAL GAS. | 0.0006 | LB/MMBTU | BACT-PSD | 0.0006 | LB/MMBTU |
| OK-0135 | PRYOR PLANT CHEMICAL | OK | 2008-100-C PSD | 2/23/2009 | BOILERS #1 AND #2 | 80 | MMBTU/H | | 0.2 | LB/H | BACT-PSD | 0.0025 | LB/MMBTU |
| SC-0115 | GP CLARENDON LP | SC | 0680-0046-CB | 2/10/2009 | NATURAL GAS SPACE HEATERS - 14 UNITS (ID 17) | 20.89 | MMBTU/H | | 0.01 | LB/H | BACT-PSD | 0.0005 | LB/MMBTU |
| OK-0129 | CHOUTEAU POWER PLANT | OK | 2007-115-C(M-1)PSD | 1/23/2009 | AUXILIARY BOILER | 33.5 | MMBTU/H | LOW SULFUR FUEL | 0.03 | LB/H | N/A | 0.0009 | LB/MMBTU |
| SC-0114 | GP ALLENDALE LP | SC | 0160-0020-CB | 11/25/2008 | NATURAL GAS SPACE HEATERS - 14 UNITS (ID 18) | 20.89 | MMBTU/H | | 0.01 | LB/H | BACT-PSD | 0.0005 | LB/MMBTU |
| AL-0230 | THYSSENKRUPP STEEL AND STAINLESS USA, LLC | AL | 503-0095-X001 THRU X026 | 8/17/2007 | 3 NATURAL GAS-FIRED BOILERS WITH ULNB & EGR (537-539) | 64.9 | MMBTU each | | 0.0006 | LB/MMBTU | BACT-PSD | 0 | |
| OH-0309 | TOLEDO SUPPLIER PARK-PAINT SHOP | OH | 04-01358 | 5/3/2007 | BOILER (2), NATURAL GAS | 20.4 | MMBTU/H | | 0.01 | LB/H | BACT-PSD | 0.0006 | LB/MMBTU |
| FL-0286 | FPL WEST COUNTY ENERGY CENTER | FL | PSD-FL-354 AND 0990646-001-AC | 1/10/2007 | TWO GAS-FUELED 10 MMBTU/H PROCESS HEATERS | 10 | MMBTU/H | | 2 | GS/100 SCF GAS | BACT-PSD | 0.003 | LB/MMBTU |
| NV-0044 | HARRAH'S OPERATING COMPANY, INC. | NV | 257 | 1/4/2007 | COMMERCIAL/INSTITUTIONAL-SIZE BOILERS | 35.4 | MMBTU/H | USE OF NATURAL GAS AS THE ONLY FUEL | 0.001 | LB/MMBTU | BACT-PSD | 0.001 | LB/MMBTU |
| TX-0501 | TEXSTAR GAS PROCESS FACILITY | TX | PSD-TX 55M3 AND 6051 | 7/11/2006 | POWER STEAM BOILER | 93 | MMBTU/H | | 0.05 | LB/H | BACT-PSD | 0.0005 | LB/MMBTU |
| NY-0095 | CAITHNES BELLPORT ENERGY CENTER | NY | PSD-NY-0001 | 5/10/2006 | AUXILIARY BOILER | 29.4 | MMBTU/H | LOW SULFUR FUEL | 0.0005 | LB/MMBTU | BACT-PSD | 0 | LB/MMBTU |
| AR-0090 | NUCOR STEEL, ARKANSAS | AR | 1139-AOP-R6 | 4/3/2006 | PICKLE LINE BOILERS, SN-52 | 12.6 | MMBTU EACH | | 0.1 | LB/H | N/A | 0.0006 | LB/MMBTU |
| LA-0203 | OAKDALE OSB PLANT | LA | PSD-LA-710 | 6/13/2005 | AUXILIARY THERMAL OIL HEATER | 66.5 | MMBTU/H | USE OF NATURAL GAS AS FUEL AND GOOD COMBUSTION PRACTICES | 0.05 | LB/H | BACT-PSD | 0.001 | LB/MMBTU |
| OH-0252 | DUKE ENERGY HANGING ROCK ENERGY FACILITY | OH | 07-00503 | 12/28/2004 | BOILERS (2) | 30.6 | MMBTU/H | THE MAXIMUM S CONTENT OF THE NATURAL GAS SHALL NOT EXCEED 2 GRAINS PER 100 CUBIC FEET. | 0.031 | LB/H | BACT-PSD | 0.001 | LB/MMBTU |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - SO2

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AZ-0047 | WELLTON MOHAWK GENERATING STATION | AZ | 1001653 | 12/1/2004 | AUXILIARY BOILER | 38 | MMBTU/H | | 0.0023 | LB/MMBTU | BACT-PSD | 0.0023 | LB/MMBTU |
| WI-0227 | PORT WASHINGTON GENERATING STATION | WI | 04-RV-175 | 10/13/2004 | NATURAL GAS FIRED AUXILLIARY BOILER | 97.1 | MMBTU/H | NATURAL GAS FUEL | 0.06 | LB/H | BACT-PSD | 0.006 | LB/MMBTU |
| WI-0226 | WPS - WESTON PLANT | WI | 04-RV-128 | 8/27/2004 | NATURAL GAS FIRED BOILER | 46.2 | MMBTU/H | NATURAL GAS FUEL ONLY | 0.05 | LB/H | N/A | 0.0011 | LB/MMBTU |
| AR-0077 | BLUEWATER PROJECT | AR | 2062-AOP-R0 | 7/22/2004 | BOILERS | 22 | MMBTU/H | NATURAL GAS COMBUSTION ONLY | 0.0006 | LB/MMBTU | BACT-PSD | 0.0006 | LB/MMBTU |
| OH-0276 | CHARTER STEEL | OH | 13-04176 | 6/10/2004 | BOILER FOR VACUUM OXYGEN DEGASSER VESSEL | 28.6 | MMBTU/H | | 0.02 | LB/H | BACT-PSD | 0.0007 | LB/MMBTU |
| NV-0037 | COPPER MOUNTAIN POWER | NV | 15347 | 5/14/2004 | AUXILIARY BOILER | 60 | MMBTU/H | USE OF LOW-SULFUR NATURAL GAS | 0.04 | LB/H | BACT-PSD | 0.0007 | LB/MMBTU |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | BOILER, COMMERCIAL | 70 | MMBTU/H | LOW SULFUR FUEL | 0.001 | LB/MMBTU | BACT-PSD | 0.001 | LB/MMBTU |
| IN-0108 | NUCOR STEEL | IN | 107-16823-00038 | 11/21/2003 | BOILER, NATURAL GAS, (2) | 34 | MMBTU/H | COMPLIANCE BY USING NATURAL GAS | 0.0006 | LB/MMBTU | BACT-PSD | 0.0006 | LB/MMBTU |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR GE TURBINE | 41 | MMBTU/H | | 0.0025 | LB/MMBTU | BACT-PSD | 0.0025 | LB/MMBTU |
| AZ-0049 | LA PAZ GENERATING FACILITY | AZ | 1001743 | 9/4/2003 | AUXILIARY BOILER FOR SIEMENS TURBINES | 55.34 | MMBTU/H | | 0.0025 | LB/MMBTU | BACT-PSD | 0.0025 | LB/MMBTU |
| OH-0254 | DUKE ENERGY WASHINGTON COUNTY LLC | OH | 06-06792 | 8/14/2003 | BOILER | 30.6 | MMBTU/H | | 0.031 | LB/H | BACT-PSD | 0.001 | LB/MMBTU |
| TX-0458 | JACK COUNTY POWER PLANT | TX | P1026 | 7/22/2003 | AUXILIARY BOILER | 36 | mmbtu/h | | 0.3 | LB/H | BACT-PSD | 0.0083 | LB/MMBTU |
| OK-0090 | DUKE ENERGY STEPHENS, LLC STEPHENS ENERGY | OK | 2001-157-C M-1 PSD | 3/21/2003 | BOILER, AUXILIARY | 33 | MMBTU/H | BACT IS USE OF PIPE-LINE QUALITY NATURAL GAS | 0.2 | LB/H | BACT-PSD | 0.006 | LB/MMBTU |
| TX-0389 | BAYTOWN CARBON BLACK PLANT | TX | PSD-1010 | 12/31/2002 | BACK-UP BOILER | 13.4 | MMBUT/H | | 0.01 | LB/H | Other Case-by-Case | 0.0007 | LB/MMBTU |
| IA-0062 | EMERY GENERATING STATION | IA | 02-357 | 12/20/2002 | AUXILIARY BOILER | 68 | MMBTU/H | LOW SULFUR FUEL, NG | 0.0006 | LB/MMBTU | Other Case-by-Case | 0.0006 | LB/MMBTU |
| TX-0354 | ATOFINA CHEMICALS INCORPORATED | TX | PSD-TX-1016 | 12/19/2002 | (2) STEAM BOILERS, X-426A AND X-426B | 15.8 | MMBTU/H | FUEL GAS SHALL BE SWEET NATURAL GAS CONTAINING NO MORE THAN 5 GR S/100 DSCF. | 0.01 | LB/H | Other Case-by-Case | 0.0006 | LB/MMBTU |
| TX-0408 | INDIAN ROCK GATHERING COMPANY LP | TX | PSD-TX-1002 | 11/22/2002 | AUXILIARY BOILER, (2) | 6 | MMBTU/H | | 0.01 | LB/H | BACT-PSD | 0.0017 | LB/MMBTU |
| VA-0255 | VA POWER - POSSUM POINT | VA | 70225 | 11/18/2002 | BOILER, AUXILIARY | 99 | MMBTU/H | LOW SULFUR FUEL AND GOOD COMBUSTION PRACTICES. | 0.1 | LB/H | Other Case-by-Case | 0.001 | LB/MMBTU |
| OH-0248 | LAWRENCE ENERGY | OH | 07-00505 | 9/24/2002 | BOILER | 99 | MMBTU/H | | 0.56 | LB/H | BACT-PSD | 0.0057 | LB/MMBTU |
| LA-0174 | PORT HUDSON OPERATIONS | LA | PSD-LA-581 (M-2) | 1/25/2002 | POWER BOILER NO. 2 | 65.5 | MMBTU/H | FIRING NATURAL GAS | 0.26 | LB/H | BACT-PSD | 0.004 | LB/MMBTU |
| OH-0257 | JACKSON COUNTY POWER, LLC | OH | 06-06313 | 12/27/2001 | AUXILIARY BOILER | 76 | MMBTU/H | LOW SULFUR FUEL, NATURAL GAS SULFUR LIMIT - 2 GR/100 SCF | 0.5 | LB/H | BACT-PSD | 0.006 | LB/MMBTU |
| PA-0210 | DART CONTAINER CORP OF PA | PA | 36-05117 | 12/14/2001 | BOILER, (2) | 33.5 | MMBTU/H | LOW SULFUR FUEL | 4 | LB/MMBTU | N/A | 0 | LB/MMBTU |
| AL-0180 | DUKE ENERGY DALE, LLC | AL | 604-0023-X001, X002 | 12/11/2001 | 35 MMBTU/HR NAT. GAS FIRED AUXILIARY BOILER | 35 | MMBTU/H | NATURAL GAS | 0.0057 | LB/MMBTU | BACT-PSD | 0 | LB/MMBTU |
| IN-0095 | ALLEGHENY ENERGY SUPPLY CO. LLC | IN | 141-14198-00543 | 12/7/2001 | AUXILLIARY BOILER | 21 | MMBTU/H | LOW SULFUR CONTENT NATURAL GAS | 0.0006 | LB/MMBTU | BACT-PSD | 0.0006 | LB/MMBTU |
| OH-0251 | CENTRAL SOYA COMPANY INC. | OH | 03-13369 | 11/29/2001 | BOILER, NATURAL GAS | 91.2 | MMBTU/H | | 0.055 | LB/H | N/A | 0.0006 | LB/MMBTU |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - SO2

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TX-0378 | LA PORTE POLYPROPYLENE PLANT | TX | PSD-TX-989 | 11/5/2001 | PACKAGE BOILER BO-4 | 60 | MMBTU/H | NONE INDICATED | 0.95 | LB/H | N/A | 0.02 | LB/MMBTU |
| OK-0071 | MCCLAIN ENERGY FACILITY | OK | 99-213-C M-1 PSD | 10/25/2001 | AUXILIARY BOILER | 22 | MMBTU/H | USE OF PIPELINE QUALITY NATURAL GAS | 0.001 | LB/MMBTU | BACT-PSD | 0.001 | LB/MMBTU |
| AL-0181 | DUKE ENERGY AUTAUGA, LLC | AL | 201-0012-X001, X002 | 10/23/2001 | 31.4 MMBTU/HR NATURAL GAS FIRED BOILER | 31.4 | MMBTU/H | NATURAL GAS IS EXCLUSIVE FUEL. | 0.0057 | LB/MMBTU | BACT-PSD | 0 | LB/MMBTU |
| WA-0292 | SATSOP COMBUSTION TURBINE PROJECT | WA | EFSEC/2001-01 | 10/23/2001 | AUXILIARY BOILER | 29.3 | MMBTU/H | | 0.07 | LB/H | BACT-PSD | 0.0024 | LB/MMBTU |
| OK-0043 | WEBERS FALLS ENERGY FACILITY | OK | 2000-278-C PSD | 10/22/2001 | AUXILIARY BOILER | 30 | MMBTU/H | USE OF NATURAL GAS | 150 | PPM | BACT-PSD | 0 | LB/MMBTU |
| OH-0265 | DRESDEN ENERGY LLC | OH | 06-06238 | 10/16/2001 | BOILER, NATURAL GAS | 49 | MMBTU/H | THE MAXIMUM SULFUR CONTENT OF THE NATURAL GAS SHALL NOT EXCEED 0.3 GRAINS PER 100 STANDARD CUBIC FEET. | 0.05 | LB/H | BACT-PSD | 0.001 | LB/MMBTU |
| IN-0110 | COGENTRIX LAWRENCE CO., LLC | IN | 093-12432-00021-4911 | 10/5/2001 | BOILER, AUXILIARY, NATURAL GAS | 35 | MMBTU/H | GOOD COMBUSTION PRACTICE | 0.006 | LB/MMBTU | BACT-PSD | 0.006 | LB/MMBTU |
| OK-0044 | SMITH POCOLA ENERGY PROJECT | OK | 2000-115-C PSD | 8/16/2001 | AUXILIARY BOILERS, (2) | 48 | MMBTU/H | USE OF PIPELINE NATURAL GAS W/SULFUR CONTENT 2 GRAINS SULFUR/100 SCF | 0.57 | LB/H | BACT-PSD | 0.2 | LB/MMBTU |
| OH-0263 | FREMONT ENERGY CENTER, LLC | OH | 03-13549 | 8/9/2001 | AUXILIARY BOILER | 80 | MMBTU/H | | 0.48 | LB/H | BACT-PSD | 0.006 | LB/MMBTU |
| AK-0047 | MILNE POINT PRODUCTION FACILITY | AK | 0073-AC023 | 7/13/2001 | HEATERS (2), H-5701A AND H-5701B | 29 | MMBTU/H EACH | BURN NATURAL GAS WITH NO GREATER THAN 100 PPM H2S. BURN FUEL OIL WITH NO GREATER THAN 0.30 % SULFUR BY WEIGHT. | 500 | PPM | N/A | 2.55 | LB/MMBTU |
| AK-0047 | MILNE POINT PRODUCTION FACILITY | AK | 0073-AC023 | 7/13/2001 | HEATERS (2), H-4510A AND H-4510B | 14.4 | MMBTU/H EACH | USE FUEL OIL WITH NO GREATER THAN 0.3% SULFUR BY WEIGHT AND NATURAL GAS WITH NO GREATER THAN 100 PPMVD. | 500 | PPM | N/A | 2.55 | LB/MMBTU |
| AK-0047 | MILNE POINT PRODUCTION FACILITY | AK | 0073-AC023 | 7/13/2001 | HEATERS (2), H-5302A AND H-5302B | 35 | MMBTU/H EA | BURN NATURAL GAS WITH NO GREATER THAN 100 PPM H2S. BURN FUEL OIL WITH NO GREATER THAN 0.30 % SULFUR BY WEIGHT. | 500 | PPM | N/A | 2.55 | LB/MMBTU |
| IN-0087 | DUKE ENERGY, VIGO LLC | IN | 167-12481-00125 | 6/6/2001 | AUXILARY BOILER, NATURAL GAS (2) | 46 | MMBTU/H | NATURAL GAS AS FUEL. LIMIT IS FOR EACH BOILER. | 0.0006 | LB/MMBTU | BACT-PSD | 0.0006 | LB/MMBTU |
| NV-0039 | CHUCK LENZIE GENERATING STATION | NV | 1513 | 6/1/2001 | AUXILIARY BOILERS | 44.1 | MMBTU/H | USE OF PIPELINE-QUALITY NATURAL GAS | 0.4 | LB/H | BACT-PSD | 0.009 | LB/MMBTU |
| IN-0086 | MIRANT SUGAR CREEK, LLC | IN | 167-12208-00123 | 5/9/2001 | AUXILARY BOILER, NATURAL GAS (2) | 35 | MMBTU/H | LOW SULFUR NATURAL GAS ONLY (LESS THAN 0.8% BY WEIGHT). LB/H LIMIT IS FOR EACH BOILER. | 0.0006 | LB/MMBTU | BACT-PSD | 0.0006 | LB/MMBTU |
| OK-0074 | KIAMICHI ENERGY FACILITY | OK | 2000-103-C M-1 PSD | 5/1/2001 | AUXILIARY BOILER | 27.5 | MMBTU/H | USE OF NATURAL GAS WITH LOW SULFUR CONTENT | 2 | GR/100 SCF | BACT-PSD | 0.003 | LB/MMBTU |
| OH-0255 | AEP WATERFORD ENERGY LLC | OH | 06-06739 | 3/29/2001 | BOILER, NATURAL GAS | 85.2 | MMBTU/H | LOW S NATURAL GAS, 2 GR/100 SCF | 0.05 | LB/H | BACT-PSD | 0.0006 | LB/MMBTU |
| AL-0169 | BLOUNT MEGAWATT FACILITY | AL | 402-0010-X001 AND X002 | 2/5/2001 | AUXILIARY BOILER | 40 | MMBTU/H | GOOD COMBUSTION PRACTICES | 0.006 | LB/MMBTU | BACT-PSD | 0.006 | LB/MMBTU |
| AL-0168 | GENPOWER KELLEY LLC | AL | 414-0014-X001 AND X002 | 1/12/2001 | BOILER | 83 | MMBTU/H | | 0.001 | LB/MMBTU | BACT-PSD | 0.001 | LB/MMBTU |

# RBLC REVIEW FOR ALL BOILERS (< 100 MMBTU/HR AND >10 MMBTU/HR) - H2SO4

| RBLCID | FACILITY NAME | FACILITY STATE | PERMIT NUMBER | PERMIT ISSUANCE DATE | PROCESS NAME | THROUGHPUT | THROUGHPUT UNIT | CONTROL METHOD DESCRIPTION | EMISSION LIMIT 1 | EMISSION LIMIT 1 UNIT | CASE-BY-CASE BASIS | STANDARD EMISSION LIMIT | STANDARD EMISSION LIMIT UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD-0040 | CPV ST CHARLES | MD | CPCN CASE NO. | 11/12/2008 | BOILER | 93 | MMBTU/H | | 0.0001 | LB/MMBTU | BACT-PSD | 0 | |
| MN-0054 | MANKATO ENERGY CENTER | MN | 01300098-001 | 12/4/2003 | BOILER, COMMERCIAL | 70 | MMBTU/H | LOW SULFUR FUEL | 0.8 | GR/100 SCF | BACT-PSD | 0 | |