# APPLICATION FOR AIR PERMIT REVISIONS AND RENEWAL 

Lake Cogeneration Plant Lake County, Florida

Submitted To: Air Quality Division
Department of Environmental Protection
2600 Blair Stone Road
MS 5000
Tallahassee, FL 32399 USA

Submitted By: Golder Associates Inc.
5100 W. Lemon Street
Suite 208
Tampa, FL 33609 USA

Distribution: 4 Copies—Florida Department of Environmental Protection
2 Copies -Caithness Corporation
1 Copy -Golder Associates Inc.

A world of capabilities delivered locally
Mr. Jonathon Holtom, P.E.
North Permitting Section
Division of Air Resource Management
2600 Blair Stone Road MS 5500
Tallahassee, Florida $32399-2400$

## RE: APPLICATION FOR AIR PERMIT REVISIONS AND RENEWAL LAKE COGENERATION PLANT FACILITY ID NO. 0694801

Dear Mr. Holtom:

## $0694801-014$ AC

On January 31, 2011, an apicicaion for concurrent processing of revisions to the current Late Cogeneration Title V permit, 0694801-011-AV, as well as the underlying air construction permit, 0694801-012-AC, conditions upon which they were based was submitted to the Florida Department of Protection (FDEP). On April 1, 2011 the Lake Cogeneration facility received a Request for Additional Information (RAI) letter from the FDEP stating that it is their understanding that Caithness Energy would like to also address the Title $V$ revisions within the Title $V$ renewal process.

Enclosed please find one original and three copies of an application for concurrent processing of a renewal and revision to the current Title $V$ air permit, as well as the underlying air construction permit conditions upon which they were based, for the Lake Cogeneration Plant located in Umatilla, Lake County, Florida. This permit renewal and revision application incorporates the provisions of Permit No. 0694801-012-AC, and, therefore, requires changes to conditions of the current Title V Air Operation Permit No. 0694801-011-AV to incorporate these new requirements. Permit No. 0694801-012-AC authorized the installation of oxidation catalyst control systems in the Heat Recovery Steam Generator associated with each of the two combustion turbine units. This application also requests changes to conditions of the current Title V Air Operation Permit No. 0694801-011-AV, which requires concurrent air construction permit processing.

Lake Cogeneration looks forward to working with you on this permitting effort. If you would like to discuss any issues regarding this application, please contact Mr. Tom Grace of Caithness Energy at (917) 4724593 or me at (813) 287-1717 in Tampa.

Sincerely,

## GOLDER ASSOCIATES INC.




Dave Larocca
Senior Project Engineer

# cc: Jeffery F. Koerner, DEP Bureau of Air Regulations 

 Caroline Shine, DEP Central District OfficeJim Miller, Lake Cogen
Tom Grace, Caithness Energy
Enclosure: $\quad$ Title $V$ Renewal Application Report

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## INTRODUCTION

On January 31, 2011, an application for concurrent processing of revisions to the current Lake Cogeneration Title V permit, 0694801-011-AV, as well as the underlying air construction permit (0694801-012-AC) conditions upon which they were based was submitted to the Florida Department of Protection (FDEP). On April 1, 2011 the Lake Cogeneration facility received a Request for Additional Information (RAI) letter from the FDEP stating that it is their understanding that Caithness Energy would like to also address the Title $V$ revisions within the Title $V$ renewal process.

This Title V (TV) Operation Permit Renewal application serves to request a permit renewal and revision. This permit application incorporates the provisions of Permit No. 0694801-012-AC, and, therefore, requires changes to conditions of the current Title V Air Operation Permit No. 0694801-011-AV to incorporate these new requirements. Permit No. 0694801-012-AC authorized the installation of oxidation catalyst control systems in the Heat Recovery Steam Generator associated with each of the two combustion turbine units. This application also requests changes to conditions of the current Title $V$ Air Operation Permit No. 0694801-011-AV, which requires concurrent air construction permit processing. The requested revisions are described in LC-FI-C7.

## PROJECT DESCRIPTION

Permit No. 0694801-012-AC authorized the installation of oxidation catalyst control systems in the Heat Recovery Steam Generator associated with each of the two combustion turbine units. Carbon Monoxide $(\mathrm{CO})$ is controlled or reduced by the use of a catalytic oxidation system, which is effectively a passive control system. The catalyst (stainless steel foil coated with calcined alumina with platinum metal) enhances the chemical reaction between oxygen and carbon monoxide and forms carbon dioxide as the end product. This reaction generally provides for emission control in the range of 50 to $70 \%$, depending on the exhaust gas temperature. The catalyst normally operates at a temperature around $700^{\circ} \mathrm{F}$ with corresponding CO removal efficiencies of approximately $70 \%$. This system is designed and certified by the manufacturer to operate while the plant is burning either natural gas or new No. 2 diesel fuel oil.

A plant operator occupies the plant control room 24 hours per day, which allows the plant personnel to monitor two key catalyst operating parameters. Namely, catalyst inlet temperature and pressure drop across the catalyst bed. A high temperature alarm is proposed to alert the operator if the catalyst inlet temperature becomes excessive to protect the bed from thermal damage, and a high-pressure alarm sounds if the pressure drop across the catalyst bed becomes excessive. The pressure reading serves two purposes: to ensure that there is airflow across the bed, thus verifying that the system is operating, and to alert the plant operator if a possible plugging or fouling has occurred. Please see Attachment LC-EU1-I5 for a copy of the CO control Compliance Assurance Monitoring (CAM) plan.

## REQUESTED PERMIT CHANGES

This Title $\vee$ Operation Permit Renewal application also requests changes to conditions of the current Title $\checkmark$ Air Operation Permit No. 0694801-011-AV, please see Attachment LC-FI-C7 for a list of requested changes. A summary of the requested revisions is as follows:

- Revision in the nominal MW ratings of the facilities;
1.1 Page 2, subsection A - Change from 52 MW to 50 MW .
- Revise to remove the distinction between the normal operating mode and the SPRINT mode, as the units will primarily be operating in the SPRINT mode. Please see the attached proposed permit language in LC-FI-C7;
- Revise the annual test scheduling to be consistent with a FY basis; and
1.2 Page 13, section A24 - Change from the July 15 requirement to fiscal year requirement.
- It is requested that a footnote be added to the CO emission limits in Condition A. 6 of the current TV permit, indicating that the limits are corrected to 15 percent O2. This is consistent with other similar BACT determinations for CO and may have been implied in the current permit, although not specifically addressed.
- Request to remove units and activities in the insignificant activities list that either no longer exist or that do not emit "emissions-limited" pollutants. Please see the attached proposed list of insignificant activities in LC-FI-C7;
- Request to categorize EU 002, the fuel oil storage tank, as an insignificant emission unit instead of a regulated emission unit. Please see attachment LC-EU3-I1 for detailed fuel oil storage tank calculations with 40 CFR 60 Subpart Kb applicability analysis. Please see the attached proposed list of insignificant activities in LC-FI-C7;

■ Under the National Emission Standards for Hazardous Air Pollutants (NESHAP), EU 005 diesel fuel fired emergency generator and EU 006 fire pump are subject to Subpart ZZZZ for reciprocating internal combustion engines. EU 005 and EU 006 are classified as an existing area source and are subject to the requirements of Table 2d Subpart ZZZZ of Part 63- Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions. Please categorize EU 005, the diesel fuel fired emergency generator, and EU 006, the fire pump, as regulated emission units. Please see attachment LC-EU2-11 for a 40 CFR 63 Subpart ZZZZ applicability analysis;

- Request revised permit language of Section III, Subpart A. 1 for EU 003 and EU 004. Please see the attached proposed permit language in LC-FI-C7; and
- Request permit language of Section III, Subpart A for EU 003 and EU 004 with respect to component replacements. Please see the attached proposed permit language in LC-FIc7.


## PART II

FDEP APPLICATION FOR AIR PERMIT

Department of RECEIVED Environmental Protection AUG 262011

## Division of Air Resource Management APPLICATION FOR AIR PERMIT - LONG FORM

## I. APPLICATION INFORMATION

Air Construction Permit - Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- To establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit - Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial, revised, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

## Identification of Facility



## Application Contact

1. Application Contact Name: Thomas Grace
2. Application Contact Mailing Address...

Organization/Firm: Caithness Generation Services
Street Address: 565 Fifth Ave., 29th Floor
City: New York State: NY Zip Code: 10017
3. Application Contact Telephone Numbers...

Telephone: (917) 472-4593 ext. Fax: (732) 817-0101
4. Application Contact E-mail Address: tgrace@caithnessenergy.com

## Application Processing Information (DEP Use)

| 1. Date of Receipt of Application: | 3. PSD Number (if applicable): |
| :--- | :--- |
| 2. Project Number(s): | 4. Siting Number (if applicable): |

## APPLICATION INFORMATION

## Purpose of Application

This application for air permit is being submitted to obtain: (Check one)

## Air Construction Permit

$\square$ Air construction permit.
$\square$ Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
$\square$ Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

## Air Operation Permit

$\square$ Initial Title $V$ air operation permit.
$\boxtimes$ Title $V$ air operation permit revision.
$\boxtimes$ Title $V$ air operation permit renewal.
$\square$ Initial federally enforceable state air operation permit (FESOP) where professional engineer ( PE ) certification is required.
$\square$ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

## Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

$\boxtimes$ Air construction permit and Title V permit revision, incorporating the proposed project.
$\boxtimes$ Air construction permit and Title V permit renewal, incorporating the proposed project.
Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:
$\boxtimes$ I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

## Application Comment

This application serves to request a construction permit revision, as well as a TV permit renewal and revision. This permit application incorporates the provisions of Permit No. 0694801-012-AC, and, therefore, requires changes to conditions of the current Title V Air Operation Permit No. 0694801-011-AV to incorporate these new requirements. Permit No. 0694801-012-AC authorized the installation of oxidation catalyst control systems in the Heat Recovery Steam Generator associated with each of the two combustion turbine units. This application also requests changes to conditions of the current Title V Air Operation Permit No. 0694801-011-AV, which requires concurrent air construction permit processing. The requested revisions are described in LC-FI-C7.

## APPLICATION INFORMATION

## Scope of Application

| Emissions <br> Unit ID <br> Number | Description of Emissions Unit | Air <br> Permit <br> Type | Air Permit <br> Processing <br> Fee |
| :--- | :--- | :--- | :--- |
| 003 | Combined Cycle Combustion Turbine with Duct <br> Burner | AV05 | NA |
| 004 | Combined Cycle Combustion Turbine with Duct <br> Burner | AV05 | NA |
| $002^{\star}$ | Unregulated Emission Unit - Fuel Oil Storage <br> Tank (170,000 gallons) | AV05 | NA |
| $\mathbf{0 0 5 ^ { * * }}$ | Regulated Emission Unit - Diesel Fuel Fired <br> Emergency Generators (1 @ 250 kW) | AV05 | NA |
| $006^{* *}$ | Regulated Emission Unit - Fire Pump (1 @ 216 hp) | AV05 | NA |
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*Request permit revision to categorize as an insignificant emission unit instead as an unregulated emission unit. Please see attachment LC-FI-C7 which includes requested changes to the current Title V Operation Permit. Also, please see attachment LC-EU3-I1 for detailed fuel oil storage tank calculations with 40 CFR 60 Subpart Kb applicability analysis.
** Under the National Emission Standards for Hazardous Air Pollutants (NESHAP), EU 005 diesel fuel fired emergency generator and EU 006 fire pump are subject to Subpart ZZZZ for reciprocating internal combustion engines. EU 005 and EU 006 are classified as an existing area source and are subject to the requirements of Table 2d Subpart ZZ7Z of Part 63Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions. Please see attachment LC-FI-C7 which includes requested changes to the current Title V Operation Permit. Please see attachment LC-EU2-I1 for a 40 CFR 63 Subpart ZZ7Z applicability analysis.

## Application Processing Fee

Check one: $\square$ Attached - Amount: $\qquad$ V Not Applicable

## APPLICATION INFORMATION

## Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
2. Owner/Authorized Representative Mailing Address...

Organization/Firm:
Street Address:
City: State: Zip Code:
3. Owner/Authorized Representative Telephone Numbers...

Telephone: ext. Fax:
4. Owner/Authorized Representative E-mail Address:
5. Owner/Authorized Representative Statement:

I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.

## APPLICATION INFORMATION

## Application Responsible Official Certification <br> Complete if applying for an initial, revised, or renewal Title $V$ air operation permit or concurrent processing of an air construction permit and revised or renewal Title $V$ air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

```
1. Application Responsible Official Name:
    James Miller, Plant Manager
```

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):
$\boxtimes$ For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.For a partnership or sole proprietorship, a general partner or the proprietor, respectively.For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.
$\square$ The designated representative at an Acid Rain source or CAIR source.
3. Application Responsible Official Mailing Address...

Organization/Firm: Lake Cogeneration Ltd.
Street Address: 39001 Golden Gem Dr.
City: Umatilla State: Florida Zip Code: 32784
4. Application Responsible Official Telephone Numbers...

Telephone: (352) 669-3288 ext. Fax: (352) 669-3188
5. Application Responsible Official E-mail Address: imiller@caithnessenergy.com

## APPLICATION INFORMATION

## 6. Application Responsible Official Certification:

I, the undersigned, am a responsible official of the Title $V$ source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance Nan(s) subnijted with this application.

$\qquad$

## APPLICATION INFORMATION

## Professional Engineer Certification



## II. FACILITY INFORMATION

## A. GENERAL FACILITY INFORMATION

## Facility Location and Type

| 1. Facility UTM Coordinates... <br> $\begin{array}{lll}\text { Zone } 17 & \text { East (km) } & 434.00 \\ & \text { North }(\mathrm{km}) & 3198.80\end{array}$ |  |  | 2. Facility Latitude/Longitude... <br> Latitude (DD/MM/SS) $\quad 28^{\circ} 55^{\prime} 02^{\prime \prime}$ <br> Longitude (DD/MM/SS) $81^{\circ} \mathbf{4 0} \mathbf{3 7}$ " |  |
| :---: | :---: | :---: | :---: | :---: |
| 3. Governmenta Facility Code 0 |  |  | Group SIC Code: 49 | 6. Facilit |
| 7. Facility Comment : <br> Lake Cogeneration facility consists of two GE LM-6000 combustion turbine units (CTs), each unit equipped with an inlet chiller and a supplementary fired duct burner (DB) and exhausting through Heat Recovery Steam Generator (HRSG) stacks. The CTs have dual fuel (natural gas and distillate fuel) capability. Both CTs recently underwent SPRINT upgrade for enhanced efficiency. Permit No. 0694801-012-AC authorized the installation of oxidation catalyst control systems in the Heat Recovery Steam Generator associated with each of the two combustion turbine units. |  |  |  |  |

## Facility Contact

| 1. Facility Contact Name: James Miller, Plant Manager |  |  |  |
| :---: | :---: | :---: | :---: |
| 2. Facility Contact Mailing Address... Organization/Firm: Lake Cogeneration Ltd. <br> Street Address: $\mathbf{3 9 0 0 1}$ Golden Gem Dr. <br> City: Umatilla State: FL Zip Code: 32784 |  |  |  |
| 3. Facility Contact Telephone Numbers: <br> Telephone: (352) 669-3288 ext. Fax: <br> (352) 669-3188 |  |  |  |
| 4. Facility Contact E-mail Address: imiller@caithnessenergy.com |  |  |  |

## Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I that is not the facility "primary responsible official."


## Facility Regulatory Classifications

Check all that would apply following completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."


## List of Pollutants Emitted by Facility

| 1. Pollutant Emitted | 2. Pollutant Classification | 3. Emissions Cap <br> [Y or N]? |
| :--- | :---: | :---: |
| $\mathbf{P M} / \mathbf{P M}_{10}$ | $\mathbf{B}$ | $\mathbf{N}$ |
| $\mathbf{C O}$ | $\mathbf{A}$ | $\mathbf{N}$ |
| $\mathbf{V O C}$ | $\mathbf{B}$ | $\mathbf{N}$ |
| $\mathbf{S O}_{\mathbf{2}}$ | $\mathbf{B}$ | $\mathbf{N}$ |
| $\mathbf{N O}_{\mathbf{x}}$ | $\mathbf{A}$ | $\mathbf{N}$ |
| $\mathbf{C O}_{2} \mathbf{e}$ | $\mathbf{A}$ | $\mathbf{N}$ |
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## B. EMISSIONS CAPS

## Facility-Wide or Multi-Unit Emissions Caps

| 1. Pollutant <br> Subject to <br> Emissions <br> Cap | 2. Facility- <br> Wide Cap <br> [Y or N]? <br> (all units) | 3. Emissions <br> Unit ID's <br> Under Cap <br> (if not all units) | 4. Hourly <br> Cap <br> (lb/hr) | 5. Annual <br> Cap <br> (ton/yr) | 6. Basis for <br> Emissions <br> Cap |
| :--- | :--- | :--- | :--- | :--- | :--- |
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7. Facility-Wide or Multi-Unit Emissions Cap Comment:

## C. FACILITY ADDITIONAL INFORMATION

## Additional Requirements for All Applications, Except as Otherwise Stated



## Additional Requirements for Air Construction Permit Applications -- NA

| 1. Area Map Showing Facility Location: |
| :--- | :--- |
| $\square$ Attached, Document ID: |
| 2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit |
| (PAL): |
| $\square$ Attached, Document ID: |
| 3. Rule Applicability Analysis: |
| $\square$ Attached, Document ID: |

## C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

## Additional Requirements for FESOP Applications -- NA

1. List of Exempt Emissions Units:Attached, Document ID: $\qquad$Not Applicable (no exempt units at facility)
Additional Requirements for Title V Air Operation Permit Applications
2. List of Insignificant Activities: (Required for initial/renewal applications only) $\boxtimes$ Attached, Document ID: LC-FI-C4 $\square$ Not Applicable (revision application)
3. Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought)
$\boxtimes$ Attached, Document ID: LC-FI-C5Not Applicable (revision application with no change in applicable requirements)
4. Compliance Report and Plan: (Required for all initial/revision/renewal applications) $\square$ Attached, Document ID: $\qquad$
Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.
5. List of Equipment/Activities Regulated under Title VI: (If applicable, required for initial/renewal applications only)
区 Attached, Document ID: LC-FI-C6Equipment/Activities Onsite but Not Required to be Individually ListedNot Applicable
6. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only) $\square$ Attached, Document ID: $\qquad$ V Not Applicable
7. Requested Changes to Current Title V Air Operation Permit: $\boxtimes$ Attached, Document ID:LC-FI-C7 $\square$ Not Applicable

## C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Facilities Subject to Acid Rain, CAIR, or Hg Budget Program

```
1. Acid Rain Program Forms:
    Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):
    \square \mp@code { A t t a c h e d , ~ D o c u m e n t ~ I D : } \square \square \text { Previously Submitted, Date:}
    Not Applicable (not an Acid Rain source)
    Phase II NO
    \square Attached, Document ID:
```

$\qquad$

```Previously Submitted, Date:
``` \(\qquad\)
```

® Not Applicable
New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):
$\square$ Attached, Document ID:

``` \(\qquad\)
``` Previously Submitted, Date:
``` \(\qquad\)
```

区 Not Applicable
2. CAIR Part (DEP Form No. 62-210.900(1)(b)):
$\boxtimes$ Attached, Document ID:LC-FI-C8 $\square$ Previously Submitted, Date:

``` \(\qquad\)
```

$\square]$ Not Applicable (not a CAIR source)

```

\section*{Additional Requirements Comment}

\section*{EMISSIONS UNIT INFORMATION}

Section [1] of [3]
EU 003 \& 004 - Combined Cycle Combustion Turbine with Duct Burner

\section*{III. EMISSIONS UNIT INFORMATION}

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.
Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title \(V\) permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title \(V\) purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.
If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

\section*{EMISSIONS UNIT INFORMATION}

\section*{Section \\ [1] of \\ [3]}

EU 003 \& 004 - Combined Cycle Combustion Turbine with Duct Burner

\section*{A. GENERAL EMISSIONS UNIT INFORMATION}

Title V Air Operation Permit Emissions Unit Classification
1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
\(\boxtimes\) The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
\(\square\) The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

\section*{Emissions Unit Description and Status}
1. Type of Emissions Unit Addressed in this Section: (Check one)
\(\square\) This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
T This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
\(\square\) This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.
2. Description of Emissions Unit Addressed in this Section:

GE LM-6000 Combustion Turbines (CTs), each unit equipped with an inlet chiller, SPRINT spray inter-cooling, a supplementary fired duct burner (DB) exhausting through HRSG stacks, and an oxidation catalyst control system.
3. Emissions Unit Identification Number:

EU 003 and EU 004
\begin{tabular}{|l|l|l|l|}
\hline 4. \begin{tabular}{l} 
Emissions Unit \\
Status Code: \\
A
\end{tabular} & 5. \begin{tabular}{l} 
Commence \\
Construction \\
Date:
\end{tabular} & \begin{tabular}{l} 
6. Initial Startup \\
Date: \\
1 July 1993
\end{tabular} & \begin{tabular}{l} 
7.
\end{tabular} \begin{tabular}{l} 
Emissions Unit \\
Major Group \\
SIC Code: 49
\end{tabular} \\
\hline
\end{tabular}
8. Federal Program Applicability: (Check all that apply)

Acid Rain Unit \(\boxtimes\) CAIR Unit
9. Package Unit: GE LM-6000 CTs w/ Zurn HRSG, equipped with chiller system, SPRINT, and a catalytic oxidation system.

Manufacturer: Model Number:
10. Generator Nameplate Rating: Each CT is \(\mathbf{4 2} \mathbf{M W}\) at \(59^{\circ} \mathrm{F}\) (nameplate), per note below, SPRINT upgrade has increased generation to approximately \(\mathbf{5 0} \mathbf{~ M W} / \mathrm{hr} / \mathrm{CT}\).

> 11. Emissions Unit Comment:
> Each CT's exhaust goes through a Heat Recovery Steam Generator (HRSG). The two HRSGs service a steam turbine generator rated at a nominal 26.5 MW. Supplemental heat to the system is supplied via Duct Burner firing, when needed. The SPRINT upgrade, increased power production generation output from approximately 42 MW/hr/CT to 50 MW/hr/CT. In addition, as required by the CAIR, each unit is equipped with a certified CEMs for NOx monitoring and reporting. Permit No. \(0694801-012\)-AC authorized the installation of oxidation catalyst control systems in the HRSGs.
EMISSIONS UNIT INFORMATION
Section ..... [1] of ..... [3]
EU 003 \& 004 - Combined Cycle Combustion Turbine with Duct Burner
Emissions Unit Control Equipment/Method: Control 1 ..... of \(\underline{2}\)
1. Control Equipment/Method Description:
Water injection to control NOx emissions
2. Control Device or Method Code: 028
Emissions Unit Control Equipment/Method: Control \(\underline{2}\) of \(\underline{2}\)
1. Control Equipment/Method Description
Oxidation catalyst systems in the HRSG to control or reduce CO and VOC emissions
2. Control Device or Method Code: ..... 109
Emissions Unit Control Equipment/Method: ..... Control ..... of

\(\qquad\)
1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control \(\qquad\) of \(\qquad\)
1. Control Equipment/Method Description:
2. Control Device or Method Code:

\section*{EMISSIONS UNIT INFORMATION}

\section*{Section [1] of [3]}

EU 003 \& 004 - Combined Cycle Combustion Turbine with Duct Burner
B. EMISSIONS UNIT CAPACITY INFORMATION
(Optional for unregulated emissions units.)
Emissions Unit Operating Capacity and Schedule
1. Maximum Process or Throughput Rate:
2. Maximum Production Rate:
3. Maximum Heat Input Rate: nominal 450 (LHV @ \(59^{\circ}\) F) per CT million Btu/hr *
4. Maximum Incineration Rate: pounds/hr tons/day
5. Requested Maximum Operating Schedule:
\begin{tabular}{ll}
24 hours/day & 7 days/week \\
52 weeks/year & 8,760 hours/year
\end{tabular}
6. Operating Capacity/Schedule Comment:
*Refer to the heat input curve in Attachment LC-EU1-I9.
The nominal heat input for the Duct Burners is \(\mathbf{9 0}\) MMBTU/hr/DB (HHV).

\section*{EMISSIONS UNIT INFORMATION}
Section
[1] of
[3]

EU 003 \& 004 - Combined Cycle Combustion Turbine with Duct Burner
C. EMISSION POINT (STACK/VENT) INFORMATION

\section*{(Optional for unregulated emissions units.)}

\section*{Emission Point Description and Type}
\begin{tabular}{|l|l|l|}
\hline \begin{tabular}{l} 
1. Identification of Point on Plot Plan or \\
Flow Diagram: EU-3 and EU-4
\end{tabular} & \begin{tabular}{c} 
2. \\
\hline
\end{tabular} \\
\hline 3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: \\
Unit \(\mathbf{1}\) stack (EU-003); Unit \(\mathbf{2}\) stack (EU-004)
\end{tabular}

\section*{EMISSIONS UNIT INFORMATION}

Section [1] of [3]
EU 003 \& 004 - Combined Cycle Combustion Turbine with Duct Burner

\section*{D. SEGMENT (PROCESS/FUEL) INFORMATION}

Segment Description and Rate: Segment 1 of \(\underline{2}\)
1. Segment Description (Process/Fuel Type):

Internal Combustion Engines Electric Generation Natural Gas Combustion Turbine
\begin{tabular}{l|l} 
2. Source Classification Code (SCC): & 3. \begin{tabular}{l} 
SCC Units: \\
Million cubic feet burned \\
2-01-002-01
\end{tabular}
\end{tabular}
\begin{tabular}{|l|l|l|}
\hline \begin{tabular}{l} 
4. Maximum Hourly Rate: \\
\(\mathbf{0 . 4 7 4}\)
\end{tabular} & \begin{tabular}{l} 
5. Maximum Annual Rate: \\
4,152
\end{tabular} & \begin{tabular}{l} 
6. \begin{tabular}{l} 
Estimated Annual Activity \\
Factor:
\end{tabular} \\
\hline \begin{tabular}{l} 
7. Maximum \% Sulfur: \\
Pipeline quality or less
\end{tabular}
\end{tabular} \begin{tabular}{l} 
8. Maximum \% Ash: \\
\(\mathbf{0}\)
\end{tabular} \\
\hline
\end{tabular}
10. Segment Comment:

Based on natural gas LHV of 950 Btu/ft \({ }^{3}\)
450 MMBTU/hr represents the nominal heat input, when firing on natural gas in either CT, (LHV @ \(59^{\circ} \mathrm{F}\) ).

Nominal hourly rate \(=\mathbf{4 5 0} \mathbf{~ M M B t u} / \mathrm{hr} / \mathrm{CT} / 950 \mathrm{MMBTU} / \mathrm{MM} \mathrm{ft}^{3}=0.474 \mathrm{MM} \mathrm{ft}^{3} / \mathrm{hour} / \mathrm{CT}\) Nominal annual rate \(=0.474 \mathrm{MM} \mathrm{ft}^{3} / \mathrm{hour} / \mathrm{CT} \times 8,760 \mathrm{hr} / \mathrm{yr}=4,152 \mathrm{MM} \mathrm{ft}{ }^{3} / \mathrm{yr} / \mathrm{CT}\)

DB rates are 90 MMBtu/hr and 525,000 MMBtu/yr per CT (~5,833 hr/yr/DB of operation).
Maximum percent sulfur: 1 grain/100 scf
Segment Description and Rate: Segment \(\underline{2}\) of \(\underline{2}\)
1. Segment Description (Process/Fuel Type):

Internal Combustion Engine, Industrial, Distillate Oil (Diesel) Combustion Turbine; Cogeneration
2. Source Classification Code (SCC): 2-02-001-03
3. SCC Units: Thousand gallons burned
\(\left.\begin{array}{|l|l|l|}\hline \text { 4. Maximum Hourly Rate: } \\
\mathbf{2 . 9 2 1}\end{array} \quad \begin{array}{l}\text { 5. Maximum Annual Rate: } \\
\mathbf{7 0 1 . 0 5}\end{array}\right)\) 6. \begin{tabular}{l} 
Estimated Annual Activity \\
Factor:
\end{tabular}
10. Segment Comment:
*Under NSPS Subpart KKKK, the maximum fuel oil sulfur content is \(0.05 \%\). Maximum hourly and annual fuel oil usage based upon a permit limitation of 2,921 gal/hr/CT and 701,050 gal/yr/CT.

Based on distillate oil LHV of \(\mathbf{1 3 0 - 1 5 0}\) MMBTU/1000 gal

Maximum hourly rate \(=\mathbf{4 2 4}\) MMBtu/hr /CT/145 MMBtu/1000 gallon \(\sim \mathbf{2 , 9 2 1}\) gallons/hour/CT Maximum annual rate \(\mathbf{= 2 , 9 2 1}\) gallons/hour \(\mathbf{x} 240 \mathrm{hr} / \mathrm{yr} \sim \mathbf{7 0 1 , 0 5 0}\) gallons/yr/CT

\section*{EMISSIONS UNIT INFORMATION}

\section*{Section [1] of [3]}

EU 003 \& 004 - Combined Cycle Combustion Turbine with Duct Burner

\section*{E. EMISSIONS UNIT POLLUTANTS}

List of Pollutants Emitted by Emissions Unit
\begin{tabular}{|l|l|l|l|}
\hline 1. Pollutant Emitted & \begin{tabular}{l} 
2. Primary Control \\
Device Code
\end{tabular} & \begin{tabular}{l} 
3. Secondary Control \\
Device Code
\end{tabular} & \begin{tabular}{l} 
4. Pollutant \\
Regulatory Code
\end{tabular} \\
\hline NOx & \(\mathbf{0 2 8}\) & & EL \\
\hline CO & 109 & & EL \\
\hline PM/PM \(_{10}\) & & & EL \\
\hline VOC & 109 & & EL \\
\hline SO2 & & & EL \\
\hline SAM & & & EL \\
\hline CO \(_{2} \mathbf{e}\) & & & EL \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline
\end{tabular}

\section*{F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION POTENTIAL/ESTIMATED FUGITIVE EMISSIONS}
(Optional for unregulated emissions units.)
Complete a Subsection \(\mathbf{F 1}\) for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection \(E\) if applying for an air operation permit.

\section*{Potential, Estimated Fugitive and Baseline \& Projected Actual Emissions}


\section*{F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION ALLOWABLE EMISSIONS}

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.
Allowable Emissions Allowable Emissions 1 of 4
\begin{tabular}{|l|l|}
\hline \begin{tabular}{l} 
1.
\end{tabular} \begin{tabular}{l} 
Basis for Allowable Emissions Code: \\
OTHER
\end{tabular} & \begin{tabular}{l} 
2. \begin{tabular}{l} 
Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline \begin{tabular}{l} 
3.
\end{tabular} \\
\begin{tabular}{l} 
Allowable Emissions and Units: \\
\(\mathbf{2 5}\) ppmvd @ 15\%O2 for natural gas CTs
\end{tabular} \\
\hline \begin{tabular}{l} 
5.
\end{tabular} Method of Compliance: Request change from Annual Compliance Test (EPA Method 7E or \\
20) to use of CEMs (24 hr block average) and annual RATA. \\
Ib/hour
\end{tabular} \\
\hline \begin{tabular}{l} 
6. Allowable Emissions Comment (Description of Operating Method): \\
Total TPY for both units combined when natural gas firing. CT units 1 and 2 are operated with \\
wet injection design to produce 25 ppmvd NOx @ 15\% O2. \\
Allowable emissions established as BACT in AC Permit, Table 1A.
\end{tabular} \\
\hline
\end{tabular}

Allowable Emissions Allowable Emissions 2 of 4
\begin{tabular}{|l|l|}
\hline \begin{tabular}{l} 
1.
\end{tabular} \begin{tabular}{l} 
Basis for Allowable Emissions Code: \\
Other
\end{tabular} & \begin{tabular}{l} 
2.
\end{tabular} \begin{tabular}{l} 
Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline 3. Allowable Emissions and Units: \\
42 ppmvd @ 15\%O2 for distillate oil CTs
\end{tabular}\(\quad\)\begin{tabular}{c} 
4. \begin{tabular}{l} 
Equivalent Allowable Emissions: \\
lb/hour \\
tons/year
\end{tabular} \\
\hline \begin{tabular}{l} 
5. Method of Compliance: Request change from Annual Compliance Test (EPA Method 20) to \\
use of CEMs (24 hr block average) and annual RATA.
\end{tabular} \\
\hline \begin{tabular}{l} 
6. Allowable Emissions Comment (Description of Operating Method): \\
Oil firing. The CTs are operated with wet injection designed to produce 42 ppmvd NOx @ \\
15\% O2. Allowable emission established as BACT in AC Permit, Table 1A.
\end{tabular} \\
\hline
\end{tabular}

Allowable Emissions Allowable Emissions \(\underline{3}\) of 4
\begin{tabular}{|c|c|}
\hline 1. Basis for Allowable Emissions Code: Other & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: \(0.1 \mathrm{lb} /\) MMBtu for natural gas for DBs & 4. Equivalent Allowable Emissions: lb /hour tons/year \\
\hline \multicolumn{2}{|l|}{5. Method of Compliance: NOx CEMs ( 24 hr block average).} \\
\hline 6. Allowable Emissions Comment (Desc Emission limits for 2 Duct Burners as facility. Natural Gas fired only. Basis f & \begin{tabular}{l}
of Operating Method): \\
shed by BACT. Annual Emissions for \\
is \(0.1 \mathrm{lb} / \mathrm{MMBtu}\)
\end{tabular} \\
\hline
\end{tabular}

EMISSIONS UNIT INFORMATION Section [1] of [3] EU 003 \& 004

POLLUTANT DETAIL INFORMATION
Page [3] of |3| Nitrogen Oxide - NO

\section*{F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -} ALLOWABLE EMISSIONS
Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 4 of 4
\begin{tabular}{|l|l|}
\hline \begin{tabular}{l} 
1. Basis for Allowable Emissions Code: \\
Other
\end{tabular} & \begin{tabular}{l} 
2. \begin{tabular}{l} 
Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline \begin{tabular}{l} 
3. Allowable Emissions and Units: \\
25 ppmvd @ 15\%O2 for natural gas CTs \\
0.1 lb/MMBtu for natural gas for DBs
\end{tabular} \\
\hline \begin{tabular}{l} 
5. Method of Compliance: Request change from Annual Compliance Test (EPA Method 7E or \\
20) to use of CEMs (24 hr block average) and annual RATA.
\end{tabular} \\
\hline \begin{tabular}{l} 
6. Allowable Emissions Comment (Description of Operating Method): \\
Combined emissions limits for CTs and DBs as established by BACT. Annual emissions for \\
facility. Natural gas firing only.
\end{tabular} \\
\hline
\end{tabular} (bq/hour Alowable Emissions: \\
tons/year
\end{tabular}

\title{
F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS
}
(Optional for unregulated emissions units.)
Complete a Subsection \(\mathbf{F} 1\) for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection \(E\) if applying for an air operation permit.
Potential, Estimated Fugitive, and Baseline \& Projected Actual Emissions


\section*{F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -}

\section*{ALLOWABLE EMISSIONS}

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

\section*{Allowable Emissions Allowable Emissions 1 of 4}
\begin{tabular}{|c|c|}
\hline 1. Basis for Allowable Emissions Code: Other & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: 28 ppmvd for natural gas for CTs & 4. Equivalent Allowable Emissions: lb/hour tons/year \\
\hline 5. Method of Compliance: Annual Compliance Test; EPA Method 10 & \\
\hline \begin{tabular}{l}
6. Allowable Emissions Comment (Description \\
Natural Gas Firing; CT Units 1 \& 2; establis Basis of limit is \(\mathbf{2 8}\) ppmvd.
\end{tabular} & \begin{tabular}{l}
of Operating Method): \\
d as BACT in AC51-196460, Table 1A;
\end{tabular} \\
\hline
\end{tabular}

Allowable Emissions Allowable Emissions 2 of 4
\begin{tabular}{|l|l|l|}
\hline 1. Basis for Allowable Emissions Code: & 2. \begin{tabular}{l} 
Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline Other & \begin{tabular}{l} 
Allowable Emissions and Units: \\
18 ppmvd for distillate oil for CTs
\end{tabular} & \begin{tabular}{c} 
4.
\end{tabular} \begin{tabular}{l} 
Equivalent Allowable Emissions: \\
lb/hour \\
tons/year
\end{tabular} \\
\hline
\end{tabular}
5. Method of Compliance: Annual Compliance Test; EPA Method 10, if operated greater than 400 hr /year.
6. Allowable Emissions Comment (Description of Operating Method):

Oil firing; CTs 1 and 2; established as BACT; basis of limit is 18 ppmvd.

Allowable Emissions Allowable Emissions \(\mathbf{3}\) of 4
\begin{tabular}{|c|c|}
\hline 1. Basis for Allowable Emissions Code: Other & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: \(0.2 \mathrm{lb} / \mathrm{MMBtu}\) for DBs & 4. Equivalent Allowable Emissions: lb/hour tons/year \\
\hline 5. Method of Compliance: None & \\
\hline \begin{tabular}{l}
6. Allowable Emissions Comment (Desc \\
Natural gas firing of the Duct Burners is \(0.2 \mathrm{lb} / \mathrm{MMBtu}\).
\end{tabular} & \begin{tabular}{l}
of Operating Method): \\
1 and 2. Established as BACT. Basis of limit
\end{tabular} \\
\hline
\end{tabular}

EMISSIONS UNIT INFORMATION
Section |1] of [3]
EU 003 \& 004

POLLUTANT DETAIL INFORMATION
Page [3] of [3] Carbon Monoxide - CO

\section*{F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION ALLOWABLE EMISSIONS}

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 4 of 4
\begin{tabular}{|c|c|}
\hline 1. Basis for Allowable Emissions Code: Other & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: 28 ppmvd for natural gas for CTs \(0.2 \mathrm{lb} / \mathrm{MMBtu}\) for DBs & 4. Equivalent Allowable Emissions: lb/hour tons/year \\
\hline \begin{tabular}{l}
5. Method of Compliance: \\
Annual Compliance Test; EPA Method 10.
\end{tabular} & \\
\hline 6. Allowable Emissions Comment (Descripti Natural gas firing for CTs and DBs; establis & \begin{tabular}{l}
of Operating Method): \\
d as BACT.
\end{tabular} \\
\hline
\end{tabular}

\section*{F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS}

\section*{(Optional for unregulated emissions units.)}

Complete a Subsection F 1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title \(V\) operation permit. Complete for each emissions-limited pollutant identified in Subsection \(E\) if applying for an air operation permit.
Potential, Estimated Fugitive, and Baseline \& Proiected Actual Emissions


\section*{F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION ALLOWABLE EMISSIONS}

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 4
\begin{tabular}{|c|c|}
\hline 1. Basis for Allowable Emissions Code: Other & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: \(0.0065 \mathrm{Ib} / \mathrm{MMBtu}\) for natural gas CTs & 4. Equivalent Allowable Emissions: lb /hour tons/year \\
\hline 5. Method of Compliance: Annual VE test; 10\% or less & \\
\hline \begin{tabular}{l}
6. Allowable Emissions Comment (Des \\
Natural gas firing; CT Units 1 \& 2, estab \(0.0065 \mathrm{lb} / \mathrm{MMBtu}\).
\end{tabular} & \begin{tabular}{l}
of Operating Method): \\
s BACT in Permit; Table 1A; basis of
\end{tabular} \\
\hline
\end{tabular}

\section*{Allowable Emissions Allowable Emissions 2 of 4}
\begin{tabular}{|c|c|}
\hline 1. Basis for Allowable Emissions Code: Other & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: \(0.026 \mathrm{lb} / \mathrm{MMBtu}\) for distillate oil CTs & 4. Equivalent Allowable Emissions: lb/hour tons/year \\
\hline \multicolumn{2}{|l|}{\begin{tabular}{l}
5. Method of Compliance: \\
Annual VE test; \(\mathbf{1 0 \%}\) or less; only required if operated \(\mathbf{> 4 0 0} \mathbf{~ h r} / \mathrm{yr}\) operation on fuel oil
\end{tabular}} \\
\hline 6. Allowable Emissions Comment (Desc Oil firing; CTs 1 \& 2; established as BACT; & \begin{tabular}{l}
of Operating Method): \\
limit is \(0.026 \mathrm{lb} / \mathrm{MMBtu}\).
\end{tabular} \\
\hline
\end{tabular}

Allowable Emissions Allowable Emissions \(\underline{3}\) of 4
\begin{tabular}{|c|c|}
\hline 1. Basis for Allowable Emissions Code: Other & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: \(0.006 \mathrm{lb} / \mathrm{MMBtu}\) for natural gas for DBs & 4. Equivalent Allowable Emissions: lb/hour tons/year \\
\hline \multicolumn{2}{|l|}{5. Method of Compliance: None.} \\
\hline \multicolumn{2}{|l|}{6. Allowable Emissions Comment (Description of Operating Method):} \\
\hline \multicolumn{2}{|l|}{Natural gas firing for Duct burners in Units 1 \& 2; established as BACT; basis of limit 0.006 lb/ MMBtu.} \\
\hline
\end{tabular}

\title{
EMISSIONS UNIT INFORMATION
}

Section [1] of [3]
EU 003 \& 004
POLLUTANT DETAIL INFORMATION
Page \(\quad \begin{gathered}\text { [3] } \\ \\ \text { Total } \operatorname{PM} / \mathbf{P M}_{10}\end{gathered}\)

\section*{F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION ALLOWABLE EMISSIONS}

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 4 of 4
\begin{tabular}{|l|l|}
\hline \begin{tabular}{c} 
1.
\end{tabular} \begin{tabular}{l} 
Basis for Allowable Emissions Code: \\
Other
\end{tabular} & 2. \begin{tabular}{l} 
Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline \begin{tabular}{l} 
3. Allowable Emissions and Units: \\
0.026 Ib/MMBtu for distillate oil CTs \\
0.006 Ib/MMBtu for natural gas for DBs
\end{tabular} & 4. \begin{tabular}{c} 
Equivalent Allowable Emissions: \\
lb/hour \\
tons/year
\end{tabular} \\
\hline \begin{tabular}{l} 
5. Method of Compliance: \\
Annual VE test; \(10 \%\) or less
\end{tabular} & \\
\hline
\end{tabular}
6. Allowable Emissions Comment (Description of Operating Method):

Natural gas firing for CTs and DBs. Established as BACT

\title{
EMISSIONS UNIT INFORMATION
} Section [1] of [3] EU 003 \& 004

\section*{F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS}
(Optional for unregulated emissions units.)
Complete a Subsection \(\mathbf{F} 1\) for each pollutant identified in Subsection \(E\) if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title \(V\) operation permit. Complete for each emissions-limited pollutant identified in Subsection \(E\) if applying for an air operation permit.
Potential, Estimated Fugitive, and Baseline \& Projected Actual Emissions


EMISSIONS UNIT INFORMATION
Section [1] of [3] EU 003 \& 004

POLLUTANT DETAIL INFORMATION
Page [2] of |3] voc

\section*{F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION ALLOWABLE EMISSIONS}

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 4
\begin{tabular}{|l|l|}
\hline 1. \begin{tabular}{l} 
Basis for Allowable Emissions Code: \\
Other
\end{tabular} & \begin{tabular}{l} 
2.
\end{tabular} Future Effective Date of Allowable \\
Emissions:
\end{tabular}
5. Method of Compliance: Compliance with CO limit.
6. Allowable Emissions Comment (Description of Operating Method):

Natural gas firing; CT units 1 and 2 at \(59^{\circ}\); established as permit limit in AC51-196460.

Allowable Emissions Allowable Emissions 2 of 4


Allowable Emissions Allowable Emissions \(\mathbf{3}\) of 4
\begin{tabular}{|c|c|}
\hline 1. Basis for Allowable Emissions Code: Other & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: \(5.4 \mathrm{lb} / \mathrm{hr}\) & \begin{tabular}{l}
4. Equivalent Allowable Emissions: \\
\(5.4 \mathrm{lb} /\) hour \\
30.8 tons/year
\end{tabular} \\
\hline 5. Method of Compliance: None. & \\
\hline 6. Allowable Emissions Comment (Des Natural gas firing of Duct Burners 18 & \begin{tabular}{l}
of Operating Method): \\
g required only if CO standard is exceeded.
\end{tabular} \\
\hline
\end{tabular}

\section*{F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION ALLOWABLE EMISSIONS}

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

\section*{Allowable Emissions Allowable Emissions 4 of 4}
1. Basis for Allowable Emissions Code: Other
2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:
4. Equivalent Allowable Emissions:
\(8.7 \mathrm{lb} / \mathrm{hr}\)
\(8.7 \mathrm{lb} /\) hour
30.8 tons/year
5. Method of Compliance:

Compliance with CO limit.
6. Allowable Emissions Comment (Description of Operating Method):

Natural gas firing for CTs ( \(59^{\circ} \mathrm{F}\) ) and DBs.

\section*{F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS \\ (Optional for unregulated emissions units.)}

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title \(V\) operation permit. Complete for each emissions-limited pollutant identified in Subsection \(E\) if applying for an air operation permit.

\section*{Potential, Estimated Fugitive, and Baseline \& Projected Actual Emissions}


EMISSIONS UNIT INFORMATION
Section [1] of [3]
EU 003 \& 004

POLLUTANT DETAIL INFORMATION
Page [2] of [2]
SO2

\section*{F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION ALLOWABLE EMISSIONS}

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions \(\underline{1}\) of \(\underline{2}\)
\begin{tabular}{|l|l|}
\hline 1. Basis for Allowable Emissions Code: \\
Other
\end{tabular}\(\quad\) 2. \begin{tabular}{l} 
Future Effective Date of Allowable \\
Emissions:
\end{tabular}
5. Method of Compliance:

Fuel analysis; oil firing.
6. Allowable Emissions Comment (Description of Operating Method):

Potential emissions based on NSPS Subpart KKKK and the permitted limit on hours of distillate oil firing.

Allowable Emissions Allowable Emissions \(\underline{2}\) of \(\underline{2}\)
\begin{tabular}{|l|l|}
\hline \begin{tabular}{l} 
1. Basis for Allowable Emissions Code: \\
Other
\end{tabular} & \begin{tabular}{l} 
2.
\end{tabular} \begin{tabular}{l} 
Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline \begin{tabular}{c} 
3. Allowable Emissions and Units: \\
\(\mathbf{1 g r ~ S / 1 0 0 ~ s c f ~}\)
\end{tabular} & 4. \begin{tabular}{c} 
Equivalent Allowable Emissions: \\
lb/hour \\
tons/year
\end{tabular} \\
\hline \begin{tabular}{c} 
5. \begin{tabular}{c} 
Method of Compliance: \\
Fuel analysis
\end{tabular} \\
\hline \begin{tabular}{l} 
6. Allowable Emissions Comment (Description of Operating Method): \\
Annual average based on vender data.
\end{tabular} \\
\hline
\end{tabular}\(\quad\). \\
\hline
\end{tabular}

Allowable Emissions Allowable Emissions \(\qquad\) f
\begin{tabular}{|l|l|}
\hline 1. Basis for Allowable Emissions Code: & \begin{tabular}{l} 
2. Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline 3. Allowable Emissions and Units: & 4. \begin{tabular}{c} 
Equivalent Allowable Emissions: \\
lb/hour \\
tons/year
\end{tabular} \\
\hline
\end{tabular}
5. Method of Compliance:
6. Allowable Emissions Comment (Description of Operating Method):

EMISSIONS UNIT INFORMATION
Section [1] of [3]
EU 003 \& 004

POLLUTANT DETAIL INFORMATION
Page [1] of [2] SAM

\title{
F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS \\ (Optional for unregulated emissions units.)
}

Complete a Subsection \(\mathbf{F} 1\) for each pollutant identified in Subsection \(\mathbf{E}\) if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title \(V\) operation permit. Complete for each emissions-limited pollutant identified in Subsection \(E\) if applying for an air operation permit.
Potential, Estimated Fugitive, and Baseline \& Projected Actual Emissions


EMISSIONS UNIT INFORMATION
Section [1] of [3]
EU 003 \& 004
F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -

\section*{ALLOWABLE EMISSIONS}

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

\section*{Allowable Emissions Allowable Emissions 1 of 1}
\begin{tabular}{|c|c|}
\hline 1. Basis for Allowable Emissions Code: Other & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: \(0.05 \%\) sulfur in fuel oil. & ```
4. Equivalent Allowable Emissions:
    lb/hour
tons/year
``` \\
\hline 5. Method of Compliance: Fuel analysis; oil firing & \\
\hline \begin{tabular}{l}
6. Allowable Emissions Comment (Desc \\
Allowable emissions established as limit in firing. Annual limit established for facility.
\end{tabular} & \begin{tabular}{l}
of Operating Method): \\
rmit 51-196460, Table 1A for distillate oil
\end{tabular} \\
\hline
\end{tabular}

Allowable Emissions Allowable Emissions \(\underline{2}\) of \(\underline{2}\)
\begin{tabular}{|l|l|l|}
\hline \begin{tabular}{l} 
1.
\end{tabular} \begin{tabular}{l} 
Basis for Allowable Emissions Code: \\
Other
\end{tabular} & \begin{tabular}{l} 
2.
\end{tabular} \begin{tabular}{l} 
Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline \begin{tabular}{l} 
3.
\end{tabular} & \begin{tabular}{ll} 
Allowable Emissions and Units: \\
\(\mathbf{1}\) gr S/100 scf
\end{tabular} & 4. \begin{tabular}{c} 
Equivalent Allowable Emissions: \\
lb/hour \\
tons/year
\end{tabular} \\
\hline \begin{tabular}{l} 
5.
\end{tabular} \begin{tabular}{l} 
Method of Compliance: \\
Fuel analysis
\end{tabular} \\
\hline 6. & Allowable Emissions Comment (Description of Operating Method): \\
Annual average based on vender data.
\end{tabular}

Allowable Emissions Allowable Emissions __ of __
\(\left.\begin{array}{|ll|l|}\hline \text { 1. Basis for Allowable Emissions Code: } & \begin{array}{l}\text { 2. }\end{array} \text { Future Effective Date of Allowable } \\ \text { Emissions: }\end{array}\right]\)
5. Method of Compliance:
6. Allowable Emissions Comment (Description of Operating Method):

\section*{F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS \\ (Optional for unregulated emissions units.)}

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title \(V\) operation permit. Complete for each emissions-limited pollutant identified in Subsection \(E\) if applying for an air operation permit.
Potential, Estimated Fugitive, and Baseline \& Proiected Actual Emissions


DEP Form No. 62-210.900(1) - Form
Effective: 03/11/2010

EMISSIONS UNIT INFORMATION
Section [1] of [3]
EU 003 \& 004

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION ALLOWABLE EMISSIONS
Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1
\begin{tabular}{|l|l|}
\hline \begin{tabular}{l} 
1. Basis for Allowable Emissions Code: \\
Other
\end{tabular} & \begin{tabular}{c} 
2.
\end{tabular} \begin{tabular}{l} 
Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline \begin{tabular}{l} 
3. Allowable Emissions and Units: \\
tons/year
\end{tabular} & \begin{tabular}{c} 
4.
\end{tabular} \\
\hline Equivalent Allowable Emissions: \\
lb/hour \\
tons/year
\end{tabular}
5. Method of Compliance:
6. Allowable Emissions Comment (Description of Operating Method):

Allowable Emissions Allowable Emissions __ of __
\begin{tabular}{|l|l|l|}
\hline 1. Basis for Allowable Emissions Code: & \begin{tabular}{l} 
2.
\end{tabular} \begin{tabular}{l} 
Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline 3. Allowable Emissions and Units: & 4. \begin{tabular}{c} 
Equivalent Allowable Emissions: \\
lb/hour \\
tons/year
\end{tabular} \\
\hline
\end{tabular}
5. Method of Compliance:
6. Allowable Emissions Comment (Description of Operating Method):

Allowable Emissions Allowable Emissions \(\qquad\) of \(\qquad\)
\begin{tabular}{|l|l|}
\hline 1. Basis for Allowable Emissions Code: & \begin{tabular}{l} 
2. Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline 3. Allowable Emissions and Units: & 4. \begin{tabular}{c} 
Equivalent Allowable Emissions: \\
lb/hour \\
tons/year
\end{tabular} \\
\hline
\end{tabular}
5. Method of Compliance:
6. Allowable Emissions Comment (Description of Operating Method):

\section*{EMISSIONS UNIT INFORMATION}

Section [1] of [3]
EU 003 \& 004 - Combined Cycle Combustion Turbine with Duct Burner

\section*{G. VISIBLE EMISSIONS INFORMATION}

Complete Subsection \(G\) if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation \(\underline{1}\) of \(\underline{\mathbf{2}}\)


Visible Emissions Limitation: Visible Emissions Limitation \(\underline{2}\) of \(\underline{\mathbf{2}}\)


\section*{EMISSIONS UNIT INFORMATION}

Section [1] of [3]
EU 003 \& 004 - Combined Cycle Combustion Turbine with Duct Burner

\section*{H. CONTINUOUS MONITOR INFORMATION}

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 1
\begin{tabular}{|c|c|}
\hline 1. Parameter Code: EM & \begin{tabular}{l}
2. Pollutant(s): \\
NOx
\end{tabular} \\
\hline 3. CMS Requirement: & \(\triangle\) Rule \(\quad \square\) Other \\
\hline \begin{tabular}{l}
4. Monitor Information... \\
Manufacturer: CISCO Systems \\
Model Number: 10008140
\end{tabular} & Serial Number: \\
\hline 5. Installation Date: 01 July 1993 (original); Upgraded system 01 November 2007 & 6. Performance Specification Test Date: December 20, 2007 \\
\hline \begin{tabular}{l}
7. Continuous Monitor Comment: \\
NOTE: in 2007 per CAIR requirements, a NOx replaces the water-to-fuel ratio monitoring sys
\end{tabular} & MS was installed, tested and certified. This m for compliance purposes in the permit. \\
\hline
\end{tabular}

Continuous Monitoring System: Continuous Monitor \(\qquad\) of \(\qquad\)
\begin{tabular}{|l|ll|}
\hline 1. Parameter Code: & 2. Pollutant(s): \\
\hline 3. CMS Requirement: & \(\square\) Rule \(\quad \square\) Other \\
\hline \begin{tabular}{l} 
4.
\end{tabular} \\
\begin{tabular}{c} 
Monitor Information... \\
Manufacturer: \\
Model Number:
\end{tabular} & Serial Number: \\
\hline 5. Installation Date: & 6. Performance Specification Test Date: \\
\hline
\end{tabular}
7. Continuous Monitor Comment:

\section*{EMISSIONS UNIT INFORMATION}

\section*{Section [1] of [3]}

EU 003 \& 004 - Combined Cycle Combustion Turbine with Duct Burner

\section*{I. EMISSIONS UNIT ADDITIONAL INFORMATION}

\section*{Additional Requirements for All Applications, Except as Otherwise Stated}
1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) \(\boxtimes\) Attached, Document ID: LC-EU1-I1 \(\square\) Previously Submitted, Date \(\qquad\)
2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID:LC-EU1-I2 \(\square\) Previously Submitted, Date \(\qquad\)
3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID:LC-EU1-I3 \(\square\) Previously Submitted, Date \(\qquad\)
4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) \(\boxtimes\) Attached, Document ID:LC-EU1-I4 \(\square\) Previously Submitted, Date \(\qquad\) \(\square\) Not Applicable (construction application)
5. Operation and Maintenance Plan: (Required for all permit applications, except Title \(V\) air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ® Attached, Document ID: LC-EU1-I5 \(\qquad\)
Not Applicable
6. Compliance Demonstration Reports/Records:

Attached, Document ID: LC-EU1-I6
Test Date(s)/Pollutant(s) Tested:


Previously Submitted, Date: \(\qquad\)
Test Date(s)/Pollutant(s) Tested:To be Submitted, Date (if known):
Test Date(s)/Pollutant(s) Tested:
Not Applicable
Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute:

Attached, Document ID:
\(\boxtimes\) Not Applicable

\section*{EMISSIONS UNIT INFORMATION}

Section [1] of [3]
EU 003 \& 004 - Combined Cycle Combustion Turbine with Duct Burner
I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

\section*{Additional Requirements for Air Construction Permit Applications - N/A}
1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)):
Attached, Document ID: \(\qquad\)区 Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.):
Attached, Document ID: \(\qquad\) Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only)

Attached, Document ID: \(\qquad\)区 Not Applicable

\section*{Additional Requirements for Title V Air Operation Permit Applications}
\begin{tabular}{|c|}
\hline \begin{tabular}{l}
1. Identification of Applicable Requirements: \\
Attached, Document ID: LC-F1-C5 Not Applicable
\end{tabular} \\
\hline 2. Compliance Assurance Monitoring:
Attached, Document ID: \(\qquad\) Not Applicable \\
\hline 3. Alternative Methods of Operation:
Attached, Document ID: \(\qquad\) Not Applicable \\
\hline 4. Alternative Modes of Operation (Emissions Trading):
Attached, Document ID: \(\qquad\) \\
\hline
\end{tabular}

\section*{Additional Requirements Comment}

\section*{LC-EU1-I7: US EPA Emission Collection and Monitoring Plan System (ECMPS) Feedback Forms for EU003 and EU004}

LC-EU1-I8: 2010 Annual Title V Permit Certification
LC-EU1-19: Lake Cogen Heat Input Curve

\section*{EMISSIONS UNIT INFORMATION}

\section*{III. EMISSIONS UNIT INFORMATION}

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through 1 as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

\section*{EMISSIONS UNIT INFORMATION}

Section [2] of [3]
Regulated Emission Units - EU 005 and EU 006

\section*{A. GENERAL EMISSIONS UNIT INFORMATION}

\section*{Title V Air Operation Permit Emissions Unit Classification}
1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
\(\boxtimes\) The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- \(\square\) The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

\section*{Emissions Unit Description and Status}
1. Type of Emissions Unit Addressed in this Section: (Check one)
\(\square\) This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
\(\boxtimes\) This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.
2. Description of Emissions Unit Addressed in this Section:
Diesel Fuel Fire pump (1@ \(\mathbf{2 1 6} \mathbf{~ h p}\) ) and Emergency Generator (1@250 kW)
3. Emissions Unit Identification Number:

Regulated EU 005 (Diesel Fuel Fired Emergency Generator (1@250 kW))*
Regulated EU 006 (Diesel Fuel Fired Fire Pump(1@216 hp))*
\begin{tabular}{|c|c|c|c|}
\hline 4. Emissions Unit Status Code: A & 5. Commence Construction Date: & \begin{tabular}{l}
6. Initial Startup Date: \\
1 July 1993
\end{tabular} & 7. Emissions Unit Major Group SIC Code: 49 \\
\hline \multicolumn{4}{|l|}{8. Federal Program Applicability: (Check all that apply)
Acid Rain Unit CAIR Unit} \\
\hline \multicolumn{4}{|l|}{9. Package Unit: Manufacturer: Model Number:} \\
\hline \multicolumn{4}{|l|}{10. Generator Nameplate Rating: 335 HP (EU 005), 216 HP (EU 006)} \\
\hline \multicolumn{4}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{l}
11. Emissions Unit Comment: \\
*Under the NESHAP, EU 005 diesel fuel fired emergency generator and EU 006 fire pump are subject to Subpart ZZZZ for reciprocating internal combustion engines. EU 005 and EU 006 are classified as an existing area source and are subject to the requirements of Table 2d Subpart ZZZZ of Part 63-Requirements for Existing Stationary RICE Located at Area Sources of HAP
\end{tabular}}} \\
\hline & & & \\
\hline \multicolumn{4}{|l|}{Emissions. Please see attachment LC-FI-C7 which includes requested changes to the current Title V Operation Permit. Please see attachment LC-EU2-I1 for a 40 CFR 63 Subpart ZZ7Z applicability analysis.} \\
\hline
\end{tabular}
EMISSIONS UNIT INFORMATION
Section [2] of ..... [3]
Regulated Emission Units - EU 005 and EU 006
Emissions Unit Control Equipment/Method: Control 1 of 1
1. Control Equipment/Method Description:
Emissions limited under work practice standards as defined by 63.6603, Table 2d.
2. Control Device or Method Code: 099
Emissions Unit Control Equipment/Method: Control ..... of

\(\qquad\)
1. Control Equipment/Method Description:
2. Control Device or Method Code:
Emissions Unit Control Equipment/Method: Control \(\qquad\) of \(\qquad\)
1. Control Equipment/Method Description:
2. Control Device or Method Code:
Emissions Unit Control Equipment/Method: Control \(\qquad\) of \(\qquad\)
1. Control Equipment/Method Description:
2. Control Device or Method Code:

\section*{EMISSIONS UNIT INFORMATION}

\section*{Section [2] of [3]}

Regulated Emission Units - EU 005 and EU 006

\section*{B. EMISSIONS UNIT CAPACITY INFORMATION}

\section*{(Optional for unregulated emissions units.)}

\section*{Emissions Unit Operating Capacity and Schedule}
1. Maximum Process or Throughput Rate:
2. Maximum Production Rate:
3. Maximum Heat Input Rate: million Btu/hr
4. Maximum Incineration Rate: pounds/hr tons/day
5. Requested Maximum Operating Schedule:
hours/day
days/week
weeks/year 100 hr/yr (EU 005)
\(250 \mathrm{hr} / \mathrm{yr}\) (EU 006)
6. Operating Capacity/Schedule Comment:

\section*{EMISSIONS UNIT INFORMATION}

\section*{Section [2] of [3]}

Regulated Emission Units - EU 005 and EU 006

\section*{C. EMISSION POINT (STACK/VENT) INFORMATION}

\section*{(Optional for unregulated emissions units.)}

\section*{Emission Point Description and Type}
\begin{tabular}{|l|l|}
\begin{tabular}{l} 
1. Identification of Point on Plot Plan or \\
Flow Diagram:
\end{tabular} & 2. Emission Point Type Code: \\
\hline 3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:
\end{tabular}
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
\begin{tabular}{|c|c|c|c|}
\hline 5. Discharge Type Code: & \multicolumn{2}{|l|}{6. Stack Height: feet} & 7. Exit Diameter: feet \\
\hline 8. Exit Temperature: & 9. Actua acfm & netric Flow Rate: & 10. Water Vapor: \% \\
\hline \multicolumn{2}{|l|}{11. Maximum Dry Standard Flow Rate: dscfm} & \multicolumn{2}{|l|}{12. Nonstack Emission Point Height: feet} \\
\hline \multicolumn{2}{|l|}{\begin{tabular}{l}
13. Emission Point UTM Coordinates.. \\
Zone: 17 East (km): \\
North (km):
\end{tabular}} & \multicolumn{2}{|l|}{\begin{tabular}{l}
14. Emission Point Latitude/Longitude.. Latitude (DD/MM/SS) \\
Longitude (DD/MM/SS)
\end{tabular}} \\
\hline
\end{tabular}

\section*{EMISSIONS UNIT INFORMATION}

Section [2] of [3]
Regulated Emission Units - EU 005 and EU 006
D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1
\begin{tabular}{l}
\begin{tabular}{l} 
1. Segment Description (Process/Fuel Type): \\
Internal Combustion Engines Electric Generation, Distillate Oil (Diesel) - Reciprocating
\end{tabular} \\
\hline \begin{tabular}{l} 
2. Source Classification Code (SCC): \\
2-01-001-02
\end{tabular} \\
\hline 4. Maximum Hourly Rate: \\
\hline \begin{tabular}{l} 
3. SCC Units: \\
Thousand gallons burned
\end{tabular} \\
\hline 7. Maximum \% Sulfur: \\
\hline 5. Maximum Annual Rate: \\
\hline \begin{tabular}{l} 
10. Segment Comment: \\
See LC-EU2-I2 and LC-EU2-I3 for performance and emission data for EU 005 and EU 006. \\
Factor:
\end{tabular} \\
\hline
\end{tabular}

Segment Description and Rate: Segment _ of _
1. Segment Description (Process/Fuel Type):
\begin{tabular}{|l|l|l|}
\hline \multicolumn{3}{|l|}{ 2. Source Classification Code (SCC): } \\
\hline 4. Maximum Hourly Rate: & 5. Maximum Annual Rate: & \begin{tabular}{l} 
6. Estimated Annual Activity \\
Factor:
\end{tabular} \\
\hline 7. Maximum \% Sulfur: & 8. Maximum \% Ash: & 9. Million Btu per SCC Unit: \\
\hline
\end{tabular}
10. Segment Comment:

\section*{EMISSIONS UNIT INFORMATION}

\section*{Section [2] of \\ [3]}

Regulated Emission Units - EU 005 and EU 006

\section*{E. EMISSIONS UNIT POLLUTANTS}

\section*{List of Pollutants Emitted by Emissions Unit}
\begin{tabular}{|l|l|l|l|}
\hline 1. Pollutant Emitted & \begin{tabular}{l} 
2. Primary Control \\
Device Code
\end{tabular} & \begin{tabular}{l} 
3. Secondary Control \\
Device Code
\end{tabular} & \begin{tabular}{l} 
4. Pollutant \\
Regulatory Code
\end{tabular} \\
\hline NOx & & & WP \\
\hline CO & & & WP \\
\hline PM/PM 10 & & & WP \\
\hline VOC & & & WP \\
\hline SO2 & & & WP \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline
\end{tabular}

EMISSIONS UNIT INFORMATION
Section [2] of [3]
EU 005 \& 006

\section*{F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION POTENTIAL/ESTIMATED FUGITIVE EMISSIONS}
(Optional for unregulated emissions units.)
Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection \(E\) if applying for an air operation permit.

\section*{Potential, Estimated Fugitive and Baseline \& Projected Actual Emissions}
\begin{tabular}{|c|c|}
\hline 1. Pollutant Emitted: NOx & 2. Total Percent Efficiency of Control: \\
\hline \begin{tabular}{l}
3. Potential Emissions: \\
See LC-EU2-12 and LC-EU2-13 for performance data for EU 005 and EU 006.
\end{tabular} & \begin{tabular}{c|c} 
& \multicolumn{2}{c}{\begin{tabular}{c} 
Synthetically Limited? \\
\(\square\) Yes \(\quad \mathrm{x}\) \\
\(\square\)
\end{tabular}} \\
\hline
\end{tabular} \\
\hline \multicolumn{2}{|l|}{5. Range of Estimated Fugitive Emissions (as applicable): to tons/year} \\
\hline \begin{tabular}{l}
6. Emission Factor: \\
See LC-EU2-I2 and LC-EU2-13 for performance 005 and EU 006. \\
Reference: AP -42
\end{tabular} & \begin{tabular}{l|l} 
7. \begin{tabular}{l} 
Emissions \\
Method Code:
\end{tabular}
\end{tabular} \\
\hline 8.a. Baseline Actual Emissions (if required): tons/year & 8.b. Baseline 24-month Period: From: To: \\
\hline 9.a. Projected Actual Emissions (if required): tons/year & 9.b. Projected Monitoring Period:
5 years 10 years \\
\hline \multicolumn{2}{|l|}{\begin{tabular}{l}
10. Calculation of Emissions: \\
See LC-EU2-I2 and LC-EU2-13 for performance and emission data for EU 005 and EU 006.
\end{tabular}} \\
\hline 11. Potential, Fugitive, and Actual Emissions C & mment: \\
\hline
\end{tabular}

\section*{F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION ALLOWABLE EMISSIONS}

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.
Allowable Emissions Allowable Emissions 1 of 1
\begin{tabular}{|c|c|}
\hline 1. Basis for Allowable Emissions Code: Rule & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: 63.6603 Table 2d & 4. Equivalent Allowable Emissions: \(\mathrm{lb} /\) hour tons/year \\
\hline \multicolumn{2}{|l|}{5. Method of Compliance:} \\
\hline \multicolumn{2}{|l|}{6. Allowable Emissions Comment (Description of Operating Method): Please see attachment LC-EU2-I1 for a 40 CFR 63 Subpart Z7ZZ applicability analysis} \\
\hline \multicolumn{2}{|l|}{Allowable Emissions Allowable Emissions __of _-} \\
\hline 1. Basis for Allowable Emissions Code: & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: \(\mathrm{lb} / \mathrm{hr}\) & 4. Equivalent Allowable Emissions: lb/hour tons/year \\
\hline \multicolumn{2}{|l|}{5. Method of Compliance:} \\
\hline \multicolumn{2}{|l|}{6. Allowable Emissions Comment (Description of Operating Method):} \\
\hline \multicolumn{2}{|l|}{Allowable Emissions Allowable Emissions __of _} \\
\hline 1. Basis for Allowable Emissions Code: & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: \(\mathrm{lb} / \mathrm{hr}\) & 4. Equivalent Allowable Emissions: lb/hour tons/year \\
\hline \multicolumn{2}{|l|}{5. Method of Compliance:} \\
\hline 6. Allowable Emissions Comment (Desc & of Operating Method): \\
\hline
\end{tabular}

\section*{EMISSIONS UNIT INFORMATION}

Section [2] of [3]
EU 005 \& 006

POLLUTANT DETAIL INFORMATION Page [1] of [2]

Carbon Monoxide - CO

\section*{F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION POTENTIAL/ESTIMATED FUGITIVE EMISSIONS}
(Optional for unregulated emissions units.)
Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title \(V\) operation permit. Complete for each emissions-limited pollutant identified in Subsection \(E\) if applying for an air operation permit.
Potential, Estimated Fugitive and Baseline \& Projected Actual Emissions
\begin{tabular}{|c|c|}
\hline 1. Pollutant Emitted: CO & 2. Total Percent Efficiency of Control: \\
\hline \begin{tabular}{l}
3. Potential Emissions: \\
See LC-EU2-12 and LC-EU2-13 for performance data for EU 005 and EU 006 ..
\end{tabular} & \begin{tabular}{l|l} 
& \begin{tabular}{l} 
4. Synthetically Limited? \\
\(\square\) \\
\(\square\) \\
\(\square\)
\end{tabular} \\
\hline
\end{tabular} \\
\hline \multicolumn{2}{|l|}{5. Range of Estimated Fugitive Emissions (as applicable): to tons/year} \\
\hline \begin{tabular}{l}
6. Emission Factor: \\
See LC-EU2-12 and LC-EU2-13 for performance 005 and EU 006. \\
Reference: AP -42
\end{tabular} & \begin{tabular}{l|l} 
& \begin{tabular}{l} 
7. \begin{tabular}{l} 
Emissions \\
Method Code:
\end{tabular}
\end{tabular}\(.\)\begin{tabular}{l} 
nd emission data for EU
\end{tabular} \\
\hline
\end{tabular} \\
\hline 8.a. Baseline Actual Emissions (if required): tons/year & 8.b. Baseline 24-month Period: From: To: \\
\hline 9.a. Projected Actual Emissions (if required): tons/year & 9.b. Projected Monitoring Period:
5 years 10 years \\
\hline
\end{tabular}
10. Calculation of Emissions:

See LC-EU2-I2 and LC-EU2-I3 for performance and emission data for EU 005 and EU 006.
11. Potential, Fugitive, and Actual Emissions Comment:

EMISSIONS UNIT INFORMATION
Section [2] of [3]
EU 005 \& 006

POLLUTANT DETAIL INFORMATION
Page [2] of [2]

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION ALLOWABLE EMISSIONS
Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.
Allowable Emissions Allowable Emissions 1 of 1
\begin{tabular}{|l|l|}
\hline \begin{tabular}{l} 
1. Basis for Allowable Emissions Code: \\
Rule
\end{tabular} & \begin{tabular}{l} 
2. \begin{tabular}{l} 
Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline \begin{tabular}{l} 
3. Allowable Emissions and Units: \\
63.6603 Table 2d
\end{tabular} \\
\hline 4.
\end{tabular} \begin{tabular}{c} 
Equivalent Allowable Emissions: \\
Ib/hour \\
tons/year
\end{tabular} \\
\hline
\end{tabular}
5. Method of Compliance:
6. Allowable Emissions Comment (Description of Operating Method):

Please see attachment LC-EU2-I1 for a 40 CFR 63 Subpart ZZZZ applicability analysis

Allowable Emissions Allowable Emissions __of __
\begin{tabular}{|l|l|}
\hline 1. Basis for Allowable Emissions Code: & \begin{tabular}{l} 
2.
\end{tabular} \begin{tabular}{l} 
Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline \begin{tabular}{l} 
3. Allowable Emissions and Units: \\
lb/hr
\end{tabular} & 4. \begin{tabular}{c} 
Equivalent Allowable Emissions: \\
lb/hour \\
tons/year
\end{tabular} \\
\hline 5. Method of Compliance: \\
\hline 6. Allowable Emissions Comment (Description of Operating Method): \\
\hline
\end{tabular}
\begin{tabular}{l} 
Allowable Emissions Allowable Emissions __of _- \\
\begin{tabular}{|l|l|}
\hline 1. Basis for Allowable Emissions Code: & \begin{tabular}{l} 
2. Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline \begin{tabular}{l} 
3. Allowable Emissions and Units: \\
lb/hr
\end{tabular} & 4. \begin{tabular}{c} 
Equivalent Allowable Emissions: \\
lb/hour
\end{tabular} \\
\hline 5. Method of Compliance: \\
\hline tons/year
\end{tabular} \\
\hline
\end{tabular}

EMISSIONS UNIT INFORMATION
Section [2] of [3] EU 005 \& 006

\section*{F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION POTENTIAL/ESTIMATED FUGITIVE EMISSIONS}
(Optional for unregulated emissions units.)
Complete a Subsection \(\mathbf{F 1}\) for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title \(V\) operation permit. Complete for each emissions-limited pollutant identified in Subsection \(E\) if applying for an air operation permit.

\section*{Potential, Estimated Fugitive and Baseline \& Projected Actual Emissions}


\section*{F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION ALLOWABLE EMISSIONS}

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.
Allowable Emissions Allowable Emissions 1 of 1
\begin{tabular}{|l|l|}
\hline \begin{tabular}{l} 
1. Basis for Allowable Emissions Code: \\
Rule
\end{tabular} & \begin{tabular}{l} 
2.
\end{tabular} \begin{tabular}{l} 
Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline \begin{tabular}{l} 
3. Allowable Emissions and Units: \\
63.6603 Table 2d
\end{tabular} & 4. \begin{tabular}{c} 
Equivalent Allowable Emissions: \\
lo/hour
\end{tabular} \\
\hline 5. Method of Compliance: \\
\hline \begin{tabular}{l} 
6. Allowable Emissions Comment (Description of Operating Method): \\
Please see attachment LC-EU2-I1 for a 40 CFR 63 Subpart ZZZZ applicability analysis
\end{tabular} \\
\hline
\end{tabular}

Allowable Emissions Allowable Emissions __of __
\begin{tabular}{|l|l|}
\hline 1. Basis for Allowable Emissions Code: & \begin{tabular}{l} 
2.
\end{tabular} \begin{tabular}{l} 
Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline \begin{tabular}{l} 
3. Allowable Emissions and Units: \\
lb/hr
\end{tabular} & 4. \begin{tabular}{c} 
Equivalent Allowable Emissions: \\
lb/hour \\
tons/year
\end{tabular} \\
\hline 5. Method of Compliance: & \\
\hline 6. Allowable Emissions Comment (Description of Operating Method): \\
\hline
\end{tabular}

Allowable Emissions Allowable Emissions __of __
\begin{tabular}{|l|l|}
\hline 1. Basis for Allowable Emissions Code: & \begin{tabular}{l} 
2.
\end{tabular} \begin{tabular}{l} 
Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline \begin{tabular}{l} 
3. Allowable Emissions and Units: \\
lb/hr
\end{tabular} & \begin{tabular}{c} 
4.
\end{tabular} \begin{tabular}{c} 
Equivalent Allowable Emissions: \\
lb/hour \\
tons/year
\end{tabular} \\
\hline
\end{tabular}
5. Method of Compliance:
6. Allowable Emissions Comment (Description of Operating Method):

EMISSIONS UNIT INFORMATION
Section [2] of [3] EU 005 \& 006

POLLUTANT DETAIL INFORMATION
Page [1] of [2]

\section*{F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION POTENTIAL/ESTIMATED FUGITIVE EMISSIONS}
(Optional for unregulated emissions units.)
Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title \(V\) operation permit. Complete for each emissions-limited pollutant identified in Subsection \(E\) if applying for an air operation permit.
Potential, Estimated Fugitive and Baseline \& Projected Actual Emissions
\begin{tabular}{|l|l|l|l|}
\hline 1. Pollutant Emitted: \\
VOC
\end{tabular}\(\quad\) 2. Total Percent Efficiency of Control:
10. Calculation of Emissions:

See LC-EU2-I2 and LC-EU2-13 for performance and emission data for EU 005 and EU 006.
11. Potential, Fugitive, and Actual Emissions Comment:

EMISSIONS UNIT INFORMATION
Section [2] of [3]
EU 005 \& 006

POLLUTANT DETAIL INFORMATION
Page [2] of [2]

\section*{F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION ALLOWABLE EMISSIONS}

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.
Allowable Emissions Allowable Emissions 1 of 1
\begin{tabular}{|c|c|}
\hline 1. Basis for Allowable Emissions Code: Rule & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: 63.6603 Table 2d & 4. Equivalent Allowable Emissions: lb /hour tons/year \\
\hline \multicolumn{2}{|l|}{5. Method of Compliance:} \\
\hline \multicolumn{2}{|l|}{6. Allowable Emissions Comment (Description of Operating Method): Please see attachment LC-EU2-I1 for a 40 CFR 63 Subpart ZZZZ applicability analysis} \\
\hline \multicolumn{2}{|l|}{Allowable Emissions Allowable Emissions _of} \\
\hline 1. Basis for Allowable Emissions Code: & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: \(\mathrm{lb} / \mathrm{hr}\) & 4. Equivalent Allowable Emissions: lb /hour tons/year \\
\hline \multicolumn{2}{|l|}{5. Method of Compliance:} \\
\hline \multicolumn{2}{|l|}{6. Allowable Emissions Comment (Description of Operating Method):} \\
\hline \multicolumn{2}{|l|}{Allowable Emissions Allowable Emissions __of __} \\
\hline 1. Basis for Allowable Emissions Code: & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: \(\mathrm{lb} / \mathrm{hr}\) & \begin{tabular}{l}
4. Equivalent Allowable Emissions: \\
lb/hour \\
tons/year
\end{tabular} \\
\hline \multicolumn{2}{|l|}{5. Method of Compliance:} \\
\hline 6. Allowable Emissions Comment (Desc & of Operating Method): \\
\hline
\end{tabular}

EMISSIONS UNIT INFORMATION
Section [2] of [3]
EU 005 \& 006

\section*{F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION POTENTIAL/ESTIMATED FUGITIVE EMISSIONS}
(Optional for unregulated emissions units.)
Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title \(V\) operation permit. Complete for each emissions-limited pollutant identified in Subsection \(E\) if applying for an air operation permit.
Potential, Estimated Fugitive and Baseline \& Projected Actual Emissions
\begin{tabular}{|c|c|}
\hline 1. Pollutant Emitted: SO2 & 2. Total Percent Efficiency of Control: \\
\hline \begin{tabular}{l}
3. Potential Emissions: \\
See LC-EU2-12 and LC-EU2-13 for performance data for EU 005 and EU 006.
\end{tabular} & \begin{tabular}{c|c} 
& 4. Synthetically Limited? \\
\(\square\) Yes \(\quad \mathrm{X}\) No
\end{tabular} \\
\hline \multicolumn{2}{|l|}{5. Range of Estimated Fugitive Emissions (as applicable): to tons/year} \\
\hline \begin{tabular}{l}
6. Emission Factor: \\
See LC-EU2-12 and LC-EU2-13 for performance 005 and EU 006. \\
Reference: AP -42
\end{tabular} &  \\
\hline 8.a. Baseline Actual Emissions (if required): tons/year & 8.b. Baseline 24-month Period: From: To: \\
\hline 9.a. Projected Actual Emissions (if required): tons/year & 9.b. Projected Monitoring Period:
5 years 10 years \\
\hline
\end{tabular}
10. Calculation of Emissions:

See LC-EU2-I2 and LC-EU2-13 for performance and emission data for EU 005 and EU 006.
11. Potential, Fugitive, and Actual Emissions Comment:

\section*{F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -} ALLOWABLE EMISSIONS
Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.
Allowable Emissions Allowable Emissions 1 of 1
\begin{tabular}{|c|c|}
\hline 1. Basis for Allowable Emissions Code: Rule & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: 63.6603 Table 2d & 4. Equivalent Allowable Emissions: lb/hour tons/year \\
\hline \multicolumn{2}{|l|}{5. Method of Compliance:} \\
\hline \multicolumn{2}{|l|}{6. Allowable Emissions Comment (Description of Operating Method): Please see attachment LC-EU2-I1 for a 40 CFR 63 Subpart ZZZZ applicability analysis} \\
\hline \multicolumn{2}{|l|}{Allowable Emissions Allowable Emissions __of __} \\
\hline 1. Basis for Allowable Emissions Code: & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: lb/hr & 4. Equivalent Allowable Emissions: lb/hour tons/year \\
\hline \multicolumn{2}{|l|}{5. Method of Compliance:} \\
\hline 6. Allowable Emissions Comment (Desc & of Operating Method): \\
\hline
\end{tabular}
\begin{tabular}{|l|l|}
\hline Allowable Emissions Allowable Emissions __of __ \\
\hline 1. Basis for Allowable Emissions Code: & \begin{tabular}{l} 
2.
\end{tabular} \begin{tabular}{l} 
Future Effective Date of Allowable \\
Emissions:
\end{tabular} \\
\hline \begin{tabular}{l} 
3. Allowable Emissions and Units: \\
lb/hr
\end{tabular} & \begin{tabular}{c} 
4. \begin{tabular}{c} 
Equivalent Allowable Emissions: \\
lb/hour \\
tons/year
\end{tabular} \\
\hline 5. Method of Compliance: \\
\hline 6. Allowable Emissions Comment (Description of Operating Method): \\
\hline
\end{tabular}
\end{tabular}

\section*{EMISSIONS UNIT INFORMATION}

Section [2] of [3]
Regulated Emission Units - EU 005 and EU 006

\section*{G. VISIBLE EMISSIONS INFORMATION}

Complete Subsection \(G\) if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

4. Method of Compliance: None
5. Visible Emissions Comment:

Applicable to \(\mathbf{2 5 0} \mathbf{~ k W}\) diesel generator (1); general VE pursuant to Rule 62-296.320(4)(b); excess emissions allowed for startup/shutdown and malfunction (Rule 62-210.700(1)).

Visible Emissions Limitation: Visible Emissions Limitation _ of _

4. Method of Compliance:
5. Visible Emissions Comment:
\begin{tabular}{|c|c|}
\hline \multicolumn{2}{|l|}{\multirow[t]{3}{*}{\begin{tabular}{l}
EMISSIONS UNIT INFORMATION \\
Section [2] of [3] \\
Regulated Emission Units - EU 005 and EU 006
\end{tabular}}} \\
\hline & \\
\hline & \\
\hline \multicolumn{2}{|r|}{H. CONTINUOUS MONITOR INFORMATION} \\
\hline \multicolumn{2}{|l|}{Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.} \\
\hline \multicolumn{2}{|l|}{Continuous Monitoring System: Continuous Monitor ____ of ___} \\
\hline 1. Parameter Code: & 2. Pollutant(s): \\
\hline 3. CMS Requirement: & \(\square\) Rule \(\quad \square\) Other \\
\hline \multicolumn{2}{|l|}{4. Monitor Information... Manufacturer:} \\
\hline Model Number: & Serial Number: \\
\hline 5. Installation Date: & 6. Performance Specification Test Date: \\
\hline \multicolumn{2}{|l|}{7. Continuous Monitor Comment:} \\
\hline \multicolumn{2}{|l|}{Continuous Monitoring System: Continuous Monitor ____ of ___} \\
\hline 1. Parameter Code: & 2. Pollutant(s): \\
\hline 3. CMS Requirement: & \(\square\) Rule \(\quad \square\) Other \\
\hline \multicolumn{2}{|l|}{\begin{tabular}{l}
4. Monitor Information... \\
Manufacturer: \\
Model Number: \\
Serial Number:
\end{tabular}} \\
\hline 5. Installation Date: & 6. Performance Specification Test Date: \\
\hline 7. Continuous Monitor & \\
\hline
\end{tabular}

\section*{EMISSIONS UNIT INFORMATION}

Section [2] of [3]
Regulated Emission Units - EU 005 and EU 006

\section*{I. EMISSIONS UNIT ADDITIONAL INFORMATION}

\section*{Additional Requirements for All Applications, Except as Otherwise Stated - N/A}
1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)

Attached, Document ID: N/A
Previously Submitted, Date \(\qquad\)
2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID: N/A

Previously Submitted, Date \(\qquad\)
3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)

Attached, Document ID: N/A \(\square\) Previously Submitted, Date
4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID: N/A

Previously Submitted, Date \(\qquad\)Not Applicable (construction application)
5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
\(\qquad\) Attached, Document ID: \(\qquad\) Previously Submitted, Date \(\qquad\)
Not Applicable
6. Compliance Demonstration Reports/Records:

Attached, Document ID:
Test Date(s)/Pollutant(s) Tested:
Previously Submitted, Date:
Test Date(s)/Pollutant(s) Tested:
\(\square\) To be Submitted, Date (if known):
Test Date(s)/Pollutant(s) Tested:
Not Applicable
Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute:

Attached, Document ID:
N Not Applicable

\section*{EMISSIONS UNIT INFORMATION}

Section [2] of [3]
Regulated Emission Units - EU 005 and EU 006

\section*{I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)}

Additional Requirements for Air Construction Permit Applications - N/A
1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)):

Attached, Document ID: \(\qquad\) X Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.):

Attached, Document ID:
X Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only)

Attached, Document ID: \(\qquad\) Not Applicable
Additional Requirements for Title V Air Operation Permit Applications


\section*{EMISSIONS UNIT INFORMATION}

Section [3] of [3]
Emission Units - EU 002

\section*{III. EMISSIONS UNIT INFORMATION}

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.
Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

\section*{EMISSIONS UNIT INFORMATION}

\section*{Section [3] of [3]}

\section*{Emission Units - EU 002}

\section*{A. GENERAL EMISSIONS UNIT INFORMATION}

\section*{Title V Air Operation Permit Emissions Unit Classification}
1. Regulated or Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
\(\boxtimes\) The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
\(\square\) The emissions unit addressed in this Emissions Unit Information Section is an emissions unit.

\section*{Emissions Unit Description and Status}
1. Type of Emissions Unit Addressed in this Section: (Check one)
\(\square\) This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
\(\boxtimes\) This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
\(\square\) This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.
2. Description of Emissions Unit Addressed in this Section: vent emissions
3. Emissions Unit Identification Number:

EU 002 (Fuel Oil Storage Tank)*
\begin{tabular}{|c|c|c|c|}
\hline 4. Emissions Unit Status Code: A & 5. Commence Construction Date: & 6. Initial Startup Date: 1 July 1993 & 7. Emissions Unit Major Group SIC Code: 49 \\
\hline \multicolumn{4}{|l|}{8. Federal Program Applicability: (Check all that apply)
Acid Rain Unit CAIR Unit} \\
\hline \multicolumn{4}{|l|}{9. Package Unit: Manufacturer: Model Number:} \\
\hline \multicolumn{4}{|l|}{10. Generator Nameplate Rating:} \\
\hline \multicolumn{4}{|l|}{\begin{tabular}{l}
11. Emissions Unit Comment: \\
*Request permit revision to categorize as an insignificant emission unit instead as a regulated emission unit. Please see attachment LC-FI-C7 which includes requested changes to the current Title V Operation Permit. Also, please see attachment LC-EU3-I1 for detailed fuel oil storage tank calculations with 40 CFR 60 Subpart Kb applicability analysis.
\end{tabular}} \\
\hline
\end{tabular}

\section*{EMISSIONS UNIT INFORMATION}
Section [3] of [3]

Emission Units - EU 002
Emissions Unit Control Equipment/Method: Control \(\qquad\) of \(\qquad\)
1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control \(\qquad\) of \(\qquad\)
1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control \(\qquad\) of \(\qquad\)
1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control \(\qquad\) of
1. Control Equipment/Method Description:
2. Control Device or Method Code:

\section*{EMISSIONS UNIT INFORMATION}

Section [3] of [3]
Emission Units - EU 002

\section*{B. EMISSIONS UNIT CAPACITY INFORMATION}

\section*{(Optional for emissions units.)}

\section*{Emissions Unit Operating Capacity and Schedule}
1. Maximum Process or Throughput Rate: 701,050 gal/ yr/CT fuel oil
2. Maximum Production Rate:
3. Maximum Heat Input Rate: million Btu/hr
4. Maximum Incineration Rate: pounds \(/ \mathrm{hr}\)
tons/day
5. Requested Maximum Operating Schedule:
\begin{tabular}{ll}
24 hours/day & \(\mathbf{7}\) days/week \\
52 weeks/year & 8,760 hours/year
\end{tabular}
6. Operating Capacity/Schedule Comment:

This is the maximum process rate per CT to reflect fuel oil throughput from the oil storage tanks.

Request permit revision to categorize as an insignificant emission unit instead as a regulated emission unit. Please see attachment LC-FI-C7 which includes requested changes to the current Title V Operation Permit. Also, please see attachment LC-EU2-I1 for detailed fuel oil storage tank calculations with 40 CFR 60 Subpart Kb applicability analysis.

\section*{EMISSIONS UNIT INFORMATION}

\section*{Section [3] of [3]}

Emission Units - EU 002

\section*{C. EMISSION POINT (STACK/VENT) INFORMATION}

\section*{(Optional for emissions units.)}

\section*{Emission Point Description and Type}
\begin{tabular}{|l|l|}
\hline 1. Identification of Point on Plot Plan or & 2. Emission Point Type Code: \\
Flow Diagram: \(\mathbf{L}\)
\end{tabular} ( Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
\begin{tabular}{|l|l|l|}
\hline 5. Discharge Type Code: & \begin{tabular}{l} 
6. Stack Height: \\
feet
\end{tabular} & \begin{tabular}{l} 
7. Exit Diameter: \\
feet
\end{tabular} \\
\hline \begin{tabular}{l} 
8. Exit Temperature: \\
\({ }^{\circ} \mathrm{F}\)
\end{tabular} & \begin{tabular}{l} 
9. Actual Volumetric Flow Rate: \\
acfm
\end{tabular} & \begin{tabular}{l} 
10. Water Vapor: \\
\(\%\)
\end{tabular} \\
\hline \begin{tabular}{l} 
11. Maximum Dry Standard Flow Rate: \\
dscfm
\end{tabular} & \begin{tabular}{l} 
12. Nonstack Emission Point Height: \\
feet
\end{tabular} \\
\hline \begin{tabular}{l} 
13. Emission Point UTM Coordinates... \\
Zone: 17 \\
\(\quad\)\begin{tabular}{l} 
East (km): \\
North (km):
\end{tabular} \\
\hline
\end{tabular} \begin{tabular}{l} 
14. Emission Point Latitude/Longitude... \\
Latitude (DD/MM/SS) \\
Longitude (DD/MM/SS)
\end{tabular} \\
\hline
\end{tabular}
15. Emission Point Comment:

\section*{EMISSIONS UNIT INFORMATION}

Section [3] of [3]
Emission Units - EU 002

\section*{D. SEGMENT (PROCESS/FUEL) INFORMATION}

Segment Description and Rate: Segment 1 of 1
1. Segment Description (Process/Fuel Type):

Petroleum Liquid Storage: Fixed roof tank, distillate No. 2 fuel oil; working loss.
\begin{tabular}{|c|c|c|}
\hline 2. Source Classification C 4-03-010-20 & \begin{tabular}{l|l} 
SCC): & \begin{tabular}{l} 
3. SCC Un \\
Thousan
\end{tabular}
\end{tabular} & 3. SCC Units: Thousand gallons stored \\
\hline 4. Maximum Hourly Rate: & 5. Maximum Annual Rate: 170 & 6. Estimated Annual Activity Factor: \\
\hline 7. Maximum \% Sulfur: 0.05 & 8. Maximum \(\%\) Ash: 0 & 9. Million Btu per SCC Unit: 130 \\
\hline
\end{tabular}
10. Segment Comment:

Max. Annual Rate: Reflects capacity of tank. Under NSPS Subpart KKKK, the maximum fuel oil sulfur content is \(0.05 \%\).

Per Subpart Kb \(\mathbf{6 0 . 1 1 0 b}(b)\), this tank does not apply to Subpart Kb since it has a capacity greater than \(151 \mathrm{~m}^{3}\) and has a max. true vapor pressure less than 3.5 kP .

Segment Description and Rate: Segment _ of _
1. Segment Description (Process/Fuel Type):
2. Source Classification Code (SCC):
3. SCC Units:
\begin{tabular}{|l|l|l|}
\hline 4. Maximum Hourly Rate: & 5. Maximum Annual Rate: & \begin{tabular}{l} 
6. Estimated Annual Activity \\
Factor:
\end{tabular} \\
\hline 7. Maximum \% Sulfur: & 8. Maximum \% Ash: & 9. Million Btu per SCC Unit: \\
\hline
\end{tabular}
10. Segment Comment:

\section*{EMISSIONS UNIT INFORMATION}

Section |3] of [3]
Emission Units - EU 002

\section*{E. EMISSIONS UNIT POLLUTANTS}

List of Pollutants Emitted by Emissions Unit
\begin{tabular}{|l|l|l|l|}
\hline 1. Pollutant Emitted & \begin{tabular}{l} 
2. Primary Control \\
Device Code
\end{tabular} & \begin{tabular}{l} 
3. Secondary Control \\
Device Code
\end{tabular} & \begin{tabular}{l} 
4. Pollutant \\
Regulatory Code
\end{tabular} \\
\hline VOC & & & NS \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline
\end{tabular}

\section*{F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION POTENTIAL/ESTIMATED FUGITIVE EMISSIONS}
(Optional for emissions units.)
Complete a Subsection \(\mathbf{F 1}\) for each pollutant identified in Subsection \(\mathbf{E}\) if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title \(V\) operation permit. Complete for each emissions-limited pollutant identified in Subsection \(E\) if applying for an air operation permit.
Potential, Estimated Fugitive and Baseline \& Proiected Actual Emissions
\begin{tabular}{|c|c|}
\hline 1. Pollutant Emitted: VOC & 2. Total Percent Efficiency of Control: \\
\hline \begin{tabular}{l}
3. Potential Emissions: \\
See LC-EU2-I1 for detailed fuel oil storage tank with 40 CFR 60 Subpart Kb applicability analys
\end{tabular} & \begin{tabular}{l|l} 
& \multicolumn{2}{c}{} \\
calculations & 4. Synthetically Limited? \\
\(\square\) Yes \(\quad \mathrm{X}\) No \\
\hline
\end{tabular} \\
\hline \multicolumn{2}{|l|}{5. Range of Estimated Fugitive Emissions (as applicable): to tons/year} \\
\hline \begin{tabular}{l}
6. Emission Factor: \\
See LC-EU2-I1 for detailed fuel oil storage tank 60 Subpart Kb applicability analysis Reference: AP -42
\end{tabular} &  \\
\hline 8.a. Baseline Actual Emissions (if required): tons/year & 8.b. Baseline 24-month Period: From: To: \\
\hline 9.a. Projected Actual Emissions (if required): tons/year & 9.b. Projected Monitoring Period:
5 years \(\square\) 10 years \\
\hline \multicolumn{2}{|l|}{\begin{tabular}{l}
10. Calculation of Emissions: \\
See LC-EU2-I1 for detailed fuel oil storage tank calculations with 40 CFR 60 Subpart Kb applicability analysis
\end{tabular}} \\
\hline 11. Potential, Fugitive, and Actual Emissions C & omment: \\
\hline
\end{tabular}

\section*{ALLOWABLE EMISSIONS}

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.
Allowable Emissions Allowable Emissions 1 of 1
\begin{tabular}{|c|c|}
\hline 1. Basis for Allowable Emissions Code: & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: & 4. Equivalent Allowable Emissions: \(\mathrm{lb} /\) hour tons/year \\
\hline \multicolumn{2}{|l|}{5. Method of Compliance:} \\
\hline \multicolumn{2}{|l|}{\begin{tabular}{l}
6. Allowable Emissions Comment (Description of Operating Method): \\
Request permit revision to categorize as an insignificant emission unit instead as a regulated emission unit. Please see attachment LC-FI-C7 which includes requested changes to the current Title V Operation Permit. Also, please see attachment LC-EU2-I1 for detailed fuel oil storage tank calculations with 40 CFR 60 Subpart Kb applicability analysis. \\
Per Subpart Kb 60.110b(b), this tank does not apply to Subpart Kb since it has a capacity greater than \(151 \mathrm{~m}^{3}\) and has a max. true vapor pressure less than 3.5 kP
\end{tabular}} \\
\hline \multicolumn{2}{|l|}{Allowable Emissions Allowable Emissions __of _} \\
\hline 1. Basis for Allowable Emissions Code: & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: lb/hr & 4. Equivalent Allowable Emissions: lb/hour tons/year \\
\hline \multicolumn{2}{|l|}{5. Method of Compliance:} \\
\hline \multicolumn{2}{|l|}{6. Allowable Emissions Comment (Description of Operating Method):} \\
\hline \multicolumn{2}{|l|}{Allowable Emissions Allowable Emissions __of _} \\
\hline 1. Basis for Allowable Emissions Code: & 2. Future Effective Date of Allowable Emissions: \\
\hline 3. Allowable Emissions and Units: \(\mathrm{lb} / \mathrm{hr}\) & 4. Equivalent Allowable Emissions: lb /hour tons/year \\
\hline \multicolumn{2}{|l|}{5. Method of Compliance:} \\
\hline \multicolumn{2}{|l|}{6. Allowable Emissions Comment (Description of Operating Method):} \\
\hline
\end{tabular}

\section*{EMISSIONS UNIT INFORMATION}

Section [3] of [3]
Emission Units - EU 002

\section*{G. VISIBLE EMISSIONS INFORMATION}

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation _ of _
\begin{tabular}{|c|c|c|c|}
\hline & . Visible Emissions Subtype: & 2. Basis for Allowa
Rule & acity: \(\square\) Other \\
\hline \multicolumn{3}{|l|}{\begin{tabular}{l}
3. Allowable Opacity: \\
Normal Conditions: \\
\% \\
Exceptional Conditions: \\
Maximum Period of Excess Opacity Allowed:
\end{tabular}} & min/hour \\
\hline \multicolumn{4}{|l|}{4. Method of Compliance:} \\
\hline \multicolumn{4}{|l|}{5. Visible Emissions Comment:} \\
\hline
\end{tabular}

Visible Emissions Limitation: Visible Emissions Limitation _ of

4. Method of Compliance:
5. Visible Emissions Comment:

\section*{EMISSIONS UNIT INFORMATION}

\section*{Section [3] of [3]}

Emission Units - EU 002

\section*{H. CONTINUOUS MONITOR INFORMATION}

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.
Continuous Monitoring System: Continuous Monitor \(\qquad\) of \(\qquad\)


Continuous Monitoring System: Continuous Monitor \(\qquad\) of \(\qquad\)
\begin{tabular}{|c|c|}
\hline 1. Parameter Code: & 2. Pollutant(s): \\
\hline 3. CMS Requirement: & \(\square\) Rule \(\quad \square\) Other \\
\hline \begin{tabular}{l}
4. Monitor Information... Manufacturer: \\
Model Number:
\end{tabular} & Serial Number: \\
\hline 5. Installation Date: & 6. Performance Specification Test Date: \\
\hline \multicolumn{2}{|l|}{7. Continuous Monitor Comment:} \\
\hline
\end{tabular}

\section*{EMISSIONS UNIT INFORMATION}

Section [3] of [3]
Emission Units - EU 002

\section*{I. EMISSIONS LINIT ADDITIONAL INFORMATION}

\section*{Additional Requirements for All Applications, Except as Otherwise Stated - N/A}
\begin{tabular}{|c|c|}
\hline & Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
\(\square\) Attached, Document ID: N/A Previously Submitted, Date \(\qquad\) \\
\hline & Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
Attached, Document ID: N/A Previously Submitted, Date \(\qquad\) \\
\hline & \begin{tabular}{l}
Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
Attached, Document ID: \\
N/A Previously Submitted, Date \(\qquad\)
\end{tabular} \\
\hline & Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
Attached, Document ID: N/A Previously Submitted, Date \(\qquad\)
Not Applicable (construction application) \\
\hline & Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
Attached, Document 1D: \(\qquad\)
Previously Submitted, Date \(\qquad\) Not Applicable \\
\hline & \begin{tabular}{l}
Compliance Demonstration Reports/Records:
Attached, Document ID: \(\qquad\) \\
Test Date(s)/Pollutant(s) Tested: \(\qquad\)
Previously Submitted, Date: \(\qquad\) \\
Test Date(s)/Pollutant(s) Tested: \(\qquad\)
To be Submitted, Date (if known): \(\qquad\) \\
Test Date(s)/Pollutant(s) Tested: \(\qquad\) \\
Not Applicable \\
Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
\end{tabular} \\
\hline & \begin{tabular}{l}
Other Information Required by Rule or Statute: \\
\(\square\) Attached, Document ID: \(\qquad\) Not Applicable
\end{tabular} \\
\hline
\end{tabular}

\section*{EMISSIONS UNIT INFORMATION}

Section [3] of [3]
Emission Units - EU 002

\section*{I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)}

Additional Requirements for Air Construction Permit Applications - N/A
1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)):Attached, Document ID: \(\qquad\) Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.):

Attached, Document ID: \(\qquad\) Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only)

Attached, Document ID:
Not Applicable
Additional Requirements for Title V Air Operation Permit Applications


\section*{Additional Requirements Comment}

Request permit revision to categorize as an insignificant emission unit instead as an emission unit. Please see attachment LC-FI-C7 which includes requested changes to the current Title \(V\) Operation Permit.

Also, please see attachment LC-EU3-I1 for detailed fuel oil storage tank calculations with 40 CFR 60 Subpart Kb applicability analysis.

\section*{ATTACHMENT LC-FI-CI}


\section*{ATTACHMENT LC-FI-C2}

PROCESS FLOW DIAGRAM


\section*{ATTACHMENT LC-FI-C3}

PRECAUTION TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

Lake Cogeneration Ltd.
Lake Cogeneration
Facility ID No. 0694801

\section*{ATTACHMENT PC-FI-C3 Precautions to Prevent Emissions of Unconfined Particulate Matter}

The facility has negligible amounts of unconfined particulate matter as a result of the operation of the facility. Potential examples of particulate matter include:
- Fugitive dust from paved and unpaved roads,
- Fugitive particulates from the use of bagged chemical products, and
- Storage and handling of the zero-liquid-discharge-system (ZLD) salt and filtercake.

Operational measures are undertaken at the facility which also minimize particulate emissions, in accordance with 62-296.310(3), F.A.C.:
- Maintenance of paved areas as needed, Regular
- mowing of grass and care of vegetation,
- Limiting access to plant property by unnecessary vehicles,
- Use of bagged chemical products in enclosed or semi-enclosed areas, and storage of ZLD byproduct in covered enclosed containers.

\section*{ATTACHMENT LC-FI-C4}

LIIST OF INSIGNIFICANT ACTIVITIES

\section*{ATTACHMENT LC-FI-C4 \\ List of Insignificant Activities}

\section*{List of Insignificant Emissions Units and/or Activities.}

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, are exempt from the permitting requirements of Chapters 62-210 and \(62-4\), F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rule 62-210.300(3)(a), F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rule \(62.210 .300(3)(a)\), F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

Items in red or red are proposed units to be added or removed from the insignificant activities list.

Brief Description of Emissions Units and/or Activities:
\begin{tabular}{|c|c|c|}
\hline Area & Emission Unit Description & Number of Units \\
\hline \multirow{13}{*}{CT/ST/BUILDING AREA} & Fuel Oil Storage Tank (170,000 gal) & 1 \\
\hline & CT Lube Oil Vents & 2 \\
\hline & CT Lube Oil Storage Tank & 2 \\
\hline & ST Lube Oil Tank Vent & 1 \\
\hline & ST Lube Oil Filter Vent & 1 \\
\hline & Electric Generator Mineral Oil & \(\underline{2}\) \\
\hline & Vent & \\
\hline & Furbine-Cleaning Operation & 2 \\
\hline & Water Wash Tanks & 3 \\
\hline & Furbine-Gooling - Air & 2 \\
\hline & Various Pumps & Multiple \\
\hline & Miscellaneous Tank Drains & Multiple \\
\hline & Hydraulic Equipment & Multiple \\
\hline \multirow{3}{*}{HRSG} & Natural Gas Relief Valves & Multiple \\
\hline & Various Steam Vents \& Pressure Relief Valves & Various \\
\hline & HPS Breather Vent & Multiple \\
\hline
\end{tabular}

Lake Cogeneration Ltd.
Lake Cogeneration
Facility ID No. 0694801
\begin{tabular}{|c|c|c|}
\hline & Nitrogen Lines & Multiple \\
\hline \multirow{4}{*}{HRSG AREA} & Blowdown Quench Tank & Aultiple \\
\hline & Blowdown Flash Tank & 4 \\
\hline & Various Pumps (feedwater, and chemical feed) & Multiple \\
\hline & CEM Equipment \& Calibration
Gas Venting & 2 Systems \\
\hline \multirow[t]{20}{*}{WATER TREATMENT
(BOILER, WASTE WATER)} & Raw Water/Fire Water Storage Fank; 376,012 gal-capacity & 4 \\
\hline & Chlorine Cylinders; 150 lb each & 4510 \\
\hline & Sulfuric Acid (H2SO4) Tank; 6,016 gal capacity & 1 \\
\hline & Boiler Feedwater Chemical Treatments Tanks & Multiple \\
\hline & \begin{tabular}{l}
Sodium Hydroxide ( NaOH ) \\
Tank; 6,610 gal capacity
\end{tabular} & 1 \\
\hline & Brine Tank; 9,306 galcapacity & 4 \\
\hline & Brine Containment Tank; 16,545 galcapacity & 4 \\
\hline & Chilled Water Storage Tank; 25,000-gat capacity & 4 \\
\hline & RO-Surge-Tank; 10,857 gal
Gapacity & 4 \\
\hline & Weak Waste-Fank; 151, 222-gat
Gapacity & 4 \\
\hline & Condensate Return Tank; 25,000 galcapacity & 4 \\
\hline & Demin Water Storage Tank; 102,000 gal capacity & 4 \\
\hline & \begin{tabular}{l}
Decarbonator/Degasifier; \\
Removes CO2 from raw water
\end{tabular} & 1 \\
\hline & Equalization Tank; 22,000 gal capacity & 4 \\
\hline & Neutralization Basin and Pumps & 4 \\
\hline & Wastewater Cooling Tower & 4 \\
\hline & Filter Press & 1 \\
\hline & Various Pumps & Multiple \\
\hline & Crystallizer & 1 \\
\hline & Soda Ash Handling & 1 \\
\hline \multirow{4}{*}{COOLING TOWER} & Fresh Water Cooling Tower & 1 \\
\hline & Nalco 7342 (NaBr) Tank; 492 ib capacity & 4 \\
\hline & Cooling Water Pumps & Multiple \\
\hline & Steam-Condonsing Unit & 4 \\
\hline \multirow[t]{2}{*}{CHILLER AREA} & Refrigeration Chillers & 3 \\
\hline & Chiller Condensate Tank & 1 \\
\hline
\end{tabular}

Lake Cogeneration Ltd.
Lake Cogeneration
Facility ID No. 0694801
\begin{tabular}{|c|c|c|}
\hline & Various pumps & Multiple \\
\hline \multirow{8}{*}{GENERAL SITE} & Surface Coating <6.0 gal/day NA & NA \\
\hline & Sewer Vents Multiple & Multiple \\
\hline & Emergency-Generators; 250-kW Diesel & 4 \\
\hline & Diesel Fuel Storage Tank 2 & 2 \\
\hline & Natural Gas Meter Station 1 & 1 \\
\hline & Diesel Fire Pump - 216 hp- 4 & 4 \\
\hline & Diesel Fire Pump Storage Tank 1 & 1 \\
\hline & Diesel Portable Welder/Air Compressor & 1 \\
\hline \multirow{7}{*}{OFFICE SHOP AREA} & Degreaser Non-Halogenated Solvent & 1 \\
\hline & Laboratory & 1 \\
\hline & Propane Forklift & 1 \\
\hline & Air Compressor & 1 \\
\hline & Battery Room & 1 \\
\hline & \(\mathrm{CO}_{2}\) Fire System (Control Room) & 1 System \\
\hline & Bead Blaster & 1 \\
\hline \multirow[t]{2}{*}{SWITCHYARD/SUBSTATION AREA} & Transformers and Associated Equipment & Multiple \\
\hline & Breakers-SF6 & 2 \\
\hline PARKING LOT & Vehicles & Multiple \\
\hline \multirow{9}{*}{GENERAL} & Unit 1250 gallon waste-lube oil reclaim tank & 1 \\
\hline & Unit 2250 gallon waste-lube oil reclaim tank & 1 \\
\hline & Nalco Tower Brom Tank & 4 \\
\hline & 300 gallon waste oil storage tank & 1 \\
\hline & Unit \(1 \mathrm{CO}_{2}\) fire system & 10 cylinders \\
\hline & Unit \(2 \mathrm{CO}_{2}\) fire system & 10 cylinders \\
\hline & Electric Room \(\mathrm{CO}_{2}\) Fire System & 2 cylinders \\
\hline & Water Distillation Units Air Ejectors (vents) & 3 \\
\hline & 100,000 gallon distilled water tank (vent) & 4 \\
\hline
\end{tabular}

\section*{ATTACHMENT LC-FI-C5}

IDENTIFICATION OF APPLICABLE REQUIREMENTS

Lake Cogeneration Ltd.

\section*{ATTACHMENT PC-FI-C5 Identification of Applicable Requirements}

In addition to the requirements identified in the TV Core List (Effective: 03/01/02), the following emission unit specific requirements are:
- 40 CFR 60 Subpart KKKK - Standards of Performance for Stationary Combustion Turbines;
- 40 CFR 60 Subpart A - General Provisions;
- 40 CFR 60 Appendix A - Test Methods;
- Chapter 403 F.S
- Chapter 62-204 - Air Pollution Control - General Provisions; and
- 40 CFR 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.
[Note: The Title V Core List is meant to simplify the completion of the "List of Applicable Regulations" for DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List.]

\section*{Federal:}
(description)
40 CFR 61, Subpart M: NESHAP for Asbestos.
40 CFR 82: Protection of Stratospheric Ozone.
40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).
40 CFR 82, Subpart F: Recycling and Emissions Reduction.

\section*{State:}

\section*{(description)}

CHAPTER 62-4, F.A.C.: PERMITS, effective 06-01-01
62-4.030, F.A.C.: General Prohibition.
62-4.040, F.A.C.: Exemptions.
62-4.050, F.A.C.: Procedure to Obtain Permits; Application.
62-4.060, F.A.C.: Consultation.
62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.
62-4.080, F.A.C.: Modification of Permit Conditions.
62-4.090, F.A.C.: Renewals.
62-4.100, F.A.C.: Suspension and Revocation.
62-4.110, F.A.C.: Financial Responsibility.
62-4.120, F.A.C.: Transfer of Permits.
62-4.130, F.A.C.: Plant Operation - Problems.
62-4.150, F.A.C.: Review.
62-4.160, F.A.C.: Permit Conditions.
62-4.210, F.A.C.: Construction Permits.
62-4.220, F.A.C.: Operation Permit for New Sources.

\section*{CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS, effective 06-21-01}

62-210.300, F.A.C.: Permits Required.
62-210.300(1), F.A.C.: Air Construction Permits.
62-210.300(2), F.A.C.: Air Operation Permits.
62-210.300(3), F.A.C.: Exemptions.
62-210.300(5), F.A.C.: Notification of Startup.
62-210.300(6), F.A.C.: Emissions Unit Reclassification.
62-210.300(7), F.A.C.: Transfer of Air Permits.

62-210.350, F.A.C.: Public Notice and Comment.
62-210.350(1), F.A.C.: Public Notice of Proposed Agency Action.
62-210.350(2), F.A.C.: Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment-Area Preconstruction Review.
62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources.

62-210.360, F.A.C.: Administrative Permit Corrections.
62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.
62-210.400, F.A.C.: Emission Estimates.
62-210.650, F.A.C.: Circumvention.
62-210.700, F.A.C.: Excess Emissions.
62-210.900, F.A.C.: Forms and Instructions.
62-210.900(1), F.A.C.: Application for Air Permit - Title V Source, Form and Instructions.
62-210.900(5), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions.
62-210.900(7), F.A.C.: Application for Transfer of Air Permit - Title V and Non-Title V Source.

CHAPTER 62-212, F.A.C.: STATIONARY SOURCES - PRECONSTRUCTION REVIEW, effective 08-17-00

CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 04-16-01

62-213.205, F.A.C.: Annual Emissions Fee.
62-213.400, F.A.C.: Permits and Permit Revisions Required.
62-213.410, F.A.C.: Changes Without Permit Revision.
62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.
62-213.415, F.A.C.: Trading of Emissions Within a Source.
62-213.420, F.A.C.: Permit Applications.
62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.
62-213.440, F.A.C.: Permit Content.
62-213.450, F.A.C.: Permit Review by EPA and Affected States
62-213.460, F.A.C.: Permit Shield.
62-213.900, F.A.C.: Forms and Instructions.
62-213.900(1), F.A.C.: Major Air Pollution Source Annual Emissions Fee Form.
62-213.900(7), F.A.C.: Statement of Compliance Form.

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 03-02-99

62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter.
62-296.320(2), F.A.C.: Objectionable Odor Prohibited.
CHAPTER 62-297, F.A.C.: STATIONARY SOURCES - EMISSIONS
MONITORING, effective 03-02-99
62-297.310, F.A.C.: General Test Requirements.
62-297.330, F.A.C.: Applicable Test Procedures.
62-297.340, F.A.C.: Frequency of Compliance Tests.
62-297.345, F.A.C.: Stack Sampling Facilities Provided by the Owner of an Emissions Unit.
62-297.350, F.A.C.: Determination of Process Variables.
62-297.570, F.A.C.: Test Report.
62-297.620, F.A.C.: Exceptions and Approval of Alternate Procedures and Requirements.

\section*{Miscellaneous:}

CHAPTER 28-106, F.A.C.: Decisions Determining Substantial Interests
CHAPTER 62-110, F.A.C.: Exception to the Uniform Rules of Procedure, effective 07-01-98
CHAPTER 62-256, F.A.C.: Open Burning and Frost Protection Fires, effective 11-3094
CHAPTER 62-257, F.A.C.: Asbestos Notification and Fee, effective 02-09-99
CHAPTER 62-281, F.A.C.: Motor Vehicle Air Conditioning Refrigerant Recovery and Recycling, effective 09-10-96


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Florida Department of Environmental Protection
}

\section*{NOTICE OF ADMINISTRATIVELY CORRECTED TTTLE V AIR PERMIT}

Sent by Electronic Mail - Received Receipt Requested

Mr. James Miller, Plant Manager
Lake Investment, Ltd.
39001 Golden Gem Drive
Umatilla, Florida 32784

Project No. 0694801-013-AV
Lake Cogeneration Plant
Title V Air Operation Permit
Lake County, Florida

\section*{Dear Mr. Miller:}

Enclosed is an administrative correction to Title V Air Permit No. 0694801-011-AV for the Lake Cogeneration Plant, which is located in Lake County at 39001 Golden Gem Drive in Umatilla, Florida. This action corrects Condition A. 24 to identify that compliance tests must be conducted during each federal fiscal year rather than during the specified 60-day test window. The Department's Final Determination for Permit 0694801-011-AV indicates that this was updated in the final permit, but the change was mistakenly omitted. A copy of this letter shall be filed with the original permit and shall become part of that permit. This administratively corrected permit is issued pursuant to Chapter 403, Florida Statutes.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station \#35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241). Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 14 days of receipt of this written notice. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address and telephone number of the petitioner; the name address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial rights will be affected by the agency determination; (c) A statement of when and how the petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the

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petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.
Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Notice of Administratively Corrected Title V Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.
Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station \#35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.
Mediation is not available in this proceeding.

Executed in Tallahassee, Florida.

Trina Vielhauer, Chief
Bureau of Air Regulation

TLV/jfk

\section*{CERTIFICATE OF SERVICE}

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Administratively
Corrected Title V Air Permit was sent by electronic mail (or a link to these documents made available electronically pn a publicly accessible server) with received receipt requested before the close of business on
\(\qquad\) to the persons listed below.

Mr. James Miller, Lake Cogeneration Plant (jmiller@caithnessenergy.com)
Mr. Thomas Grace, Caithness Energy (tgrace@caithnessenergy.com)
Mr. Scott Osbourn, Golder Associates (sosbourn@golder.com)
Ms. Kathleen Forney, EPA Region 4 (forney.kathleen@epa.gov)
Ms. Heather Abrams, EPA Region 4 (abrams.heather@epamail.epa.gov)
Ms. Ana M. Oquendo, EPA Region 4 (oquendo.ana@epa.gov)
Ms. Caroline Shine, DEP CD Office (caroline.shine@dep.state.fl.us)
Mr. Mike Halpin, DEP Siting Office (mike.halpin@dep.state.fl.us)
Ms. Barbara Friday, DEP BAR (barbara.friday@dep.state.fl.us) for posting with U.S. EPA Region 4
Ms. Victoria Gibson, DEP BAR Reading File (victoria.gibson@dep.state.fl.us)

\section*{Clerk Stamp}

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby


The following permit condition is revised as indicated. Strikethrough is used to denote the deletion of text. Double-underlines are used to denote the addition of text. All changes are emphasized with shading.
Permit Being Administratively Corrected: Permit No. 0694801-011-AV Affected Emissions Units: EU-003 and EU-004, Combined Cycle Combustion Turbines

\section*{Condition A. 24 is corrected as follows.}

A24. Frequency of Compliance Tests. Compliance testing for visible emissions, VOC, carbon dioxide ( \(\mathrm{CO}_{2}\) ), \(\mathrm{O}_{2}, \mathrm{PM}, \mathrm{SO}_{2}, \mathrm{NO}_{\mathrm{x}}\), and CO emissions from each unit is required during each federal fiscal year (October ] September 30) at yearly intervals on or within 60 days prior to the date of July 15 .
[Rules 62-297.310(7)(a)3., 4., and 5., F.A.C.; operating permit AO35-248140; and construction permit AC35196459]

\title{
Florida Department of Environmental Protection
}

\author{
In the Matter of an \\ Application for Permit by:
}

Lake Investment, Ltd.
39001 Golden Gem Drive
Umatilla, Florida 32784
Responsible Official:

Air Permit No. 0694801-011-AV
Lake Cogeneration Plant SPRINT Project Capacity Increase Lake County

Mr. James Miller, Plant Manager
Enclosed is Final Title V air operation permit revision No. 0694801-011-AV for the existing cogeneration plant, which is located in Lake County at 3900 I Golden Gem Drive, Umatilla, Florida. This revision incorporates air construction permit revision Project No. 0694801-010-AC (PSD-FL-176C), which made the following changes for existing combined cycle Units I and 2: increase the maximum heat input rate when firing natural gas; authorize installation of continuous emissions monitoring systems (CEMS) for monitoring nitrogen oxides \(\left(\mathrm{NO}_{\mathrm{x}}\right)\); revise the averaging period for the \(\mathrm{NO}_{\mathrm{x}}\) standard; and identify that combustion turbines will now be subject to the applicable New Source Performance Standards (NSPS) in Part 60, Title 40 of the Code of Federal Regulations (CFR) including Subpart A (General Provisions) and Subpart KKKK (Stationary Combustion Turbines) instead of Subpart GG (Stationary Combustion Turbines). This permit is issued pursuant to Chapter 403, Florida Statutes.
Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of \(\Lambda\) ppellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station \#35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.
Zima dVichaur
Trina Vielhauer, Chief Bureau of Air Regulation

TLV/jfk/ttm

\section*{CERTIFICATE OF SERVICE}

The undersigned duly designated deputy agency clerk hereby certifies that either this Notice of Final Air Permit (including the Final Air Permit, Appendices and Final Determination), or a link to these documents available electronically on a publicly accessible server, was sent by electronic mail with received receipt requested before the close of business on \(6 / 23 / 09\) to the persons listed below.
Mr. James Miller, Lake Cogeneration Plant (imiller@caithnessenergy.com)
Mr. Thomas Grace, Caithness Energy (tgrace@caithnessenergy.com)
Mr. Scott Osbourn, Golder Associates (sosbourn@golder.com)
Ms. Kathlecn Forney, EPA Region 4 (forncy.kathleen@epa.gov)
Ms. Heather Abrams, EPA Region 4 (abrams.heather@epamail.epa.gov)
Mr. Alan Zahm, DEP CD Office (alan.zahm@dep.state.fl.us)
Mr. Mike Halpin, DEP Siting Office (mike.halpin@dep.state.fl.us)
Ms. Barbara Friday, DEP BAR (barbara.friday@.dep.state.fl.us)
Ms. Victoria Gibson, DEP BAR (victoria.gibson@.dep.state.fl.us)

\section*{Clerk Stamp}

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby


\section*{PERMITTEE}

Lake Investment, Ltd.
39001 Golden Gem Drive
Umatilla, FL 32784

\section*{PERMITTING AUTHORITY}

Florida Department of Environmental Protection (Department)
Division of Air Resource Management
Bureau of Air Regulation, Title V Section
2600 Blair Stone Road, MS \#5505
Tallahassee, Florida 32399-2400

\section*{PROJECT}

Air Permit No. 0694801-011-AV
Lake Cogeneration Plant
The purpose of this Title V air operation permit revision is to incorporate the changes established in Project No. 0694801-010-AC (PSD-F1-176C), which made the following changes to existing combined cycle Units 1 and 2 : increase the maximum heat input rate when firing natural gas; authorize installation of continuous emissions monitoring systems (CEMS) for monitoring nitrogen oxides ( \(\mathrm{NO}_{\mathrm{x}}\) ); revise the averaging period for the \(\mathrm{NO}_{\mathrm{x}}\) standard; and identify that combustion turbines will now be subject to the applicable New Source Performance Standards (NSPS) in Part 60, Title 40 of the Code of Federal Regulations (CFR) including Subpart A (General Provisions) and Subpart KKKK (Stationary Combustion Turbines) instead of Subpart GG (Stationary Combustion Turbines).

\section*{NOTICE AND PUBLICATION}

The Department distributed an Intent to Issue a (Draft/Proposed) Title V Air Operation Permit Revision package on April 23, 2009. The applicant published the Public Notice in the Orlando Sentinel (Orange County Edition) on May 1, 2009. The Department received the proof of publication on May 8, 2009.

\section*{COMMENTS}

No comments on the Draft/Proposed Pcrmit were received from the public or the EPA Region 4 Office. The Final Permit was renumbered in accordance with the proposed changes. The applicant had minor comments on the draft permit package. The following summarizes these comments and the Department's response.

\section*{Drait/Proposed Title V Air Operation Permit}
1. Comment (Section IIIA. Renumbered Specific Condition 24): Regarding Draft/Proposed Permit Condition A.31, annual stack tests must be conducted within 60 days of July \(15^{\text {th }}\). Due to the practice of removing and replacing the engines periodically for repair, the Central District has allowed this test window to move as necessary, provided that the facility conducts the required test at least once each federal fiscal year.
Response: The Central District confirmed that the 60 -day testing window is no longer necessary and that the testing frequency should default to the state requirement of once during each federal fiscal year in accordance with Rule 62-297.310(7), F.A.C. The 60-day testing window was removed from the permit.
2. Comment (Section IIIA. Renumbered Specific Condition 30): Please correct the permit application renewal date in Draft/Proposed Permit Condition A.41 to reflect 225 days instead of 180 days.

Response: In March of 2008, the Department revised the requirement to submit a renewal application from 180 days prior to expiration to 225 days prior to expiration. The Department corrected the final permit.
3. Comment (Section IllA. No Renumbered Condition): With the installation of the \(\mathrm{NO}_{\mathrm{X}} \mathrm{CEMS}\) and the

Lake Investment, Ltd.
Lake Cogeneration Plant, Units 1 and 2

Permit No. 0694801-011-AV
SPRINT Project Capacity Increase
proposed deletion of Draf//Proposed Permit Condition A. 43 from the existing permit, the applicant requests confirmation that annual \(\mathrm{NO}_{x}\) testing and that subsequent \(\mathrm{NO}_{x}\) testing of leased engines during maintenance periods will no longer be necessary. The continuous emissions monitoring system (CEMS) will undergo an annual relative accuracy test audit. The applicant will continue to conduct annual CO stack testing and when required by the Central District for temporary leased engines, which operate while the original unit is being repaired at a central maintenance site.
Response: The Department confirms that the required CEMS shall be used to demonstrate compliance with the \(\mathrm{NO}_{\mathrm{x}}\) standards. No additional stack testing for \(\mathrm{NO}_{\mathrm{x}}\) emissions is required. However, the Central District may require "special compliance tests" for CO emissions when they have good reason to believe the unit is may not in compliance with a CO standard pursuant to Rule \(62-297.310(7)(b)\), F.A.C. No changes were made.
4. Comment (Section IV. CAIR Part): The applicant states that the Lake Cogeneration Plant is not an Acid Rain Phase II facility because it is considered a "cogeneration facility" and a "qualified facility". However, the plant is required to participate in the Clean Air Interstate Rule (CAIR) program in accordance with the state requirements of Rule \(62-204.800\) (27), F.A.C. Therefore, the applicant checked the \(\mathrm{SO}_{2}\) box on the CAIR program application. Please confirm that this was correct.

Response: These units are subject to the CAIR program. The permittec may want to consider opting into the Acid Rain program, which may be able to provide allowances. Please check with EPA's Clean Air Markets Division.
5. Section II, Condition 13: The Department notes that Rule 62-210.370, F.A.C. was revised in July of 2008 to change the submittal deadline of the Annual Operating Report from March \(1^{\text {st }}\) to April \(1^{\text {si }}\). The Department corrected this deadline in Condition 13 of Section II in the final permit.

\section*{CONCLUSION}

As noted above, only minor revisions were made to the draft permit. The final action of the Department is to issue the permit with the minor changes described above.


\title{
Florida Department of Environmental Protection
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\section*{PERMITTER:}

Lake Cogeneration L.P.
39001 Golden Gem Drive
Umatilla, Florida 32784

Final Permit No. 0694801-01 1-AV
Facility ID No. 0694801
SIC Nos. 49; 4931
Title V Air Operation Permit Revision

The purpose of this permit is to revise the Title V Air Operation Permit. The existing Lake Cogeneration Facility is located at 39001 Golden Gem Drive, Umatilla, Lake County. The map coordinates are: Zone I7, 434.0 km East and 3198.8 km North; and, Latitude: \(28^{\circ} 55^{\prime} 02^{\prime \prime}\) North and Longitude: \(81^{\circ} 40^{\prime} 37^{\prime \prime}\) West.

This Title V Air Operation Permit Revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. The above named permitter is hereby authorized to operate the facility shown on the application and approved drawings, plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Effective Date: 06/23/2009
Renewal Application Due Date: 05/20/2012
Expiration Date: 12/30/2012

\(\mathrm{JK} / \mathrm{tlv} / \mathrm{ttm}\)

\title{
V AIR OPERATION PERMIT
}

Final Permit No. 0694801-011-AV
\(2^{\text {nd }}\) Revision of Permit No. 0694801-007-AV

\section*{PERMITTEE}

Lake Cogeneration, Ltd.
Lake Cogeneration Facility
Facility ID No. 0694801
Lake County, Florida

\section*{PERMITTING AUTHORITY}

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation
2600 Blair Stone Road, Mail Station \#5505
Tallahassee, Florida 32399-2400
Telephone: 850/488-0114
Fax: 850/921-9533

\section*{COMPLIANCE AUTHORITY}

Florida Department of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803
Telephone: 407/894-7555
Fax: 407/897-5963

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\section*{PERMITTEE:}

\author{
Lake Cogeneration L.P. \\ 39001 Golden Gem Drive \\ Umatilla, Florida 32784 \\ Final Permit No. 0694801-011-AV \\ Facility ID No. 0694801 \\ SIC Nos. 49; 4931 \\ Title V Air Operation Permit Revision \\ The purpose of this permit is to revise the Title V Air Operation Permit. The existing Lake Cogeneration Facility is located at 39001 Golden Gem Drive, Umatilla, Lake County. The map coordinates are: Zone 17, 434.0 km East and 3198.8 km North; and, Latitude: \(28^{\circ} 55^{\prime} 02^{\prime \prime}\) North and Longitude: \(81^{\circ} 40^{\prime} 37^{\prime \prime}\) West. \\ This Title V Air Operation Permit Revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawings, plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.
}

Effective Date: 06/23/2009
Renewal Application Due Date: 05/20/2012
Expiration Date: 12/30/2012

Joseph Kahn, Director
Division of Air Resource Management

JK/tlv/ttm

\section*{SECTION I. FACILITY INFORMATION}

\section*{Subsection A. Facility Description.}

This facility includes two nominal 52.0 megawatt (MW) combined cycle combustion turbines with duct burners that exhaust through heat recovery steam generators (HRSG) which are used to power a nominal 26.5 MW steam turbine. Nitrogen oxides \(\left(\mathrm{NO}_{x}\right)\) emissions are controlled by using water injection. The facility also includes a fuel oil storage \(\operatorname{tank}\) ( 170,000 gallon).

Also included in this permit are miscellaneous insignificant emission units and/or activities.
Based on the Title V permit application received on August 12, 2008, this facility is not a major source of hazardous air pollutants (HAP).

\section*{Subsection B. Summary of Emissions Unit ID Nos. and Brief Descriptions.}
\begin{tabular}{|c|l|}
\hline ID No. & Brief Description \\
\hline 002 & Fuel Oil Tank \\
\hline 003 & Combined Cycle Combustion Turbine (CT)/Duct Burner \\
\hline 004 & Combined Cycle Combustion Turbine (CT)/Duct Burner \\
\hline
\end{tabular}

Please reference the Permit No., Facility ID No., and appropriate Emissions Units ID Nos. on all correspondence, test report submittals, applications, etc.

The "Permitting Notes" used throughout this permit are for informational purposes only and are not permit conditions.

\section*{SECTION II. FACILITY-WIDE CONDITIONS}

\section*{The following conditions apply facility-wide:}
1. Appendices: The following Appendices are attached as a part of this permit: Appendix A-1 (Abbreviations, Acronyms, Citations, and Identification Numbers), Appendix CM (CEMS Requirements), Appendix CS (Calibration Schedule), Appendix CT (NSPS Provisions), Appendix H-1 (Permit History/ID Number Changes), Appendix 1-1 (List of lnsignificant Emission Units and/or Activities), Appendix SS-1 (Stack Sampling Facilities) and Appendix TV-6 (Title V Conditions).
2. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.
[Rule 62-296.320(2), F.A.C.]

\section*{3. General Particulate Emission Limiting Standards. General Visible Emissions Standard.}

Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart ( 20 percent opacity). Environmental Protection Agency (EPA) Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.
[Rules 62-296.320(4)(b)1. \& 4., F.A.C.]

\section*{4. Prevention of Accidental Releases (Section 112(r) of CAA).}
a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

RMP Reporting Center
Post Office Box 1515
Lanham-Seabrook, MD 20703-1515
Telephone: 301/429-5018

\section*{and,}
b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.
[40 Code of Federal Regulations (CFR) 68]
5. Insignificant Emissions Units and/or Activities. Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit.
[Rules 62-213.440(1), 62-213.430(6) and 62-4.040(1)(b), F.A.C.]
6. General Pollutant Emission Limiting Standards. Volatile Organic Compounds Emissions or Organic Solvents Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.
[Rule 62-296.320(1)(a), F.A.C.]
7. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:
a. Application of asphalt, water, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities; maintenance of paved areas as needed;

\section*{SECTION II. FACILITY-WIDE CONDITIONS}
b. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate matter from becoming airborne;
c. Landscaping or planting of vegetation; regular mowing of grass and care of vegetation;
d. Limiting access to plant property by unnecessary vehicles;
e. Use of bagged chemical products in enclosed or semi-enclosed areas;
f. Storage of zero liquid discharge salt cake byproduct in covered enclosed containers; and
g. Other techniques, as necessary.
[Rule 62-296.320(4)(c)2., F.A.C.]
\(\{\) Permitting note: This condition implements the requirements of Rules 62-296.320(4)(c)l., 3., \& 4., F.A.C. (see Condition No. 57. of APPENDIX TV-6, TITLE V CONDITIONS) \}
8. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one.
[Rule 62-213.440, F.A.C.]
9. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3)(a)2., F.A.C., shall be submitted to the Department and EPA within 60 (sixty) days after the end of the calendar year using DEP Form No. 62-213.900(7), F.A.C.
[Rules 62-213.440(3) and 62-213.900, F.A.C.]
\(\{\) Permitting Note: This condition implements the requirements of Rules 62-213.440(3)(a)2. \& 3., F.A.C. (see Condition 51. of APPENDIX TV-6, T]TLE V CONDITIONS.) \}
10. The permittee shall submit all compliance related notifications and reports required of this permit to the Department's Central District office.

Department of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803
Telephone: 407/894-7555; Fax: 407/897-5963
11. Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency
Region 4
Air, Pesticides \& Toxics Management Division
Air and EPCRA Enforcement Branch
Air Enforcement Section
61 Forsyth Street
Atlanta, Georgia 30303-8960
Telephone: 404/562-9155; Fax: 404/562-9163
12. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule \(62-4.050(3)\), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter \(62-213\), F.A.C., shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon

\section*{SECTION II. FACILITY-WIDE CONDITIONS}
becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information.
[Rule 62-213.420(4), F.A.C.]
13. Annual Operating Report. A DEP Form No. 62-210.900(5), "Annual Operating Report for Air Pollutant Emitting Facility" including the Emissions Report, shall be completed for each calendar year on or before April \(1^{\text {st }}\) of the following year and submitted to the Department of Environmental Protection's Central District office:

Florida Department of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803
Telephone: 407/894-7555
\{Permitting Note: This condition implements the requirements of Rules 62-210.370(3) F.A.C. (see Condition 24. of APPENDIX TV-6, TITLE V CONDITIONS.) \}
14. Annual Emissions Fee. Each Title V source permitted to operate in Florida must pay between January 15 and March 1 of each year, upon written notice from the Department, an annual emissions fee in accordance with Rule 62-213.205, F.A.C., and the appropriate form and associated instructions.
\{Permitting Note: This condition implements the requirements of Rules 62-213.205 and 62-213.900(1), F.A.C. (see Condition 28. of APPENDIX TV-6, TITLE V CONDITIONS.)\}
15. Annual Emissions Fee. Any documentation of actual hours of operation, actual material or heat input, actual production amount, or actual emissions used to calculate the annual emissions fee shall be retained by the owner for a minimum of five (5) years and shall be made available to the Department upon request.
\{Permitting Note: This condition implements the requirements of Rule 62-213.205(1)(j), F.A.C. (see Condition 28 of APPENDIX TV-6, TITLE V CONDITIONS.) \}
16. Annual Emissions Fee. A completed DEP Form 62-213.900(1), F.A.C., "Major Air Pollution Source Annual Emissions Fee Form", must be submitted by the responsible official with the annual emissions fee.
\{Permitting Note: This condition implements the requirements of Rule 62-213.205(1)(k), F.A.C. (see Condition 28. of APPENDIX TV-6, TITLE V CONDITIONS.) \}
17. At least 225 days prior to the expiration date of this operation permit, the permittee shall submit to this office four copies of the air permit application, DEP Form No. 62-210.900(1).
[Rule 62-4.090(1), F.A.C.]
\{Permitting Note: This condition implements the requirements of Rules 62-213.420(1)(a)3., 62213.420(1)(b)1., 2., 3. \& 4., 62-213.430(3), F.A.C. and 40 CFR 70.7(f) (see Conditions 35. and 38. of APPENDIX TV-6, TITLE V CONDITIONS.) \}

\section*{SECTION III. SPECIFIC CONDITIONS FOR EMISSIONS UNITS Subsection A. Combined Cycle Units}

Subsection A. This section addresses the following emissions units.
\begin{tabular}{|c|l|}
\hline ID No. & Brief Description \\
\hline 003 & Combined Cycle Combustion Turbine (CT)/Duct Burner \\
\hline 004 & Combined Cycle Combustion Turbine (CT)/Duct Burner \\
\hline
\end{tabular}
\{Permitting note: These emission units are regulated under Standards of Performance for New Stationary Sources (NSPS) - 40 CFR 60, Subpart KKKK, Standards of Performance for Stationary Combustion Turbines, and Subpart A, General Provisions, adopted and incorporated by reference in Rule 62-204.800(8), F.A.C.; Rule 212.400 , F.A.C., Prevention of Significant Deterioration (PSD) with a Best Available Control Technology (BACT) Determination, dated November 20, 1991, as currently modified; and Clean Air Interstate Rule (CAIR) Chapter 62-213, F.A.C.\}

\section*{Essential Potential to Emit (PTE) Parameters}

\section*{A1. Capacity}

The maximum capacities are as follows:
a) Maximum distillate fuel oil consumption shall not exceed either of the following limitations: 2,921 gallons/hour/CT; 701,050 gallons/year/CT.
b) Maximum annual firing using distillate fuel oil shall not exceed an equivalent of 10 days ( 240 hours) per year at full load.
c) Maximum sulfur content in the oil shall not exceed 0.05 percent by weight. The maximum sulfur content of natural gas shall not exceed I grain/ 100 scf based on an annual average of pipeline vendor data. Pursuant NSPS Subpart KKKK, the maximum sulfur content of any fuel fired in the combustion turbine shall not exceed \(0.06 \mathrm{lb} \mathrm{SO}_{2} / \mathrm{MMBtu}\).
d) Maximum heat input based on the lower heating value (LHV) while burning natural gas, shall not exceed 450 million British thermal units (MMBtu)/hour/CT at \(51^{\circ} \mathrm{F}\) or \(429 \mathrm{MMBtu} /\) hour/CT when corrected to International Organization for Standardization (ISO) conditions. The maximum heat input, based on the LHV while burning distillate fuel oil, shall not exceed \(424 \mathrm{MMBtu} / \mathrm{hr} / \mathrm{CT}\) at \(51^{\circ} \mathrm{F}\) or \(406 \mathrm{MMBtu} / \mathrm{hr} / \mathrm{CT}\) when corrected to ISO conditions.
e) Duct firing shall be limited to natural gas firing only, with a maximum heat input of \(90 \mathrm{MMBtu} / \mathrm{hour}\) based on the higher heating value ( HHV ) of approximately \(1054.5 \mathrm{Btu} / \mathrm{ft}^{3}\).
f) Duct firing shall be limited to \(525,000 \mathrm{MMBtu} /\) year/HRSG-duct burner.
[Rule 62-210.200, (PTE), F.A.C., construction permit AC35-196459 and construction permit 0694801-010-AC (PSD-FL-176C)]

A2. Methods of Operation - Fuels. Each emission unit is permitted to use natural gas as the primary fuel and distillate oil as the emergency backup fuel.
[Rule 62-210.200, (PTE), F.A.C.; and construction permit AC35-196459]
A3. Hours of Operation. This emission unit is allowed to operate 8760 hours per year.
[Rule 62-210.200, (PTE), F.A.C.; and construction permit AC35-196459]
A4. Emissions Unit Operating Rate Limitation After Testing. See specific condition no. A26.
[Rule 62-297.310(2), F.A.C.]

\section*{SECTION III. SPECIFIC CONDITIONS FOR EMISSIONS UNITS Subsection A. Combined Cycle Units}

\section*{Emission Limitations and Standards}

A5. Visible emissions shall not exceed \(10 \%\) opacity.
[Construction permit AC35-196459]
A6. The maximum allowable emissions from these units shall not exceed the emissions limits specified in Table 1.
Table 1. Allowable Emissions Limits
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline \multirow{4}{*}{Pollutant} & \multirow{4}{*}{Source \({ }^{\text {a }}\)} & \multirow{4}{*}{Fuel \({ }^{\text {b }}\)} & \multicolumn{5}{|c|}{Allowable Emissions Limits} \\
\hline & & & \multirow{3}{*}{Limits \({ }^{\text {a }}\)} & \multicolumn{4}{|l|}{Maximum Allowable Emissions Rates \({ }^{\text {h }}\)} \\
\hline & & & & \multicolumn{2}{|l|}{@ \(59^{\circ} \mathrm{F}\)} & \multicolumn{2}{|l|}{(a) \(51^{\circ} \mathrm{F}^{\mathrm{e} . f}\)} \\
\hline & & & & lb/hour & TPY \({ }^{\text {e }}\) & 1b/hour \({ }^{\text {d.f }}\) & TPY \({ }^{\text {e }}\) \\
\hline \multirow{4}{*}{\(\mathrm{NO}_{\mathrm{x}}{ }^{\text {c }}\)} & CT & NG & BACT Limit:25 ppmvd at \(15 \% \mathrm{O}_{2}\) as determined by a 24 -hour CEMS block average & 82.7 & \multirow{4}{*}{393.6} & 85.5 & \multirow{4}{*}{404.7} \\
\hline & CT & DFO & BACT Limit: 42 ppmvd at \(15 \% \mathrm{O}_{2}\) as determined by a 24 -hour rolling CEMS average & 143.9 & & 148.3 & \\
\hline & DB & NG & BACT Limit: \(0.1 \mathrm{lb} / \mathrm{MMBtu}\) & 18.0 & & 18.0 & \\
\hline & CT\&DB & NG & BACT Limit: 25 ppmvd at \(15 \% \mathrm{O}_{2}\) as determined by a 24 -hour CEMS block average & 100.7 & & 103.5 & \\
\hline \multirow{4}{*}{CO} & CT & NG & BACT Limit: 28 ppmvd & 54.6 & \multirow{4}{*}{350.3} & 56.0 & \multirow{4}{*}{350.3} \\
\hline & CT & DFO & BACT Limit: 18 ppmvd & 33.0 & & 34.5 & \\
\hline & DB & NG & BACT Limit: \(0.2 \mathrm{lb} / \mathrm{MMBtu}\) & 36.0 & & 36.0 & \\
\hline & CT\&DB & NG & --- & 90.6 & & 92.0 & \\
\hline \multirow{4}{*}{PM/PM \({ }_{10}\)} & CT & NG & BACT Limit: \(0.0065 \mathrm{lb} / \mathrm{MMBtu}\) & 5.0 & \multirow{4}{*}{27.0} & 5.0 & \multirow{4}{*}{27.0} \\
\hline & CT & DFO & BACT Limit: \(0.026 \mathrm{lb} / \mathrm{MMBtu}\) & 20.0 . & & 20.0 & \\
\hline & DB & NG & BACT Limit: \(0.006 \mathrm{lb} / \mathrm{MMBtu}\) & 2.6 & & 2.6 & \\
\hline & CT\&DB & NG & --- & 7.6 & & 7.6 & \\
\hline \multirow[t]{2}{*}{\(\mathrm{SO}_{2}{ }^{\text {g }}\)} & CT\&DB & NG & Limit: 1 grain/ 100 scf of natural gas, annual average based on vendor data & --- & \multirow[t]{2}{*}{\(15.0{ }^{\text {g }}\)} & --- & \multirow[t]{2}{*}{\(15.8{ }^{\text {g }}\)} \\
\hline & CT & DFO & Limit: 0.05\% sulfur by weight & --- & & --- & \\
\hline \multirow{4}{*}{VOC} & CT & NG & Requested by Applicant to avoid PSD & 3.3 & \multirow{4}{*}{30.8} & 3.4 & \multirow{4}{*}{30.8} \\
\hline & CT & DFO & Requested by Applicant to avoid PSD & 8.3 & & 8.7 & \\
\hline & DB & NG & Requested by Applicant to avoid PSD & 5.4 & & 5.4 & \\
\hline & CT\&DB & NG & --- & 8.7 & & 8.8 & \\
\hline Sulfuric Acid Mist & CT & DFO & Estimate by Applicant to avoid PSD & -- & 0.80 & -- & 0.80 \\
\hline
\end{tabular}
a. \(\mathrm{CT}=2\) combustion turbines, \(\mathrm{DB}=2\) duct burners. The emissions limits apply to each unit and also apply when utilizing the SPRINT technology.
b. \(\mathrm{NG}=\) natural gas, \(\mathrm{DFO}=\) distillate fuel oil
c. \(\mathrm{NO}_{\mathrm{x}}\) limits for \(59^{\circ} \mathrm{F}\) are at \(60 \%\) relative humidity (ISO conditions). The CEMS-based BACT and NSPS

\section*{SECTION III. SPECIFIC CONDITIONS FOR EMISSIONS UNITS \\ Subsection A. Combined Cycle Units}
\(\mathrm{NO}_{\mathrm{x}}\) limits apply to each unit. The 24-hour block average for the BACT limit shall be determined from the valid CEMS operating data collected for each calendar day. Emissions from each combustion turbine and duct burner system are also subject to the NSPS Subpart KKKK provisions in 40 CFR 60. For these units, the \(\mathrm{NO}_{\mathrm{X}}\) standards based on a 30 -day rolling average of CEMS data are 42 ppmvd at \(15 \% \mathrm{O}_{2}\) when firing natural gas and 96 ppmvd at \(15 \% \mathrm{O}_{2}\) when firing distillate oil.
d. As specified by this permit, compliance with the Maximum Allowable Emission Limits shall be demonstrated for CT limits and CT\&DB limits based on data from stack tests or data from the annual RATA.
c. The Maximum Allowable TPY of emissions, based on a worst case scenario, are the sum of the CT emissions while firing NG for 355 days, the CT emissions while firing DFO for 10 days, and DB emissions at the maximum heat input for the previous combinations of CT firing. The DB will only fire NG and only while the CT is firing NG.
f. These are the Maximum Allowable Emission Limits that shall never be exceeded at any temperature and/or operating configuration.
g. The maximum sulfur content of distillate oil shall not exceed \(0.05 \%\) by weight. The maximum sulfur content of natural gas shall not exceed I grain/ 100 scf based on an annual average of pipeline vendor data. Pursuant NSPS Subpart KKKK provisions in 40 CFR 60 , the maximum sulfur content of any fuel fired in the combustion turbine shall not exceed \(0.06 \mathrm{lb} \mathrm{SO}_{2} / \mathrm{MMBtu}\). This data shall be submitted with the annual operating report.
h. The "maximum allowable emissions rates" are the total emissions from Units 1 and 2.

Note: All temperatures cited in this table refer to turbine inlet temperatures.
[BACT dated November 20, 1991, construction permit AC35-196459 and construction permit 0694801-010-AC (PSD-FL-176C)]

\section*{Excess Emissions}
\{Permitting Note: The following excess emissions rules apply only to the SIP-based standards and do not apply to the federal NSPS standards.\}

A7. Excess emissions from this emissions unit resulting from startup, shutdown or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.
[Rule 62-210.700(1), F.A.C.]
A8. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.
[Rule 62-210.700(4), F.A.C.]
A9. In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.
[Rule 62-210.700(6), F.A.C.]

\section*{SECTION III. SPECIFIC CONDITIONS FOR EMISSIONS UNITS Subsection A. Combined Cycle Units}

\section*{Monitoring of Operations}

A10. \(\mathrm{NO}_{\mathrm{x}}\) monitoring:
a) The owner or operator shall install, certify, maintain, and operate a continuous emission monitoring system (CEMS) consisting of a \(\mathrm{NO}_{\mathrm{x}}\) monitor and a diluent gas monitor (oxygen or carbon dioxide) to determine the hourly \(\mathrm{NO}_{\mathrm{x}}\) emission rate in parts per million volume dry (ppmvd) corrected \(15 \%\) oxygen and demonstrate compliance with the standards of this permit. See Appendix CM for CEMS requirements.
b) The owner or operator shall install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the combustion turbine. This monitoring data shall be used to demonstrate compliance during periods when the CEMS data is not available or not valid. This monitoring shall be conducted consistent with the NSPS KKKK provisions in Appendix CT of this permit.
[Rules 62-4.070(3) and 62-213.440(1)(b), F.A.C.]
A11. The permittee shall monitor sulfur content of distillate oil consistent with the provisions of NSPS Subpart KKKK in 40 CFR 60. The permittee shall obtain records from the pipeline vendor sufficient to demonstrate compliance with the fuel sulfur limit on an annual average basis.

A12. Determination of Process Variables.
a) Required Equipment.

The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
b) Accuracy of Equipment.

Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within \(10 \%\) of its true value.
[Rule 62-297.310(5), F.A.C.]

\section*{Test Methods and Procedures}

A13. Visible Emissions (VE). The test method for VE shall be EPA Method 9, incorporated by reference in Chapter 62-297, F.A.C.
[Rules 62-213.440, 62-297.310, and 62-297.401, F.A.C.; and construction permit AC35-196459]
A14. Particulate matter (PM). The test methods for PM emissions shall be EPA Method 5 or 17, incorporated by reference in Chapter 62-297, F.A.C. A visible emission test using EPA Method 9 will be acceptable and stack testing for PM is waived if the opacity is less than \(10 \%\).
[Rules 62-213.440, 62-297.310, and 62-297.401, F.A.C.; and construction permit AC35-196459]

\section*{SECTION III. SPECIFIC CONDITIONS FOR EMISSIONS UNITS Subsection A. Combined Cycle Units}

A15. Volatile organic compound (VOC). Compliance with the VOC standard shall be EPA Method 25A and shall be assumed provided the carbon monoxide (CO) allowable emission rate is achieved. [Rules 62-213.440, 62-297.310, and 62-297.401, F.A.C.; and construction permit AC35-196459]

A16. Carbon monoxide (CO). Compliance with the CO standard shall be demonstrated using EPA Method 10 . [Rules 62-213.440, 62-297.310, and 62-297.401, F.A.C.; and construction permit AC35-196459]

\section*{A17. Additional Test Requirements}
a) \(\mathrm{NO}_{\mathrm{x}}-\) Method 7 E or 20 when tests are required.
b) CO - Method 10 -

Test will be three test runs, with each test run to be a minimum of one hour.
c) Fuel Analysis -

Fuel Analysis both low and high. Btu input for CT calculated using lower heating value. Btu input for DB calculated using higher heating value.
d) \(\mathrm{CO}_{2}\) and \(\mathrm{O}_{2}\) -

Method 3 to be used to measure oxygen for all test conditions.
[Operating permit AO35-248140]
A18. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.
[Rule 62-297.310(1), F.A.C.]

\section*{A19. Operating Rate During Testing.}

Compliance testing of emissions shall be conducted with the combustion turbine operating at capacity. Capacity is defined as 90-100 percent of the manufacturer's rated heat input achievable for the average compressor inlet conditions during the test. If it is impracticable to test at capacity, then the combustion turbines may be tested at less than capacity. In such cases, the entire curve or table shall be adjusted downwards by the increment which reflects the reduced rate of operation at which compliance was demonstrated. This increment is equal to the difference between the manufacturer's heat input or fuel usage value and 110 percent of the value reached during the test. In this case, the data and calculations necessary to demonstrate the heat input or fuel usage rate correction shall be submitted to the Department with the compliance test report. Procedures for these tests shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapters 62-204 and 62-297, F.A.C.

\author{
Lake Cogeneration L.P. \\ Lake Cogeneration Facility
}

Final Permit No. 0694801-011-AV
Facility ID No. 0694801

\section*{SECTION III. SPECIFIC CONDITIONS FOR EMISSIONS UNITS}

\section*{Subsection A. Combined Cycle Units}
[Rule 62-297.310(2), F.A.C.]
A20. Applicable Test Procedures.
a) Required Sampling Time.
1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
a. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.
b. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a FINAL surrogate standard and an existing mass emission limiting standard.
c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.
b) Minimum Sample Volume. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.
c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.
d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in TABLE 297.310-1, CALIBRATION SCHEDULE (attached).
e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.
[Rule 62-297.310(4), F.A.C.]
A21. The permittee shall comply with the requirements contained in APPENDIX SS-1, Stack Sampling Facilities, attached to this permit.
[Rule 62-297.310(6), F.A.C.]
A22. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.
a) General Compliance Testing.

\section*{SECTION III. SPECIFIC CONDITIONS FOR EMISSIONS UNITS}

\section*{Subsection A. Combined Cycle Units}
3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
a. Did not operate; or
b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.
4. During each federal fiscal year (October 1 -- September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
a. Visible emissions, if there is an applicable standard;
b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
c. Each NESHAP pollutant, if there is an applicable emission standard.
5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
10. An annual compliance test conducted for visible emissions shall not be required for units exempted from permitting at Rule 62-210.300(3)(a), F.A.C., or units permitted under the General Permit provisions at Rule 62-210.300(4), F.A.C.
b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.
c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a baghouse or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62297.310(7)(b), F.A.C., shall apply.
[Rule 62-297.310(7), F.A.C.]

\section*{SECTION 1II. SPECIFIC CONDITIONS FOR EMISSIONS UNITS Subsection A. Combined Cycle Units}

A23. Frequency of Compliance Tests. General Compliance Testing. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.
[Rule 62-297.310(7)(a)8., F.A.C.]

A24. Frequency of Compliance Tests. Compliance testing for visible emissions, VOC, carbon dioxide \(\left(\mathrm{CO}_{2}\right)\), \(\mathrm{O}_{2}, \mathrm{PM}, \mathrm{SO}_{2}, \mathrm{NO}_{\mathrm{x}}\), and CO emissions from each unit is required at yearly intervals on or within 60 days prior to the date of July 15 .
[Rules 62-297.310(7)(a)3., 4., and 5., F.A.C.; operating permit AO35-248140; and construction permit AC35196459]

A25. At least 15 days prior to the date on which each formal compliance test is due to begin, the permittee shall provide written notification of the test to the air compliance section of this office. The notification must include the following information: the date, time and location of each test; the name and telephone number of the facility's contact person who will be responsible for coordinating the test; and the name, company, and telephone number of the person conducting the test.
[Rule 62-297.310(7)(a)9, F.A.C.]

\section*{A26. Test Reports.}
a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:
1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.

\section*{SECTION III. SPECIFIC CONDITIONS FOR EMISSIONS UNITS Subsection A. Combined Cycle Units}
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.
[Rule 62-297.310(8), F.A.C.]

\section*{Record Keeping and Reporting Requirements}

A27. Malfunction Reporting. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.
[Rule 62-210.700(6), F.A.C.]
A28. A DEP Form No. 62-2 10.900(5), "Annual Operating Report for Air Pollutant Emitting Facility" including the Emissions Report, shall be completed for each calendar year on or before March 1 of the following year and submitted to the air compliance section of this office.
[Rule 62-210.370(3), F.A.C.]
A29. In order to demonstrate compliance with conditions no. A1 and A2, the permittee shall maintain a log at the facility. The log at a minimum shall contain the following:

Monthly
a) month
b) consecutive 12 month total of: - fuel usage and heat input rates
- fuel sulfur content by weight
[Rules 62-4.070(3), and 62-213.440(1)(b)2., F.A.C.]
A30. At least 225 days prior to the expiration date of this operation permit, the permittee shall submit to this office four air permit applications, DEP Form No. 62-210.900(1).
[Rule 62-4.090(1), F.A.C.]
Lake Cogeneration L.P.Final Permit No. 0694801-011-AV
Lake Cogeneration FacilityFacility ID No. 0694801
SECTION III. SPECIFIC CONDITIONS FOR EMISSIONS UNITS
Subsection A. Combined Cycle Units
NSPS Subparts A (General Provisions) and KKKK (Stationary Combustion Turbines)
A31. Combined Cycle Combustion Turbines: Each combined cycle combustion turbine and duct bumersystem is subject to the applicable requirements in NSPS Subparts A (General Provisions) and KKKK(Stationary Combustion Turbines) of 40 CFR 60. See Appendix CT.

\section*{SECTION III. SPECIFIC CONDITIONS FOR EMISSIONS UNITS Subsection B. Fuel Tank}

This subsection addresses the emissions unit.
\begin{tabular}{|c|l|}
\hline ID No. & Brief Description \\
\hline 002 & Fuel Oil Tank (170,000 gallon) \\
\hline
\end{tabular}
\{Permitting Note: Based on changes to NSPS Subpart Kb made on October 15, 2003, NSPS Subpart Kb does not apply to storage vessels with a capacity greater than or equal to \(151 \mathrm{~m}^{3}\) ( 39,890 gallons) storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals ( 0.51 psia ). The tank stores distillate oil, which has a vapor pressure of approximately 0.009 psia at \(70^{\circ} \mathrm{F}\). This is well below the vapor pressure specified in Subpart Kb for this size tank and shows that distillate oil is not considered to be volatile. Therefore, the tank is considered an unregulated emissions unit.\}

\section*{Clean Air Interstate Rule (CAIR)}

Operated by: Lake Cogen, Ltd.
Plant: Lake Cogeneration Facility
ORIS Code: 54423
The emissions units below are regulated under the Clean Air Interstate Rule.
\begin{tabular}{|c|c|l|}
\hline ID No. & EPA Unit ID No. & \multicolumn{1}{c|}{ Brief Description } \\
\hline 003 & 3 & Combined Cycle Combustion Turbine (CT)/Duct Burner \\
\hline 004 & 4 & Combined Cycle Combustion Turbine (CT)/Duct Burner \\
\hline
\end{tabular}
1. Clean Air Interstate Rule Application. The Clean Air Interstate Rule Part Form submitted for this facility is a part of this permit. The owners and operators of these CAIR units as identified in this form must comply with the standard requirements and special provisions set forth in the CAIR Part Form (DEP Form No. 62\(210.900(1)(b))\) dated March 16, 2008, which is attached at the end of this section. [Chapter 62-213, F.A.C. and Rule 62-210.200, F.A.C.]

Lake Cogeneration L.P.
Lake Cogeneration Facility

Final Permit No. 0694801-011-AV
Facility ID No. 0694801

\section*{Clean Air Interstate Rule (CAIR) Part}

For more information, see instructions and refer to 40 CFR 96.121, \(96.122,96.221\), \(96.222,96.321\) and 96.322 ; and Rule 62-296.470. F.A.C.
This submission ls: \(\square\) New \(\square\) Revised \(\square\) Renewal
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \begin{tabular}{l}
STEP 1 \\
Identify the source by plant name and ORIS or ELA plant code
\end{tabular} & \multicolumn{4}{|l|}{\begin{tabular}{l}
Plant Nama: \\
Lake Cogen, Ltd.
\end{tabular}} & State: Florida & ORIS or EIA Plant Code:
\[
54423
\] \\
\hline STEP 2 & a & \(b\) & c & d & e & \(f\) \\
\hline \multirow[t]{3}{*}{\begin{tabular}{l}
In column "a" enter the unit ID\# for every CAR unit at the CAIR source. \\
In columns " \(b\), " " \(c\)," and "d," indicate to which CANR program(s) each unit is subject by placing an " \(X\) " in tha column(8).
\end{tabular}} & Unlt ID\# & \begin{tabular}{l} 
Unit will \\
hold nitfogen \\
oxddes ( \(\mathrm{NO} \mathrm{O}_{\mathrm{x}}\) ) \\
allowwnces \\
in acoordance \\
with 40 CFR \\
96.106(c) \\
\hline
\end{tabular} &  & \begin{tabular}{l} 
Unit will \\
hold NOx Ozone \\
Season \\
allowances \\
in accordance \\
with 40 CFR \\
\(96.306(c)(1)\) \\
\hline
\end{tabular} & \begin{tabular}{l}
New Units \\
Expected Commence Commercial Operation Date
\end{tabular} & \begin{tabular}{l}
New Units \\
Expected Certification Deadline
\end{tabular} \\
\hline & 003 & X & X & X & & \\
\hline & 004 & X & X & X & & \\
\hline \multirow[t]{16}{*}{For new unlts, enter the requested information in columns " \(e\) " and "f.} & & & & & & \\
\hline & & & & & & \\
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\hline
\end{tabular}

Lake Cogen, Ltd. (54423)
Plan Name (trom Step i)

Read the
standard requirements.

CAR NOx ANNUAL TRADING PROGRAM

\section*{CAIR Part Requirements.}
(1) The CAIR designated representative of each CAIR NO \(\mathrm{O}_{x}\) source and each CAIR \(N O_{x}\) unit at the source shall:
(I) Submit to the DEP a complete and certified CAIR Part form under 40 CFR 96.122 and Rute \(82-296.470\), F.A.C., In accordance with the deadlines specified in Rule \(62-213.420\). F.A.C.; and
(if) Reserved:(ii) Reserved):
(2) The owners and operators of each CAIR NO \(\mathrm{NO}_{x}\) source and each CAIR \(\mathrm{NO}_{x}\) unit at the source shall have a CAIR Part inclucded in the Tite \(V\) operating permit lssued by the DEP under 40 CFR Part 86, Subpart CC, and operate the source and the unit In complance with such CAIR Part

\section*{Monitoring, Reporting, and Recordkeeping Requirements.}
(1) The owners and operators, and the CAIR destgnated representative, of each CAIR NOx source and each CAIR NOx unit at the source shall comply whth the monitoring, reporting, and recordkeeping requiremente of 40 CFR Part 96, Subpart HH, and Rule 62-296.470, F.A.C. (2) The emlasions measurements recorded and reported In accordance with 40 CFR Part 96 , Subpert HH, shall be used to determine compllance by each CAIR NO \(\mathrm{N}_{x}\) source with the following CAIR NOx Emissions Requirements.

\section*{\(\mathrm{NO}_{x}\) Emission Requirements.}
(1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO \(\quad\) source and each CAIR NO unit at the source shall hold, in the source's compliance account. CAIR NOX allowances avaliable for compliance deductions for the control period under 40 CFR 96.154 (a) in an amount not less than the tons of total NO \(\mathrm{N}_{\mathrm{x}}\) emisstons for the control period from all CAIR NO x Units at the source, as determined in accordance with 40 CFR Part 96, Subpart HH.
(2) A CAIR NO \(\mathrm{N}_{\mathrm{x}}\) unit shall be subject to the requlrements under paragraph (1) of the NOx Requirements starting on the later of January 1, 2009. or tha deedline for meeting the unit's monitor certification requirements under 40 CFR 98.170 (b)(1) or (2) and for each controd perlod thereafter. (3) A CAIR NO \(x\) allowance shall not be deducted, for compllance with the requirements under paragraph (1) of the NOx Requirements, for a control period in a calendar year before the year for which the CAIR NOx allowarce was allocated.
(4) CAIR NOx allowances shail be held in, deducted from, or transferred into or among CAIR NO Allowarcee Tracking System accounts in accordance with 40 CFR Part 96, Subparts FF and GG.
(5) A CAIR NOx allowance is a limitted authortzation to emit one ton of NOx in accordance with tha CAIR NO Annusal Trading Program. No provision of the CAIR NOx Annural Trading Program, the CAIR Part, or an exemption under 40 CFR 96.105 and no provision of law shall be construed to limit the authorlyy of the state or the United Statas to terminate or limit such authorization.
(6) A CAIR NOX allowance does not consttute a property right.
(7) Upon recordation by the Admindstrator under 40 CFR Part 86, Subpart EE, FF, or GG, every allocatton, transfer, or deduction of a CAIR NOx allowance to or from a CAIR NOx unt's complance accoum is incorporated automatically in any CAIR Part of the source that includes tha CAIR \(\mathrm{NO}_{x}\) undt

\section*{Excess Emissions Requirements.}

If a CAIR NO \({ }_{x}\) source emits NOx during any control period in excess of the CARR NO \(\mathrm{N}_{\mathrm{x}}\) emissions limitation, then:
(1) The owners and operators of the source and each CAIR NOx unit at the source shall surrender the CAIR NO \({ }_{x}\) allowances requlred for deduction under 40 CFR 96.154 (d) (1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same tolations, under the Clean Air Act or applicable state law; and
(2) Each ton of such excess emisstons and each day of such control period shall constitute a separate volation of 40 CFR Part 96, Subpart AA. the Clean AIr Act, and applicable state law.

\section*{Recordkeeping and Reporting Requirements.}
(1) Unless otherwise provided, the owners and operators of the CAIR NOx source and each CAIR NOX Lnit at the source shall keep on site at the source each of the following documents for a pertod of 5 years from the date the document is created. This perlod may be extended for cause, at any time before the end of 5 years, In witing by the DEP or the Administrator.
(i) The centicata of representation under 40 CFR 68.113 for the CAIR destgnatad repressentative for the source and each CAIR NOX unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided thet the certificate and documents shall be retalned on stte at the source beyond such 5 -year period until such documents are superseded because of the submiscion of a new certificate of representation under 40 CFR 86.113 changing the CAIR designated representative.
(i) All emissions montroring Information, In accordance with 40 CFR Part 96, Subpart HH, of this part, provided that to the extent that 40 CFR Part 96. Subpart HH, provides for a 3-year pertod for recordkeeplng, the 3 -year period shall apply.
(ill) Copies of all reports, compllance cortfications, and other submissions and all records made or required under the CAIR NOx Anmual Trading Program.
(iv) Coples of all documents used to complete a CAIR Part form and any other aubmisston under the CAIR NO Anrual Trading Program or to (iv) Coples of all documents used to complete a CAIR Part form and any other aubmiss
demonstrate complance with the requirements of the CAIR NOx Arnual Trading Program.
(2) The CAIR deslgnated representative of a CAIR NOx source and each CAIR NO \(\mathrm{X}_{x}\) unlt, at the source shall submit the reports required under the CAIR NOx Arnual Trading Program, Including those under 40 CFR Part 96. Subpart HH.

Liability.
(1) Each CAIR NOx source and each CAIR NO \(\mathrm{N}_{x}\) unt shall meet the requirements of the CAIR NO Anmual Trading Program. (2) Any provision of the CAIR NO, Annual Trading Program that applles to a CAIR NOX source or the CAIR designated representative of a CAIR \(\mathrm{NO}_{x}\) source shall also apply to the owners and operators of such source and of the CAIR NOx units at the source. (3) Any provislon of the CAIR NOx Annaral Trading Program that epplies to a CAIR NOx unit or the CAR designated representative of a CAIR \(\mathrm{NO}_{x}\) unit shall also apply to the owners and operators of such unit.

\section*{Effect on Other Authorities.}

No proviston of the CAIR NOx Annual Trading Program, a CAIR Part, or an exemption under 40 CFR 96.105 shall be construed as exempting or excluding the owners and operators, and the CAIR designated reprasentative, of a CAIR NOx source or CAIR NO other provision of the applicable, approved State Implementation Plan, a federally enforceable permit, or the Clean Alt Act

\section*{CAIR SO \(\mathbf{2}_{2}\) TRADING PROGRAM}

\section*{CAIR Part Requirements.}
(1) The CAIR designated representative of each CAIR \(\mathrm{SO}_{2}\) source and each CAIR \(\mathrm{SO}_{2}\) unit at the source shall: (I) Submit to the DEP a complete and certifled CAIR Part form under 40 CFR 90.222 and Rule 62-296.470, F.A.C., in accordance with the deadlines specified in Rule 62-213.420, F.A.C.; and (ii) [Resarver];
(2) The owners and operators of each CAN \(\mathrm{SO}_{2}\) sourte and each \(\mathrm{CAIR} \mathrm{SO}_{2}\) unlt at the source shall have a CAIR Part Included in the Titte \(V\) operating permit lssued by the DEP under 40 CFR Part 96, Subpart CCC, for the source and operate the source and each CAIR unlt in compliance with such CAIR Pert.

\section*{Monitoring, Reporting, and Recordkeeping Requirements.}
(1) The owners and operators, and the CAIR designated representative, of each CAIR \(\mathrm{SO}_{2}\) source and each \(\mathrm{SO}_{2}\) CAIR unlt at the source shall comply with the monitoring, reporting, and recordikeeplng requirements of 40 CFR Parl 96 , Subpart HHH, and Rule 62-296.470, F.A.C. (2) The emisslons measurements recorded and reported to accordance with 40 CFR Part 98, Subpart HHH, shall be used to determine complance by aach CAIR \(\mathrm{SO}_{2}\) source with the following CAIR \(\mathrm{SO}_{2}\) Emission Requirements.

\section*{\(\mathrm{SO}_{2}\) Emission Requirements.}
(1) As of the allowance transfer deadiline for a control pertod, the owners and operators of each CAIR SO \({ }_{2}\) source and each CAIR SO2 unit at the source shall hold, in the source's complance account, a tonnaga equivalant in CAIR \(\mathrm{SO}_{2}\) allowances avaltable for compliance deductions for the control pertod, as determined in accordance with 40 CFR 98.254 (a) and (b), not less than the tons of total suffur diaxde emiasions for the the control pertod, as determined in accordanca whth 40 CFR 98.254 (a) and (b), not tase than the tons of total suntur dion
(2) A CAIR SO \({ }_{2}\) unit shall be sudbject to the requirements under paragraph (1) of the Sulfur Dtoxde Emission Requilrements starting on the later (2) A CAIR SO2 unit shall be sudject to the requirerments under paragraph (1) of the Sultur Dtoxde Emission Requirements starting on the later
of danuary 1, 2010 or the deadline for meeting the unit's monitor certification requirements under \(40 \mathrm{CFR} 96.270(\mathrm{bX1}\) ) or (2) and for each control of Januery 1, 2010
perlod thereatter.
(3) A CAR SO
a
(3) A CARR \(\mathrm{SO}_{2}\) allowance shall not be deducted, fox compliance with the requirements under paragraph (1) of the \(\mathrm{SO}_{2}\) Emission Requiraments, for a control period in a calendar year before the year for which the CAIR \(\mathrm{SO}_{2}\) allowance was allocated.
(4) CAIR \(\mathrm{SO}_{2}\) allowances shall be held in, deducted from, or transferred into or aming CAIR \(\mathrm{SO}_{2}\) Allowance Tracking System accoumts in accordance with 40 CFR Part 96, Subparts FFF and GGG.
(5) A CAIR \(\mathrm{SO}_{2}\) allowance is a limfted authortration to emilt sulfur dioxdde in accondance with the CANR \(\mathrm{SO}_{2}\) Tradirg Program. No provision of the CAIR \(\mathrm{SO}_{2}\) Trading Program, the CAIR Part, or an exemption under 40 CFR 96.205 and no provision of law shall be construed to limit the authority of the state or the United States to terminate or limit such authorization.
(6) A CAIR \(\mathrm{SO}_{2}\) allowance does not constituta a property right.
(7) Upon recordation by the Administrator under 40 CFR Part 96 , Subpart FFF of GGG, every aliocation, transter, of deduction of a CAIR SO 2 allowance to or from a CAIR \(\mathrm{SO}_{2}\) unll's compliance account is inconporated autometically in anty CAIR Part of the source that includes the CAIR \(\mathrm{SO}_{2}\) unit.

\section*{Excess Emissions Requirements.}

I a CAIR \(\mathrm{SO}_{2}\) source emits \(\mathrm{SO}_{2}\) during any control period In excess of the CAIR \(\mathrm{SO}_{2}\) emissions Ilmitation, then:
(1) The owners and operators of the source and each CAIR \(\mathrm{SO}_{2}\) unt at the source shall surrender the CAIR SO \(\mathrm{SO}_{2}\) allowances required for deduction under 40 CFR 98.254 (d) 1) and pay any fine, pemalty, or assessment or comply with any other remedy imposed, for the same deduction under 40 CFR 98 . 254 (d) 1) and pay any fine, penatty,
volations, under the Clean Ar Act or applicabte state law, and (2) Each ton of such excess emlssions and
the Clean Alr Act, and applicable state law.

\author{
Lake Cogen, Ltd. (54423)
}

\section*{Recordkeeping and Reporting Requlrements.}

STEP 3,
Continued
(1) Unless otherwise provided, the owners and operators of the CAIR \(\mathrm{SO}_{2}\) source and each CAIR \(\mathrm{SO}_{2}\) unlt at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, In witung by the Dopariment or the Administrator.
(i) The certificate of represemtation under 40 CFR 96.213 for the CAIR designated representrative for the source and each CAIR SO \(\mathrm{O}_{2}\) unlt at the source and all documents that demonstrate the truth of the statements in the certficate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5 -year perlod until such documents are superseded because of the submission of \(a\) now cartificate of representation under 40 CFR 96.213 changing the CAIR deskgnatad representative.
(ili) All emissions monitoring information, In accordance with 40 CFR Part 96, Sutpast HHH, of this part, provided that to the extent that 40 CFR Part 96, Subpart HHH, provides for a-year period for recordkeeptng, the 3 -year period shall apply.
(ili) Coples of all reports, compliance certifications, and other submisslons and all records made or required under the CAIR SO2 Trading Program.
(iv) Coples of all documents used to complete a CAIR Part form and ary other submission under the CAIR \(\mathrm{SO}_{2}\) Trading Program or to demonstrate compliance with the requirementis of the CAIR \(\mathrm{SO}_{2}\) Trading Program. (2) The CAIR designated representative of a CAIR \(\mathrm{SO}_{2}\) source and each \(\mathrm{CAIR} \mathrm{SO}_{2}\) unit at the source shall submilt the reports requited under the


\section*{Liability.}
(1) Each CAIR \(\mathrm{SO}_{2}\) source and each \(\mathrm{CAIR}^{2} \mathrm{SO}_{2}\) unlt shall meet the requirements of the CAIR \(\mathrm{SO}_{2}\) Treding Program.
(2) Any provision of the CAIR \(\mathrm{SO}_{2}\) Trading Program thet applies to a CAIR \(\mathrm{SO}_{2}\) source or the CAIR designated representative of a CAIR \(\mathrm{SO}_{2}\) source shall also appty to the ouners and operators of such source and of the CAIR \(\mathrm{SO}_{2}\) unlts at the sounce. (3) Any provision of the CAIR SO \({ }_{2}\) Trading Program that applies to a \(\mathrm{CAIR}_{2} \mathrm{SO}_{2}\) unit or the CAIR designated representative of a CAIR \(\mathrm{SO}_{2}\) unlt shall aso apply to the owners and operators of such unit.

\section*{Effect on Other Authorities.}

No provtsion of the CAIR SO2 Trading Program, a CAIR Part, or an exemption under 40 CFR 96.205 shall be construed as exempting or exctuding the owners and operators, and the CAIR destgnated repressentative, of a CAIR SO \({ }_{2}\) source or CAIR SO 2 undt from complance with any other provision of the applicable, approved Scate implementation Plan, a federally enforceable permit, of the Clean Air Act.

\section*{CAIR NO OZONE SEASON TRADING PROGRAM}

\section*{CAIR Part Requirements.}
(1) The CAIR designated representative of each CAIR NO Ozone Season source and each CAIR NO Ozone Season unt at the source shall: (i) Submit to the DEP a complete and certified CAIR Part form under 40 CFR 96.322 and Rule 62-296.470, FA.C., in accordance with the deadinnes spectived in Rule 62-213.420, F.A.C.; and (il) [Ressivec]:
(2) The ownera and operators of each CAIR NO O Ozone Season source required to have a Tile V operating permit or air construction permit. and each CAIR NOx Ozone Season unit required to have a Title V operating permit or air constuction permil at tha source shalli have a CAIR Pert Included in the Title V operating permit or air constiuction permit kssued by the DEP under 40 CFR Part 96 . Subpart CCCC, for the scurce and operate the source and the unit in compllance with such CAIR Part.
Monitoring, Reporting, and Recordkeeping Requirements.
(1) The owners and operators, and the CAIR designated representative, of exch CAIR NOX Ozone Season source and each CAIR NO, Ozone Season urit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 86, Subpart HHHH, and Rule 62-290.470, FA.C.
(2) The emissions measurements recorded and reported In accordance with 40 CFR Part 96, Subpart HHHH, shall be used to determine compllance by each CAIR NOx Ozone Season sounce whth the following CAIR NOx Ozone Season Emisslons Requirements.

\section*{\(\mathrm{NO}_{\mathrm{x}}\) Ozone Season Emission Requirements.}
(1) As of the allowance transfer deadiline for a control period, tha owners and operators of each CAIR NO Ozone Season source and each CAIR NOx Ozone Season unt at the source shall hotd, In the source's compllance accounti. CAIR NOx Ozone Season allowancess avallable for compllance deduetions for the control period under 40 CFR \(86.364(a)\) in an amoumt not less than the tons of tofal NOX emissions for the control perlod from all CAIR NOx Ozene Season unlts at the source, as determined in accordance with 40 CFR Part 96, Subpart HHHH.
(2) A CAIR NOx Ozone Season unit shall be subject to the requirements under paragraph (1) of the NO, Ozone Season Embsion Requirements starting on the later of May 1,2009 or the deadlins for meeting the unit's monitor certification requirements under 40 CFR 96.370 (b)(1), (2), or (3) and for each controf period thereatter.
(3) A CAIR NOX Ozona Season alliwance shall not be deducted, for compliance with the requrements under paragraph (1) of the \(\mathrm{NO}_{\mathrm{x}}\) Ozone Season Emlssion Requirements, for a controd period in a calendar year before the year for wtich the CAIR NOx Ozone Sesson allowance was allocated.
(4) CAIR NO, Ozone Season allowances shati be held in, deducted from, or transferred into or among CAlR NOx Ozone Season Allowance Tracking System accounts in accordance with 40 CFR Part 96, Subparts FFFF and GGGG.
(5) A CAIR NOx Owone Season allowance is a limited authorization to emt one ton of NOx in accordance with the CAIR NOx Ozone Season Trading Program. No proviston of the CAIR NO Ozone Season Trading Program, the CAIR Part, or an exemption under 40 CFR 96.305 and no provision of law shall be construed to limit the authority of the state or the United States to terminate or Ilmil such suithorization.
(6) A CAIR NOx Ozone Season allowance does not constitute a property ight.
(7) Upon recordation by the Administrator under 40 CFR Part 86, Subpart EEEE, FFFF or GGGG, every allocation, transfer, or deduction of a CAIR NOx Ozone Season allowance to or from a CAIR NOx Ozone Season unit's compliance accoum is incorporated autiomatieally in any CAIR Part of the source that ineludes the CAIR NOx Ozone Season unit

\section*{Excess Emissions Reguirements.}

STEP 3, Contlinued

STEP 4 Certification (for designated representative or alternate designated representative only)
\begin{tabular}{|c|c|c|}
\hline \multirow[t]{5}{*}{Read the certification statement; provide name, title, owner company name, phone, and e-mall address; sign, and date.} & \multicolumn{2}{|l|}{I am authorized to make this submission on behalf of the owners and operators of the CAIR source or CAIR unlts for which the submission is made. I certity under penatty of law that I have personally examined, and am familiar with, the statements and information submilted In this document and aill ts attachments. Based on my inqulry of those Indilyiduals with primary responsibility for obtaining the lnformation, I certify that the statements and information are to the bast of my knowiedge and bellef tue, accurate, and complete. I am aware that there are significant penalties for subtmitting false statements and information or omiting requffed statements and infombation, including the possiblitity of fine or imprisonmem.} \\
\hline & Name Thomas Grace & Tite Mgr., E, H \& S \\
\hline & \multicolumn{2}{|l|}{Company Owner Name Lake Cogen, Ltd.} \\
\hline & Phone 917 472-4583 & E-mall Address torace@caithnessenergy.com \\
\hline &  & Date 05/22/08 \\
\hline
\end{tabular}

\section*{APPENDICES}

\section*{Contents}

Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers
Appendix CM. CEMS Requirements
Appendix CS. Calibration Schedule
Appendix CT. NSPS Provisions
Appendix H-1, Permit History/ID Number Changes
Appendix I-1, List of lnsignificant Emission Units and/or Activities
Appendix SS-1, Stack Sampling Facilities
Appendix TV-6, Title V Conditions

\section*{APPENDIX A-1}

\section*{Citation Formats and Glossary of Common Terms}

\section*{CITATION FORMATS}

The following illustrate the formats used in the permit to identify applicable requirements from permits and regulations.

\section*{Old Permit Numbers}

Example: Permit No. AC50-123456 or Permit No. AO50-123456
Where: "AC" identifies the permit as an Air Construction Permit
"AO" identifies the permit as an Air Operation Permit
" 123456 " identifies the specific permit project number

\section*{New Permit Numbers}

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV
Where: " 099 " represents the specific county ID number in which the project is located
" 2222 " represents the specific facility ID number for that county
" 001 "identifies the specific permit project number
"AC" identifies the permit as an air construction permit
"AF" identifies the permit as a minor source federally enforceable state operation permit
"AO" identifies the permit as a minor source air operation permit
"AV" identifies the permit as a major Title V air operation permit

\section*{PSD Permit Numbers}

Example: Permit No. PSD-FL-317
Where: "PSD" means issued pursuant to the preconstruction review requirements of the Prevention of Significant Deterioration of Air Quality
"FL" means that the permit was issued by the State of Florida
"317" identifies the specific permit project number
Florida Administrative Code (F.A.C.)
Example: [Rule 62-213.205, F.A.C.]
Means: \(\quad\) Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)
Example: [40 CRF 60.7]
Means: \(\quad\) Title 40, Part 60, Section 7

\section*{GLOSSARY OF COMMON TERMS}
\({ }^{\circ}\) F: degrees Fahrenheit
acfm: actual cubic feet per minute
ARMS: Air Resource Management System
BACT: best available control technology
bhp: brake horsepower

Btu: British thermal units
CAM: compliance assurance monitoring
CEMS: continuous emissions monitoring system
cfm: cubic feet per minute
CFR: Code of Federal Regulations

Air Permit No. 0694801-011-AV
Title V Air Operation Permit Revision

\section*{Citation Formats and Glossary of Common Terms}

CO: carbon monoxide
COMS: continuous opacity monitoring system
DEP: Department of Environmental Protection
Department: Department of Environmental Protection
dscfm: dry standard cubic feet per minute
EPA: Environmental Protection Agency
ESP: electrostatic precipitator (control system for reducing particulate matter)
EU: emissions unit
F.A.C.: Florida Administrative Code
F.D.: forced draft

\section*{F.S.: Florida Statutes}

FGR: flue gas recirculation
Fl: fluoride
\(\mathrm{ft}^{2}\) : square feet
\(\mathbf{f t}^{3}\) : cubic feet
gpm: gallons per minute
gr: grains
HAP: hazardous air pollutant
Hg : mercury
I.D.: induced draft

ID: identification
\(\mathbf{k P a}\) : kilopascals
lb: pound
MACT: maximum achievable technology
MMBtu: million British thermal units
MSDS: material safety data sheets

MW: megawatt
NESHAP: National Emissions Standards for Hazardous Air Pollutants
\(\mathbf{N O}_{\mathbf{x}}\) : nitrogen oxides
NSPS: New Source Performance Standards
\(\mathbf{O \& M}\) : operation and maintenance
\(\mathrm{O}_{2}\) : oxygen
Pb: lead
PM: particulate matter
\(\mathbf{P M}_{10}\) : particulate matter with a mean aerodynamic diameter of 10 microns or less
PSD: prevention of signifi9cant deterioration
psi: pounds per square inch
PTE: potential to emit
RACT: reasonably available control technology
RATA: relative accuracy test audit
SAM: sulfuric acid mist
scf: standard cubic feet
scfm: standard cubic feet per minute
SIC: standard industrial classification code
SNCR: selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)
\(\mathbf{S O}_{2}\) : sulfur dioxide
TPH: tons per hour
TPY: tons per year
UTM: Universal Transverse Mercator coordinate system
VE: visible emissions
VOC: volatile organic compounds

\section*{APPENDIX CM}

\section*{CEMS Requirements}

\section*{CEMS OPERATION PLAN}
1. Affected Units: The permittee is required to install and operate a \(\mathrm{NO}_{\mathrm{X}}\) CEMS on each of the two combined cycle gas turbines (EU-003 and EU-004).
2. CEMS Operation Plan: The owner or operator shall maintain a facility-wide plan for the proper installation, calibration, maintenance and operation of each \(\mathrm{NO}_{\mathrm{x}}\) CEMS required by this permit. Copies of this plan shall be provided to the Compliance Authority and kept on site for review. The owner or operator shall revise this plan as necessary and provide updates to the Compliance Authority.

\section*{INSTALLATION, PERFORMANCE SPECIFICATIONS AND QUALITY ASSURANCE}
3. Installation Deadline: The owner or operator shall install and operate a \(\mathrm{NO}_{\mathrm{x}}\) CEMS in accordance with the provisions of 40 CFR 75 and NSPS Subparts A and KKKK in 40 CFR 60 . For this project, each NO \(\mathrm{O}_{\mathrm{x}}\) CEMS has already been installed and certified.
4. Installation: All CEMS shall be installed such that representative measurements of emissions or process parameters from the facility are obtained. The owner or operator shall locate the CEMS by following the procedures contained in the applicable performance specification of 40 CFR Part 60 , Appendix B.
5. Span Values and Dual Range Monitors: The owner or operator shall set appropriate span values for the CEMS. The owner or operator shall install dual range monitors if required by and in accordance with the CEMS Operation Plan.
6. Continuous Flow Monitor: For compliance with mass emission rate standards, the owner or operator shall install a continuous flow monitor to determine the stack exhaust flow rate. The flow monitor shall be certified pursuant to 40 FR Part 60, Appendix B, Performance Specification 6. Alternatively, the owner or operator may install a fuel flow monitor and use an appropriate F-Factor computational approach to calculate stack exhaust flow rate.
7. Diluent Monitor: If it is necessary to correct the CEMS output to the oxygen concentrations specified in this permit's emission standards, the owner or operator shall either install an oxygen monitor or install a \(\mathrm{CO}_{2}\) monitor and use an appropriate F-Factor computational approach.
8. Moisture Correction: If necessary, the owner or operator shall determine the moisture content of the exhaust gas and develop an algorithm to enable correction of the monitoring results to a dry basis ( \(0 \%\) moisture). \{Permitting Note: The CEMS Operation Plan will contain additional CEMS-specific details and procedures for installation.\}
9. Performance Specifications: The owner or operator shall evaluate the acceptability of each CEMS by conducting the appropriate performance specification, as follows. CEMS determined to be unacceptable shall not be considered installed for purposes of meeting the timelines of this permit. For \(\mathrm{NO}_{\mathrm{x}}\) monitors, the owner or operator shall conduct Performance Specification 2 of 40 CFR Part 60, Appendix B.
10. Quality Assurance: The owner or operator shall follow the quality assurance procedures of 40 CFR Part 60, Appendix F. The required RATA tests for \(\mathrm{NO}_{\mathrm{x}}\) shall be performed using EPA Method 7E in Appendix A of 40 CFR Part 60. \(\mathrm{NO}_{\mathrm{X}}\) emissions shall be expressed "as \(\mathrm{NO}_{2}\)."
11. Substituting RATA Tests for Compliance Tests: Data collected during CEMS quality assurance RATA tests can substitute for annual stack tests, and vice versa, at the option of the owner or operator, provided the owner or operator indicates this intent in the submitted test protocol and follows the procedures outlined in the CEMS Operation Plan.

\section*{CALCULATION APPROACH}
12. CEMS Used for Compliance: Once adherence to the applicable performance specification for each CEMS is demonstrated, the owner or operator shall use the CEMS to demonstrate compliance with the applicable emission standards as specified by this permit.
13. CEMS Data: Each CEMS shall monitor and record emissions during all periods of operation and whenever emissions are being generated, including during episodes of startups, shutdowns, and malfunctions. All data shall be used, except for invalid measurements taken during monitor system breakdowns, repairs, calibration checks, zero adjustments and span adjustments, and except for allowable data exclusions as per Condition 19 of this Appendix.

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\section*{CEMS Requirements}
14. Operating Hours and Operating Days: For purposes of this Appendix, the following definitions shall apply. An hour is the 60 -minute period beginning at the top of each hour. Any hour during which an emissions unit is in operation for more than 15 minutes is an operating hour for that emission unit. A day is the 24 -hour period from midnight to midnight. Unless otherwise specified by this permit, any day with at least one operating hour for an emissions unit is an operating day for that emission unit.
15. Valid Hourly Averages: Each CEMS shall be designed and operated to sample, analyze and record data evenly spaced over the hour at a minimum of one measurement per minute. All valid measurements collected during an hour shall be used to calculate a 1-hour block average that begins at the top of each hour.
a. Hours that are not operating hours are not valid hours.
b. For each operating hour, the 1-hour block average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two such data points are available, there is insufficient data, the 1 -hour block average is not valid, and the hour is considered as "monitor unavailable."
16. Compliance Averages: Compliance with the "24-hour block average" shall be determined for each calendar day of operation by calculating the arithmetic average of valid hourly averages collected during the calendar day.

\section*{MONITOR AVAILABILITY}
17. Monitor Availability: The quarterly excess emissions report shall identify monitor availability for each quarter in which the unit operated. Monitor availability for the CEMS shall be \(95 \%\) or greater in any calendar quarter in which the unit operated for more than 760 hours. In the event the applicable availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving the required availability and a plan of corrective actions that will be taken to achieve \(95 \%\) availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit.

\section*{EXCESS EMISSIONS}
18. Definitions:
a. Startup is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.
b. Shutdown means the cessation of the operation of an emissions unit for any purpose.
c. Malfunction means any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.
19. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.
20. Data Exclusion Procedures for SIP Compliance: As per the procedures in this condition, limited amounts of CEMS emissions data may be excluded from the corresponding compliance demonstration, provided that best operational practices to minimize emissions are adhered to and the duration of data excluded is minimized. The data exclusion procedures of this condition apply only to SIP-based emission limits.
a. Excess Emissions. Data in excess of the applicable emission standard may be excluded from compliance calculations if the data are collected during periods of permitted excess emissions (for example, during startup, shutdown or malfunction). The maximum duration of excluded data is 2 hours in any 24 -hour period, unless some other duration is specified by this permit.
b. Limited Data Exclusion. If the compliance calculation using all valid CEMS emission data, as defined in Condition 14 of this Appendix, indicates that the emission unit is in compliance, then no CEMS data shall be excluded from the compliance demonstration.

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\section*{CEMS Requirements}
c. Event Driven Exclusion. The underlying event (for example, the startup, shutdown or malfunction event) must precede the data exclusion. If there is no underlying event, then no data may be excluded. Only data collected during the event may be excluded.
d. Reporting Excluded Data. The data exclusion procedures of this condition are not necessarily the same procedures used for excess emissions as defined by federal rules. Quarterly or semi-annual reports required by this permit shall indicate not only the duration of data excluded from SIP compliance calculations but also the number of excess emissions as defined by federal rules.
21. Notification Requirements: The owner or operator shall notify the Compliance Authority within one working day of discovering any emissions that demonstrate noncompliance for a given averaging period. Within one working day of occurrence, the owner or operator shall notify the Compliance Authority of any malfunction resulting in the exclusion of CEMS data. For malfunctions, notification is sufficient for the owner or operator to exclude CEMS data.

\section*{ANNUAL EMISSIONS}
22. CEMS Used for Calculating Annual Emissions: All valid data, as defined in Condition 14 of this Appendix, shall be used when calculating annual emissions.
a. Annual emissions shall include data collected during startup, shutdown and malfunction periods.
b. Annual emissions shall include data collected during periods when the emission unit is not operating but emissions are being generated (for example, when firing fuel to warm up a process for some period of time prior to the emission unit's startup).
c. Annual emissions shall not include data from periods of time where the monitor was functioning properly but was unable to collect data while conducting a mandated quality assurance/quality control activity such as calibration error tests, RATA, calibration gas audit or RAA. These periods of time shall be considered missing data for purposes of calculating annual emissions.
d. Annual emissions shall not include data from periods of time when emissions are in excess of the calibrated span of the CEMS. These periods of time shall be considered missing data for purposes of calculating annual emissions.
23. Accounting for Missing Data: All valid measurements collected during each hour shall be used to calculate a 1 -hour block average. For each hour, the 1 -hour block average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two such data points are available, the owner or operator shall account for emissions during that hour using site-specific data to generate a reasonable estimate of the 1 -hour block average.
24. Emissions Calculation: Hourly emissions shall be calculated for each hour as the product of the 1-hour block average and the duration of pollutant emissions during that hour. Annual emissions shall be calculated as the sum of all hourly emissions occurring during the year.

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\section*{Calibration Schedule}
\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{4}{|c|}{TABLE 297.310-1 CALIBRATION SCHEDULE} \\
\hline ITEM & \[
\begin{aligned}
& \text { MINIMUM } \\
& \text { CALIBRATION } \\
& \text { FREQUENCY } \\
& \hline
\end{aligned}
\] & REFERENCE INSTRUMENT & TOLERANCE \\
\hline Liquid in glass thermometer & Annually & ASTM Hg in glass ref. thermometer or equivalent or thermometric points & +/-2\% \\
\hline Bimetallic thermometer & Quarterly & Calib. liq. in glass & \(5^{\circ} \mathrm{F}\) \\
\hline Thermocouple & Annually & ASTM Hg in glass ref. thermometer, NBS calibrated reference and potentiometer & \(5^{\circ} \mathrm{F}\) \\
\hline Barometer & Monthly & Hg barometer or NOAA station & +/-1\% scale \\
\hline Pitot Tube & When required or when damaged & By construction or measurements in wind tunnel D greater than \(16^{\prime \prime}\) and standard pitot tube & See EPA Method 2, Fig. 2-2 \& 2-3 \\
\hline Probe Nozzles & Before each test or when nicked, dented, or corroded & Micrometer & \(+/-0.001 "\) mean of at least three readings; Max. deviation between readings, 0.004" \\
\hline Dry Gas Meter and Orifice Meter & 1. Full Scale: When received, when \(5 \%\) change observed, annually & Spirometer or calibrated wet test or dry gas test meter & 2\% \\
\hline & 2. One Point: Semiannually & & \\
\hline & 3. Check after each test series & Comparison check & 5\% \\
\hline
\end{tabular}

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\section*{NSPS Subparts A and KKKK Provisions}

In accordance with Rule 62-204.800, F.A.C., the following federal regulations in Title 40 of the Code of Federal Regulations were adopted by reference: 40 CFR 60, Subpart A, General Provisions; and 40 CFR 60, Subpart KKKK, Stationary Combustion Turbines. The original federal rule numbering has been retained. The federal regulations apply to the following emissions units.
\begin{tabular}{|c|l|}
\hline ID No. & Emission Unit Description \\
\hline 003 & Combined Cycle Combustion Turbine with HRSG and Duct Burner \\
\hline 004 & Combined Cycle Combustion Turbine with HRSG and Duct Burner \\
\hline
\end{tabular}

\section*{40 CFR 60, SUBPART A, GENERAL PROVISIONS}

The following emissions units are subject to the applicable provisions in NSPS Subpart A, KKKK and Kb of 40 CFR 60.

\section*{§60.1 Applicability.}
(a) Except as provided in subparts B and C, the provisions of this part apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.
(b) Any new or revised standard of performance promulgated pursuant to section 111(b) of the Act shall apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of such new or revised standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.
(c) In addition to complying with the provisions of this part, the owner or operator of an affected facility may be required to obtain an operating permit issued to stationary sources by an authorized State air pollution control agency or by the Administrator of the U.S. Environmental Protection Agency (EPA) pursuant to Title V of the Clean Air Act (Act) as amended November 15, 1990 (42 U.S.C. 7661 ). For more information about obtaining an operating permit see part 70 of this chapter.
(d) Site-specific standard for Merck \& Co., Inc.'s Stonewall Plant in Elkton, Virginia. \{Not Applicable\}

\section*{§ 60.2 Definitions.}

The terms used in this part are defined in the Act or in this section as follows:
Act means the Clean Air Act ( 42 U.S.C. 7401 et seq.)
Administrator means the Administrator of the Environmental Protection Agency or his authorized representative.
Affected facility means, with reference to a stationary source, any apparatus to which a standard is applicable.
Alternative method means any method of sampling and analyzing for an air pollutant which is not a reference or equivalent method but which has been demonstrated to the Administrator's satisfaction to, in specific cases, produce results adequate for his determination of compliance.

Approved permit program means a State permit program approved by the Administrator as meeting the requirements of part 70 of this chapter or a Federal permit program established in this chapter pursuant to Title \(V\) of the Act ( 42 U.S.C. 7661).
Capital expenditure means an expenditure for a physical or operational change to an existing facility which exceeds the product of the applicable "annual asset guideline repair allowance percentage" specified in the latest edition of Internal Revenue Service (IRS) Publication 534 and the existing facility's basis, as defined by section 1012 of the Internal Revenue Code. However, the total expenditure for a physical or operational change to an existing facility must not be reduced by any "excluded additions" as defined in IRS Publication 534, as would be done for tax purposes.
Clean coal technology demonstration project means a project using funds appropriated under the heading 'Department of Energy-Clean Coal Technology', up to a total amount of \(\$ 2,500,000,000\) for commercial demonstrations of clean coal

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\section*{NSPS Subparts A and KKKK Provisions}
technology, or similar projects funded through appropriations for the Environmental Protection Agency.
Commenced means, with respect to the definition of new source in section \(111(\mathrm{a})(2)\) of the Act, that an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

Construction means fabrication, erection, or installation of an affected facility.
Continuous monitoring system means the total equipment, required under the emission monitoring sections in applicable subparts, used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters.
Electric utility steam generating unit means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.
Equivalent method means any method of sampling and analyzing for an air pollutant which has been demonstrated to the Administrator's satisfaction to have a consistent and quantitatively known relationship to the reference method, under specified conditions.

Excess Emissions and Monitoring Systems Performance Report is a report that must be submitted periodically by a source in order to provide data on its compliance with stated emission limits and operating parameters, and on the performance of its monitoring systems.

Existing facility means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in this part, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type.
Force majeure means, for purposes of \(\S 60.8\), an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents the owner or operator from complying with the regulatory requirement to conduct performance tests within the specified timeframe despite the affected facility's best efforts to fulfill the obligation. Examples of such events are acts of nature, acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility.
Isokinetic sampling means sampling in which the linear velocity of the gas entering the sampling nozzle is equal to that of the undisturbed gas stream at the sample point.

Issuance of a part 70 permit will occur, if the State is the permitting authority, in accordance with the requirements of part 70 of this chapter and the applicable, approved State permit program. When the EPA is the permitting authority, issuance of a Title V permit occurs immediately after the EPA takes final action on the final permit.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Modification means any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.

Monitoring device means the total equipment, required under the monitoring of operations sections in applicable subparts, used to measure and record (if applicable) process parameters.

Nitrogen oxides means all oxides of nitrogen except nitrous oxide, as measured by test methods set forth in this part.
One-hour period means any 60 -minute period commencing on the hour.
Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

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Owner or operator means any person who owns, leases, operates, controls, or supervises an affected facility or a stationary source of which an affected facility is a part.

Part 70 permit means any permit issued, renewed, or revised pursuant to part 70 of this chapter.
Particulate matter means any finely divided solid or liquid material, other than uncombined water, as measured by the reference methods specified under each applicable subpart, or an equivalent or alternative method.

Permit program means a comprehensive State operating permit system established pursuant to title V of the Act (42 U.S.C. 7661 ) and regulations codified in part 70 of this chapter and applicable State regulations, or a comprehensive Federal operating permit system established pursuant to title V of the Act and regulations codified in this chapter.

Permitting authority means:
(1) The State air pollution control agency, local agency, other State agency, or other agency authorized by the Administrator to carry out a permit program under part 70 of this chapter; or
(2) The Administrator, in the case of EPA-implemented permit programs under title V of the Act (42 U.S.C. 7661 ).

Proportional sampling means sampling at a rate that produces a constant ratio of sampling rate to stack gas flow rate.
Reactivation of a very clean coal-fired electric utility steam generating unit means any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:
(1) Has not been in operation for the two-year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority's emissions inventoryat the time of enactment;
(2) Was equipped prior to shut-down with a continuous system of emissions control that achieves a removal efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;
(3) Is equipped with low-NOX burners prior to the time of commencement of operations following reactivation; and
(4) Is otherwise in compliance with the requirements of the Clean Air Act.

Reference method means any method of sampling and analyzing for an air pollutant as specified in the applicable subpart.
Repowering means replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990. Repowering shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.
Run means the net period of time during which an emission sample is collected. Unless otherwise specified, a run may be either intermittent or continuous within the limits of good engineering practice.

Shutdown means the cessation of operation of an affected facility for any purpose.
Six-minute period means any one of the 10 equal parts of a one-hour period.
Standard means a standard of performance proposed or promulgated under this part.
Standard conditions means a temperature of \(293 \mathrm{~K}(68 \mathrm{~F})\) and a pressure of 101.3 kilopascals ( 29.92 in Hg ).
Startup means the setting in operation of an affected facility for any purpose.
State means all non-Federal authorities, including local agencies, interstate associations, and State-wide programs, that have delegated authority to implement: (1) The provisions of this part; and/or (2) the permit program established under part 70 of this chapter. The term State shall have its conventional meaning where clear from the context.

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\section*{NSPS Subparts A and KKKK Provisions}

Stationary source means any building, structure, facility, or installation which emits or may emit any air pollutant.
Title V permit means any permit issued, renewed, or revised pursuant to Federal or State regulations established to implement title \(V\) of the Act ( 42 U.S.C. 7661 ). A title \(V\) permit issued by a State permitting authority is called a part 70 permit in this part.

Volatile Organic Compound means any organic compound which participates in atmospheric photochemical reactions; or which is measured by a reference method, an equivalent method, an alternative method, or which is determined by procedures specified under any subpart.
[44 FR 55173, Sept. 25, 1979, as amended at 45 FR 5617, Jan. 23, 1980; 45 FR 85415, Dec. 24, 1980; 54 FR 6662, Feb. 14, 1989; 55 FR 51382, Dec. 13, 1990; 57 FR 32338, July 21, 1992; 59 FR 12427, Mar. 16, 1994; 72 FR 27442, May 16, 2007]

\section*{§ 60.3 Units and abbreviations.}

Used in this part are abbreviations and symbols of units of measure. These are defined as follows:
(a) System International (SI) units of measure:
\begin{tabular}{|c|c|}
\hline A-ampere & cal-calorie \\
\hline g -gram & cfim-cubic feet per minute \\
\hline Hz - hertz & cu ft-cubic feet \\
\hline J-joule & dcf-dry cubic feet \\
\hline K-degree Kelvin & dem-dry cubic meter \\
\hline kg—kilogram & dscf-dry cubic feet at standard conditions \\
\hline m -meter & dscm-dry cubic meter at standard conditions \\
\hline m3-cubic meter & eq-equivalent \\
\hline mg-milligram-10-3gram & \({ }^{\circ} \mathrm{F}\)-degree Fahrenheit \\
\hline mm-millimeter-10-3meter & ft -feet \\
\hline Mg-megagram-106 gram & gal-gallon \\
\hline mol-mole & gr-grain \\
\hline N -newton & g-eq-gram equivalent \\
\hline ng-nanogram-10-9gram & hr-hour \\
\hline nm--nanometer-10-9meter & in-inch \\
\hline Pa -pascal & k-1,000 \\
\hline s-second & 1 -liter \\
\hline V-volt & lpm-liter per minute \\
\hline W-wwatt & lb -pound \\
\hline \(\Omega\)-ohm & meq-milliequivalent \\
\hline \(\mu \mathrm{g}-\) microgram-10-6gram & min-minute \\
\hline (b) Other units of measure: & ml-milliliter \\
\hline Btu-British thermal unit & mol. wt.-molecular weight \\
\hline \({ }^{\circ} \mathrm{C}\)-degree Celsius (centigrade) & ppb-parts per billion \\
\hline
\end{tabular}

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ppm-parts per million
psia-pounds per square inch absolute
psig-pounds per square inch gage
\({ }^{\circ} \mathrm{R}\)-_degree Rankine
scf--cubic feet at standard conditions
scfh-cubic feet per hour at standard conditions
scm-cubic meter at standard conditions
sec-second
sq ft-square feet
std-at standard conditions
(c) Chemical nomenclature:

CdS—cadmium sulfide
CO-carbon monoxide
CO2--carbon dioxide
(d) Miscellaneous:
A.S.T.M.-American Society for Testing and Materials
[42 FR 37000, July 19, 1977; 42 FR 38178, July 27, 1977]

\section*{§ 60.4 Address.}

All addresses that pertain to Florida have been incorporated. To see the complete list of addresses please go to http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr\&rgn=div6\&view=text\&node=40:6.0.1.1.1.1\&idno=40.

Link to an amendment published at 73 FR 18164, Apr. 3, 2008.
(a) All requests, reports, applications, submittals, and other communications to the Administrator pursuant to this part shall be submitted in duplicate to the appropriate Regional Office of the U.S. Environmental Protection Agency to the attention of the Director of the Division indicated in the following list of EPA Regional Offices.

Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee), Director, Air and Waste Management Division, U.S. Environmental Protection Agency, 345 Courtland Street, NE., Atlanta, GA 30365.
(b) Section 111 (c) directs the Administrator to delegate to each State, when appropriate, the authority to implement and enforce standards of performance for new stationary sources located in such State. All information required to be submitted to EPA under paragraph (a) of this section, must also be submitted to the appropriate State Agency of any State to which this authority has been delegated (provided, that each specific delegation may except sources from a certain Federal or State reporting requirement). The appropriate mailing address for those States whose delegation request has been approved is as follows:
(K) Bureau of Air Quality Management, Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, FL 32301.
[40 FR 18169, Apr. 25, 1975]
Editorial Note: For Federal Register citations affecting \(\$ 60.4\) see the List of CFR Sections Affected which appears in the Finding Aids section of the printed volume and on GPO Access.
§ 60.5 Determination of construction or modification.

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(a) When requested to do so by an owner or operator, the Administrator will make a determination of whether action taken or intended to be taken by such owner or operator constitutes construction (including reconstruction) or modification or the commencement thereof within the meaning of this part.
(b) The Administrator will respond to any request for a determination under paragraph (a) of this section within 30 days of receipt of such request.
[40 FR 58418, Dec. 16, 1975]

\section*{§ 60.6 Review of plans.}
(a) When requested to do so by an owner or operator, the Administrator will review plans for construction or modification for the purpose of providing technical advice to the owner or operator.
(b)
(1) A separate request sháll be submitted for each construction or modification project.
(2) Each request shall identify the location of such project, and be accompanied by technical information describing the proposed nature, size, design, and method of operation of each affected facility involved in such project, including information on any equipment to be used for measurement or control of emissions.
(c) Neither a request for plans review nor advice furnished by the Administrator in response to such request shall (1) relieve an owner or operator of legal responsibility for compliance with any provision of this part or of any applicable State or local requirement, or (2) prevent the Administrator from implementing or enforcing any provision of this part or taking any other action authorized by the Act.
[36 FR 24877, Dec. 23, 1971, as amended at 39 FR 9314, Mar. 8, 1974]

\section*{§ 60.7 Notification and record keeping.}
(a) Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, as follows:
(1) A notification of the date construction (or reconstruction as defined under \(\S 60.15\) ) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of massproduced facilities which are purchased in completed form.
(2) [Reserved]
(3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
(4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in \(\S 60.14(\mathrm{e})\). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.
(5) A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with \(\S 60.13\) (c). Notification shall be postmarked not less than 30 days prior to such date.
(6) A notification of the anticipated date for conducting the opacity observations required by \(\S 60.11(\mathrm{e})(1)\) of this part. The notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.
(7) A notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by \(\S 60.8\) in lieu of Method 9 observation data as allowed by \(\S 60.11(e)(5)\) of this part. This notification shall be postmarked not less than 30 days prior to the date of the performance test.

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(b) Any owner or operator subject to the provisions of this part shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
(c) Each owner or operator required to install a continuous monitoring device shall submit excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and-or summary report form (see paragraph (d) of this section) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:
(1) The magnitude of excess emissions computed in accordance with \(\S 60.13(\mathrm{~h})\), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
(d) The summary report form shall contain the information and be in the format shown in figure 1 unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.
(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in \(\S 60.7\) (c) need not be submitted unless requested by the Administrator.
(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in §60.7(c) shall both be submitted.

Figure 1—Summary Report—Gaseous and Opacity Excess Emission and Monitoring System Performance
Pollutant (Circle One-SO2/NOX/TRS/H2S/CO/Opacity)
Reporting period dates: From \(\qquad\) to \(\qquad\)
Company:
Emission Limitation
Address:
Monitor Manufacturer and Model No.
Date of Latest CMS Certification or Audit \(\qquad\)
Process Unit(s) Description:
Total source operating time in reporting period \(\qquad\)
Emission data summaryl CMS performance summary 1
1. Duration of excess emissions in reporting period due to: 1. CMS downtime in reporting period due to:

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\section*{a. Startup/shutdown \\ a. Monitor equipment malfunctions}
b. Control equipment problems
b. Non-Monitor equipment malfunctions
c. Process problems
c. Quality assurance calibration
d. Other known causes
d. Other known causes
e. Unknown causes
e. Unknown causes
2. Total duration of excess emission

\section*{2. Total CMS Downtime}
3. Total duration of excess emissions \(\times(100)\) [Total source operating time] \%2 3. [Total CMS Downtime] \(\times\) (100) [Total source operating time] \%2

1 For opacity, record all times in minutes. For gases, record all times in hours.
2 For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in \(\S 60.7\) (c) shall be submitted.

On a separate page, describe any changes since last quarter in CMS, process or controls. I certify that the information contained in this report is true, accurate, and complete.
\begin{tabular}{l}
\hline Name \\
\hline Tignature \\
\hline Date
\end{tabular}
(e)
(1) Notwithstanding the frequency of reporting requirements specified in paragraph (c) of this section, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:
(i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;
(ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the applicable standard; and
(iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in paragraph (e)(2) of this section.
(2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the

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source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.
(3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting forthat standard as provided for in paragraphs (e)(1) and (e)(2) of this section.
(f) Any owner or operator subject to the provisions of this part shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records, except as follows:
(1) This paragraph applies to owners or operators required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (f) of this section, the owner or operator shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.
(2) This paragraph applies to owners or operators required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph ( \(f\) ) of this section, the owner or operator shall retain all subhourly measurements for the most recent reporting period. The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted to the Administrator.
(3) The Administrator or delegated authority, upon notification to the source, may require the owner or operator to maintain all measurements as required by paragraph (f) of this section, if the Administrator or the delegated authority determines these records are required to more accurately assess the compliance status of the affected source.
(g) If notification substantially similar to that in paragraph (a) of this section is required by any other State or local agency, sending the Administrator a copy of that notification will satisfy the requirements of paragraph (a) of this section.
(h) Individual subparts of this part may include specific provisions which clarify or make inapplicable the provisions set forth in this section.
[36 FR 24877, Dec. 28, 1971, as amended at 40 FR 46254, Oct. 6, 1975; 40 FR 58418, Dec. 16, 1975; 45 FR 5617, Jan. 23, 1980; 48 FR 48335, Oct. 18, 1983; 50 FR 53113, Dec. 27, 1985; 52 FR 9781, Mar. 26, 1987; 55 FR 51382, Dec. 13, 1990; 59 FR 12428, Mar. 16, 1994; 59 FR 47265, Sep. 15, 1994; 64 FR 7463, Feb. 12, 1999]

\section*{§ 60.8 Performance tests.}
(a) Except as specified in paragraphs (a)(1),(a)(2), (a)(3), and (a)(4) of this section, within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, or at such other times specified by this part, and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and

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furnish the Administrator a written report of the results of such performance test(s).
(1) If a force majeure is about to occur, occurs, or has occurred for which the affected owner or operator intends to assert a claim of force majeure, the owner or operator shall notify the Administrator, in writing as soon as practicable following the date the owner or operator first knew, or through due diligence should have known that the event may cause or caused a delay in testing beyond the regulatory deadline, but the notification must occur before the performance test deadline unless the initial force majeure or a subsequent force majeure event delays the notice, and in such cases, the notification shall occur as soon as practicable.
(2) The owner or operator shall provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in testing beyond the regulatory deadline to the force majeure; describe the measures taken or to be taken to minimize the delay; and identify a date by which the owner or operator proposes to conduct the performance test. The performance test shall be conducted as soon as practicable after the force majeure occurs.
(3) The decision as to whether or not to grant an extension to the performance test deadine is solely within the discretion of the Administrator. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an extension as soon as practicable.
(4) Until an extension of the performance test deadline has been approved by the Administrator under paragraphs (a)(1), (2), and (3) of this section, the owner or operator of the affected facility remains strictly subject to the requirements of this part.
(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance, (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.
(c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.
(d) The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the Administrator (or delegated State or local agency) as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator (or delegated State or local agency) by mutual agreement.
(e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:
(1) Sampling ports adequate for test methods applicable to such facility. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.
(2) Safe sampling platform(s).

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(3) Safe access to sampling platform(s).
(4) Utilities for sampling and testing equipment.
(f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.
[36 FR 24877, Dec. 23, 1971, as amended at 39 FR 9314, Mar. 8, 1974; 42 FR 57126, Nov. 1, 1977; 44 FR 33612, June 11, 1979; 54 FR 6662, Feb. 14, 1989; 54 FR 21344, May 17, 1989; 64 FR 7463, Feb. 12, 1999; 72 FR 27442, May 16, 2007]

\section*{§ 60.9 Availability of information.}

The availability to the public of information provided to, or otherwise obtained by, the Administrator under this part shall be governed by part 2 of this chapter. (Information submitted voluntarily to the Administrator for the purposes of \(\S \$ 60.5\) and 60.6 is governed by \(\S \$ 2.201\) through 2.213 of this chapter and not by \(\$ 2.301\) of this chapter.)

\section*{§60.10 State authority.}

The provisions of this part shall not be construed in any manner to preclude any State or political subdivision thereof from:
(a) Adopting and enforcing any emission standard or limitation applicable to an affected facility, provided that such emission standard or limitation is not less stringent than the standard applicable to such facility.
(b) Requiring the owner or operator of an affected facility to obtain permits, licenses, or approvals prior to initiating construction, modification, or operation of such facility.

\section*{§ 60.11 Compliance with standards and maintenance requirements.}
(a) Compliance with standards in this part, other than opacity standards, shall be determined in accordance with performance tests established by \(\S 60.8\), unless otherwise specified in the applicable standard.
(b) Compliance with opacity standards in this part shall be determined by conducting observations in accordance with Method 9 in appendix \(A\) of this part, any alternative method that is approved by the Administrator, or as provided in paragraph (e)(5) of this section. For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours ( 306 -minute averages) for the performance test or other set of observations (meaning those fugitivetype emission sources subject only to an opacity standard).
(c) The opacity standards set forth in this part shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.
(d) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(e)
(1) For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in \(\S 60.8\) unless one of the following conditions apply. If no performance test under \(\S 60.8\) is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under \(\$ 60.8\), the source owner or operator shall reschedule the opacity

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observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. In these cases, the 30 -day prior notification to the Administrator required in \(\$ 60.7(\mathrm{a})(6)\) shall be waived. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under \(\S 60.8\). The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Method 9 of appendix B of this part. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The owner or operator of an affected facility shall make available, upon request by the Administrator, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. Except as provided in paragraph (e)(5) of this section, the results of continuous monitoring by transmissometer which indicate that the opacity at the time visual observations were made was not in excess of the standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in appendix B of this part, has been properly maintained and (at the time of the alleged violation) that the resulting data have not been altered in any way.
(2) Except as provided in paragraph (e)(3) of this section, the owner or operator of an affected facility to which an opacity standard in this part applies shall conduct opacity observations in accordance with paragraph (b) of this section, shall record the opacity of emissions, and shall report to the Administrator the opacity results along with the results of the initial performance test required under \(\S 60.8\). The inability of an owner or operator to secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.
(3) The owner or operator of an affected facility to which an opacity standard in this part applies may request the Administrator to determine and to record the opacity of emissions from the affected facility during the initial performance test and at such times as may be required. The owner or operator of the affected facility shall report the opacity results. Any request to the Administrator to determine and to record the opacity of emissions from an affected facility shall be included in the notification required in \(\S 60.7\) (a)(6). If, for some reason, the Administrator cannot determine and record the opacity of emissions from the affected facility during the performance test, then the provisions of paragraph (e)(1) of this section shall apply.
(4) An owner or operator of an affected facility using a continuous opacity monitor (transmissometer) shall record the monitoring data produced during the initial performance test required by \(\$ 60.8\) and shall furnish the Administrator a written report of the monitoring results along with Method 9 and \(\S 60.8\) performance test results.
(5) An owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under \(\$ 60.8\) in lieu of Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he shall notify the Administrator of that decision, in writing, at least 30 days before any performance test required under \(\S 60.8\) is conducted. Once the owner or operator of an affected facility has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under \(\S 60.8\) until the owner or operator notifies the Administrator, in writing, to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under \(\S 60.8\) using COMS data, the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under \(\S 60.8\). The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in \(\$ 60.13\) (c) of this part, that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for compliance with the opacity standard for a period of time during which Method 9 data indicates noncompliance, the Method 9 data will be used to determine compliance with the opacity standard.
(6) Upon receipt from an owner or operator of the written reports of the results of the performance tests required by \(\S 60.8\), the opacity observation results and observer certification required by \(\S 60.11(\mathrm{e})(1)\), and the COMS results, if

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applicable, the Administrator will make a finding concerning compliance with opacity and other applicable standards. If COMS data results are used to comply with an opacity standard, only those results are required to be submitted along with the performance test results required by \(\S 60.8\). If the Administrator finds that an affected facility is in compliance with all applicable standards for which performance tests are conducted in accordance with \(\S 60.8\) of this part but during the time such performance tests are being conducted fails to meet any applicable opacity standard, he shall notify the owner or operator and advise him that he may petition the Administrator within 10 days of receipt of notification to make appropriate adjustment to the opacity standard for the affected facility.
(7) The Administrator will grant such a petition upon a demonstration by the owner or operator that the affected facility and associated air pollution control equipment was operated and maintained in a manner to minimize the opacity of emissions during the performance tests; that the performance tests were performed under the conditions established by the Administrator; and that the affected facility and associated air pollution control equipment were incapable of being adjusted or operated to meet the applicable opacity standard.
(8) The Administrator will establish an opacity standard for the affected facility meeting the above requirements at a level at which the source will be able, as indicated by the performance and opacity tests, to meet the opacity standard at all times during which the source is meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity standard in the Federal Register.
(f) Special provisions set forth under an applicable subpart shall supersede any conflicting provisions in paragraphs (a) through (e) of this section.
(g) For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this part, nothing in this part shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.
[38 FR 28565, Oct. 15, 1973, as amended at 39 FR 39873, Nov. 12, 1974; 43 FR 8800, Mar. 3, 1978; 45 FR 23379, Apr. 4, 1980; 48 FR 48335, Oct. 18, 1983; 50 FR 53113, Dec. 27, 1985; 51 FR 1790, Jan. 15, 1986; 52 FR 9781, Mar. 26, 1987; 62 FR 8328, Feb. 24, 1997; 65 FR 61749, Oct. 17, 2000]

\section*{§60.12 Circumvention.}

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.
[39 FR 9314, Mar. 8, 1974]

\section*{§ 60.13 Monitoring requirements.}
(a) For the purposes of this section, all continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under appendix B to this part and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, appendix F to this part, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.
(b) All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under \(\$ 60.8\). Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.
(c) If the owner or operator of an affected facility elects to submit continuous opacity monitoring system (COMS) data for compliance with the opacity standard as provided under \(\S 60.11(\mathrm{e})(5)\), he shall conduct a performance evaluation of the COMS as specified in Perfonnance Specification 1, appendix B, of this part before the perfonmance test required under \(\$ 60.8\) is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under \(\S 60.8\) or within 30 days thereafter in accordance with the applicable performance specification in appendix B of this part, The owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as

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may be required by the Administrator under section 114 of the Act.
(1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under \(\S 60.8\) and as described in \(\S 60.11(\mathrm{e})(5)\) shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in paragraph (c) of this section at least 10 days before the performance test required under \(\S 60.8\) is conducted.
(2) Except as provided in paragraph (c)(1) of this section, the owner or operator of an affected facility shall furmish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.
(d)
(1) Owners and operators of a CEMS installed in accordance with the provisions of this part, must check the zero (or low level value between 0 and 20 percent of span value) and span ( 50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span must, as a minimum, be adjusted whenever either the 24 -hour zero drift or the 24 -hour span drift exceeds two times the limit of the applicable performance specification in appendix B of this part. The system must allow the amount of the excess zero and span drift to be recorded and quantified whenever specified. Owners and operators of a COMS installed in accordance with the provisions of this part, must automatically, intrinsic to the opacity monitor, check the zero and upscale (span) calibration drifts at least once daily. For a particular COMS, the acceptable range of zero and upscale calibration materials is as defined in the applicable version of PS-1 in appendix B of this part. For a COMS, the optical surfaces, exposed to the effluent gases, must be cleaned before performing the zero and upscale drift adjustments, except for systems using automatic zero adjustments. The optical surfaces must be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.
(2) Unless otherwise approved by the Administrator, the following procedures must be followed for a COMS. Minimum procedures must include an automated method for producing a simulated zero opacity condition and an upscale opacity condition using a certified neutral density filter or other related technique to produce a known obstruction of the light beam. Such procedures must provide a system check of all active analyzer internal optics with power or curvature, all active electronic circuitry including the light source and photodetector assembly; and electronic or electro-mechanical systems and hardware and or software used during normal measurement operation.
(e) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:
(1) All continuous monitoring systems referenced by paragraph (c) of this section for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10 -second period and one cycle of data recording for each successive 6-minute period.
(2) All continuous monitoring systems referenced by paragraph (c) of this section for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15 -minute period.
(f) All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of appendix B of this part shall be used.
(g) When the effluents from a single affected facility or two or more affected facilities subject to the same emission standards are combined before being released to the atmosphere, the owner or operator may install applicable continuous monitoring systems on each effluent or on the combined effluent. When the affected facilities are not subject to the same emission standards, separate continuous monitoring systems shall be installed on each effluent. When the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator shall install an applicable continuous monitoring system on each separate effluent unless the installation of fewer systems is approved by the Administrator. When more than one continuous monitoring system is used to measure the emissions from one affected facility (e.g., multiple breechings, multiple outlets), the owner or operator shall report the

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results as required from each continuous monitoring system.
(h)
(1) Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to 6minute averages and for continuous monitoring systems other than opacity to 1 -hour averages for time periods as defined in \(\S 60.2\). Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period.
(2) For continuous monitoring systems other than opacity, 1-hour averages shall be computed as follows, except that the provisions pertaining to the validation of partial operating hours are only applicable for affected facilities that are required by the applicable subpart to include partial hours in the emission calculations:
(i) Except as provided under paragraph (h)(2)(iii) of this section, for a full operating hour (any clock hour with 60 minutes of unit operation), at least four valid data points are required to calculate the hourly average, i.e. , one data point in each of the 15 -minute quadrants of the hour.
(ii) Except as provided under paragraph (h)(2)(iii) of this section, for a partial operating hour (any clock hour with less than 60 minutes of unit operation), at least one valid data point in each 15 -minute quadrant of the hour in which the unit operates is required to calculate the hourly average.
(iii) For any operating hour in which required maintenance or quality-assurance activities are performed:
(A) If the unit operates in two or more quadrants of the hour, a minimum of two valid data points, separated by at least 15 minutes, is required to calculate the hourly average; or
(B) If the unit operates in only one quadrant of the hour, at least one valid data point is required to calculate the hourly average.
(iv) If a daily calibration error check is failed during any operating hour, all data for that hour shall be invalidated, unless a subsequent calibration error test is passed in the same hour and the requirements of paragraph (h)(2)(iii) of this section are met, based solely on valid data recorded after the successful calibration.
(v) For each full or partial operating hour, all valid data points shall be used to calculate the hourly average.
(vi) Except as provided under paragraph (h)(2)(vii) of this section, data recorded during periods of continuous monitoring system breakdown, repair, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph.
(vii) Owners and operators complying with the requirements of \(\S 60.7(\mathrm{f})(1)\) or (2) must include any data recorded during periods of monitor breakdown or malfunction in the data averages.
(viii) When specified in an applicable subpart, hourly averages for certain partial operating hours shall not be computed or included in the emission averages (e.g. hours with \(<30\) minutes of unit operation under §60.47b(d)).
(ix) Either arithmetic or integrated averaging of all data may be used to calculate the hourly averages. The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent \(\mathrm{O} 2 \mathrm{or} \mathrm{ng} / \mathrm{J}\) of pollutant).
(3) All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in the applicable subpart. After conversion into units of the standard, the data may be rounded to the same number of significant digits used in the applicable subpart to specify the emission limit.
(i) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring procedures or requirements of this part including, but not limited to the following:
(1) Alternative monitoring requirements when installation of a continuous monitoring system or monitoring device specified by this part would not provide accurate measurements due to liquid water or other interferences caused by substances in the effluent gases.
(2) Alternative monitoring requirements when the affected facility is infrequently operated.

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(3) Alternative monitoring requirements to accommodate continuous monitoring systems that require additional measurements to correct for stack moisture conditions.
(4) Alternative locations for installing continuous monitoring systems or monitoring devices when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements.
(5) Alternative methods of converting pollutant concentration measurements to units of the standards.
(6) Alternative procedures for performing daily checks of zero and span drift that do not involve use of span gases or test cells.
(7) Alternatives to the A.S.T.M. test methods or sampling procedures specified by any subpart.
(8) Alternative continuous monitoring systems that do not meet the design or performance requirements in Performance Specification 1, appendix B, but adequately demonstrate a definite and consistent relationship between its measurements and the measurements of opacity by a system complying with the requirements in Performance Specification 1. The Administrator may require that such demonstration be performed for each affected facility.
(9) Alternative monitoring requirements when the effluent from a single affected facility or the combined effluent from two or more affected facilities is released to the atmosphere through more than one point.
(j) An alternative to the relative accuracy (RA) test specified in Performance Specification 2 of appendix B may be requested as follows:
(I) An alternative to the reference method tests for determining RA is available for sources with emission rates demonstrated to be less than 50 percent of the applicable standard. A source owner or operator may petition the Administrator to waive the RA test in Section 8.4 of Performance Specification 2 and substitute the procedures in Section 16.0 if the results of a performance test conducted according to the requirements in \(\S 60.8\) of this subpart or other tests performed following the criteria in \(\S 60.8\) demonstrate that the emission rate of the pollutant of interest in the units of the applicable standard is less than 50 percent of the applicable standard. For sources subject to standards expressed as control efficiency levels, a source owner or operator may petition the Administrator to waive the RA test and substitute the procedures in Section 16.0 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the continuous emission monitoring system is used to determine compliance continuously with the applicable standard. The petition to waive the RA test shall include a detailed description of the procedures to be applied. Included shall be location and procedure for conducting the alternative, the concentration or response levels of the alternative RA materials, and the other equipment checks included in the alternative procedure. The Administrator will review the petition for completeness and applicability. The determination to grant a waiver will depend on the intended use of the CEMS data (e.g., data collection purposes other than NSPS) and may require specifications more stringent than in Performance Specification 2 (e.g., the applicable emission limit is more stringent than NSPS).
(2) The waiver of a CEMS RA test will be reviewed and may be rescinded at such time, following successful completion of the alternative RA procedure, that the CEMS data indicate that the source emissions are approaching the level. The criterion for reviewing the waiver is the collection of CEMS data showing that emissions have exceeded 70 percent of the applicable standard for seven, consecutive, averaging periods as specified by the applicable regulation(s). For sources subject to standards expressed as control efficiency levels, the criterion for reviewing the waiver is the collection of CEMS data showing that exhaust emissions have exceeded 70 percent of the level needed to meet the control efficiency requirement for seven, consecutive, averaging periods as specified by the applicable regulation(s) [e.g., \(\S 60.45(\mathrm{~g})\) (2) and (3), \(\S 60.73(\mathrm{e})\), and \(\S 60.84(\mathrm{e})]\). It is the responsibility of the source operator to maintain records and determine the level of emissions relative to the criterion on the waiver of RA testing. If this criterion is exceeded, the owner or operator must notify the Administrator within 10 days of such occurrence and include a description of the nature and cause of the increasing emissions. The Administrator will review the notification and may rescind the waiver and require the owner or operator to conduct a RA test of the CEMS as specified in Section 8.4 of Performance Specification 2.

Lake Investment, Ltd.
Lake Cogeneration Plant

Air Permit No. 0694801-011-AV
Title V Air Operation Permit Revision

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[40 FR 46255, Oct. 6, 1975; 40 FR 59205, Dec. 22, 1975, as amended at 41 FR 35185, Aug. 20, 1976; 48 FR 13326, Mar. 30, 1983; 48 FR 23610, May 25, 1983; 48 FR 32986, July 20, 1983; 52 FR 9782, Mar. 26, 1987; 52 FR 17555, May 11, 1987; 52 FR 21007, June 4, 1987; 64 FR 7463, Feb. 12, 1999; 65 FR 48920, Aug. 10, 2000; 65 FR 61749, Oct. 17, 2000; 66 FR 44980, Aug. 27, 2001; 71 FR 31102, June 1, 2006; 72 FR 32714, June 13, 2007]
Editorial Note: At 65 FR 61749, Oct. 17, 2000, \(\S 60.13\) was amended by revising the words "ng/J of pollutant" to read "ng of pollutant per \(J\) of heat input" in the sixth sentence of paragraph (h). However, the amendment could not be incorporated because the words "ng/J of pollutant" do not exist in the sixth sentence of paragraph (h).

\section*{§ 60.14 Modification.}
(a) Except as provided under paragraphs (e) and (f) of this section, any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.
(b) Emission rate shall be expressed as \(\mathrm{kg} / \mathrm{hr}\) of any pollutant discharged into the atmosphere for which a standard is applicable. The Administrator shall use the following to determine emission rate:
(1) Emission factors as specified in the latest issue of "Compilation of Air Pollutant Emission Factors," EPA Publication No. AP-42, or other emission factors determined by the Administrator to be superior to AP-42 emission factors, in cases where utilization of emission factors demonstrates that the emission level resulting from the physical or operational change will either clearly increase or clearly not increase.
(2) Material balances, continuous monitor data, or manual emission tests in cases where utilization of emission factors as referenced in paragraph (b)(1) of this section does not demonstrate to the Administrator's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not increase, or where an owner or operator demonstrates to the Administrator's satisfaction that there are reasonable grounds to dispute the result obtained by the Administrator utilizing emission factors as referenced in paragraph (b)(1) of this section. When the emission rate is based on results from manual emission tests or continuous monitoring systems, the procedures specified in appendix C of this part shall be used to determine whether an increase in emission rate has occurred. Tests shall be conducted under such conditions as the Administrator shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.
(c) The addition of an affected facility to a stationary source as an expansion to that source or as a replacement for an existing facility shall not by itself bring within the applicability of this part any other facility within that source.
(d) [Reserved]
(e) The following shall not, by themselves, be considered modifications under this part:
(1) Maintenance, repair, and replacement which the Administrator determines to be routine for a source category, subject to the provisions of paragraph (c) of this section and §60.15.
(2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.
(3) An increase in the hours of operation.
(4) Use of an alternative fuel or raw material if, prior to the date any standard under this part becomes applicable to that source type, as provided by \(\S 60.1\), the existing facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fucl or raw material if that use could be accomplished under the facility's construction specifications as amended prior to the change. Conversion to coal required for energy considerations, as specified in section \(111(a)(8)\) of the Act, shall not be considered a modification.
(5) The addition or use of any system or device whose primary function is the reduction of air pollutants, except when

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an emission control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.
(6) The relocation or change in ownership of an existing facility.
(f) Special provisions set forth under an applicable subpart of this part shall supersede any conflicting provisions of this section.
(g) Within 180 days of the completion of any physical or operational change subject to the control measures specified in paragraph (a) of this section, compliance with all applicable standards must be achieved.
(h) No physical change, or change in the method of operation, at an existing electric utility steam generating unit shall be treated as a modification for the purposes of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the 5 years prior to the change.
(i) Repowering projects that are awarded funding from the Department of Energy as permanent clean coal technology demonstration projects (or similar projects funded by EPA) are exempt from the requirements of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the five years prior to the change.
(i)
(1) Repowering projects that qualify for an extension under section 409(b) of the Clean Air Act are exempt from the requirements of this section, provided that such change does not increase the actual hourly emissions of any pollutant regulated under this section above the actual hourly emissions achievable at that unit during the 5 years prior to the change.
(2) This exemption shall not apply to any new unit that:
(i) Is designated as a replacement for an existing unit;
(ii) Qualifies under section 409(b) of the Clean Air Act for an extension of an emission limitation compliance date under section 405 of the Clean Air Act; and
(iii) Is located at a different site than the existing unit.
(k) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project is exempt from the requirements of this section. A temporary clean coal control technology demonstration project, for the purposes of this section is a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State implementation plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.
(I) The reactivation of a very clean coal-fired electric utility steam generating unit is exempt from the requirements of this section.
[40 FR 58419, Dec. 16, 1975, as amended at 43 FR 34347, Aug. 3, 1978; 45 FR 5617, Jan. 23, 1980; 57 FR 32339, July 21, 1992; 65 FR 61750, Oct. 17, 2000]

\section*{§60.15 Reconstruction.}
(a) An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate.
(b) "Reconstruction" means the replacement of components of an existing facility to such an extent that:
(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and
(2) It is technologically and economically feasible to meet the applicable standards set forth in this part.
(c) "Fixed capital cost" means the capital needed to provide all the depreciable components.

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(d) If an owner or operator of an existing facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable.entirely new facility, he shall notify the Administrator of the proposed replacements. The notice must be postmarked 60 days (or as soon as practicable) before construction of the replacements is commenced and must include the following information:
(1) Name and address of the owner or operator.
(2) The location of the existing facility.
(3) A brief description of the existing facility and the components which are to be replaced.
(4) A description of the existing air pollution control equipment and the proposed air pollution control equipment.
(5) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility.
(6) The estimated life of the existing facility after the replacements.
(7) A discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.
(e) The Administrator will determine, within 30 days of the receipt of the notice required by paragraph (d) of this section and any additional information he may reasonably require, whether the proposed replacement constitutes reconstruction.
(f) The Administrator's determination under paragraph (e) shall be based on:
(1) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new facility;
(2) The estimated life of the facility after the replacements compared to the life of a comparable entirely new facility;
(3) The extent to which the components being replaced cause or contribute to the emissions from the facility; and
(4) Any economic or technical limitations on compliance with applicable standards of performance which are inherent in the proposed replacements.
(g) Individual subparts of this part may include specific provisions which refine and delimit the concept of reconstruction set forth in this section.
[40 FR 58420, Dec. 16, 1975]

\section*{§ 60.16 Priority list.}

A list of prioritized major source categories may be found at the following EPA web site:
http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr\&rgn=div6\&view=text\&node=40:6.0.1.1.1.1\&idno=40

\section*{§ 60.17 Incorporations by reference.}

The materials listed below are incorporated by reference in the corresponding sections noted. These incorporations by reference were approved by the Director of the Federal Register on the date listed. These materials are incorporated as they exist on the date of the approval, and a notice of any change in these materials will be published in the Federal Register. The materials are available for purchase at the corresponding address noted below, and all are available for inspection at the Library (C267-01), U.S. EPA, Research Triangle Park, NC or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.
(a) The following materials are available for purchase from at least one of the following addresses: American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, Post Office Box C700, West Conshohocken, PA 19428-2959; or ProQuest, 300 North Zeeb Road, Ann Arbor, MI 48106.
(1) ASTM A99-76, 82 (Reapproved 1987), Standard Specification for Ferromanganese, incorporation by reference (IBR) approved for \(\$ 60.261\).
(2) ASTM A100-69, 74, 93, Standard Specification for Ferrosilicon, IBR approved for \(\S 60.261\).

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(3) ASTM A101-73, 93, Standard Specification for Ferrochromium, IBR approved for \(\S 60.261\).
(4) ASTM A482-76, 93, Standard Specification for Ferrochromesilicon, IBR approved for \(\$ 60.261\).
(5) ASTM A483-64, 74 (Reapproved 1988), Standard Specification for Silicomanganese, IBR approved for \(\S 60.261\).
(6) ASTM A495-76, 94, Standard Specification for Calcium-Silicon and Calcium Manganese-Silicon, IBR approved for \(\$ 60.261\).
(7) ASTM D86-78, 82, 90, 93, 95, 96, Distillation of Petroleum Products, IBR approved for \(\S \S 60.562-2(\mathrm{~d})\), \(60.593(\mathrm{~d}), 60.593 \mathrm{a}(\mathrm{d})\), and \(60.633(\mathrm{~h})\).
(8) ASTM D129-64, 78, 95, 00, Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), IBR approved for \(\S \$ 60.106(\mathrm{j})(2), 60.335(\mathrm{~b})(10)(\mathrm{i})\), and Appendix A: Method 19, 12.5.2.2.3.
(9) ASTM D129-00 (Reapproved 2005), Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), IBR approved for \(\$ 60.4415(\mathrm{a})(1)(\mathrm{i})\).
(10) ASTM D240-76, 92, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, IBR approved for \(\S \S 60.46\) (c), 60.296 (b), and Appendix A: Method 19, Section 12.5.2.2.3.
(11) ASTM D270-65, 75, Standard Method of Sampling Petroleum and Petroleum Products, IBR approved for Appendix A: Method 19, Section 12.5.2.2.1.
(12)ASTM D323-82, 94, Test Method for Vapor Pressure of Petroleum Products (Reid Method), IBR approved for \(\S \S 60.111(\mathrm{l}), 60.111 \mathrm{a}(\mathrm{g}), 60.111 \mathrm{~b}(\mathrm{~g})\), and \(60.116 \mathrm{~b}(\mathrm{f})(2)(\mathrm{ii})\).
(I3)ASTM D388-77, 90, 91, 95, 98a, 99 (Reapproved 2004) 1 , Standard Specification for Classification of Coals by Rank, IBR approved for \(\S \S 60.24(\mathrm{~h})(8), 60.41\) of subpart D of this part, \(60.45(\mathrm{f})(4)(\mathrm{i}), 60.45(\mathrm{f})(4)(\mathrm{ii})\), \(60.45(\mathrm{f})(4)(\mathrm{vi}), 60.41 \mathrm{Da}\) of subpart Da of this part, 60.4 lb of subpart Db of this part, 60.41 c of subpart Dc of this part, and 60.4102 .
(14)ASTM D388-77, 90, 91, 95, 98a, Standard Specification for Classification of Coals by Rank, IBR approved for \(\S \$ 60.251\) (b) and (c) of subpart \(Y\) of this part.
(15) ASTM D396-78, 89, 90, 92, 96, 98, Standard Specification for Fuel Oils, IBR approved for \(\$ \S 60.41 \mathrm{~b}\) of subpart Db of this part, 60.41 c of subpart Dc of this part, 60.111 (b) of subpart K of this part, and \(60.111 \mathrm{a}(\mathrm{b})\) of subpart Ka of this part.
(16) ASTM D975-78, 96, 98a, Standard Specification for Diesel Fucl Oils, IBR approved for \(\S \S 60.111\) (b) of subpart K of this part and \(60.111 \mathrm{a}(\mathrm{b})\) of subpart Ka of this part.
(17) ASTM D1072-80, 90 (Reapproved 1994), Standard Test Method for Total Sulfur in Fuel Gases, IBR approved for §60.335(b)(10)(ii).
(18)ASTM D1072-90 (Reapproved 1999), Standard Test Method for Total Sulfur in Fuel Gases, IBR approved for \(\S 60.4415(\mathrm{a})(1)(\mathrm{ii})\).
(19) ASTM D1137-53, 75, Standard Method for Analysis of Natural Gases and Related Types of Gaseous Mixtures by the Mass Spectrometer, IBR' approved for \(\S 60.45(\mathrm{f})(5)(\mathrm{i})\).
(20) ASTM D1193-77, 91, Standard Specification for Reagent Water, IBR approved for Appendix A: Method 5, Section 7.1.3; Method 5E, Section 7.2.1; Method 5F, Section 7.2.1; Method 6, Section 7.1.1; Method 7, Section 7.1.1; Method 7C, Section 7.1.1; Method 7D, Section 7.1.1; Method 10A, Section 7.1.1; Method 11, Section 7.1.3; Method 12, Section 7.1.3; Method 13A, Section 7.1.2; Method 26, Section 7.1.2; Method 26A, Section 7.1.2; and Method 29, Section 7.2.2.
(21) ASTM D1266-87, 91, 98, Standard Test Method for Sulfur in Petroleum Products (Lamp Method), IBR approved for \(\$ \$ 60.106(\mathrm{j})(2)\) and \(60.335(\mathrm{~b})(10)(\mathrm{i})\).
(22) ASTM D1266-98 (Reapproved 2003)e 1, Standard Test Method for Sulfur in Petroleum Products (Lamp Method), IBR approved for \(\S 60.4415(\mathrm{a})(1)(\mathrm{i})\).

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(23)ASTM D1475-60 (Reapproved 1980), 90, Standard Test Method for Density of Paint, Varnish Lacquer, and Related Products, IBR approved for \(\S 60.435(\mathrm{~d})(1)\), Appendix A: Method 24, Section 6.1; and Method 24A, Sections 6.5 and 7.1.
(24)ASTM D1552-83, 95, 01, Standard Test Method for Sulfur in Petroleum Products (High-Temperature Method), IBR approved for \(\$ \S 60.106(\mathrm{j})(2), 60.335(\mathrm{~b})(10)(\mathrm{i})\), and Appendix A: Method 19, Section 12.5.2.2.3.
(25)ASTM D1552-03, Standard Test Method for Sulfur in Petroleum Products (High-Temperature Method), 1BR approved for \(\$ 60.4415(\mathrm{a})(1)(\mathrm{i})\).
(26)ASTM D1826-77, 94, Standard Test Method for Calorific Value of Gases in Natural Gas Range by Continuous Recording Calorimeter, IBR approved for \(\S \S 60.45(\mathrm{f})(5)(\mathrm{ii}), 60.46(\mathrm{c})(2), 60.296(\mathrm{~b})(3)\), and Appendix A: Method 19, Section 12.3.2.4.
(27)ASTM D1835-87, 91, 97, 03a, Standard Specification for Liquefied Petroleum (LP) Gases, IBR approved for \(\$ \S 60.4 \mathrm{IDa}\) of subpart Da of this part, 60.4 lb of subpart Db of this part, and 60.4 lc of subpart Dc of this part.
(28)ASTM D1945-64, 76, 91, 96, Standard Method for Analysis of Natural Gas by Gas Chromatography, IBR approved for \(\S 60.45(\mathrm{f})(5)(\mathrm{i})\).
(29)ASTM D1946-77, 90 (Reapproved 1994), Standard Method for Analysis of Reformed Gas by Gas Chromatography, IBR approved for \(\$ \$ 60.18(\mathrm{f})(3), 60.45(\mathrm{f})(5)(\mathrm{i}), 60.564(\mathrm{f})(1), 60.614(\mathrm{e})(2)(\mathrm{ii}), 60.614(\mathrm{e})(4)\), 60.664(e)(2)(ii), 60.664(e)(4), 60.704(d)(2)(ii), and 60.704(d)(4).
(30)ASTM D2013-72, 86, Standard Method of Preparing Coal Samples for Analysis, IBR approved for Appendix A: Method 19, Section 12.5.2.1.3.
(31)ASTM D2015-77 (Reapproved 1978), 96, Standard Test Method for Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter, IBR approved for \(\$ 60.45(\mathrm{f})(5)(\mathrm{ii}), 60.46(\mathrm{c})(2)\), and Appendix A: Method 19, Section 12.5.2.1.3.
(32)ASTM D2016-74, 83, Standard Test Methods for Moisture Content of Wood, IBR approved for Appendix A: Method 28, Section 16.1.1.
(33) ASTM D2234-76, 96, 97b, 98, Standard Methods for Collection of a Gross Sample of Coal, IBR approved for Appendix A: Method 19, Section 12.5.2.1.1.
(34)ASTM D2369-81, 87, 90, 92, 93, 95, Standard Test Method for Volatile Content of Coatings, IBR approved for Appendix A: Method 24, Section 6.2.
(35)ASTM D2382-76, 88, Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method), IBR approved for \(\S \S 60.18(\mathrm{f})(3), 60.485(\mathrm{~g})(6), 60.485 \mathrm{a}(\mathrm{g})(6), 60.564(\mathrm{f})(3), 60.614(\mathrm{e})(4), 60.664(\mathrm{e})(4)\), and 60.704(d)(4).
(36) ASTM D2504-67, 77, 88 (Reapproved 1993), Noncondensable Gases in C3 and Lighter Hydrocarbon Products by Gas Chromatography, IBR approved for \(\$ \S 60.485(\mathrm{~g})(5)\) and \(60.485 \mathrm{a}(\mathrm{g})(5)\).
(37)ASTM D2584-68 (Reapproved 1985), 94, Standard Test Method for Ignition Loss of Cured Reinforced Resins, IBR approved for \(\$ 60.685(\mathrm{c})(3)(\mathrm{i})\).
(38) ASTM D2597-94 (Reapproved 1999), Standard Test Method for Analysis of Demethanized Hydrocarbon Liquid Mixtures Containing Nitrogen and Carbon Dioxide by Gas Chromatography, IBR approved for \(\$ 60.335(\mathrm{~b})(9)\) (i).
(39) ASTM D2622-87, 94, 98, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive XRay Fluorescence Spectrometry, IBR approved for \(\$ \$ 60.106(\mathrm{j})(2)\) and \(60.335(\mathrm{~b})(10)(\mathrm{i})\).
(40) ASTM D2622-05, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry, IBR approved for \(\S 60.4415(\mathrm{a})(1)(\mathrm{i})\).
(41) ASTM D2879-83, 96, 97, Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, IBR approved for \(\$ \$ 60.111 \mathrm{~b}(\mathrm{f})(3), 60.116 \mathrm{~b}(\mathrm{e})(3)(\mathrm{ii}), 60.116 \mathrm{~b}(\mathrm{f})(2)(\mathrm{i})\), \(60.485(\mathrm{e})(1)\), and \(60.485 \mathrm{a}(\mathrm{e})(1)\).

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(42)ASTM D2880-78, 96, Standard Specification for Gas Turbine Fuel Oils, IBR approved for \(\S \S 60.111(\mathrm{~b})\), \(60.11 \mathrm{la}(\mathrm{b})\), and \(60.335(\mathrm{~d})\).
(43)ASTM D2908-74, 91, Standard Practice for Measuring Volatile Organic Mattcr in Water by Aqueous-Injection Gas Chromatography, IBR approved for \(\$ 60.564(\mathrm{j})\).
(44)ASTM D2986-71, 78, 95a, Standard Method for Evaluation of Air, Assay Media by the Monodisperse DOP (Dioctyl Phthalate) Smoke Test, IBR approved for Appendix A: Method 5, Section 7.1.1; Method 12, Section 7.1.1; and Method 13A, Section 7.1.1.2.
(45) ASTM D3173-73, 87, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke, IBR approved for Appendix A: Method 19, Section 12.5.2.1.3.
(46) ASTM D3176-74, 89, Standard Method for Ultimate Analysis of Coal and Coke, IBR approved for \(\S 60.45(\mathrm{f})(5)(\mathrm{i})\) and Appendix A: Method 19, Section 12.3.2.3.
(47) ASTM D3177-75, 89, Standard Test Method for Total Sulfur in the Analysis Sample of Coal and Coke, IBR approved for Appendix A: Method 19, Section 12.5.2.1.3.
(48) ASTM D3178-73 (Reapproved 1979), 89, Standard Test Methods for Carbon and Hydrogen in the Analysis Samplc of Coal and Coke, IBR approved for \(\S 60.45(\mathrm{f})(5)(\mathrm{i})\).
(49) ASTM D3246-81, 92, 96, Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry, IBR approved for \(\$ 60.335(\mathrm{~b})(10)\) (ii).
(50) ASTM D3246-05, Standard Tcst Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry, IBR approved for \(\$ 60.4415(\mathrm{a})(1)\) (ii).
(51) ASTM D3270-73T, 80, 91, 95, Standard Test Methods for Analysis for Fluoride Content of the Atmosphere and Plant Tissues (Semiautomated Method), IBR approved for Appendix A: Method 13A, Section 16.1.
(52) ASTM D3286-85, 96, Standard Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter, IBR approved for Appendix A: Method 19, Section 12.5.2.1.3.
(53)ASTM D3370-76, 95a, Standard Practices for Sampling Water, IBR approved for §60.564(j).
(54)ASTM D3792-79, 91, Standard Test Method for Water Content of Water-Reducible Paints by Direct Injection into a Gas Chromatograph, IBR approved for Appendix A: Method 24, Section 6.3.
(55)ASTM D4017-81, 90, 96a, Standard Test Method for Water in Paints and Paint Materials by the Karl Fischer Titration Method, IBR approved for Appendix A: Method 24, Section 6.4.
(56)ASTM D4057-81, 95, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, IBR approved for Appendix A: Method 19, Section 12.5.2.2.3.
(57)ASTM D4057-95 (Reapproved 2000), Standard Practice for Manual Sampling of Petroleum and Petroleum Products, IBR approved for \(\$ 60.4415(\mathrm{a})(1)\).
(58)ASTM D4084-82, 94, Standard Test Method for Analysis of Hydrogen Sulfide in Gaseous Fuels (Lead Acetate Reaction Rate Method), IBR approved for \(\$ 60.334(\mathrm{~h})(1)\).
(59) ASTM D4084-05, Standard Test Method for Analysis of Hydrogen Sulfide in Gaseous Fuels (Lead Acetate Reaction Rate Method), IBR approved for \(\$ \$ 60.4360\) and \(60.4415(\mathrm{a})(1)(\mathrm{ii})\).
(60) ASTM D4177-95, Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, IBR approved for Appendix A: Method 19, Section 12.5.2.2.1.
(61) ASTM D4177-95 (Reapproved 2000), Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, IBR approved for \(\$ 60.4415(\mathrm{a})(1)\).
(62) ASTM D4239-85, 94, 97, Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods, IBR approved for Appendix A: Method 19, Section 12.5.2.1.3.

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(63) ASTM D4294-02, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, IBR approved for \(\$ 60.335(\mathrm{~b})(10)(\mathrm{i})\).
(64) ASTM D4294-03, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, IBR approved for \(\$ 60.4415(a)(1)(i)\).
(65) ASTM D4442-84, 92, Standard Test Methods for Direct Moisture Content Measurement in Wood and Wood-base Materials, IBR approved for Appendix A: Method 28, Section 16.1.1.
(66) ASTM D4444-92, Standard Test Methods for Use and Calibration of Hand-Hcld Moisture Meters, IBR approved for Appendix A: Method 28, Section 16.1.1.
(67) ASTM D4457-85 (Reapproved 1991), Test Method for Determination of Dichloromethane and 1, 1, 1Trichloroethane in Paints and Coatings by Direct lnjection into a Gas Chromatograph, IBR approved for Appendix A: Method 24, Section 6.5.
(68) ASTM D4468-85 (Reapproved 2000), Standard Test Method for Total Sulfur in Gaseous Fuels by Hydrogenolysis and Rateometric Colorimetry, IBR approved for \(\$ \$ 60.335(\mathrm{~b})(10)\) (ii) and \(60.4415(\mathrm{a})(1)\) (ii).
(69) ASTM D4629-02, Standard Test Method for Trace Nitrogen in Liquid Petroleum Hydrocarbons by Syringe/Inlet Oxidative Combustion and Chemiluminescence Detection, IBR approved for \(\$ \$ 60.49 \mathrm{~b}(\mathrm{e})\) and 60.335 (b)(9)(i).
(70) ASTM D4809-95, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Mcthod), IBR approved for \(\S \S 60.18(\mathrm{f})(3), 60.485(\mathrm{~g})(6), 60.485 \mathrm{a}(\mathrm{g})(6), 60.564(\mathrm{f})(3)\), 60.614(d)(4), 60.664(e)(4), and 60.704(d)(4).
(71) ASTM D4810-88 (Reapproved 1999), Standard Test Method for Hydrogen Sulfide in Natural Gas Using Length of Stain Detector Tubes, IBR approved for \(\$ \$ 60.4360\) and \(60.4415(\mathrm{a})(1)(\mathrm{ii})\).
(72) ASTM D5287-97 (Reapproved 2002), Standard Practice for Automatic Sampling of Gaseous Fuels, IBR approved for \(\$ 60.4415(\mathrm{a})(1)\).
(73) ASTM D5403-93, Standard Test Methods for Volatile Content of Radiation Curable Materials, IBR approved for Appendix A: Method 24, Section 6.6.
(74) ASTM D5453-00, Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Motor Fuels and Oils by Ultraviolet Fluorescence, IBR approved for \(\$ 60.335(\mathrm{~b})(10)(\mathrm{i})\).
(75) ASTM D5453-05, Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Motor Fuels and Oils by Ultraviolet Fluorescence, IBR approved for \(\$ 60.4415(\mathrm{a})(1)(\mathrm{i})\).
(76) ASTM D5504-01, Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence, IBR approved for \(\$ \$ 60.334(\mathrm{~h})(1)\) and 60.4360 .
(77) ASTM D5762-02, Standard Test Method for Nitrogen in Petroleum and Petroleum Products by Boat-Inlet Chemiluminescence, IBR approved for \(\$ 60.335(\mathrm{~b})(9)(\mathrm{i})\).
(78) ASTM D5865-98, Standard Test Method for Gross Calorific Value of Coal and Coke, IBR approved for §60.45(f)(5)(ii), \(60.46(\mathrm{c})(2)\), and Appendix A: Method 19, Section 12.5.2.1.3.
(79)ASTM D62 16-98, Standard Practice for Opacity Monitor Manufacturers to Certify Conformance with Design and Performance Specifications, IBR approved for Appendix B, Performance Specification 1.
(80)ASTM D6228-98, Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Flame Photometric Detection, IBR approved for \(\$ 60.334(\mathrm{~h})(1)\).
(81) ASTM D6228-98 (Reapproved 2003), Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Flame Photometric Detection, IBR approved for \(\$ \$ 60.4360\) and 60.4415 .
(82) ASTM D6348-03, Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, IBR approved for table 7 of Subpart IIII of this part and table 2

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of subpart JJJJ of this part.
(83) ASTM D6366-99, Standard Test Method for Total Trace Nitrogen and Its Derivatives in Liquid Aromatic Hydrocarbons by Oxidative Combustion and Electrochemical Detection, IBR approved for \(\S 60.335(\mathrm{~b})(9)(\mathrm{i})\).
(84) ASTM D6420-99 (Reapproved 2004) Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, IBR approved for table 2 of subpart JJJJ of this part.
(85) ASTM D6522-00, Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers, IBR approved for \(\S 60.335\) (a).
(86) ASTM D6522-00 (Reapproved 2005), Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers, IBR approved for table 2 of subpart JJJJ of this part.
(87)ASTM D6667-01, Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases by Ultraviolet Fluorescence, IBR approved for \(\S 60.335(\mathrm{~b})(10)(\mathrm{ii})\).
(88) ASTM D6667-04, Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases by Ultraviolet Fluorescence, IBR approved for \(\$ 60.4415(\mathrm{a})(\mathrm{I})(\mathrm{ii})\).
(89) ASTM D6784-02, Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method), IBR approved for Appendix B to part 60, Performance Specification 12A, Section 8.6.2.
(90) ASTM E168-67, 77, 92, General Techniques of Infrared Quantitative Analysis, IBR approved for \(\$ \$ 60.485 \mathrm{a}(\mathrm{d})(1), 60.593(\mathrm{~b})(2), 60.593 \mathrm{a}(\mathrm{b})(2)\), and \(60.632(\mathrm{f})\).
(91) ASTM E169-63, 77, 93, General Techniques of Ultraviolet Quantitative Analysis, IBR approved for \(\S \$ 60.485 \mathrm{a}(\mathrm{d})(1), 60.593(\mathrm{~b})(2), 60.593 \mathrm{a}(\mathrm{b})(2)\), and \(60.632(\mathrm{f})\).
(92) ASTM E260-73, 91, 96, General Gas Chromatography Procedures, IBR approved for \(\S \S 60.485 \mathrm{a}(\mathrm{d})(1)\), 60.593(b)(2), 60.593a(b)(2), and 60.632(f).
(b) The following material is available for purchase from the Association of Official Analytical Chemists, 111] North 19th Street, Suite 210, Arlington, VA 22209.
(1) AOAC Method 9, Official Methods of Analysis of the Association of Official Analytical Chemists, 11 th edition, 1970, pp. 11-12, IBR approved January 27, 1983 for \(\S \S 60.204\) (b)(3), 60.214(b)(3), \(60.224(\mathrm{~b})(3), 60.234\) (b)(3).
(c) The following material is available for purchase from the American Petroleum Institute, 1220 L Street NW., Washington, DC 20005.
(1) API Publication 2517, Evaporation Loss from External Floating Roof Tanks, Second Edition, February 1980, IBR approved January 27, 1983, for \(\S \S 60.111(\mathrm{i}), 60.111 \mathrm{a}(\mathrm{f}), 60.11 \mathrm{la}(\mathrm{f})(1)\) and \(60.116 \mathrm{~b}(\mathrm{e})(2)(\mathrm{i})\).
(d) The following material is available for purchase from the Technical Association of the Pulp and Paper Industry (TAPPI), Dunwoody Park, Atlanta, GA 30341.
(1) TAPPI Method T624 os-68, IBR approved January 27, 1983 for \(\S 60.285(\mathrm{~d})(3)\).
(e) The following material is available for purchase from the Water Pollution Control Federation (WPCF), 2626 Pennsylvania Avenue NW., Washington, DC 20037.
(1) Method 209A, Total Residue Dried at \(103-105^{\circ} \mathrm{C}\), in Standard Methods for the Examination of Water and Wastewater, 15th Edition, 1980, IBR approved February 25, 1985 for \(\S 60.683(\mathrm{~b})\).
(f) The following material is available for purchase from the following address: Underwriter's Laboratories, Inc. (UL), 333 Pfingsten Road, Northbrook, IL 60062.
(1) UL 103, Sixth Edition revised as of September 3, 1986, Standard for Chimneys, Factory-built, Residential Type

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and Building Heating Appliance.
(g) The following material is available for purchase from the following address: West Coast Lumber Inspection Bureau, 6980.SW. Barnes Road, Portland, OR 97223.
(1) West Coast Lumber Standard Grading Rules No. 16, pages 5-21 and 90 and 91, September 3, 1970, revised 1984.
(h) The following material is available for purchase from the American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016-5990.
(1) ASME QRO-1-1994, Standard for the Qualification and Certification of Resource Recovery Facility Operators, IBR approved for \(\$ \$ 60.56 \mathrm{a}, 60.54 \mathrm{~b}(\mathrm{a}), 60.54 \mathrm{~b}(\mathrm{~b}), 60.1185(\mathrm{a}), 60.1185(\mathrm{c})(2), 60.1675(\mathrm{a})\), and \(60.1675(\mathrm{c})(2)\).
(2) ASME PTC 4.1-1964 (Reaffirmed 1991), Power Test Codes: Test Code for Steam Generating Units (with 1968 and 1969 Addenda), IBR approved for \(\$ \S 60.46 \mathrm{~b}\) of subpart Db of this part, \(60.58 \mathrm{a}(\mathrm{h})(6)(\mathrm{ii}), 60.58 \mathrm{~b}(\mathrm{i})(6)(\mathrm{ii})\), 60.1320(a)(3) and 60.1810(a)(3).
(3) ASME Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters, 6th Edition (1971), IBR approved for \(\$ \S 60.58 \mathrm{a}(\mathrm{h})(6)(\mathrm{ii}), 60.58 \mathrm{~b}(\mathrm{i})(6)(\mathrm{ii}), 60.1320(\mathrm{a}) 4)\), and \(60.1810(\mathrm{a})(4)\).
(4) ANSI/ASME PTC 19.10-1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus], IBR approved for Tables 1 and 3 of subpart EEEE, Tables 2 and 4 of subpart FFFF, Table 2 of subpart JJJJ, and \(\$ \$ 60.4415(\mathrm{a})(2)\) and \(60.4415(\mathrm{a})(3)\) of subpart KKKK of this part.
(i) Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 Third Edition (November 1986), as amended by Updates I (July 1992), II (September 1994), IIA (August, I993), IIB (January 1995), and III (December 1996). This document may be obtained from the U.S. EPA, Office of Solid Waste and Emergency Response, Waste Characterization Branch, Washington, DC 20460, and is incorporated by reference for appendix A to part 60 , Method 29 , Sections \(7.5 .34 ; 9.2 .1 ; 9.2 .3 ; 10.2 ; 10.3 ; 11.1 .1 ; 11.1 .3 ; 13.2 .1 ; 13.2 .2 ; 13.3 .1\); and Table 29-3.
(j) "Standard Methods for the Examination of Water and Wastewater," 16th edition, 1985. Method 303F: "Determination of Mercury by the Cold Vapor Technique." This document may be obtained from the American Public Health Association, 101518 th Street, NW., Washington, DC 20036, and is incorporated by reference for appendix \(\Lambda\) to part 60, Method 29, Sections 9.2.3; 10.3; and 11.1.3.
(k) This material is available for purchase from the American Hospital Association (AHA) Service, Inc., Post Office Box 92683, Chicago, Illinois 60675-2683. You may inspect a copy at EPA's Air and Radiation Docket and Information Center (Docket \(\Lambda-91-61\), Item IV-J-124), Room M-1500, 1200 Pennsylvania Ave., NW., Washington, DC.
(1) An Ounce of Prevention: Waste Reduction Strategies for Health Care Facilities. American Society for Health Care Environmental Services of the American Hospital Association. Chicago, Illinois. 1993. AHA Catalog No. 057007. ISBN 0-87258-673-5. IBR approved for \(\S 60.35 \mathrm{e}\) and \(\S 60.55 \mathrm{c}\).
(I) This material is available for purchase from the National Technical Information Services, 5285 Port Royal Road, Springfield, Virginia 22161. You may inspect a copy at EPA's Air and Radiation Docket and Information Center (Docket A-91-61, Item IV-J-125), Room M-1500, 1200 Pennsylvania Ave., NW., Washington, DC.
(1) OMB Bulletin No. 93-17: Revised Statistical Definitions for Metropolitan Areas. Office of Management and Budget, June 30, 1993. NTIS No. PB 93-192-664. IBR approved for \(\S 60.31 \mathrm{l}\).
( m ) This material is available for purchase from at least one of the following addresses: The Gas Processors Association, 6526 East 60th Street, Tulsa, OK, 74145 ; or Information Handling Services, 15 Inverness Way East, PO Box I154, Englewood, CO 80150-1154. You may inspect a copy at EPA's Air and Radiation Docket and Information Center, Room B108, 1301 Constitution Ave., NW., Washington, DC 20460.
(1) Gas Processors Association Method 2377-86, Test for Hydrogen Sulfide and Carbon Dioxide in Natural Gas Using Length of Stain Tubes, IBR approved for \(\$ \$ 60.334(\mathrm{~h})(\mathrm{I}), 60.4360\), and \(60.4415(\mathrm{a})(1)(\mathrm{ii})\).
(2) [Reserved]
(n) This material is available for purchase from IHS Inc., 15 Inverness Way East, Englewood, CO 80112.

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(1) International Organization for Standards 8178-4: 1996(E), Reciprocating Internal Combustion Engines-Exhaust Emission Measurement—Part 4: Test Cycles for Different Engine Applications, IBR approved for \(\S 60.4241(\mathbf{b})\).
(2) [Reserved]
[48 FR 3735, Jan. 27, 1983]
Editorial Note: For Federal Register citations affecting \(\S 60.17\), see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

\section*{§ 60.18 General control device requirements.}

Not applicable.

\section*{§ 60.19 General notification and reporting requirements.}
(a) For the purposes of this part, time periods specified in days shall be measured in calendar days, even if the word "calendar" is absent, unless otherwise specified in an applicable requirement.
(b) For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be delivered or postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery, including the use of electronic media, agreed to by the permitting authority, is acceptable.
(c) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.
(d) If an owner or operator of an affected facility in a State with delegated authority is required to submit periodic reports under this part to the State, and if the State has an established timeline for the submission of periodic reports that is consistent with the reporting frequency(ies) specified for such facility under this part, the owner or operator may change the dates by which periodic reports under this part shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. The allowance in the previous sentence applies in each State beginning 1 year after the affected facility is required to be in compliance with the applicable subpart in this part. Procedures governing the implementation of this provision are specified in paragraph ( \(f\) ) of this section.
(e) If an owner or operator supervises one or more stationary sources affected by standards set under this part and standards set under part 61 , part 63 , or both such parts of this chapter, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State with an approved permit program) a common schedule on which periodic reports required by each applicable standard shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning 1 year after the stationary source is required to be in compliance with the applicable subpart in this part, or I year after the stationary source is required to be in compliance with the applicable 40 CFR part 61 or part 63 of this chapter standard, whichever is latest. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.
(f)
(1)
(i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs \((f)(2)\) and \((f)(3)\) of this section, the owner or operator of an affected facility remains strictly subject to the requirements of this part.

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(ii) An owner or operator shall request the adjustment provided for in paragraphs (f)(2) and (f)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.
(2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.
(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.
(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.
[59 FR 12428, Mar. 16, 1994, as amended at 64 FR 7463, Feb. 12, 1998]

\section*{40 CFR 60, SUBPART KKKK, STATIONARY COMBUSTION TURBINES}

Source: 71 FR 38497, July 6, 2006, unless otherwise noted.

\section*{INTRODUCTION}

\section*{§ \(\mathbf{6 0 . 4 3 0 0}\) What is the purpose of this subpart?}

This subpart establishes emission standards and compliance schedules for the control of emissions from stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005.

\section*{APPLICABILITY}

\section*{§ 60.4305 Does this subpart apply to my stationary combustion turbine?}
(a) If you are the owner or operator of a stationary combustion turbine with a heat input at peak load equal to or greater than 10.7 gigajoules ( 10 MMBtu ) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18,2005, your turbine is subject to this subpart. Only heat input to the combustion turbine should be included when determining whether or not this subpart is applicable to your turbine. Any additional heat input to associated heat recovery steam generators (HRSG) or duct burners should not be included when deternining your peak heat input. However, this subpart does apply to emissions from any associated HRSG and duct burners.
(b) Stationary combustion turbines regulated under this subpart are exempt from the requirements of subpart GG of this part. Heat recovery steam generators and duct burners regulated under this subpart are exempted from the requirements of subparts \(\mathrm{Da}, \mathrm{Db}\), and Dc of this part.

\section*{§ \(\mathbf{6 0 . 4 3 1 0}\) What types of operations are exempt from these standards of performance?}
(a) Emergency combustion turbines, as defined in \(\$ 60.4420\) (i), are exempt from the nitrogen oxides \(\left(\mathrm{NO}_{\mathrm{X}}\right)\) emission limits in \(\S 60.4320\).
(b) Stationary combustion turbines engaged by manufacturers in research and development of equipment for both combustion turbine emission control techniques and combustion turbine efficiency improvements are exempt from the \(\mathrm{NO}_{\mathrm{x}}\) emission limits in \(\S 60.4320\) on a case-by-case basis as determined by the Administrator.
(c) Stationary combustion turbines at integrated gasification combined cycle electric utility steam generating units that are subject to subpart Da of this part are exempt from this subpart.
(d) Combustion turbine test cells/stands are exempt from this subpart.

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\section*{EMISSION LIMITS}

\section*{§ 60.4315 What pollutants are regulated by this subpart?}

The pollutants regulated by this subpart are nitrogen oxide ( \(\mathrm{NO}_{\mathrm{x}}\) ) and sulfur dioxide \(\left(\mathrm{SO}_{2}\right)\).

\section*{§ \(\mathbf{6 0 . 4 3 2 0}\) What emission limits must I meet for nitrogen oxides (NOX)?}
(a) You must meet the emission limits for \(\mathrm{NO}_{\mathrm{X}}\) specified in Table 1 to this subpart.
(b) If you have two or more turbines that are connected to a single generator, each turbine must meet the emission limits for \(\mathrm{NO}_{\mathrm{x}}\).

\section*{§ 60.4325 What emission limits must I meet for NOX if my turbine burns both natural gas and distillate oil (or some other combination of fuels)?}

You must meet the emission limits specified in Table 1 to this subpart. If your total heat input is greater than or equal to 50 percent natural gas, you must meet the corresponding limit for a natural gas-fired turbine when you are burning that fuel. Similarly, when your total heat input is greater than 50 percent distillate oil and fuels other than natural gas, you must meet the corresponding limit for distillate oil and fuels other than natural gas for the duration of the time that you burn that particular fuel.

\section*{§ 60.4330 What emission limits must I meet for sulfur dioxide (SO2)?}
(a) If your turbine is located in a continental area, you must comply with either paragraph (a)(1) or (a)(2) of this section. If your turbine is located in Alaska, you do not have to comply with the requirements in paragraph (a) of this section until January 1, 2008.
(1) You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain \(\mathrm{SO}_{2}\) in excess of 110 nanograms per Joule ( \(\mathrm{ng} / \mathrm{J}\) ) ( 0.90 pounds per megawatt-hour (lb/MWh)) gross output, or
(2) You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of \(26 \mathrm{ng} \mathrm{SO}_{2} / \mathrm{J}\left(0.060 \mathrm{lb} \mathrm{SO}_{2} / \mathrm{MMBtu}\right)\) heat input. If your furbine simultaneously fires multiple fuels, each fuel must meet this requirement.
(b) If your turbine is located in a noncontinental area or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit, you must comply with one or the other of the following conditions:
(1) You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain \(\mathrm{SO}_{2}\) in excess of \(780 \mathrm{ng} / \mathrm{J}(6.2 \mathrm{lb} / \mathrm{MWh})\) gross output, or
(2) You must not burn in the subject stationary combustion turbine any fuel which contains total sulfur with potential sulfur emissions in excess of \(180 \mathrm{ng} \mathrm{SO} 2 / \mathrm{J}\left(0.42 \mathrm{lb} \mathrm{SO}_{2} / \mathrm{MMBru}\right)\) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.

\section*{GENERAL COMPLIANCE REQUIREMENTS}

\section*{§ 60.4333 What are my general requirements for complying with this subpart?}
(a) You must operate and maintain your stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.
(b) When an affected unit with heat recovery utilizes a common steam header with one or more combustion turbines, the owner or operator shall either:
(I) Determine compliance with the applicable \(\mathrm{NO}_{x}\) emissions limits by measuring the emissions combined with the emissions from the other unit(s) utilizing the common heat recovery unit; or
(2) Develop, demonstrate, and provide information satisfactory to the Administrator on methods for apportioning the combined gross energy output from the heat recovery unit for each of the affected combustion turbines. The

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Administrator may approve such demonstrated substitute methods for apportioning the combined gross energy output measured at the steam turbine whenever the demonstration ensures accurate estimation of emissions related under this part.

\section*{MONITORING}

\section*{§ 60.4335 How do I demonstrate compliance for NOX if I use water or steam injection?}
(a) If you are using water or steam injection to control \(\mathrm{NO}_{\mathrm{x}}\) emissions, you must install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine when burning a fuel that requires water or steam injection for compliance.
(b) Alternatively, you may use continuous emission monitoring, as follows:
(1) Install, certify, maintain, and operate a continuous emission monitoring system (CEMS) consisting of a \(\mathrm{NO}_{\mathrm{x}}\) monitor and a diluent gas (oxygen \(\left(\mathrm{O}_{2}\right)\) or carbon dioxide \(\left(\mathrm{CO}_{2}\right)\) ) monitor, to determine the hourly \(\mathrm{NO}_{\mathrm{x}}\) emission rate in parts per million ( ppm ) or pounds per million British thermal units ( \(\mathrm{lb} / \mathrm{MMBtu}\) ); and
(2) For units complying with the output-based standard, install, calibrate, maintain, and operate a fuel flow meter (or flow meters) to continuously measure the heat input to the affected unit; and
(3) For units complying with the output-based standard, install, calibrate, maintain, and operate a watt meter (or meters) to continuously measure the gross electrical output of the unit in megawatt-hours; and
(4) For combined heat and power units complying with the output-based standard, install, calibrate, maintain, and operate meters for useful recovered energy flow rate, temperature, and pressure, to continuously measure the total thermal energy output in British thermal units per hour ( \(\mathrm{Bt} / \mathrm{L} / \mathrm{h}\) ).

\section*{§ 60.4340 How do I demonstrate continuous compliance for NOX if 1 do not use water or steam injection?}
(a) If you are not using water or steam injection to control \(\mathrm{NO}_{\mathrm{X}}\) emissions, you must perform annual performance tests in accordance with \(\S 60.4400\) to demonstrate continuous compliance. If the \(\mathrm{NO}_{x}\) emission result from the performance test is less than or equal to 75 percent of the \(\mathrm{NO}_{\mathrm{x}}\) emission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the \(\mathrm{NO}_{\mathrm{x}}\) emission limit for the turbine, you must resume annual performance tests.
(b) As an alternative, you may install, calibrate, maintain and operate one of the following continuous monitoring systems:
(1) Continuous emission monitoring as described in \(\S \S 60.4335(\mathrm{~b})\) and 60.4345 , or
(2) Continuous parameter monitoring as follows:
(i) For a diffusion flame turbine without add-on selective catalytic reduction (SCR) controls, you must define parameters indicative of the unit's \(\mathrm{NO}_{\mathrm{X}}\) formation characteristics, and you must monitor these parameters continuously.
(ii) For any lean premix stationary combustion turbine, you must continuously monitor the appropriate parameters to determine whether the unit is operating in low- \(\mathrm{NO}_{\mathrm{x}}\) mode.
(iii) For any turbine that uses SCR to reduce \(\mathrm{NO}_{\mathrm{x}}\) emissions, you must continuously monitor appropriate parameters to verify the proper operation of the emission controls.
(iv) For affected units that are also regulated under part 75 of this chapter, with state approval you can monitor the \(\mathrm{NO}_{\mathrm{x}}\) emission rate using the methodology in appendix E to part 75 of this chapter, or the low mass emissions methodology in \(\S 75.19\), the requirements of this paragraph (b) may be met by performing the parametric monitoring described in section 2.3 of part 75 appendix \(E\) or in \(\$ 75.19(\mathrm{c})(1)(\mathrm{iv})(\mathrm{H})\).
\(\S \mathbf{6 0 . 4 3 4 5}\) What are the requirements for the continuous emission monitoring system equipment, if \(I\) choose to use this option?

If the option to use a \(\mathrm{NO}_{\mathrm{X}}\) CEMS is chosen:

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(a) Each \(\mathrm{NO}_{\mathrm{X}}\) diluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in appendix B to this part, except the 7 -day calibration drift is based on unit operating days, not calendar days. With state approval, Procedure 1 in appendix F to this part is not required. Alternatively, a \(\mathrm{NO}_{\mathrm{x}}\) diluent CEMS that is installed and certified according to appendix \(A\) of part 75 of this chapter is acceptable for use under this subpart. The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/MMBtu basis.
(b) As specified in \(\$ 60.13(\mathrm{e})(2)\), during each full unit operating hour, both the \(\mathrm{NO}_{\mathrm{x}}\) monitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15 -minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the \(\mathrm{NO}_{\mathrm{x}}\) emission rate for the hour.
(c) Each fuel flow meter shall be installed, calibrated, maintained, and operated according to the manufacturer's instructions. Alternatively, with state approval, fuel flow meters that meet the installation, certification, and quality assurance requirements of appendix \(D\) to part 75 of this chapter are acceptable for use under this subpart.
(d) Each watt meter, steam flow meter, and each pressure or temperature measurement device shall be installed, calibrated, maintained, and operated according to manufacturer's instructions.
(e) The owner or operator shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment described in paragraphs (a), (c), and (d) of this section. For the CEMS and fuel flow meters, the owner or operator may, with state approval, satisfy the requirements of this paragraph by implementing the QA program and plan described in section 1 of appendix \(B\) to part 75 of this chapter.
§ 60.4350 How do I use data from the continuous emission monitoring equipment to identify excess emissions?
For purposes of identifying excess emissions:
(a) All CEMS data must be reduced to hourly averages as specified in §60.13(h).
(b) For each unit operating hour in which a valid hourly average, as described in \(\$ 60.4345(\mathrm{~b})\), is obtained for both \(\mathrm{NO}_{\mathrm{x}}\) and diluent monitors, the data acquisition and handling system must calculate and record the hourly \(\mathrm{NO}_{\mathrm{x}}\) emission rate in units of ppm or \(\mathrm{lb} / \mathrm{MMBtu}\), using the appropriate equation from method 19 in appendix A of this part. For any hour in which the hourly average \(\mathrm{O}_{2}\) concentration exceeds 19.0 percent \(\mathrm{O}_{2}\) (or the hourly average \(\mathrm{CO}_{2}\) concentration is less than 1.0 percent \(\mathrm{CO}_{2}\) ), a diluent cap value of 19.0 percent \(\mathrm{O}_{2}\) or 1.0 percent \(\mathrm{CO}_{2}\) (as applicable) may be used in the emission calculations.
(c) Correction of measured \(\mathrm{NO}_{\mathrm{x}}\) concentrations to 15 percent \(\mathrm{O}_{2}\) is not allowed.

Permitting Note: Based on correspondence with EPA's Office of Air Quality and Planning Standards, this requirement should have been removed when NSPS Subpart KKKK was revised to add concentration-based standards (ppmvd corrected to \(15 \%\) oxygen) in addition to the output-based standards ( \(\mathrm{lb} / \mathrm{MWh}\) ). The regulation is currently under reconsideration for several issues. In the mean time, EPA states that the intent is to allow sources complying with the optional concentration-based standards to correct to \(15 \%\) oxygen.
(d) If you have installed and certified a \(\mathrm{NO}_{\mathrm{X}}\) diluent CEMS to meet the requirements of part 75 of this chapter, states can approve that only quality assured data from the CEMS shall be used to identify excess emissions under this subpart. Periods where the missing data substitution procedures in subpart D of part 75 are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under \(\S 60.7\) (c).
(e) All required fuel flow rate, steam flow rate, temperature, pressure, and megawatt data must be reduced to hourly averages.
(f) Calculate the hourly average \(\mathrm{NO}_{\mathrm{x}}\) emission rates, in units of the emission standards under \(\S 60.4320\), using either ppm for units complying with the concentration limit or the following equation for units complying with the output based standard:
(1) For simple-cycle operation:

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\[
\begin{equation*}
\mathrm{E}=\frac{\left(\mathrm{NO}_{\mathrm{x}}\right)_{\mathrm{b}} *(\mathrm{HI})_{\mathrm{b}}}{\mathrm{P}} \tag{Eq.1}
\end{equation*}
\]

Where:
\(\mathrm{E}=\) hourly \(\mathrm{NO}_{\mathrm{x}}\) emission rate, in \(\mathrm{lb} / \mathrm{MWh}\),
\(\left(\mathrm{NO}_{\mathrm{X}}\right)_{\mathrm{h}}=\) hourly \(\mathrm{NO}_{\mathrm{x}}\) emission rate, in lb/MMBtu,
\((\mathrm{HI})_{\mathrm{h}}=\) hourly heat input rate to the unit, in MMBtw/h, measured using the fuel flow meter(s), e.g., calculated using Equation D-15a in appendix D to part 75 of this chapter, and
\(P=\) gross energy output of the combustion turbine in MW.
(2) For combined-cycle and combined heat and power complying with the output-based standard, use Equation 1 of this subpart, except that the gross energy output is calculated as the sum of the total electrical and mechanical energy generated by the combustion turbine, the additional electrical or mechanical energy (if any) generated by the steam turbine following the heat recovery steam generator, and 100 percent of the total useful thermal energy output that is not used to generate additional electricity or mechanical output, expressed in equivalent MW, as in the following equations:
\[
\begin{equation*}
\mathrm{P}=(\mathrm{Pe})_{\mathrm{L}}+(\mathrm{Pe})_{c}+\mathrm{Ps}+\mathrm{Po} \tag{Eq.2}
\end{equation*}
\]

Where:
\(P=\) gross energy output of the stationary combustion turbine system in MW.
\((\mathrm{Pe})_{\mathrm{t}}=\) electrical or mechanical energy output of the combustion turbine in MW,
\((\mathrm{Pe})_{c}=\) electrical or mechanical energy output (if any) of the steam turbine in MW, and
\[
\mathrm{Ps}_{\mathrm{s}}=\frac{\mathrm{Q} * \mathrm{H}}{3.413 \times 10^{6} \mathrm{Btu} / \mathrm{MWh}} \quad \text { (Eq. 3) }
\]

Where:
Ps \(=\) useful thermal energy of the steam, measured relative to ISO conditions, not used to generate additional electric or mechanical output, in MW,
\(\mathrm{Q}=\) measured steam flow rate in \(\mathrm{Jb} / \mathrm{h}\),
\(\mathrm{H}=\) enthalpy of the steam at measured temperature and pressure relative to ISO conditions, in Btu/lb, and 3.413 x \(10_{6}=\) conversion from Bru/h to MW.

Po \(=\) other useful heat recovery, measured relative to ISO conditions, not used for steam generation or performance enhancement of the combustion turbine.
(3) For mechanical drive applications complying with the output-based standard, use the following equation:
\[
\left.\mathrm{E}=\frac{\left(\mathrm{NO}_{x}\right)_{\mathrm{o}}}{\mathrm{BL} * \mathrm{AL}} \quad \text { (Eq. } 4\right)
\]

Where:
\(\mathrm{E}=\mathrm{NO}_{\mathrm{x}}\) emission rate in \(\mathrm{lb} / \mathrm{MWh}\),
\(\left(\mathrm{NO}_{\mathrm{X}}\right)_{\mathrm{m}}=\mathrm{NO}_{\mathrm{x}}\) emission rate in \(\mathrm{lb} / \mathrm{h}\),
BL \(=\) manufacturer's base load rating of turbine, in MW, and
AL \(=\) actual load as a percentage of the base load.
(g) For simple cycle units without heat recovery, use the calculated hourly average emission rates from paragraph (f) of this section to assess excess emissions on a 4-hour rolling average basis, as described in \(\S 60.4380\) (b)(1).

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(h) For combined cycle and combined heat and power units with heat recovery, use the calculated hourly average emission rates from paragraph ( \(f\) ) of this section to assess excess emissions on a 30 unit operating day rolling average basis, as described in \(\$ 60.4380(\mathrm{~b})(\mathrm{l})\).

\section*{§ 60.4355 How do I establish and document a proper parameter monitoring plan?}
(a) The steam or water to fuel ratio or other parameters that are continuously monitored as described in \(\$ \$ 60.4335\) and 60.4340 must be monitored during the performance test required under \(\S 60.8\), to establish acceptable values and ranges. You may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. You must develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the \(\mathrm{NO}_{x}\) emission controls. The plan must:
(1) Include the indicators to be monitored and show there is a significant relationship to emissions and proper operation of the \(\mathrm{NO}_{\mathrm{x}}\) emission controls,
(2) Pick ranges (or designated conditions) of the indicators, or describe the process by which such range (or designated condition) will be established,
(3) Explain the process you will use to make certain that you obtain data that are representative of the emissions or parameters being monitored (such as detector location, installation specification if applicable),
(4) Describe quality assurance and control practices that are adequate to ensure the continuing validity of the data,
(5) Describe the frequency of monitoring and the data collection procedures which you will use (e.g., you are using a computerized data acquisition over a number of discrete data points with the average (or maximum value) being used for purposes of determining whether an exceedance has occurred), and
(6) Submit justification for the proposed elements of the monitoring. If a proposed performance specification differs from manufacturer recommendation, you must explain the reasons for the differences. You must submit the data supporting the justification, but you may refer to generally available sources of information used to support the justification. You may rely on engineering assessments and other data, provided you demonstrate factors which assure compliance or explain why performance testing is unnecessary to establish indicator ranges. When establishing indicator ranges, you may choose to simplify the process by treating the parameters as if they were correlated. Using this assumption, testing can be divided into two cases:
(i) All indicators are significant only on one end of range (e.g., for a thermal incinerator controlling volatile organic compounds (VOC) it is only important to insure a minimum temperature, not a maximum). In this case, you may conduct your study so that each parameter is at the significant limit of its range while you conduct your emissions testing. If the emissions tests show that the source is in compliance at the significant limit of each parameter, then as long as each parameter is within its limit, you are presumed to be in compliance.
(ii) Some or all indicators are significant on both ends of the range. In this case, you may conduct your study so that each parameter that is significant at both ends of its range assumes its extreme values in all possible combinations of the extreme values (either single or double) of all of the other parameters. For example, if there were only two parameters, \(A\) and \(B\), and \(A\) had a range of values while \(B\) had only a minimum value, the combinations would be \(A\) high with \(B\) minimum and \(A\) low with \(B\) minimum. If both \(A\) and \(B\) had a range, the combinations would be A high and B high, A low and B low, A high and B low, \(A\) low and \(B\) high. For the case of four parameters all having a range, there are 16 possible combinations.
(b) For affected units that are also subject to part 75 of this chapter and that have state approval to use the low mass emissions methodology in \(\$ 75.19\) or the \(\mathrm{NO}_{\mathrm{x}}\) emission measurement methodology in appendix E to part 75 , you may meet the requirements of this paragraph by developing and keeping on-site (or at a central location for unmanned facilities) a QA plan, as described in \(\$ 75.19(\mathrm{e})(5)\) or in section 2.3 of appendix \(E\) to part 75 of this chapter and section 1.3.6 of appendix B to part 75 of this chapter.

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\section*{§ 60.4360 How do I determine the total sulfur content of the turbine's combustion fuel?}

You must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in \(\S 60.4365\). The sulfur content of the fuel must be determined using total sulfur methods described in \(\$ 60.4415\). Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D48 10, D5504, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17), which measure the major sulfur compounds, may be used.

\section*{§ 60.4365 How can I be exempted from monitoring the total sulfur content of the fuel?}

You may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of \(26 \mathrm{ng} \mathrm{SO}_{2} / \mathrm{J}\left(0.060 \mathrm{lb} \mathrm{SO}_{2} / \mathrm{MMBtu}\right)\) heat input for units located in continental areas and \(180 \mathrm{ng} \mathrm{SO} 2 / \mathrm{J}\left(0.42 \mathrm{lb} \mathrm{SO}_{2} / \mathrm{MMBtu}\right)\) heat input for units located in noncontinental areas or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit. You must use one of the following sources of information to make the required demonstration:
(a) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use in continental areas is 0.05 weight percent ( 500 ppmw ) or less and 0.4 weight percent ( \(4,000 \mathrm{ppmw}\) ) or less for noncontinental areas, the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and 140 grains of sulfur or less per 100 standard cubic feet for noncontinental areas, has potential sulfur emissions of less than less than \(26 \mathrm{ng} \mathrm{SO} 2 / \mathrm{J}(0.060 \mathrm{lb}\) \(\mathrm{SO}_{2} / \mathrm{MMBtu}\) ) heat input for continental areas and has potential sulfur emissions of less than less than \(180 \mathrm{ng} \mathrm{SO} 2 / \mathrm{J}\) ( \(0.42 \mathrm{lb} \mathrm{SO}_{2} / \mathrm{MMBtu}\) ) heat input for noncontinental areas; or
(b) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed \(26 \mathrm{ng} \mathrm{SO} \mathrm{S}_{2} / \mathrm{J}\) ( 0.060 lb \(\left.\mathrm{SO}_{2} / \mathrm{MMBtu}\right)\) heat input for continental areas or \(180 \mathrm{ng} \mathrm{SO}_{2} / \mathrm{J}\left(0.42 \mathrm{lb} \mathrm{SO}_{2} / \mathrm{MMBtu}\right)\) heat input for noncontinental areas. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix \(D\) to part 75 of this chapter is required.

\section*{§ 60.4370 How often must I determine the sulfur content of the fuel?}

The frequency of determining the sulfur content of the fuel must be as follows:
(a) Fuel oil. For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of appendix \(D\) to part 75 of this chapter (i.e., flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank).
(b) Gaseous fuel. If you elect not to demonstrate sulfur content using options in \(\$ 60.4365\), and the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel must be determined and recorded once per unit operating day.
(c) Custom schedules. Notwithstanding the requirements of paragraph (b) of this section, operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in paragraphs (c)(1) and (c)(2) of this section, custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in \(\S 60.4330\).
(1) The two custom sulfur monitoring schedules set forth in paragraphs (c)(1)(i) through (iv) and in paragraph (c)(2) of this section are acceptable, without prior Administrative approval:
(i) The owner or operator shall obtain daily total sulfur content measurements for 30 consecutive unit operating days, using the applicable methods specified in this subpart. Based on the results of the 30 daily samples, the required frequency for subsequent monitoring of the fuel's total sulfur content shall be as specified in paragraph (c)(1)(ii), (iii), or (iv) of this section, as applicable.
(ii) If none of the 30 daily measurements of the fuel's total sulfur content exceeds half the applicable standard, subsequent sulfur content monitoring may be performed at 12 -month intervals. If any of the samples taken at 12 -month intervals has a total sulfur content greater than half but less than the applicable limit, follow the

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procedures in paragraph (c)(1)(iii) of this section. If any measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section.
(iii) If at least one of the 30 daily measurements of the fuel's total sulfur content is greater than half but less than the applicable limit, but none exceeds the applicable limit, then:
(A) Collect and analyze a sample every 30 days for 3 months. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, follow the procedures in paragraph \((\mathrm{c})(1)(\mathrm{iii})(\mathrm{B})\) of this section.
(B) Begin monitoring at 6-month intervals for 12 months. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, follow the procedures in paragraph (c)(I)(iii)(C) of this section.
(C) Begin monitoring at 12 -month intervals. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, continue to monitor at this frequency.
(iv) If a sulfur content measurement exceeds the applicable limit, immediately begin daily monitoring according to paragraph (c)(1)(i) of this section. Daily monitoring shall continue until 30 consecutive daily samples, each having a sulfur content no greater than the applicable limit, are obtained. At that point, the applicable procedures of paragraph (c)(I)(ii) or (iii) of this section shall be followed.
(2) The owner or operator may use the data collected from the 720 -hour sulfur sampling demonstration described in section 2.3.6 of appendix D to part 75 of this chapter to determine a custom sulfur sampling schedule, as follows:
(i) If the maximum fuel sulfur content obtained from the 720 hourly samples does not exceed 20 grains \(/ 100\) scf, no additional monitoring of the sulfur content of the gas is required, for the purposes of this subpart.
(ii) If the maximum fuel sulfur content obtained from any of the 720 hourly samples exceeds 20 grains \(/ 100\) scf, but none of the sulfur content values (when converted to weight percent sulfur) exceeds half the applicable limit, then the minimum required sampling frequency shall be one sample at 12 month intervals.
(iii) If any sample result exceeds half the applicable limit, but none exceeds the applicable limit, follow the provisions of paragraph (c)(1)(iii) of this section.
(iv) If the sulfur content of any of the 720 hourly samples exceeds the applicable limit, follow the provisions of paragraph (c)(1)(iv) of this section.

\section*{REPORTING}

\section*{§ 60.4375 What reports must I submit?}
(a) For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, you must submit reports of excess emissions and monitor downtime, in accordance with \(\S 60.7\) (c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.
(b) For each affected unit that performs annual performance tests in accordance with \(\$ 60.4340(\mathrm{a})\), you must submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test.

\section*{\(\S 60.4380\) How are excess emissions and monitor downtime defined for NOX?}

For the purpose of reports required under \(\S 60.7\) (c), periods of excess emissions and monitor downtime that must be reported are defined as follows:
(a) For turbines using water or steam to fuel ratio monitoring:
(1) An excess emission is any unit operating hour for which the 4-hour rolling average steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with \(\$ 60.4320\), as established during the performance test required in \(\S 60.8\). Any unit

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operating hour in which no water or steam is injected into the turbine when a fuel is being burned that requires water or steam injection for \(\mathrm{NO}_{\mathrm{x}}\) control will also be considered an excess emission.
(2) A period of monitor downtime is any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid.
(3) Each report must include the average steam or water to fuel ratio, average fuel consumption, and the combustion turbine load during each excess emission.
(b) For turbines using continuous emission monitoring, as described in \(\$ \S 60.4335(\mathrm{~b})\) and 60.4345:
(1) An excess emissions is any unit operating period in which the 4-hour or 30 -day rolling average \(\mathrm{NO}_{x}\) emission rate exceeds the applicable emission limit in \(\S 60.4320\). For the purposes of this subpart, a " 4 -hour rolling average \(\mathrm{NO}_{x}\) emission rate" is the arithmetic average of the average \(\mathrm{NO}_{x}\) emission rate in ppm or \(\mathrm{ng} / \mathrm{J}(\mathrm{lb} / \mathrm{MWh})\) measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average \(\mathrm{NO}_{\mathrm{x}}\) emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid \(\mathrm{NO}_{\mathrm{x}}\) emission rate is obtained for at least 3 of the 4 hours. For the purposes of this subpart, a " 30 -day rolling average \(\mathrm{NO}_{x}\) emission rate" is the arithmetic average of all hourly \(\mathrm{NO}_{\mathrm{x}}\) emission data in ppm or \(\mathrm{ng} / \mathrm{J}\) ( \(\mathrm{lb} / \mathrm{MWh}\) ) measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly \(\mathrm{NO}_{\mathrm{x}}\) emissions rates for the preceding 30 unit operating days if a valid \(\mathrm{NO}_{x}\) emission rate is obtained for at least 75 percent of all operating hours.
(2) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: \(\mathrm{NO}_{\mathrm{X}}\) concentration, \(\mathrm{CO}_{2}\) or \(\mathrm{O}_{2}\) concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.
(3) For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.
(c) For turbines required to monitor combustion parameters or parameters that document proper operation of the \(\mathrm{NO}_{\mathrm{x}}\) emission controls:
(1) An excess emission is a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit.
(2) A period of monitor downtime is a unit operating hour in which any of the required parametric data are either not recorded or are invalid.

\section*{§ \(\mathbf{6 0 . 4 3 8 5}\) How are excess emissions and monitoring downtime defined for SO2?}

If you choose the option to monitor the sulfur content of the fuel, excess emissions and monitoring downtime are defined as follows:
(a) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the combustion turbine exceeds the applicable limit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.
(b) If the option to sample each delivery of fuel oil has been selected, you must immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 weight percent. You must continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and you must evaluate excess emissions according to paragraph (a) of this section. When all of the fuel from the delivery has been burned, you may resume using the as-delivered sampling option.

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(c) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.

\section*{§ 60.4390 What are my reporting requirements if I operate an emergency combustion turbine or a research and development turbine?}
(a) If you operate an emergency combustion turbine, you are exempt from the \(\mathrm{NO}_{X}\) limit and must submit an initial report to the Administrator stating your case.
(b) Combustion turbines engaged by manufacturers in research and development of equipment for both combustion turbine emission control techniques and combustion turbine efficiency improvements may be exempted from the \(\mathrm{NO}_{\mathrm{x}}\) limit on a case-by-case basis as determined by the Administrator. You must petition for the exemption.

\section*{§ 60.4395 When must I submit my reports?}

All reports required under \(\S 60.7\) (c) must be postmarked by the 30 th day following the end of each 6 -month period.

\section*{Performance Tests}

\section*{§ 60.4400 How do I conduct the initial and subsequent performance tests, regarding NOX?}
(a) You must conduct an initial performance test, as required in \(\S 60.8\). Subsequent \(\mathrm{NO}_{\mathrm{X}}\) performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test).
(1) There are two general methodologies that you may use to conduct the performance tests. For each test run:
(i) Measure the \(\mathrm{NO}_{\mathrm{X}}\) concentration (in parts per million (ppm)), using EPA Method 7E or EPA Method 20 in appendix \(A\) of this part. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix A of this part, and measure and record the electrical and thermal output from the unit. Then, use the following equation to calculate the \(\mathrm{NO}_{x}\) emission rate:
\[
\begin{equation*}
\mathrm{E}=\frac{1.194 \times 10^{-7} *\left(\mathrm{NO}_{\mathrm{K}}\right)_{\mathrm{c}} * \mathrm{Q}_{\mathrm{rut}}}{\mathrm{P}} \tag{Eq.5}
\end{equation*}
\]

Where:
\(\mathrm{E}=\mathrm{NO}_{\mathrm{x}}\) emission rate, in \(\mathrm{lb} / \mathrm{MWh}\)
\(1.194 \times 10^{-7}=\) conversion constant, in lb/dscf-ppm
\(\left(\mathrm{NO}_{\mathrm{X}}\right)_{\mathrm{c}}=\) average \(\mathrm{NO}_{\mathrm{X}}\) concentration for the run, in ppm
\(\mathrm{Q}_{\text {std }}=\) stack gas volumetric flow rate, in dscf/hr
\(P=\) gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to \(\$ 60.4350(f)(2)\); or
(ii) Measure the \(\mathrm{NO}_{x}\) and diluent gas concentrations, using either EPA Methods 7E and 3A, or EPA Method 20 in appendix A of this part. Concurrently measure the heat input to the unit, using a fuel flow meter (or flow meters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix A of this part to calculate the \(\mathrm{NO}_{x}\) emission rate in \(\mathrm{lb} / \mathrm{MMBtu}\). Then, use Equations 1 and, if necessary, 2 and 3 in \(\$ 60.4350\) (f) to calculate the \(\mathrm{NO}_{x}\) emission rate in \(\mathrm{lb} / \mathrm{MWh}\).
(2) Sampling traverse points for \(\mathrm{NO}_{X}\) and (if applicable) diluent gas are to be selected following EPA Method 20 or EPA Method 1 (non-particulate procedures), and sampled for equal time intervals. The sampling must be performed with a traversing single-hole probe, or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

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(3) Notwithstanding paragraph (a)(2) of this section, you may test at fewer points than are specified in EPA Method 1 or EPA Method 20 in appendix A of this part if the following conditions are met:
(i) You may perform a stratification test for \(\mathrm{NO}_{\mathrm{X}}\) and diluent pursuant to
(A) [Reserved], or
(B) The procedures specified in section 6.5.6.1(a) through (e) of appendix A of part 75 of this chapter.
(ii) Once the stratification sampling is completed, you may use the following alternative sample point selection criteria for the performance test:
(A) If each of the individual traverse point \(\mathrm{NO}_{\mathrm{x}}\) concentrations is within \(\pm 10\) percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than \(\pm 5 \mathrm{ppm}\) or \(\pm 0.5\) percent \(\mathrm{CO}_{2}\) (or \(\mathrm{O}_{2}\) ) from the mean for all traverse points, then you may use three points (located either 16.7, 50.0 and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters ( 7.8 feet) in diameter, at \(0.4,1.2\), and 2.0 meters from the wall). The three points must be located along the measurement line that exhibited the highest average \(\mathrm{NO}_{\mathrm{x}}\) concentration during the stratification test; or
(B) For turbines with a \(\mathrm{NO}_{\mathrm{x}}\) standard greater than \(15 \mathrm{ppm} @ 15 \% \mathrm{O}_{2}\), you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point \(\mathrm{NO}_{\mathrm{X}}\) concentrations is within \(\pm 5\) percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than \(\pm 3 \mathrm{ppm}\) or \(\pm 0.3\) percent \(\mathrm{CO}_{2}\) (or \(\mathrm{O}_{2}\) ) from the mean for all traverse points; or
(C) For turbines with a \(\mathrm{NO}_{\mathrm{x}}\) standard less than or equal to 15 ppm @ \(15 \% \mathrm{O}_{2}\), you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point \(\mathrm{NO}_{\mathrm{X}}\) concentrations is within \(\pm 2.5\) percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than \(\pm 1 \mathrm{ppm}\) or \(\pm 0.15\) percent \(\mathrm{CO}_{2}\) (or \(\mathrm{O}_{2}\) ) from the mean for all traverse points.
(b) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. You may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. You must conduct three separate test runs for each performance test. The minimum time per run is 20 minutes.
(1) If the stationary combustion turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel.
(2) For a combined cycle and CHP turbine systems with supplemental heat (duct burner), you must measure the total \(\mathrm{NO}_{\mathrm{X}}\) emissions after the duct burner rather than directly after the turbine. The duct burner must be in operation during the performance test.
(3) If water or steam injection is used to control \(\mathrm{NO}_{X}\) with no additional post-combustion \(\mathrm{NO}_{x}\) control and you choose to monitor the steam or water to fuel ratio in accordance with \(\S 60.4335\), then that monitoring system must be operated concurrently with each EPA Method 20 or EPA Method 7E run and must be used to determine the fuel consumption and the steam or water to fuel ratio necessary to comply with the applicable \(\S 60.4320 \mathrm{NO}_{\mathrm{X}}\) emissions limit.
(4) Compliance with the applicable emission limit in \(\S 60.4320\) must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average \(\mathrm{NO}_{\mathrm{x}}\) emissions rate at each tested level meets the applicable emission limit in \(\S 60.4320\).
(5) If you elect to install a CEMS, the performance evaluation of the CEMS may either be conducted separately or (as described in \(\S 60.4405\) ) as part of the initial performance test of the affected unit.
(6) The ambient temperature must be greater than \(0^{\circ} \mathrm{F}\) during the performance test.

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\section*{\(\S 60.4405\) How do 1 perform the initial performance test if \(\mathbf{l}\) have chosen to install a NOX-diluent CEMS?}

If you elect to install and certify a \(\mathrm{NO}_{\mathrm{x}}\)-diluent CEMS under \(\S 60.4345\), then the initial performance test required under \(\$ 60.8\) may be performed in the following alternative manner:
(a) Perform a minimum of nine RATA reference method runs, with a minimum time per run of 21 minutes, at a single load level, within plus or minus 25 percent of 100 percent of peak load. The ambient temperature must be greater than \(0^{\circ} \mathrm{F}\) during the RATA runs.
(b) For each RATA run, concurrently measure the heat input to the unit using a fuel flow meter (or flow meters) and measure the electrical and thermal output from the unit.
(c) Use the test data both to demonstrate compliance with the applicable \(\mathrm{NO}_{\mathrm{x}}\) emission limit under \(\$ 60.4320\) and to provide the required reference method data for the RATA of the CEMS described under \(\S 60.4335\).
(d) Compliance with the applicable cmission limit in \(\S 60.4320\) is achieved if the arithmetic average of all of the \(\mathrm{NO}_{\mathrm{x}}\) emission rates for the RATA runs, expressed in units of ppm or \(\mathrm{lb} / \mathrm{MWh}\), does not exceed the emission limit.

\section*{§ 60.4410 How do I establish a valid parameter range if I have chosen to continuously monitor parameters?}

If you have chosen to monitor combustion parameters or parameters indicative of proper operation of \(\mathrm{NO}_{\mathrm{x}}\) emission controls in accordance with \(\$ 60.4340\), the appropriate parameters must be continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in \(\$ 60.4355\).

\section*{§ 60.4415 How do I conduct the initial and subsequent performance tests for sulfur?}
(a) You must conduct an initial performance test, as required in §60.8. Subsequent \(\mathrm{SO}_{2}\) performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are three methodologies that you may use to conduct the performance tests.
(1) If you choose to periodically determine the sulfur content of the fuel combusted in the turbine, a representative fuel sample would be collected following ASTM D5287 (incorporated by reference, see \(\$ 60.17\) ) for natural gas or ASTM D4177 (incorporated by reference, see §60.17) for oil. Alternatively, for oil, you may follow the procedures for manual pipeline sampling in section 14 of ASTM D4057 (incorporated by reference, see \(\S 60.17\) ). The fuel analyses of this section may be performed either by you, a service contractor retained by you, the fuel vendor, or any other qualified agency. Analyze the samples for the total sulfur content of the fuel using:
(i) For liquid fuels, ASTM D129, or alternatively D1266, D1552, D2622, D4294, or D5453 (all of which are incorporated by reference, see \(\S 60.17\) ); or
(ii) For gaseous fuels, ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17).
(2) Measure the \(\mathrm{SO}_{2}\) concentration (in parts per million (ppm)), using EPA Mcthods \(6,6 \mathrm{C}, 8\), or 20 in appendix A of this part. In addition, the American Society of Mechanical Engineers (ASME) standard, ASME PTC 19-10-1981Part 10, "Flue and Exhaust Gas Analyses," manual methods for sulfur dioxide (incorporated by reference, see \(\S 60.17\) ) can be used instead of EPA Methods 6 or 20. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix A of this part, and measure and record the electrical and thermal output from the unit. Then use the following cquation to calculate the \(\mathrm{SO}_{2}\) emission rate:
\[
\begin{equation*}
\mathrm{E}=\frac{1.664 \times 10^{-2} *\left(\mathrm{SO}_{2}\right)_{\mathrm{E}} * \mathrm{Q}_{\mathrm{zd}}}{\mathrm{P}} \tag{Eq.6}
\end{equation*}
\]

Where:
\(\mathrm{E}=\mathrm{SO}_{2}\) emission rate, in \(\mathrm{lb} / \mathrm{MWh}\)
\(1.664 \times 10^{-7}=\) conversion constant, in lb/dscf-ppm
\(\left(\mathrm{SO}_{2}\right)_{\mathbf{c}}=\) average \(\mathrm{SO}_{2}\) concentration for the run, in ppm

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\(\mathrm{Q}_{\text {sid }}=\) stack gas volumetric flow rate, in dscf/hr
\(\mathrm{P}=\) gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to \(\$ 60.4350(f)(2)\); or
(3) Measure the \(\mathrm{SO}_{2}\) and diluent gas concentrations, using either EPA Methods \(6,6 \mathrm{C}\), or 8 and 3 A , or 20 in appendix A of this part. In addition, you may use the manual methods for sulfur dioxide ASME PTC 19-10-1981-Part 10 (incorporated by reference, see \(\S 60.17\) ). Concurrently measure the heat input to the unit, using a fuel flow meter (or flow meters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix A of this part to calculate the \(\mathrm{SO}_{2}\) emission rate in \(\mathrm{lb} / \mathrm{MMBtu}\). Then, use Equations 1 and, if necessary, 2 and 3 in \(\S 60.4350(\mathrm{f})\) to calculate the \(\mathrm{SO}_{2}\) emission rate in \(\mathrm{lb} / \mathrm{MWh}\).
(b) [Reserved]

\section*{DEFINITIONS}

\section*{§ \(\mathbf{6 0 . 4 4 2 0}\) What definitions apply to this subpart?}

As used in this subpart, all terms not defined herein will have the meaning given them in the Clean Air Act and in subpart A (General Provisions) of this part.
Combined cycle combustion turbine means any stationary combustion turbine which recovers heat from the combustion turbine exhaust gases to generate steam that is only used to create additional power output in a steam turbine.

Combined heat and power combustion turbine means any stationary combustion turbine which recovers heat from the exhaust gases to heat water or another medium, generate steam for useful purposes other than additional electric generation, or directly uses the heat in the exhaust gases for a useful purpose.
Combustion turbine model means a group of combustion turbines having the same nominal air flow, combustor inlet pressure, combustor inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.

Combustion turbine test cell/stand means any apparatus used for testing uninstalled stationary or uninstalled mobile (motive) combustion turbines.
Diffusion flame stationary combustion turbine means any stationary combustion turbine where fuel and air are injected at the combustor and are mixed only by diffusion prior to ignition.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary combustion turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.
Efficiency means the combustion turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output-based on the higher heating value of the fuel.

Emergency combustion turbine means any stationary combustion turbine which operates in an emergency situation. Examples include stationary combustion turbines used to produce power for critical networks or equipment, including power supplied to portions of a facility, when electric power from the local utility is interrupted, or stationary combustion turbines used to pump water in the case of fire or flood, etc. Emergency stationary combustion turbines do not include stationary combustion turbines used as peaking units at electric utilities or stationary combustion turbines at industrial facilities that typically operate at low capacity factors. Emergency combustion turbines may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are required by the manufacturer, the vendor, or the insurance company associated with the turbine. Required testing of such units should be minimized, but there is no time limit on the use of emergency combustion turbines.

Excess emissions means a specified averaging period over which either (1) the \(\mathrm{NO}_{\mathrm{X}}\) emissions are higher than the applicable emission limit in \(\S 60.4320\); (2) the total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in \(\S 60.4330\); or (3) the recorded value of a particular monitored parameter is outside the acceptable range specified in the parameter monitoring plan for the affected unit.

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Gross useful output means the gross useful work performed by the stationary combustion turbine system. For units using the mechanical energy directly or generating only electricity, the gross useful work performed is the gross electrical or mechanical output from the turbine/generator set. For combined heat and power units, the gross useful work performed is the gross electrical or mechanical output plus the useful thermal output (i.e., thermal energy delivered to a process).

Heat recovery steam generating unit means a unit where the hot exhaust gases from the combustion turbine are routed in order to extract heat from the gases and generate steam, for use in a steam turbine or other device that utilizes steam. Heat recovery steam generating units can be used with or without duct burners.
Integrated gasification combined cycle electric utility steam generating unit means a coal-fired electric utility steam generating unit that burns a synthetic gas derived from coal in a combined-cycle gas turbine. No solid coal is directly burned in the unit during operation.

ISO conditions means 288 Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.
Lean premix stationary combustion turbine means any stationary combustion turbine where the air and fuel are thoroughly mixed to form a lean mixture before delivery to the combustor. Mixing may occur before or in the combustion chamber. A lean premixed turbine may operate in diffusion flame mode during operating conditions such as startup and shutdown, extreme ambient temperature, or low or transient load.

Natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1,100 British thermal units (Btu) per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coalderived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, the Northern Mariana Islands, or offshore platforms.

Peak load means 100 percent of the manufacturer's design capacity of the combustion turbine at ISO conditions.
Regenerative cycle combustion turbine means any stationary combustion turbine which recovers heat from the combustion turbine exhaust gases to preheat the inlet combustion air to the combustion turbine.

Simple cycle combustion turbine means any stationary combustion turbine which does not recover heat from the combustion turbine exhaust gases to preheat the inlet combustion air to the combustion turbine, or which does not recover heat from the combustion turbine exhaust gases for purposes other than enhancing the performance of the combustion turbine itself.

Stationary combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), heat recovery system, and any ancillary components and sub-components comprising any simple cycle stationary combustion turbine, any regenerative/recuperative cycle stationary combustion turbine, any combined cycle combustion turbine, and any combined heat and power combustion turbine based system. Stationary means that the combustion turbine is not self propelled or intended to be propelled while performing its function. It may, however, be mounted on a vehicle for portability.

Unit operating day means a 24 -hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Unit operating hour means a clock hour during which any fuel is combusted in the affected unit. If the unit combusts fuel for the entire clock hour, it is considered to be a full unit operating hour. If the unit combusts fuel for only part of the clock hour, it is considered to be a partial unit operating hour.
Useful thermal output means the thermal energy made available for use in any industrial or commercial process, or used in any heating or cooling application, i.e., total thermal energy made available for processes and applications other than electrical or mechanical generation. Thermal output for this subpart means the energy in recovered thermal output measured against the energy in the thermal output at 15 degrees Celsius and 101.325 kilopascals of pressure.

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NSPS Subparts A and KKKK Provisions
Table 1-to Subpart KKKK of Part 60 - Nitrogen Oxide Emission Limits for New Stationary Combustion Turbines
\begin{tabular}{|l|l|l|}
\hline \multicolumn{1}{|c|}{ Combustion turbine type } & \multicolumn{1}{c|}{\begin{tabular}{c} 
Combustion turbine heat \\
input at peak load \\
(HHV)
\end{tabular}} & \multicolumn{1}{c|}{ NO \(\mathbf{O}_{\mathbf{x}}\) emission standard } \\
\hline \begin{tabular}{l} 
Modified or reconstructed turbine firing \\
natural gas
\end{tabular} & \begin{tabular}{l}
\(>50 \mathrm{MMBtu} / \mathrm{h}\) and \(\leq 850\) \\
\(\mathrm{MMBtu} / \mathrm{h}\)
\end{tabular} & \begin{tabular}{l}
42 ppm at 15 percent \(\mathrm{O}_{2} \mathrm{or} 250 \mathrm{ng} / \mathrm{J}\) of \\
useful output \((2.0 \mathrm{lb} / \mathrm{MWh})\).
\end{tabular} \\
\hline \begin{tabular}{l} 
Modified or reconstructed turbine firing \\
fuels other than natural gas
\end{tabular} & \begin{tabular}{l}
\(>50 \mathrm{MMBtu} / \mathrm{h}\) and \(\leq 850\) \\
\(\mathrm{MMBtu} / \mathrm{h}\)
\end{tabular} & \begin{tabular}{l}
96 ppm at 15 percent \(\mathrm{O}_{2}\) or \(590 \mathrm{ng} / \mathrm{J}\) of \\
useful output \((4.7 \mathrm{lb} / \mathrm{MWh})\).
\end{tabular} \\
\hline
\end{tabular}

\section*{APPENDIX H-1}

\section*{Permit History}
\begin{tabular}{|c|l|c|c|c|c|}
\hline ID No. & \multicolumn{1}{|c|}{ Description } & Permit No. & Effective Date & Expiration Date & Project Type \\
\hline All & Initial Title V Permit & \(0694801-002-\mathrm{AV}\) & \(6 / 16 / 1998\) & \(05 / 30 / 2002\) & Initial \\
\hline \(003 \& 004\) & Minor Changes & \(0694801-003-\mathrm{AC}\) & \(7 / 30 / 1997\) & \(10 / 01 / 1997\) & Modification \\
\hline \(003 \& 004\) & Minor Changes & \begin{tabular}{c}
\(0694801-004-\mathrm{AC}\) \\
Denied
\end{tabular} & \(11 / 20 / 1991\) & \(6 / 01 / 1994\) & Modification \\
\hline \(003 \& 004\) & \begin{tabular}{l} 
2 Combustion Turbines/ \\
Duct Burners
\end{tabular} & AC35-196459 & \(11 / 20 / 1991\) & \(06 / 01 / 1994\) & Construction \\
\hline \(003 \& 004\) & & AO35-248140 & \(3 / 30 / 1995\) & \(11 / 04 / 1999\) & Operation \\
\hline-002 & Fuel Oil Storage Tank & N/A & & & \\
\hline All & Administrative Correction & \(0694801-006-\mathrm{AV}\) & & & \\
\hline\(\overline{\text { All }}\) & Title V Permit Renewal & \(0694801-005-\mathrm{AV}\) & \(9 / 18 / 02\) & \(05 / 30 / 07\) & Operation \\
\hline \(003 \& 004\) & Air Construction Permit & \(0694801-008-\mathrm{AC}\) & & \(12 / 31 / 08\) & Modification \\
\hline All & Title V Permit Renewal & \(0694801-007-\mathrm{AV}\) & \(12 / 31 / 07\) & \(12 / 30 / 12\) & Renewal \\
\hline \(003 \& 004\) & CAIR Part Application & \(0694801-009-\mathrm{AV}\) & \(12 / 31 / 07\) & \(12 / 30 / 12\) & Revision \\
\hline
\end{tabular}

\section*{APPENDIX I-1}

\section*{List of Insignificant Emission Units and/or Activities}

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, or that meet the criteria specified in Rule 62-210.300(3)(b)1., F.A.C., Generic Emissions Unit Exemption, are exempt from the permitting requirements of Chapters \(62-210,62-212\) and \(62-4\), F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title \(V\) purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from pernitting under Rules 62-210.300(3)(a) and (b)l., F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source. The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.
Brief Description of Emissions Units and/or Activities
\begin{tabular}{|c|c|c|}
\hline Area & Emission Unit Description & Number of Units \\
\hline \multirow{12}{*}{CT/ST/BUILDING AREA} & CT Lube Oil Vents & 2 \\
\hline & CT Lube Oil Storage Tank & 2 \\
\hline & ST Lube Oil Tank Vent & 1 \\
\hline & ST Lube Oil Filter Vent & 1 \\
\hline & Electric Generator Mineral Oil & 2 \\
\hline & Vent & \\
\hline & Turbine Cleaning Operation & 2 \\
\hline & Water Wash Tanks & 3 \\
\hline & Turbine Cooling Air & 2 \\
\hline & Various Pumps & Multiple \\
\hline & Miscellaneous Tank Drains & Multiple \\
\hline & Hydraulic Equipment & Multiple \\
\hline \multirow{4}{*}{HRSG} & Natural Gas Relief Valves & Multiple \\
\hline & Various Steam Vents \& Pressure Relief Valves & Various \\
\hline & HPS Breather Vent & Multiple \\
\hline & Nitrogen Lines & Multiple \\
\hline \multirow{4}{*}{HRSG AREA} & Blowdown Quench Tank & Multiple \\
\hline & Blowdown Flash Tank & 1 \\
\hline & Various Pumps (feedwater, and chemical feed) & Multiple \\
\hline & CEM Equipment \& Calibration Gas Venting & 2 Systems \\
\hline \multirow{7}{*}{WATER TREATMENT (BOILER, WASTE WATER)} & \begin{tabular}{l}
Raw Water/Fire Water Storage \\
Tank; 376,012 gal capacity
\end{tabular} & I \\
\hline & Chlorine Cylinders; 150 lb each & 15 \\
\hline & Sulfuric Acid (H2SO4) Tank; 6,016 gal capacity & 1 \\
\hline & Boiler Feedwater Chemical Treatments Tanks & Multiple \\
\hline & \begin{tabular}{l}
Sodium Hydroxide ( NaOH ) \\
Tank; 6,610 gal capacity
\end{tabular} & 1 \\
\hline & Brine Tank; 9,306 gal capacity & 1 \\
\hline & Brine Containment Tank; 16,545 gal capacity & 1 \\
\hline
\end{tabular}

\section*{APPENDIX I-1}

List of Insignificant Emission Units and/or Activities
\begin{tabular}{|c|c|c|}
\hline Area & Emission Unit Description & Number of Units \\
\hline \multirow[t]{13}{*}{\(\checkmark\)} & Chilled Water Storage Tank; 25,000 gal capacity & 1 \\
\hline & RO Surge Tank; 10,857 gal capacity & 1 \\
\hline & Weak Waste Tank; 151, 222 gal capacity & 1 \\
\hline & Condensate Return Tank; 25,000 gal capacity & 1 \\
\hline & Demin Water Storage Tank; \(102,000 \mathrm{gal}\) capacity & 1 \\
\hline & Decarbonator/Degasifier; Removes CO2 from raw water & 1 \\
\hline & Equalization Tank; 22,000 gal capacity & 1 \\
\hline & Neutralization Basin and Pumps & 1 \\
\hline & Wastewater Cooling Tower & 1 \\
\hline & Filter Press & 1 \\
\hline & Various Pumps & Multiple \\
\hline & Crystallizer & I \\
\hline & Soda Ash Handling & 1 \\
\hline \multirow{4}{*}{COOLING TOWER} & Fresh Water Cooling Tower & 1 \\
\hline & Nalco 7342 ( NaBr ) Tank; 492 Ib capacity & 1 \\
\hline & Cooling Water Pumps & Multiple \\
\hline & Steam Condensing Unit & 1 \\
\hline \multirow{3}{*}{CHILLER AREA} & Refrigeration Chillers & 3 \\
\hline & Chiller Condensate Tank & 1 \\
\hline & Various pumps & Multiple \\
\hline \multirow{8}{*}{GENERAL SITE} & Surface Coating <6.0 gal/day & NA \\
\hline & Sewer Vents & Multiple \\
\hline & Emergency Generators; 250 kW Diesel & 1 \\
\hline & Diesel Fuel Storage Tank & 2 \\
\hline & Natural Gas Meter Station & 1 \\
\hline & Diesel Fire Pump - 216 hp & 1 \\
\hline & Diesel Fire Pump Storage Tank & 1 \\
\hline & Diesel Portable Welder/Air Compressor & 1 \\
\hline \multirow{7}{*}{OFFICE SHOP AREA} & Degreaser Non-Halogenated Solvent & 1 \\
\hline & Laboratory & 1 \\
\hline & Propane Forklift & 1 \\
\hline & Air Compressor & 1 \\
\hline & Battery Room & 1 \\
\hline & \(\mathrm{CO}_{2}\) Fire System (Control Room) & . 1 System \\
\hline & Bead Blaster & 1 \\
\hline SWITCHYARD/ & Transformers and Associated & Multiple \\
\hline \multirow[t]{2}{*}{SUBSTATION AREA} & Equipment & \\
\hline & Breakers-SF6 & 2 \\
\hline PARKING LOT & Vehicles & Multiple \\
\hline
\end{tabular}

Lake Investment, Ltd.
Lake Cogeneration Plant

Air Permit No. 0694801-011-AV
Title V Air Operation Permit Revision

\section*{APPENDIX I-1}

\section*{List of Insignificant Emission Units and/or Activities}
\begin{tabular}{|l|l|c|}
\hline Area & \multicolumn{1}{|c|}{ Emission Unit Description } & Number of Units \\
\hline \multirow{5}{*}{ GENERAL } & \begin{tabular}{l} 
Unit 1250 gallon waste oil \\
reclaim tank
\end{tabular} & 1 \\
\cline { 2 - 3 } & \begin{tabular}{l} 
Unit 2 250 gallon waste oil \\
reclaim tank
\end{tabular} & 1 \\
\cline { 2 - 3 } & Nalco Tower Brom Tank & 1 \\
\cline { 2 - 3 } & 300 gallon waste oil storage tank & 1 \\
\cline { 2 - 3 } & Unit 1 \(\mathrm{CO}_{2}\) fire system & 10 cylinders \\
\cline { 2 - 3 } & Unit 2 \(\mathrm{CO}_{2}\) fire system & 10 cylinders \\
\cline { 2 - 3 } & Electric Room \(\mathrm{CO}_{2}\) Fire System & 2 cylinders \\
\cline { 2 - 3 } & \begin{tabular}{l} 
Water Distillation Units Air \\
Ejectors (vents)
\end{tabular} & 3 \\
\cline { 2 - 3 } & \begin{tabular}{l}
100,000 gallon distilled water \\
tank (vent)
\end{tabular} & 1 \\
\hline
\end{tabular}

\section*{Sampling Conditions}

\section*{Stack Sampling Facilities Provided by the Owner of an Emissions Unit}

This section describes the minimum requirements for stack sampling facilities that are necessary to sample point emissions units. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. Emissions units must provide these facilities at their expense. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910 , Subparts D and E.
(a) Permanent Test Facilities. The owner or operator of an emissions unit for which a compliance test, other than a visible emissions test, is required on at least an annual basis, shall install and maintain permanent stack sampling facilities.
(b) Temporary Test Facilities. The owner or operator of an emissions unit that is not required to conduct a compliance test on at least an annual basis may use permanent or temporary stack sampling facilities. If the owner chooses to use temporary sampling facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department and remain on the emissions unit until the test is completed.
(c) Sampling Ports.
1. All sampling ports shall have a minimum inside diameter of 3 inches.
2. The ports shall be capable of being sealed when not in use.
3. The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.
4. For emissions units for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter, four sampling ports, each 90 degrees apart, shall be installed. For emissions units for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.
5. On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.
(d) Work Platforms.
1. Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.
2. On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.
3. On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees around the stack.
4. All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toeboard, and hinged flooropening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.
(e) Access to Work Platform.
1. Ladders to the work platform exceeding 15 feet in length shall have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.
2. Walkways over free-fall areas shall be equipped with safety rails and toeboards.
(f) Electrical Power.

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\section*{Sampling Conditions}
1. A minimum of two 120 -volt AC, 20 -amp outlets shall be provided at the sampling platform within 20 feet of each sampling port.
2. If extension cords are used to provide the electrical power, they shall be kept on the plant's property and be available immediately upon request by sampling personnel.
(g) Sampling Equipment Support.
1. A three-quarter inch eyebolt and an angle bracket shall be attached directly above each port on vertical stacks and above each row of sampling ports on the sides of horizontal ducts.
a. The bracket shall be a standard 3 inch \(x 3\) inch \(x\) one-quarter inch equal-legs bracket which is 1 and one-half inches wide. A hole that is one-half inch in diameter shall be drilled through the exact center of the horizontal portion of the bracket. The horizontal portion of the bracket shall be located 14 inches above the centerline of the sampling port.
b. A three-eighth inch bolt which protrudes 2 inches from the stack may be substituted for the required bracket. The bolt shall be located 15 and one-half inches above the centerline of the sampling port.
c. The three-quarter inch eyebolt shall be capable of supporting a 500 pound working load. For stacks that are less than 12 feet in diameter, the eyebolt shall be located 48 inches above the horizontal portion of the angle bracket. For stacks that are greater than or equal to 12 feet in diameter, the eyeboit shall be located 60 inches above the horizontal portion of the angle bracket. If the eyebolt is more than 120 inches above the platform, a length of chain shall be attached to it to bring the free end of the chain to within safe reach from the platform.
2. A complete monorail or dualrail arrangement may be substituted for the eyebolt and bracket.
3. When the sample ports are located in the top of a horizontal duct, a frame shall be provided above the port to allow the sample probe to be secured during the test.
[Rule 62-297.310(6), F.A.C.]

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\section*{Chapter 62-4, F.A.C.}
1. Not lederally enforceable. General Prohibition. Any stationary installation which will reasonably be expected to be a source of pollution shall not be operated, maintained, constructed, expanded, or modified without the appropriate and valid permits issued by the Department, unless the source is exempted by Department rule. The Department may issue a permit only after it receives reasonable assurance that the installation will not cause pollution in violation of any of the provisions of Chapter 403, F.S., or the rules promulgated there under. A permitted installation may only be operated, maintained, constructed, expanded or modified in a manner that is consistent with the terms of the permit.
[Rule 62-4.030, Florida Administrative Code (F.A.C.); and, Section 403.087, Florida Statute (F.S.)]
2. Not federally en lorceable. Procedures to Obtain Permits and Other Authorizations; Applications.
(1) Any person desiring to obtain a permit from the Department shall apply on forms prescribed by the Department and shall submit such additional information as the Department by law may require.
(2) All applications and supporting documents shall be filed in quadruplicate with the Department.
(3) To ensure protection of public health, safety, and welfare, any construction, modification, or operation of an installation which may be a source of pollution, shall be in accordance with sound professional engineering practices pursuant to Chapter 471, F.S. All applications for a Department permit shall be certified by a professional engineer registered in the State of Florida except, when the application is for renewal of an air pollution operation permit at a non-Title V source as defined in Rule 62-210.200, F.A.C., or where professional engineering is not required by Chapter 471, F.S. Where required by Chapter 471 or 492 , F.S., applicable portions of permit applications and supporting documents which are submitted to the Department for public record shall be signed and sealed by the professional(s) who prepared or approved them.
(4) Processing fees for air construction permits shall be in accordance with Rule 62-4.050(4), F.A.C.
(5) (a) To be considcred by the Department, each application must be accompanied by the proper processing fee. The fee shall be paid by check, payable to the Department of Environmental Protection. The fee is non-refundable except as provided in Section 120.60, F.S., and in this section.
(b) When an application is received without the required fee, the Department shall acknowledge receipt of the application and shall immediately notify the applicant by certified mail that the required fee was not received and advise the applicant of the correct fee. The Department shall take no further action until the correct fee is received. If a fee was received by the Department which is less than the amount required, the Department shall return the fee along with the written notification.
(c) Upon receipt of the proper application fee, the permit processing time requirements of Sections 120.60(2) and 403.0876, F.S., shall begin.
(d) If the applicant does not submit the required fee within ten days of receipt of written notification, the Department shall either return the unprocessed application or arrange with the applicant for the pick up of the application.
(e) If an applicant submits an application fee in excess of the required fee, the permit processing time requirements of Sections \(120.60(2)\) and 403.0876 , F.S., shall begin upon receipt, and the Department shall refund to the applicant the amount received in excess of the required fee.
(6) Any substantial modification to a complete application shall require an additional processing fee determined pursuant to the schedule set forth in Rule 62-4.050, F.A.C., and shall restart the time requirements of Sections 120.60 and 403.0876, F.S. For purposes of this subsection, the term "substantial modification" shall mean a modification which is reasonably expected to lead to substantially different environmental impacts which require a detailed review.
(7) Modifications to existing permits proposed by the permittee which require substantial changes in the existing permit or require substantial evaluation by the Department of potential impacts of the proposed modifications shall require the same fee as a new application for the same time duration except for modification under Chapter 62-45, F.A.C.
[Rule 62-4.050, F.A.C.]
3. Standards for Issuing or Denying Permits. Except as provided at Rule 62-213.460, F.A.C., the issuance of a permit docs not relieve any person from complying with the requirements of Chapter 403, F.S., or Department rules.

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[Rule 62-4.070(7), F.A.C.]
4. Modification of Permit Conditions.
(1) For good cause and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions and on application of the permittee the Department may grant additional time. For the purpose of this section, good cause shall include, but not be limited to, any of the following: (also, see Condition No. 38.)
(a) A showing that an improvement in effluent or emission quality or quantity can be accomplished because of technological advances without unreasonable hardship.
(b) A showing that a higher degree of treatment is necessary to effect the intent and purpose of Chapter 403, F.S.
(c) A showing of any change in the environment or surrounding conditions that requires a modification to conform to applicable air or water quality standards.
(e) Adoption or revision of Florida Statutes, rules, or standards which require the modification of a permit condition for compliance.
(2) A permittee may request a modification of a permit by applying to the Department.
(3) A permittee may request that a permit be extended as a modification of the permit. Such a request must be submitted to the Department in writing before the expiration of the permit. Upon timely submittal of a request for extension, unless the permit automatically expires by statute or rule, the permit will remain in effect until final agency action is taken on the request. For construction permits, an extension shall be granted if the applicant can demonstrate reasonable assurances that, upon completion, the extended permit will comply with the standards and conditions required by applicable regulation. For all other permits, an extension shall be granted if the applicant can demonstrate reasonable assurances that the extended permit will comply with the standards and conditions applicable to the original permit. A permit for which the permit application fee was prorated in accordance with Rule \(62-4.050(4)(v)\), F.A.C., shall not be extended. In no event shall a permit be extended or remain in effect longer than the time limits established by statute or rule.
[Rule 62-4.080, F.A.C.]
5. Renewals. Prior to 180 days before the expiration of a permit issued pursuant to Chapter \(62-213\), F.A.C., the permittee shall apply for a renewal of a permit using forms incorporated by reference in the specific rule chapter for that kind of permit. A renewal application shall be timely and sufficient. If the application is submitted prior to 180 days before expiration of the permit, it will be considered timely and sufficient. If the renewal application is submitted at a later date, it will not be considered timely and sufficient unless it is submitted and made complete prior to the expiration of the operation permit. When the application for renewal is timely and sufficient, the existing permit shall remain in effect until the renewal application has been finally acted upon by the Department or, if there is court review of the Department's final agency action, until a later date is required by Section 120.60, F.S., provided that, for renewal of a permit issued pursuant to Chapter 62-213, F.A.C., the applicant complies with the requirements of Rules \(62-213.420(1)(b) 3\). and 4., F.A.C.
[Rule 62-4.090, F.A.C.]
6. Suspension and Revocation.
(1) Permits shall be effective until suspended, revoked, surrendered, or expired and shall be subject to the provisions of Chapter 403, F.S., and rules of the Department.
(2) Failure to comply with pollution control laws and rules shall be grounds for suspension or revocation.
(3) A permit issued pursuant to Chapter 62-4, F.A.C., shall not become a vested property right in the permittee. The Department may revoke any permit issued by it if it finds that the permit holder or his agent:
(a) Submitted false or inaccurate information in his application or operational reports.
(b) Has violated law, Department orders, rules or permit conditions.
(c) Has failed to submit operational reports or other information required by Department rules.

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(d) Has refused lawful inspection under Section 403.091 , F.S.
(4) No revocation shall become effective except after notice is served by personal services, certified mail, or newspaper notice pursuant to Section 120.60 (7), F.S., upon the person or persons named therein and a hearing held if requested within the time specified in the notice. The notice shall specify the provision of the law, or rule alleged to be violated, or the permit condition or Department order alleged to be violated, and the facts alleged to constitute a violation thereof.
[Rule 62-4.100, F.A.C.]
7. Not federally enforceable. Financial Responsibility. The Department may require an applicant to submit proof of financial responsibility and may require the applicant to post an appropriate bond to guarantee compliance with the law and Department rules.
[Rule 62-4.110, F.A.C.]

\section*{8. Transfer of Permits.}
(1) Within 30 days after the sale or legal transfer of a permitted facility, an "Application for Transfer of Permit" (DEP Form 62-1.201(1)) must be submitted to the Department. This form must be completed with the notarized signatures of both the permittee and the proposed new permittee. For air permits, an "Application for Transfer of Air Permit" (DEP Form \(62-210.900(7)\) ) shall be submitted.
(2) The Department shall approve the transfer of a permit unless it determines that the proposed new permittee cannot provide reasonable assurances that conditions of the permit will be met. The determination shall be limited solely to the ability of the new permittee to comply with the conditions of the existing permit, and it shall not concern the adequacy of these permit conditions. If the Department proposes to deny the transfer, it shall provide both the permittee and the proposed new permittee a written objection to such transfer together with notice of a right to request a Chapter 120, F.S., proceeding on such determination.
(3) Within 30 days of receiving a properly completed Application for Transfer of Permit form, the Department shall issue a final determination. The Department may toll the time for making a determination on the transfer by notifying both the permittee and the proposed new permittee that additional information is required to adequately review the transfer request. Such notification shall be served within 30 days of receipt of an Application for Transfer of Permit form, completed pursuant to Rule 62-4.120(1), F.A.C. If the Department fails to take action to approve or deny the transfer within 30 days of receipt of the completed Application for Transfer of Permit form, or within 30 days of receipt of the last item of timely requested additional information, the transfer shall be deemed approved.
(4) The permittee is encouraged to apply for a permit transfer prior to the sale or legal transfer of a permitted facility. However, the transfer shall not be effective prior to the sale or legal transfer.
(5) Until this transfer is approved by the Department, the permittee and any other person constructing, operating, or maintaining the permitted facility shall be liable for compliance with the terms of the permit. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations occurring prior to the sale or legal transfer of the facility.
[Rule 62-4.120, F.A.C.]
9. Plant Operation-Problems. If the permittee is temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. (See also Condition No. 10.)
[Rule 62-4.130, F.A.C.]
10. For purposes of notification to the Department pursuant to Condition No. 9., Condition No. 12.(8), and Rule 62-4.130, F.A.C., Plant Operation-Problems, "immediately" shall mean the same day, if during a workday (i.e., 8:00 a.m. - 5:00 p.m.), or the first business day after the incident, excluding weekends and holidays; and, for purposes of 40 CFR 70.6(a)(3)(iii)(B), "prompt" shall have the same meaning as "immediately". [See also Condition Nos. 9. and 12.(8).]

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\section*{[40 CFR 70.6(a)(3)(iii)(B)]}
11. Not federally enforceable. Review. Failure to request a hearing within 14 days of receipt of notice of proposed or final agency action on a permit application or as otherwise required in Chapter 62-103, F.A.C., shall be deemed a waiver of the right to an administrative hearing.
[Rule 62-4.150, F.A.C.]
12. Permit Conditions. All permits issued by the Department shall include the following general conditions:
(1) The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections \(403.141,403.727\), or 403.859 through 403.861 , F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
(2) This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
(3) As provided in Subsections \(403.987(6)\) and \(403.722(5)\), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.
(4) This permit conveys no titie to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
(5) This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of F.S. and Department rules, unless specifically authorized by an order from the Department.
(6) The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
(7) The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
(a) Have access to and copy any records that must be kept under conditions of the permit;
(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.
(8) If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information: (also, see Condition No. 10.)
(a) A description of and cause of noncompliance; and
(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.
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(9) In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
(10) The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
(11) This permit is transferable only upon Department approval in accordance with Rule 62-4.120, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
(12) This permit or a copy thereof shall be kept at the work site of the permitted activity.
(14) The permittee shall comply with the following:
(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least five (5) years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
(c) Records of monitoring information shall include:
1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used;
6. The results of such analyses.
(15) When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.
[Rules 62-4.160 and 62-213.440(I)(b), F.A.C.]

\section*{13. Construction Permits.}
(1) No person shall construct any installation or facility which will reasonably be expected to be a source of air pollution without first applying for and receiving a construction permit from the Department unless exempted by statute or Department rule. In addition to the requirements of Chapter 62-4, F.A.C., applicants for a Department Construction Permit shall submit the following as applicable:
(a) A completed application on forms furnished by the Department.
(b) An engineering report covering:
1. Plant description and operations,
2. Types and quantities of all waste material to be generated whether liquid, gaseous or solid,

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3. Proposed waste control facilities,
4. The treatment objectives,
5. The design criteria on which the control facilities are based, and
6. Other information deemed relevant.

Design criteria submitted pursuant to Rule 62-4.210(1)(b)5., F.A.C., shall be based on the results of laboratory and pilotplant scale studies whenever such studies are warranted. The design efficiencies of the proposed waste treatment facilities and the quantities and types of pollutants in the treated effluents or emissions shall be indicated. Work of this nature shall be subject to the requirements of Chapter 471, F.S. Where confidential records are involved, certain information may be kept confidential pursuant to Section 403.111, F.S.
(c) The owners' written guarantee to meet the design criteria as accepted by the Department and to abide by Chapter 403, F.S., and the rules of the Department as to the quantities and types of materials to be discharged from the installation. The owner may be required to post an appropriate bond or other equivalent evidence of financial responsibility to guarantee compliance with such conditions in instances where the owner's financial resources are inadequate or proposed control facilities are experimental in nature.
(2) The construction permit may contain conditions and an expiration date as determined by the Secretary or the Secretary's designee.
(3) When the Department issues a permit to construct, the permittee shall be allowed a period of time, specified in the permit, to construct, and to operate and test to determine compliance with Chapter 403, F.S., and the rules of the Department and, where applicable, to apply for and receive an operation permit. The Department may require tests and evaluations of the treatment facilities by the permittee at his/her expense.
[Rule 62-4.210, F.A.C.]
14. Not federally enforceable. Operation Permit for New Sources. To properly apply for an operation permit for new sources the applicant shall submit the appropriate fee and certification that construction was completed, noting any deviations from the conditions in the construction permit and test results where appropriate.
[Rule 62-4.220, F.A.C.]
Chapters 28-106 and 62-110, F.A.C.
15. Public Notice, Public Participation, and Proposed Agency Action. The permittee shall comply with all of the requirements for public notice, public participation, and proposed agency action pursuant to Rules 62-110.106 and 62210.350 , F.A.C.
[Rules 62-110.106, 62-210.350 and 62-213.430(1)(b), F.A.C.]
16. Administrative Hearing. The permittee shall comply with all of the requirements for a petition for administrative hearing or waiver of right to administrative proceeding pursuant to Rules 28-106.201, 28-106.301 and 62-110.106, F.A.C.
[Rules 28-106.201, 28-106.301 and 62-110.106, F.A.C.]

\section*{Chapter 62-204, F.A.C.}
17. Asbestos. This permit does not authorize any demolition or renovation of the facility or its parts or components which involves asbestos removal. This permit does not constitute a waiver of any of the requirements of Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, National Emission Standard for Asbestos, adopted and incorporated by reference in Rule 62 204.800, F.A.C. Compliance with Chapter 62-257, F.A.C., and 40 CFR 6I, Subpart M, Section 61.145, is required for any asbestos demolition or renovation at the source.
[40 CFR 61; Rule 62-204.800, F.A.C.; and, Chapter 62-257, F.A.C.]
Chapter 62-210, F.A.C.
18. Permits Required. Unless exempted from permitting pursuant to Rule 62-210.300(3)(a) or (b), F.A.C., or Rule 62 4.040, F.A.C., or unless specifically authorized by provision of Rule 62-2 \(10.300(4)\), F.A.C., or Rule 62-213.300, F.A.C.,

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the owner or operator of any facility or emissions unit which emits or can reasonably be expected to emit any air pollutant shall obtain an appropriate permit from the Department prior to beginning construction, reconstruction pursuant to 40 CFR 60.15 or 63.2 , modification, or the addition of pollution control equipment; or to authorize initial or continued operation of the emissions unit; or to establish a PAL or Air Emissions Bubble. All emissions limitations, controls, and other requirements imposed by such permits shall be at least as stringent as any applicable limitations and requirements contained in or enforceable under the State Implementation Plan (SIP) or that are otherwise federally enforceable. Except as provided at Rule 62-213.460, F.A.C., issuance of a permit does not relieve the owner or operator of a facility or an emissions unit from complying with any applicable requirements, any emission limiting standards or other requirements of the air pollution rules of the Department or any other such requirements under federal, state, or local law.
(1) Air Construction Permits.
(a) Unless exempt from permitting pursuant to Rule \(62-210.300\) (3)(a) or (b), F.A.C., or Rule \(62-4.040\), F.A.C., an air construction permit shall be obtained by the owner or operator of any proposed new, reconstructed, or modified facility or emissions unit, or any new pollution control equipment prior to the beginning of construction, reconstruction pursuant to 40 CFR 60,15 or 63.2 , or modification of the facility or emissions unit or addition of the pollution control equipment; or to establish a PAL; in accordance with all applicable provisions of Chapter 62-210, F.A.C., Chapter 62-212, F.A.C., and Chapter 62-4, F.A.C. Except as provided under Rule 62-213.415, F.A.C., the owner or operator of any facility seeking to create or change an air emissions bubble shall obtain an air construction permit in accordance with all the applicable provisions of Chapter 62-210, F.A.C., Chapters 62-212 and 62-4, F.A.C. The construction permit shall be issued for a period of time sufficient to allow construction, reconstruction or modification of the facility or emissions unit or addition of the air pollution control equipment; and operation while the owner or operator of the new, reconstructed or modified facility or emissions unit or the new pollution control equipment is conducting tests or otherwise demonstrating initial compliance with the conditions of the construction permit.
(b) Notwithstanding the expiration of an air construction permit, all limitations and requirements of such permit that are applicable to the design and operation of the permitted facility or emissions unit shall remain in effect until the facility or emissions unit is permanently shut down, except for any such limitation or requirement that is obsolete by its nature (such as a requirement for initial compliance testing) or any such limitation or requirement that is changed in accordance with the provisions of Rule 62-210.300(1)(b)1., F.A.C. Either the applicant or the Department can propose that certain conditions be considered obsolcte. Any conditions or language in an air construction permit that are included for informational purposes only, if they are transferred to the air operation permit, shall be transferred for informational purposes only and shall not become enforceable conditions unless voluntarily agreed to by the permittee or otherwise required under Department rules.
1. Except for those limitations or requirements that are obsolete, all limitations and requirements of an air construction permit shall be included and identified in any air operation permit for the facility or emissions unit. The limitations and requirements included in the air operation permit can be changed, and thereby superseded, through the issuance of an air construction permit, federally enforceable state air operation permit, federally enforceable air general permit, or Title V air operation permit; provided, however, that:
a. Any change that would constitute an administrative correction may be made pursuant to Rule 62-210.360, F.A.C.;
b. Any change that would constitute a modification, as defined at Rule \(62-210.200\), F.A.C., shall be accomplished only through the issuance of an air construction permit; and
c. Any change in a permit limitation or requirement that originates from a permit issued pursuant to 40 CFR 52.21 , Rule 62-204.800(11)(d)2., F.A.C., Rule 62-212.400, F.A.C., Rule 62-212.500, F.A.C., or any former codification of Rule \(62-212.400\) or Rule 62-212.500, F.A.C., shall be accomplished only through the issuance of a new or revised air construction permit under Rule 62-204.800(11)(d)2., Rule 62-212.400 or Rule 62-212.500, F.A.C., as appropriate.
2. The force and effect of any change in a permit limitation or requirement made in accordance with the provisions of Rule \(62-210.300(1)(b) 1\)., F.A.C., shall be the same as if such change were made to the original air construction permit.
3. Nothing in Rule 62-210.300(1)(b), F.A.C., shall be construed as to allow operation of a facility or emissions unit without a valid air operation permit.

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(2) Air Operation Permits. Upon expiration of the air operation permit for any existing facility or emissions unit, subsequent to construction or modification, or subsequent to the creation of or change to a bubble, and demonstration of compliance with the conditions of the construction permit for any new or modified facility or emissions unit, any air emissions bubble, or as otherwise provided in Chapter 62-210, F.A.C., or Chapter 62-213, F.A.C., the owner or operator of such facility or emissions unit shall obtain a renewal air operation permit, an initial air operation permit or air general permit, or an administrative correction or revision of an existing air operation permit, whichever is appropriate, in accordance with all applicable provisions of Chapter 62-210, F.A.C., Chapter 62-213, F.A.C., and Chapter 62-4, F.A.C.
(a) Minimum Requirements for All Air Operation Permits. At a minimum, a permit issued pursuant to this subsection shall:
1. Specify the manner, nature, volume and frequency of the emissions permitted, and the applicable emission limiting standards or performance standards, if any;
2. Require proper operation and maintenance of any pollution control equipment by qualified personnel, where applicable in accordance with the provisions of any operation and maintenance plan required by the air pollution rules of the Department.
3. Contain an effective date stated in the permit which shall not be earlier than the date final action is taken on the application and be issued for a period, beginning on the effective date, as provided below.
a. The operation permit for an emissions unit which is in compliance with all applicable rules and in operational condition, and which the owner or operator intends to continue operating, shall be issued or renewed for a fiveyear period, except that, for Title V sources subject to Rule 62-213.420(1)(a)l., F.A.C., operation permits shall be extended until 60 days after the due date for submittal of the facility's Title V permit application as specified in Rule 62\(213.420(1)(\mathrm{a}) 1 .\), F.A.C.
b. Except as provided in Rule 62-210.300(2)(a)3.d., F.A.C., the operation permit for an emissions unit which has been shut down for six months or more prior to the expiration date of the current operation permit, shall be renewed for a period not to exceed five years from the date of shutdown, even if the emissions unit is not maintained in operational condition, provided:
(i) the owner or operator of the emissions unit demonstrates to the Department that the emissions unit may need to be reactivated and used, or that it is the owner's or operator's intent to apply to the Department for a permit to construct a new emissions unit at the facility before the end of the extension period; and
(ii) the owner or operator of the emissions unit agrees to and is legally prohibited from providing the allowable emission permitted by the renewed permit as an emissions offset to any other person under Rule 62-212.500, F.A.C.; and
(iii) the emissions unit was operating in compliance with all applicable rules as of the time the source was shut down.
c. Except as provided in Rule 62-210.300(2)(a)3.d., F.A.C., the operation permit for an emissions unit which has been shut down for five years or more prior to the expiration date of the current operation permit shall be renewed for a maximum period not to exceed ten years from the date of shutdown, even if the emissions unit is not maintained in operational condition, provided the conditions given in Rule 62-210.300(2)(a)3.b., F.A.C., are met and the owner or operator demonstrates to the Department that failure to renew the permit would constitute a hardship, which may include economic hardship.
d. The operation permit for an electric utility generating unit on cold standby or long-term reserve shutdown shall be renewed for a five-year period, and additional five-year periods, even if the unit is not maintained in operational condition, provided the conditions given in Rules \(62-210.300\) (2)(a)3.b.(i) through (iii), F.A.C., are met.
4. In the case of an emissions unit permitted pursuant to Rules 62-210.300(2)(a)3.b., c., and d., F.A.C., include reasonable notification and compliance testing requirements for reactivation of such emissions unit and provide that the owner or operator demonstrate to the Department prior to reactivation that such reactivation would not constitute reconstruction pursuant to Rule 62-204.800(8), F.A.C.
[Rules 62-210.300(1) \& (2), F.A.C.]

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19. Not federally enforceable. Notification of Startup. The owners or operator of any emissions unit or facility which has a valid air operation permit which has been shut down more than one year, shall notify the Department in writing of the intent to start up such emissions unit or facility, a minimum of 60 days prior to the intended startup date.
(a) The notification shall include information as to the startup date, anticipated emission rates or pollutants released, changes to processes or control devices which will result in changes to emission rates, and any other conditions which may differ from the valid outstanding operation permit.
(b) If, due to an emergency, a startup date is not known 60 days prior thereto, the owner shall notify the Department as soon as possible after the date of such startup is ascertained.
[Rule 62-210.300(5), F.A.C.]

\section*{20. Emissions Unit Reclassification.}
(a) Any emissions unit whose operation permit has been revoked as provided for in Chapter 62-4, F.A.C., shall be deemed permanently shut down for purposes of Rule 62-212.500, F.A.C. Any emissions unit whose permit to operate has expired without timely renewal or transfer may be deemed permanently shut down, provided, however, that no such emissions unit shall be deemed permanently shut down if, within 20 days after receipt of written notice from the Department, the emissions unit owner or operator demonstrates that the permit expiration resulted from inadvertent failure to comply with the requirements of Rule 62-4.090, F.A.C., and that the owner or operator intends to continue the emissions unit in operation, and either submits an application for an air operation permit or complies with permit transfer requirements, if applicable.
(b) If the owner or operator of an emissions unit which is so permanently shut down, applies to the Department for a permit to reactivate or operate such emissions unit, the emissions unit will be reviewed and permitted as a new emissions unit.
[Rule 62-210.300(6), F.A.C.]
21. Transfer of Air Permits.
(a) An air permit is transferable only after submission of an Application for Transfer of Air Permit (DEP Form 62\(210.900(7)\) ) and Department approval in accordance with Rule 62-4.120, F.A.C. For Title V permit transfers only, a complete application for transfer of air permit shall include the requirements of 40 CFR 70.7(d)(1)(iv), adopted and incorporated by reference at Rule 62-204.800, F.A.C. Within 30 days after approval of the transfer of permit, the Department shall update the permit by an administrative permit correction pursuant to Rule 62-210.360, F.A.C.
(b) For an air general permit, the provision of Rules 62-210.300(7)(a) and 62-4.120, F.A.C., do not apply. Thirty (30) days before using an air general permit, the new owner must submit an air general permit notification to the Department in accordance with Rule 62-210.300(4), F.A.C., or Rule 62-213.300(2)(b), F.A.C.
[Rule 62-210.300(7), F.A.C.]
22. Public Notice and Comment.
(1) Public Notice of Proposed Agency Action.
(a) A notice of proposed agency action on permit application, where the proposed agency action is to issue the permit, shall be published by any applicant for:
1. An air construction permit;
2. An air operation permit, permit renewal or permit revision subject to Rule 62-210.300(2)(b), F.A.C., (i.e., a FESOP), except as provided in Rule 62-2 10.300(2)(b)l.b., F.A.C.; or
3. An air operation permit, permit renewal, or penmit revision subject to Chapter 62-213, F.A.C., except Title V air general permits or those permit revisions meeting the requirements of Rule 62-213.412(1), F.A.C.
(b) The notice required by Rule 62-210.350(I)(a), F.A.C., shall be published in accordance with all otherwise applicable provisions of Rule 62-110.106, F.A.C. A public notice under Rule 62-210.350(1)(a)1., F.A.C., for an air construction permit may be combined with any required public notice under Rule 62-210.350(1)(a)2. or 3., F.A.C., for air operation permits. If such notices are combined, the public notice must comply with the requirements for both notices.

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(c) Except as otherwise provided at Rules 62-2I0.350(2), (5), and (6), F.A.C., each notice of intent to issue an air construction permit shall provide a 14 -day period for submittal of public comments.
(2) Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment - Area Preconstruction Review.
(a) Before taking final agency action on a construction permit application for any proposed new or modified facility or emissions unit subject to the preconstruction review requirements of Rule 62-212.400 or 62-212.500, F.A.C., the Department shall comply with all applicable provisions of Rule 62-110.106, F.A.C., and provide an opportunity for public comment which shall include as a minimum the following:
1. A complete file available for public inspection in at least one location in the district affected which includes the information submitted by the owner or operator, exclusive of confidential records under Section 403.111, F.S., and the Department's analysis of the effect of the proposed construction or modification on ambient air quality, including the Department's preliminary determination of whether the permit should be approved or disapproved;
2. A 30-day period for submittal of public comments; and
3. A notice, by advertisement in a newspaper of general circulation in the county affected, specifying the nature and location of the proposed facility or emissions unit, whether BACT or LAER has been determined, the degree of PSD increment consumption expected, if applicable, and the location of the information specified in paragraph 1. above; and notifying the public of the opportunity for submitting comments and requesting a public hearing.
(b) The notice provided for in Rule 62-210.350(2)(a)3., F.A.C., shall be prepared by the Department and published by the applicant in accordance with all applicable provisions of Rule 62-110.106, F.A.C., except that the applicant shall cause the notice to be published no later than thirty (30) days prior to final agency action.
(c) A copy of the notice provided for in Rule 62-210.350(2)(a)3., F.A.C., shall also be sent by the Department to the Regional Office of the U.S. Environmental Protection Agency and to all other state and local officials or agencies having cognizance over the location of such new or modified facility or emissions unit, including local air pollution control agencies, chief executives of city or county government, regional land use planning agencies, and any other state, Federal Land Manager, or Indian Governing Body whose lands may be affected by emissions from the new or modified facility or emissions unit.
(d) A copy of the notice provided for in Rule 62-210.350(2)(a)3., F.A.C., shall be displayed in the appropriate district, branch and local program offices.
(e) An opportunity for public hearing shall be provided in accordance with Chapter 120, F.S., and Rule 62-110.106, F.A.C.
(f) Any public comments received shall be made available for public inspection in the location where the information specified in Rule 62-210.350(2)(a)I., F.A.C., is available and shall be considered by the Department in making a final determination to approve or deny the permit.
(g) The final determination shall be made available for public inspection at the same location where the information specified in Rule 62-210.350(2)(a)1., F.A.C., was made available.
(h) For a proposed new or modified emissions unit which would be located within 100 kilometers of any Federal Class I area or whose emissions may affect any Federal Class I area, and which would be subject to the preconstruction review requirements of Rule 62-212.400 or 62-212.500, F.A.C.:
1. The Department shall mail or transmit to the Administrator a copy of the initial application for an air construction permit and notice of every action related to the consideration of the permit application.
2. The Department shall mail or transmit to the Federal Land Manager of each affected Class I area a copy of any written notice of intent to apply for an air construction permit; the initial application for an air construction permit, including all required analyses and demonstrations; any subsequently submitted information related to the application; the preliminary determination and notice of proposed agency action on the permit application; and any petition for an administrative hearing regarding the application or the Department's proposed action. Each such document shall be mailed or transmitted to the Federal Land Manager within fourteen (14) days after its receipt by the Department.

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(3) Additional Public Notice Requirements for Facilities Subject to Operation Permits for Title V Sources.
(a) Before taking final agency action to issue a new, renewed, or revised air operation permit subject to Chapter 62213, F.A.C., the Department shall comply with all applicable provisions of Rule 62-110.106, F.A.C., and provide an opportunity for public comment which shall include as a minimum the following:
1. A complete file available for public inspection in at least one location in the district affected which includes the information submitted by the owner or operator, exclusive of confidential records under Section 403.111, F.S.; and
2. A 30-day period for submittal of public comments.
(b) The notice provided for in Rule 62-210.350(3)(a), F.A.C., shall be prepared by the Department and published by the applicant in accordance with all applicable provisions of Rule 62-110.106, F.A.C., except that the applicant shall cause the notice to be published no later than thirty (30) days prior to final agency action. If written comments received during the 30 -day comment period on a draft permit result in the Department's issuance of a revised draft permit in accordance with Rule 62-213.430(1), F.A.C., the Department shall require the applicant to publish another public notice in accordance with Rule 62-210.350(1)(a), F.A.C.
(c) The notice shall identify:
1. The facility;
2. The name and address of the office at which processing of the permit occurs;
3. The activity or activities involved in the permit action;
4. The emissions change involved in any permit revision;
5. The name, address, and telephone number of a Department representative from whom interested persons may obtain additional information, including copies of the permit draft, the application, and all relevant supporting materials, including any permit application, compliance plan, permit, monitoring report, and compliance statement required pursuant to Chapter 62-213, F.A.C. (except for information entitled to confidential treatment pursuant to Section 403.111 , F.S.), and all other materials available to the Department that are relevant to the permit decision;
6. A brief description of the comment procedures required by Rule 62-210.350(3), F.A.C.;
7. The time and place of any hearing that may be held, including a statement of procedure to request a hearing (unless a hearing has already been scheduled); and
8. The procedures by which persons may petition the Administrator to object to the issuance of the proposed permit after expiration of the Administrator's 45-day review period.
[Rules 62-210.350(1) thru (3), F.A.C.]
23. Administrative Permit Corrections.
(1) A facility owner shall notify the Department by letter of minor corrections to information contained in a permit. Such notifications shall include:
(a) Typographical errors noted in the permit;
(b) Name, address or phone number change from that in the permit;
(c) A change requiring more frequent monitoring or reporting by the permittee;
(d) A change in ownership or operational control of a facility, subject to the following provisions:
1. The Department determines that no other change in the permit is necessary;
2. The permittee and proposed new permittee have submitted an Application for Transfer of Air Permit, and the Department has approved the transfer pursuant to Rule 62-210.300(7), F.A.C.; and
3. The new permittee has notified the Department of the effective date of sale or legal transfer.
(e) Changes listed at 40 CFR 72.83(a)(1), (2), (6), (9) and (10), adopted and incorporated by reference at Rule 62-204.800,

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F.A.C., and changes made pursuant to Rules 62-214.340(1) and (2), F.A.C., to Title V sources subject to emissions limitations or reductions pursuant to 42 USC ss. 7651-7651o;
(f) Changes listed at 40 CFR 72.83(a)(11) and (12), adopted and incorporated by reference at Rule 62-204.800, F.A.C., to Title V sources subject to emissions limitations or reductions pursuant to 42 USC ss. \(7651-7651 \mathrm{o}\), provided the notification is accompanied by a copy of any EPA determination concerning the similarity of the change to those listed at Rule 62-210.360(1)(e), F.A.C.; and
(g) Any other similar minor administrative change at the source.
(2) Upon receipt of any such notification, the Department shall within 60 days correct the permit and provide a corrected copy to the owner.
(3) After first notifying the owner, the Departnent shall correct any permit in which it discovers errors of the types listed at Rules 62-210.360(1)(a) and (b), F.A.C., and provide a corrected copy to the owner.
(4) For Title V source permits, other than general permits, a copy of the corrected permit shall be provided to EPA and any approved local air program in the county where the facility or any part of the facility is located.
[Rule 62-210.360, F.A.C.]
24. Emissions Computation and Reporting.
(1) Applicability. This rule sets forth required methodologies to be used by the owner or operator of a facility for computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for computing emissions for purposes of the reporting requirements of subsection 62-210.370(3) and paragraph 62\(212.300(1)(\mathrm{e})\), F.A.C., or of any permit condition that requires emissions be computed in accordance with this rule. This rule is not intended to establish methodologies for determining compliance with the emission limitations of any air permit.
(2) Computation of Emissions. For any of the purposes set forth in subsection 62-210.370(1), F.A.C., the owner or operator of a facility shall compute emissions in accordance with the requirements set forth in this subsection.
(a) Basic Approach. The owner or operator shall employ, on a pollutant-specific basis, the most accurate of the approaches set forth below to compute the emissions of a pollutant from an emissions unit; provided, however, that nothing in this rule shall be construed to require installation and operation of any continuous emissions monitoring system (CEMS), continuous parameter monitoring system (CPMS), or predictive emissions monitoring system (PEMS) not otherwise required by rule or permit, nor shall anything in this rule be construed to require performance of any stack testing not otherwise required by rule or permit.
1. If the emissions unit is equipped with a CEMS meeting the requirements of paragraph 62-210.370(2)(b), F.A.C., the owner or operator shall use such CEMS to compute the emissions of the pollutant, unless the owner or operator demonstrates to the department that an alternative approach is more accurate because the CEMS represents still-emerging technology.
2. If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C, but emissions of the pollutant can be computed pursuant to the mass balance methodology of paragraph 62-210.370(2)(c), F.A.C., the owner or operator shall use such methodology, unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
3. If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., and emissions cannot be computed pursuant to the mass balance methodology, the owner or operator shall use an emission factor meeting the requirements of paragraph 62-210.370(2)(d), F.A.C., unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
(b) Continuous Emissions Monitoring System (CEMS).
1. An owner or operator may use a CEMS to compute emissions of a pollutant for purposes of this rule provided:
a. The CEMS complies with the applicable certification and quality assurance requirements of 40 CFR Part 60, Appendices B and F, or, for an acid rain unit, the certification and quality assurance requirements of 40 CFR Part 75, all adopted by reference at Rule 62-204.800, F.A.C.; or

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b. The owner or operator demonstrates that the CEMS otherwise represents the most accurate means of computing emissions for purposes of this rule.
2. Stack gas volumetric flow rates used with the CEMS to compute emissions shall be obtained by the most accurate of the following methods as demonstrated by the owner or operator:
a. A calibrated flowmeter that records data on a continuous basis, if available; or
b. The average flow rate of all valid stack tests conducted during a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
3. The owner or operator may use CEMS data in combination with an appropriate f-factor, heat input data, and any other necessary parameters to compute emissions if such method is demonstrated by the owner or operator to be more accurate than using a stack gas volumetric flow rate as set forth at subparagraph 62-210.370(2)(b)2., F.A.C., above.
(c) Mass Balance Calculations.
1. An owner or operator may use mass balance calculations to compute emissions of a pollutant for purposes of this rule provided the owner or operator:
a. Demonstrates a means of validating the content of the pollutant that is contained in or created by all materials or fuels used in or at the emissions unit; and
b. Assumes that the emissions unit emits all of the pollutant that is contained in or created by any material or fuel used in or at the emissions unit if it cannot otherwise be accounted for in the process or in the capture and destruction of the pollutant by the unit's air pollution control equipment.
2. Where the vendor of a raw material or fuel which is used in or at the emissions unit publishes a range of pollutant content from such material or fuel, the owner or operator shall use the highest value of the range to compute the emissions, unless the owner or operator demonstrates using site-specific data that another content within the range is more accurate.
3. In the case of an emissions unit using coatings or solvents, the owner or operator shall document, through purchase receipts, records and sales receipts, the beginning and ending VOC inventories, the amount of VOC purchased during the computational period, and the amount of VOC disposed of in the liquid phase during such period.
(d) Emission Factors.
1. An owner or operator may use an emission factor to compute emissions of a pollutant for purposes of this rule provided the emission factor is based on site-specific data such as stack test data, where available, unless the owner or operator demonstrates to the department that an alternative emission factor is more accurate. An owner or operator using site-specific data to derive an emission factor, or set of factors, shall meet the following requirements.
a. If stack test data are used, the emission factor shall be based on the average emissions per unit of input, output, or gas volume, whichever is appropriate, of all valid stack tests conducted during at least a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
b. Multiple emission factors shall be used as necessary to account for variations in emission rate associated with variations in the emissions unit's operating rate or operating conditions during the period over which emissions are computed.
c. The owner or operator shall compute emissions by multiplying the appropriate emission factor by the appropriate input, output or gas volume value for the period over which the emissions are computed. The owner or operator shall not compute emissions by converting an emission factor to pounds per hour and then multiplying by hours of operation, unless the owner or operator demonstrates that such computation is the most accurate method available.
2. If site-specific data are not available to derive an emission factor, the owner or operator may use a published emission factor directly applicable to the process for which emissions are computed. If no directly-applicable emission factor is available, the owner or operator may use a factor based on a similar, but different, process.

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(e) Accounting for Emissions During Periods of Missing Data from CEMS, PEMS, or CPMS. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of missing data from CEMS, PEMS, or CPMS using other site-specific data to generate a reasonable estimate of such emissions.
(f) Accounting for Emissions During Periods of Startup and Shutdown. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of startup and shutdown of the emissions unit.
(g) Fugitive Emissions. In computing the emissions of a pollutant from a facility or emissions unit, the owner or operator shall account for the fugitive emissions of the pollutant, to the extent quantifiable, associated with such facility or emissions unit.
(h) Recordkeeping. The owner or operator shall retain a copy of all records used to compute emissions pursuant to this rule for a period of five years from the date on which such emissions information is submitted to the department for any regulatory purpose.
(3) Annual Operating Report for Air Pollutant Emitting Facility
(a) The Annual Operating Report for Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) shall be completed each year.
(c) The annual operating report shall be submitted to the appropriate Department of Environmental Protection (DEP) division, district or DEP-approved local air pollution control program office by March 1 of the following year.
(d) Beginning with 2007 annual emissions, emissions shall be computed in accordance with the provisions of Rule 62\(210.370(2)\), F.A.C., for purposes of the annual operating report.
[Rules 62-210.370(1), (2) and (3)(a), (c) \& (d), F.A.C.]
25. Circumvention. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly.
[Rule 62-210.650, F.A.C.]
26. Forms and Instructions. The forms used by the Department in the stationary source control program are adopted and incorporated by reference in this section. The forms are listed by rule number, which is also the form number, with the subject, title and effective date. Copies of forms may be obtained by writing to the Department of Environmental Protection, Division of Air Resource Management, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, or by accessing the Division's website at www.dep.state.fl.us/air. The requirement of Rule 62-4.050(2), F.A.C., to file application forms in quadruplicate is waived if an air permit application is submitted using the Department's electronic application form.
(1) Application for Air Permit - Long Form, Form and Instructions (Effective 02-02-2006).
(a) Acid Rain Part, Form and Instructions (Effective 06-16-2003).
1. Repowering Extension Plan, Form and Instructions (Effective 07/01/1995).
2. New Unit Exemption, Form and Instructions (Effective 04/16/2001).
3. Retired Unit Exemption, Form and Instructions (Effective 04/16/2001).
4. Phase II NOx Compliance Plan, Form and Instructions (Effective 01/06/1998).
5. Phase II NOx Averaging Plan, Form (Effective 01/06/1998).
(b) Reserved.
(5) Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions (Effective 02/11/1999).
(7) Application for Transfer of Air Permit - Title V Source, (Effective 04/16/200]).
[Rule 62-210.900, F.A.C.]
Chapter 62-213, F.A.C.

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\section*{27. Responsible Official.}
(1) Each Title V source must identify a responsible official on each application for Title V permit, permit revision, and permit renewal. For sources with only one responsible official, this is how the Title \(V\) source designates the responsible official.
(2) Each Title V source may designate more than one responsible official, provided a primary responsible official is designated as responsible for the certifications of all other designated responsible officials. Any action taken by the primary responsible official shall take precedence over any action taken by any other designated responsible official.
(3) Any facility initially designating more than one responsible official or changing the list of responsible officials must submit a Responsible Official Notification Form (DEP Form No. 62-213.900(8)) designating all responsible officials for a Title V source, stating which responsible official is the primary responsible official, and providing an effective date for any changes to the list of responsible officials. Each individual listed on the Responsible Official Notification Form must meet the definition of responsible official given at Rule 62-210.200, F.A.C.
(4) A Title V source with only one responsible official shall submit DEP Form No. 62-213.900(8) for a change in responsible official.
(5) No person shall take any action as a responsible official at a Title V source unless designated a responsible official as required by this rule, except that the existing responsible official of any Title \(V\) source which has a change in responsible official during the term of the permit and before the effective date of this rule may continue to act as a responsible official until the first submittal of DEP Form No. 62-213.900(8) or the next application for Title V permit, permit revision or permit renewal, whichever comes first.
[Rules 62-213.202(1) thru (5), F.A.C.]
28. Annual Emissions Fee. Each Title V source permitted to operate in Florida must pay between January 15 and March 1 of each year, upon written notice from the Department, an annual emissions fee in an amount determined as set forth in Rule 62-213.205(1), F.A.C.
(I) (g) If the Department has not received the fee by February 15 of the year following the calendar year for which the fee is calculated, the Department will send the primary responsible official of the Title V source a written warning of the consequences for failing to pay the fee by March 1. If the fee is not postmarked by March 1 of the year due, the Department shall impose, in addition to the fee, a penalty of 50 percent of the amount of the fee unpaid plus interest on such amount computed in accordance with Section 220.807 , F.S. If the Department determines that a submitted fee was inaccurately calculated, the Department shall either refund to the permittee any amount overpaid or notify the permittee of any amount underpaid. The Department shall not impose a penalty or interest on any amount underpaid, provided that the permittee has timely remitted payment of at least 90 percent of the amount determined to be due and remits full payment within 60 days after receipt of notice of the amount underpaid. The Department shall waive the collection of underpayment and shall not refund overpayment of the fee, if the amount is less than 1 percent of the fee due, up to \(\$ 50.00\). The Department shall make every effort to provide a timely assessment of the adequacy of the submitted fee. Failure to pay timely any required annual emissions fee, penalty, or interest constitutes grounds for permit revocation pursuant to Rule 62-4.100, F.A.C.
(1) (i) Any documentation of actual hours of operation, actual material or heat input, actual production amount, or actual emissions used to calculate the annual emissions fee shall be retained by the owner for a minimum of five (5) years and shall be made available to the Department upon request.
(1) (j) A completed DEP Form 62-213.900(1), "Major Air Pollution Source Annual Emissions Fee Form", must be submitted by a responsible official with the annual emissions fee.
[Rules 62-213.205, (1)(g), (1)(i) \& (1)(i), F.A.C.]
29. Reserved.

\section*{30. Reserved.}
31. Air Operation Permit Fees. No permit application processing fee, renewal fee, modification fee or amendment fee is required for an operation permit for a Title \(V\) source.
[Rule 62-213.205(4), F.A.C.]

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32. Permits and Permit Revisions Required. All Title \(V\) sources are subject to the permit requirements of Chapter 62-213, F.A.C., except those Title V sources permittable pursuant to Rule 62-213.300, F.A.C., Title V Air General Permits.
(1) No Title V source may operate except in compliance with Chapter 62-213, F.A.C.
(2) Except as provided in Rule 62-213.410, F.A.C., no source with a permit issued under the provisions of Chapter 62-213, F.A.C., shall make any changes in its operation without first applying for and receiving a permit revision if the change meets any of the following:
(a) Constitutes a modification;
(b) Violates any applicable requirement;
(c) Exceeds the allowable emissions of any air pollutant from any unit within the source;
(d) Contravenes any permit term or condition for monitoring, testing, recordkeeping, reporting or of a compliance certification requirement;
(e) Requires a case-by-case determination of an emission limitation or other standard or a source specific determination of ambient impacts, or a visibility or increment analysis under the provisions of Chapter 62-212 or 62-296, F.A.C.;
(f) Violates a permit term or condition which the source has assumed for which there is no corresponding underlying applicable requirement to which the source would otherwise be subject;
(g) Results in the trading of emissions among units within a source except as specifically authorized pursuant to Rule 62-213.415, F.A.C.;
(h) Results in the change of location of any relocatable facility identified as a Title \(V\) source pursuant to paragraph (a)(e), (g) or (h) of the definition of "major source of air pollution" at Rule 62-210.200, F.A.C.;
(i) Constitutes a change at an Acid Rain Source under the provisions of 40 CFR 72.81(a)(1), (2), or (3), (b)(1) or (b)(3), hereby incorporated by reference;
(j) Constitutes a change in a repowering plan, nitrogen oxides averaging plan, or nitrogen oxides compliance deadline extension at an Acid Rain Source;
[Rules 62-213.400(1) \& (2), F.A.C.]
33. Changes Without Permit Revision. Title V sources having a valid permit issued pursuant to Chapter 62-213, F.A.C., may make the following changes without permit revision, provided that sources shall maintain source logs or records to verify periods of operation:
(1) Permitted sources may change among those alternative methods of operation;
(2) A permitted source may implement operating changes, as defined in Rule 62-210.200, F.A.C., after the source submits any forms required by any applicable requirement and provides the Department and EPA with at least 7 days written notice prior to implementation. The source and the Department shall attach each notice to the relevant permit;
(a) The written notice shall include the date on which the change will occur, and a description of the change within the permitted source, the pollutants emitted and any change in emissions, and any term or condition becoming applicable or no longer applicable as a result of the change;
(b) The permit shield described in Rule 62-213.460, F.A.C., shall not apply to such changes;
(3) Permitted sources may implement changes involving modes of operation only in accordance with Rule 62-213.415, F.A.C.
[Rule 62-213.410, F.A.C.]

\section*{34. Immediate Implementation Pending Revision Process.}
(1) Those permitted Title \(V\) sources making any change that constitutes a modification pursuant to the definition of modification at Rule 62-210.200, F.A.C., but which would not constitute a modification pursuant to 42 USC 7412(a) or to 40 CFR \(52.01,60.2\), or 61.15 , adopted and incorporated by reference at Rule \(62-204.800\), F.A.C., may implement such

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change prior to final issuance of a permit revision, provided the change:
(a) Does not violate any applicable requirement;
(b) Does not contravene any permit term or condition for monitoring, testing, recordkeeping or reporting, or any compliance certification requirement;
(c) Does not require or change a case-by-case determination of an emission limitation or other standard, or a sourcespecific determination of ambient impacts, or a visibility or increment analysis under the provisions of Chapter 62-212 or 62-296, F.A.C.;
(d) Does not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and which the source has assumed to avoid an applicable requirement to which the source would otherwise be subject including any federally enforceable emissions cap or federally enforceable alternative emissions limit.
(2) A Title \(V\) source may immediately implement such changes after they have been incorporated into the terms and conditions of a new or revised construction permit issued pursuant to Chapter 62-212, F.A.C., and after the source provides to EPA, the Department, each affected state and any approved local air program having geographic jurisdiction over the source, a copy of the source's application for operation permit revision. The Title V source may conform its application for construction permit to include all information required by Rule 62-213.420, F.A.C., in lieu of submitting separate application forms.
(3) The Department shall process the application for operation permit revision in accordance with the provisions of Chapter 62-213, F.A.C., except that the Department shall issue a draft permit revision or a determination to deny the revision within 60 days of receipt of a complete application for operation permit revision or, if the Title V source has submitted a construction permit application conforming to the requirements of Rule 62-213.420, F.A.C., the Department shall issue a draft permit or a determination to deny the revision at the same time the Department issues its determination on issuance or denial of the construction permit application. The Department shall not take final action on the operation permit revision application until all the requirements of Rules 62-213.430(1)(a), (c), (d), and (e), F.A.C., have been complied with.
(4) Pending final action on the operation permit revision application, the source shall implement the changes in accordance with the terms and conditions of the source's new or revised construction permit. If any terms and conditions of the new or revised construction permit have not been complied with prior to the issuance of the draft operation permit revision, the operation permit shall include a compliance plan in accordance with the provisions of Rule 62-213.440(2), F.A.C.
(5) The permit shield described in Rule 62-213.460, F.A.C., shall not apply to such changes until after the Department takes final action to issuc the operation permit revision.
(6) If the Department denies the source's application for operation permit revision, the source shall cease implementation of the proposed changes.
[Rule 62-213.412, F.A.C.]
35. Permit Applications.
(1) Duty to Apply. For each Title V source, the owner or operator shall submit a timely and complete permit application in compliance with the requirements of Rules 62-213.420, F.A.C., and Rules 62-4.050(1) through (3), F.A.C.
(a) Timely Application.
3. For purposes of permit renewal, a timely application is one that is submitted in accordance with Rule 62-4.090, F.A.C.
(b) Complete Application.
1. Any applicant for a Title \(V\) permit, permit revision or permit renewal must submit an application on DEP Form No. 62-2 10.900 (1), which must include all the information specified by Rule 62-213.420(3), F.A.C., except that an application for permit revision must contain only that information related to the proposed change(s) from the currently effective Title \(V\) permit and any other requirements that become applicable at the time of application. The applicant shall include information concerning fugitive emissions and stack emissions in the application. Each application for permit, permit revision or permit renewal shall be certified by a responsible official in accordance with Rule 62-213.420(4), F.A.C.

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2. For those applicants submitting initial permit applications pursuant to Rule \(62-213.420(1)(a) 1\)., F.A.C., a complete application shall be an application that substantially addresses all the information required by the application form number 62-210.900(1), and such applications shall be deemed complete within sixty days of receipt of a signed and certified application unless the Department notifies the applicant of incompleteness within that time. For all other applicants, the applications shall be dcemed complete sixty days after receipt, unless the Department, within sixty days after receipt of a signed application for permit, permit revision or permit renewal, requests additional documentation or information needed to process the application. An applicant making timely and complete application for permit, or timely application for permit renewal as described by Rule \(62-4.090(1)\), F.A.C., shall continue to operate the source under the authority and provisions of any existing valid permit or Florida Electrical Power Plant Siting Certification, and in accordance with applicable requirements of the Acid Rain Program, until the conclusion of proceedings associated with its permit application or until the new permit becomes effective, whichever is later, provided the applicant complies with all the provisions of Rules 62\(213.420(1)(\) b \() 3\). and 4., F.A.C. Failure of the Department to request additional information within sixty days of receipt of a properly signed application shall not impair the Department's ability to request additional information pursuant to Rules 62 \(213.420(1)(b) 3\). and 4., F.A.C.
3. For those permit applications submitted pursuant to the provisions of Rule 62-213.420(1)(a)1., F.A.C., the Department shall notify the applicant if the Department becomes aware at any time during processing of the application that the application contains incorrect or incomplete information. The applicant shall submit the corrected or supplementary information to the Department within ninety days unless the applicant has requested and been granted additional time to submit the information. Failure of an applicant to submit corrected or supplementary information requested by the Department within ninety days or such additional time as requested and granted shall render the application incomplete.
4. For all applications other than those addressed at Rule 62-213.420(1)(b)3., F.A.C., should the Department become awarc, during processing of any application that the application contains incorrect information, or should the Department become aware, as a result of comment from an affected State, an approved local air program, EPA, or the public that additional information is needed to evaluate the application, the Department shall notify the applicant within 30 days. When an applicant becomes aware that an application contains incorrect or incomplete information, the applicant shall submit the corrected or supplementary information to the Department. If the Department notifies an applicant that corrected or supplementary information is necessary to process the permit, and requests a response, the applicant shall provide the information to the Department within ninety days of the Department request unless the applicant has requested and been granted additional time to submit the information or, the applicant shall, within ninety days, submit a written request that the Department process the application without the information. Failure of an applicant to submit corrected or supplementary information requested by the Department within ninety days, or such additional time as requested and granted, or to demand in writing within ninety days that the application be processed without the information shall render the application incomplete. Nothing in this section shall limit any other remedies available to the Department.
[Rules 62-213.420(1)(a)3. and 62-213.420(1)(b)I., 2., 3. \& 4., F.A.C.]
36. Confidential Information. Whenever an applicant submits information under a claim of confidentiality pursuant to Section 403.111 , F.S., the applicant shall also submit a copy of all such information and claim directly to EPA. (also, see Condition No. 50.)
[Rule 62-213.420(2), F.A.C.]
37. Standard Application Form and Required Information. Applications shall be submitted under Chapter 62-213, F.A.C., on forms provided by the Department and adopted by reference in Rule 62-210.900(1), F.A.C. The information as described in Rule 62-210.900(1), F.A.C., shall be included for the Title V source and each emissions unit. An application must include information sufficient to determine all applicable requirements for the Title \(V\) source and each emissions unit and to evaluate a fee amount pursuant to Rule 62-213.205, F.A.C.
[Rule 62-213.420(3), F.A.C.]
38. a. Permit Renewal and Expiration. Permits being renewed are subject to the same requirements that apply to permit issuance at the time of application for renewal. Permit renewal applications shall contain that information identified in Rules 62-210.900(1) and 62-213.420(3), F.A.C. Unless a Title V source submits a timely application for permit renewal in accordance with the requirements of Rule 62-4.090(1), F.A.C., the existing permit shall expire and the source's right to operate shall terminate. No Title V permit will be issued for a new term except through the renewal process.

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b. Permit Revision Procedures. Permit revisions shall meet all requirements of Chapter 62-213, F.A.C., including those for content of applications, public participation, review by approved local programs and affected states, and review by EPA, as they apply to permit issuance and permit renewal, except that permit revisions for those activities implemented pursuant to Rule 62-213.412, F.A.C., need not meet the requirements of Rule 62-213.430(1)(b), F.A.C. The Department shall require permit revision in accordance with the provisions of Rule 62-4.080, F.A.C., and 40 CFR 70.7(f), whenever any source becomes subject to any condition listed at 40 CFR 70.7(f)(1), hereby adopted and incorporated by reference. The below requirements from 40 CFR 70.7(f) are adopted and incorporated by reference in Rule 62-213.430(4), F.A.C.:

\section*{40 CFR 70.7(f): Reopening for Cause. (also, see Condition No. 4.)}
(1) This section contains provisions from 40 CFR 70.7 (f) that specify the conditions under which a Title \(V\) permit shall be reopened prior to the expiration of the permit. A Title \(V\) permit shall be reopened and revised under any of the following circumstances:
(i) Additional applicable requirements under the Act become applicable to a major Part 70 source with a remaining permit term of 3 or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii).
(ii) Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approved by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.
(iii) The permitting authority or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
(iv) The Administrator or the permitting authority determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
(2) Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable.
(3) Reopenings under \(40 \mathrm{CFR} 70.7(\mathrm{f})(1)\) shall not be initiated before a notice of such intent is provided to the Part 70 source by the permitting authority at least 30 days in advance of the date that the permit is to be reopened, except that the permitting authority may provide a shorter time period in the case of an emergency.
[Rules 62-213.430(3) \& (4), F.A.C.; and, 40 CFR 70.7(f)]
39. Insignificant Emissions Units or Pollutant-Emitting Activities.
(a) All requests for determination of insignificant emissions units or activities made pursuant to Rule 62-213.420(3)(n), F.A.C., shall be processed in conjunction with the permit, permit renewal or permit revision application submitted pursuant to Chapter 62-2I3, F.A.C. Insignificant emissions units or activities shall be approved by the Department consistent with the provisions of Rule 62-4.040(1)(b), F.A.C. Emissions units or activities which are added to a Title V source after issuance of a permit under Chapter 62-213, F.A.C., shall be incorporated into the permit at its next renewal, provided such emissions units or activities have been exempted from the requirement to obtain an air construction permit and also qualify as insignificant pursuant to Rule 62-213.430(6), F.A.C.
(b) An emissions unit or activity shall be considered insignificant if all of the following criteria are met:
1. Such unit or activity would be subject to no unit-specific applicable requirement;
2. Such unit or activity, in combination with other units or activities proposed as insignificant, would not cause the facility to exceed any major source threshold(s) as defined in Rule 62-213.420(3)(c)1., F.A.C., unless it is acknowledged in the permit application that such units or activities would cause the facility to exceed such threshold(s);
3. Such unit or activity would not emit or have the potential to emit:
a. 500 pounds per year or more of lead and lead compounds expressed as lead;

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b. 1,000 pounds per year or more of any hazardous air pollutant;
c. 2,500 pounds per year or more of total hazardous air pollutants; or
d. 5.0 tons per year or more of any other regulated pollutant.
[Rule 62-213.430(6), F.A.C.]
40. Permit Duration. Permits for sources subject to the Federal Acid Rain Program shall be issued for terms of five years, provided that the initial Acid Rain Part may be issued for a term less than five years where necessary to coordinate the term of such part with the term of a Title V permit to be issued to the source. Operation permits for Title V sources may not be. extended as provided in Rule 62-4.080(3), F.A.C., if such extension will result in a permit term greater than five years.
[Rule 62-213.440(1)(a), F.A.C.]
41. Monitoring Information. All records of monitoring information shall specify the date, place, and time of sampling or measurement and the operating conditions at the time of sampling or measurement, the date(s) analyses were performed, the company or entity that performed the analyses, the analytical techniques or methods used, and the results of such analyses.
[Rule 62-213.440(1)(b)2.a., F.A.C.]
42. Retention of Records. Retention of records of all monitoring data and support information shall be for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
[Rule 62-213.440(1)(b)2.b., F.A.C.]
43. Monitoring Reports. The permittee shall submit reports of any required monitoring at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports.
[Rule 62-213.440(1)(b)3.a., F.A.C.]
44. Deviation from Permit Requirements Reports. The permittee shall report in accordance with the requirements of Rules 62-210.700(6) and 62-4.130, F.A.C., deviations from permit requirements, including those attributable to upset conditions as defined in the permit. Reports shall include the probable cause of such deviations, and any corrective actions or preventive measures taken.
[Rule 62-213.440(1)(b)3.b., F.A.C.]
45. Reports. All reports shall be accompanied by a certification by a responsible official, pursuant to Rule 62-213.420(4), F.A.C.
[Rule 62-213.440(1)(b)3.c, F.A.C.]
46. If any portion of the final permit is invalidated, the remainder of the permit shall remain in effect.
[Rule 62-213.440(1)(d)1., F.A.C.]
47. It shall not be a defense for a permittee in an enforcement action that maintaining compliance with any permit condition would necessitate halting of or reduction of the source activity.
[Rule 62-213.440(1)(d)3., F.A.C.]
48. Any Title \(V\) source shall comply with all the terms and conditions of the existing permit until the Department has taken final action on any permit renewal or any requested permit revision, except as provided at Rule 62-213.412(2), F.A.C.
[Rule 62-213.440(1)(d)4., F.A.C.]
49. A situation arising from sudden and unforeseeable events beyond the control of the source which causes an exceedance of a technology-based emissions limitation because of unavoidable increases in emissions attributable to the situation and which requires immediate corrective action to restore normal operation, shall be an affirmative defense to an enforcement action in accordance with the provisions and requirements of \(40 \mathrm{CFR} 70.6(\mathrm{~g})(2)\) and (3), hereby adopted and incorporated by reference.

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[Rule 62-213.440(1)(d)5., F.A.C.]
50. Confidentiality Claims. Any permittee may claim confidentiality of any data or other information by complying with Rule 62-213.420(2), F.A.C. (also, see Condition No. 36.)
[Rule 62-213.440(1)(d)6., F.A.C.]
51. Statement of Compliance. (a)2. The permittee shall submit a Statement of Compliance with all terms and conditions of the permit that includes all the provisions of 40 CFR 70.6(c)(5)(iii), incorporated by reference at Rule 62-204.800, F.A.C., using DEP Form No. 62-213.900(7). Such statement shall be accompanied by a ccrtification in accordance with Rule 62\(213.420(4)\), F.A.C., for Title V requirements and with Rule 62-214.350, F.A.C., for Acid Rain requirements. Such statements shall be submitted (postmarked) to the Department and EPA:
a. Annually, within 60 days after the end of each calendar year during which the Title \(V\) permit was effective, or more frequently if specified by Rule 62-213.440(2), F.A.C., or by any other applicable requirement; and
b. Within 60 days after submittal of a written agreement for transfer of responsibility as required pursuant to 40 CFR 70.7 (d)(1)(iv), adopted and incorporated by reference at Rule 62-204.800, F.A.C., or within 60 days after permanent shutdown of a facility permitted under Chapter 62-213, F.A.C.; provided that, in either such case, the reporting period shall be the portion of the calendar year the permit was effective up to the date of transfer of responsibility or permanent facility shutdown, as applicable.
3. In lieu of individually identifying all applicable requirements and specifying times of compliance with, non-compliance with, and deviation from each, the responsible official may use DEP Form No. 62-213.900(7) as such statement of compliance so long as the responsible official identifies all reportable deviations from and all instances of non-compliance with any applicable requirements and includes all information required by the federal regulation relating to each reportable deviation and instance of non-compliance.
(b) The responsible official may treat compliance with all other applicable requirements as a surrogate for compliance with Rule 62-296.320(2), Objectionable Odor Prohibited.
[Rules 62-213.440(3)(a)2. \& 3. and (b), F.A.C.]
52. Permit Shield. Except as provided in Chapter 62-213, F.A.C., compliance with the terms and conditions of a permit issued pursuant to Chapter 62-213, F.A.C., shall, as of the effective date of the permit, be deemed compliance with any applicable requirements in effect, provided that the source included such applicable requirements in the permit application. Nothing in Rule 62-213.460, F.A.C., or in any permit shall alter or affect the ability of EPA or the Department to deal with an emergency, the liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance, or the requirements of the Federal Acid Rain Program.
[Rule 62-213.460, F.A.C.]
53. Forms and Instructions. The forms used by the Department in the Title V source operation program are adopted and incorporated by reference in Rule 62-213.900, F.A.C. The form is listed by rule number, which is also the form number, and with the subject, title, and effective date. Copies of forms may be obtained by writing to the Department of Environmental Protection, Division of Air Resource Management, 2600 Blair Stone Road, Tallahassee, Florida 323992400, or by contacting the appropriate permitting authority.
(1) Major Air Pollution Source Annual Emissions Fee Form. (Effective 01/03/2001)
(7) Statement of Compliance Form. (Effective 06/02/2002)
(8) Responsible Official Notification Form. (Effective 06/02/2002)
[Rule 62-213.900, F.A.C.: Forms (1), (7) and (8)]
Chapter 62-256, F.A.C.
54. Not federally enforceable. Open Burning. This permit does not authorize any open burning nor does it constitute any waiver of the requirements of Chapter 62-256, F.A.C. Source shall comply with Chapter 62-256, F.A.C., for any open burning at the source.

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[Chapter 62-256, F.A.C.]

\section*{Chapter 62-281, F.A.C.}
55. Refrigerant Requirements. Any facility having refrigeration equipment, including air conditioning equipment, which uses a Class ] or II substance (listed at 40 CFR 82, Subpart A, Appendices A and B), and any facility which maintains, services, or repairs motor vehicles using a Class I or Class II substance as refrigerant must comply with all requirements of 40 CFR 82 , Subparts B and F, and with Rule 62-281.100, F.A.C. Those requirements include the following restrictions:
(1) Any facility having any refrigeration equipment normally containing 50 (fifty) pounds of refrigerant, or more, must keep servicing records documenting the date and type of all service and the quantity of any refrigerant added pursuant to 40 CFR 82.166 ;
(2) No person repairing or servicing a motor vehicle may perform any service on a motor vehicle air conditioner (MVAC) involving the refrigerant for such air conditioner unless the person has been properly trained and certified as provided at 40 CFR 82.34 and 40 CFR 82.40, and properly uses equipment approved pursuant to 40 CFR 82.36 and 40 CFR 82.38, and complies with 40 CFR 82.42;
(3) No person may sell or distribute, or offer for sale or distribution, any substance listed as a Class I or Class II substance at 40 CFR 82, Subpart A, Appendices A and B, except in compliance with Rule 62-281.100, F.A.C., and 40 CFR 82.34(b), 40 CFR 82.42, and/or 40 CFR 82.166;
(4) No person maintaining, servicing, repairing, or disposing of appliances may knowingly vent or otherwise release into the atmosphere any Class I or Class II substance used as a refrigerant in such equipment and no other person may open appliances (except MVACs as defined at 40 CFR 82.152) for service, maintenance or repair unless the person has been properly trained and certified pursuant to 40 CFR 82.161 and unless the person uses equipment certified for that type of appliance pursuant to 40 CFR 82.158 and unless the person observes the practices set forth at 40 CFR 82.156 and 40 CFR 82.166;
(5) No person may dispose of appliances (except small appliances, as defined at 40 CFR 82.152 ) without using equipment certified for that type of appliance pursuant to 40 CFR 82.158 and without observing the practices set forth at 40 CFR 82.156 and 40 CFR 82.166;
(6) No person may recover refrigerant from small appliances, MVACs and MVAC-like appliances (as defined at 40 CFR 82.152), except in compliance with the requirements of 40 CFR 82, Subpart F.
[40 CFR 82; and, Chapter 62-281, F.A.C. (Chapter 62-281, F.A.C., is not federally enforceable)]
Chapter 62-296, F.A.C.
56. Industrial, Commercial, and Municipal Open Burning Prohibited. Open burning in connection with industrial, commercial, or municipal operations is prohibited, except when:
(a) Open burning is determined by the Department to be the only feasible method of operation and is authorized by an air permit issued pursuant to Chapter 62-210 or 62-213, F.A.C.; or
(b) An emergency exists which requires inmediate action to protect human health and safety; or
(c) A county or municipality would use a portable air curtain incinerator to burn yard trash generated by a hurricane, tornado, firc or other disaster and the air curtain incinerator would otherwise be operated in accordance with the pennitting exemption criteria of Rule 62-210.300(3), F.A.C.
[Rule 62-296.320(3), F.A.C.]

\section*{57. Unconfined Emissions of Particulate Matter.}
(4)(c)l. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction; alteration; demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.
3. Reasonable precautions include the following:

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a. Paving and maintenance of roads, parking areas and yards.
b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
c. Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
d. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
e. Landscaping or planting of vegetation.
f. Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
g. Confining abrasive blasting where possible.
h. Enclosure or covering of conveyor systems.
4. In determining what constitutes reasonable precautions for a particular facility, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.
[Rules 62-296.320(4)(c)1., 3., \& 4. F.A.C.]


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Florida Department of Environmental Protection \\ Bob Martinez Center \\ 2600 Blairstone Road \\ 'Tallahassee, Florida 32399-2400
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\section*{PERMITTEE}

Jake Cogeneration, Ltd. 39001 Golden Gem Drive Umatilla, Florida 32784

Authorized Representative:
James Miller, Plant Manager
^ir Permit No. 0694801-012-AC
Pcrmit Expires: June 1, 2011
Lake Cogeneration Facility
Minor Source Air Construction Permit
Installation of Oxidation Catalyst
Control Systems

\section*{PROJECT AND LOCATION}

This permit authorizes the installation of oxidation catalyst control systems to the existing two General Electric (GE) LM-6000 combustion turbine units. The proposed work will be conducted at the Lake Cogeneration Facility, which is a combined cycle combustion turbine cogeneration plant (Standard Industrial Classification No. 4931 ). The facility is located in Lake County at 39001 Golden Gem Drive in Umatilla, IIorida. The UTM coordinates are Zone 17, 434.00 km East, and 3198.80 km North.

\section*{STATEMENT OF BASIS}

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department. The Lake Cogeneration Facility is subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality. However, this project is only subject to the general preconstruction review requirements in Rule 62212.300 , F.A.C. Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of this permit.

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Executed in Tallahassee, Florida


\section*{CERTIFICATE OF SERVICE}

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit with Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on \(\qquad\) to the persons listed below.

James Miller, Lake Cogeneration Facility: jmiller@caithnessenergy.com
Thomas Grace, Caithness Energy: tgrace@caithness.com
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\section*{Clerk Stamp}

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.


\section*{FACILITY AND PROJECT DESCRIPTION}

\section*{Existing Facility}

Lake Cogeneration, Ltd. owns the Lake Cogeneration Facility, which is a combined cycle combustion turbine (CT) cogeneration plant. The facility consists of two GE LM-6000 CT units. Each unit is equipped with an inlet chiller and supplementary fired duct burner and exhausts through a Heat Recovery Steam Generator (HRSG) stack. Natural gas is the primary fuel fired in the CT, with distillate oil used as a restricted alternate fuel.

In 2007, a spray intercooling (SPRINT) system was installed on each of the CT. A continuous emission monitoring system (CEMS) for monitoring and reporting \(\mathrm{NO}_{\mathrm{x}}\) emissions was also installed on each unit. The facility consists of the emission units given below.

\section*{Facility ID No. 0694801}
\begin{tabular}{|c|l|}
\hline ID No. & Emission Unit Description \\
\hline 002 & Fuel Oil Tank \\
\hline 003 & Combined Cycle Combustion Turbine with Duct Burner \\
\hline 004 & Combined Cycle Combustion Turbine with Duct Burner \\
\hline
\end{tabular}

\section*{Proposed Project}

The proposed project authorizes the installation of an oxidation catalyst system in the HRSG associated with each of the two CT units. The oxidation catalyst system is used to control or reduce carbon monoxide (CO) emissions. The catalyst (stainless steel foil coated with calcined alumina with platinum metal) enhances the chemical reaction between oxygen and CO and forms carbon dioxide. This project generally provides for emission control of CO in the range of 50 to \(70 \%\). The project will also result in an emission reduction of volatile organic compounds (VOC). This project will modify the following emissions units.

Facility ID No. 0694801
\begin{tabular}{|c|l|}
\hline ID No. & Emission Unit Description \\
\hline 003 & Combined Cycle Combustion Turbine with Duct Burner \\
\hline 004 & Combined Cycle Combustion Turbine with Duct Burner \\
\hline
\end{tabular}

\section*{FACILITY REGULATORY CLASSIFICATION}
- The facility is not a major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.
1. Permitting Authority: The permitting authority for this project is the Bureau of Air Regulation, Division of Air Resource Management, Florida Department of Environmental Protection (Department). The Bureau of Air Regulation's mailing address is 2600 Blair Stone Road (MS \#5505), Tallahassee, Florida 32399-2400. All documents related to applications for permits to operate an emissions unit shall be submitted to the Air Resource Section of the Department's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, FL 32803-3767.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Resources Section of the Department's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, FL 32803-3767.
3. Appendices: The following Appendices are attached as part of this permit:
a. Appendix A. Citation Formats and Glossary of Common Terms;
b. Appendix B. General Conditions;
c. Appendix C. Common Conditions; and
d. Appendix D. Common Testing Requirements.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title \(V\) air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, FL 32803-3767. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

\section*{Emissions Units 003 and 004}

Description: Each unit consists of a GE Model LM-6000 CT, HRSG with duct firing, chiller system, and SPRINT spray inter-cooling. Steam generated in the HRSG is directed to a common steam turbineelectrical generator (STG), which is rated at 26.5 megawatts (MW).

Fuel: Each unit fires pipeline natural gas as the primary fuel and distillate oil as a restricted alternate fuel.

Capacity: At a turbine inlet temperature of \(51^{\circ} \mathrm{F}\), the maximum heat input rate from gas firing based on the lower heating value (LHV) is: 423 million British thermal units (MMBtu) per hour without SPRINT, which produces approximately 45 MW ; or 450 MMBtu per hour with SPRINT, which produces approximately 52 MW .
Nitrogen Oxides ( \(N O_{y}\) ) Controls: A water injection system is used to reduce \(\mathrm{NO}_{\mathrm{x}}\) emissions. The water-to-fuel ratio is monitored continuously and adjusted by the automatic control system based on load conditions.

Carbon Monoxide (CO) Controls: This project adds an oxidation catalyst system to each CT unit to reduce CO and VOC emissions.

Stack Parameters: The stack is a maximum of 11 feet in diameter and at least 100 feet tall. At base load conditions and a compressor inlet temperature of \(51^{\circ} \mathrm{F}\), exhaust gas exits the stack at approximately \(250^{\circ} \mathrm{F}\) with a volumetric flow rate of approximately 320,253 actual cubic feet per minute (acfm).
CEMS: Each unit is equipped with a CEMS to monitor \(\mathrm{NO}_{\mathrm{x}}\) emissions.

\section*{EQUIPMENT}
1. Oxidation Catalyst System: The permittee shall install an EmeraChem (or equivalent) oxidation catalyst system in the HRSG of each CT unit. The catalyst, which is stainless steel foil coated with calcined alumina with platinum metal, enhances the chemical reaction between oxygen and CO. The use of this oxidation catalyst system generally provides for an emission reduction of CO in the range of \(50 \%\) to \(70 \%\), depending on the exhaust gas temperature. [Application No. 0694801-012-AC]

\section*{EMISSION LIMITS AND PERFORMANCE STANDARDS}
\{Permitting Note: This project adds an oxidation catalyst system to each CT unit. There are no changes to any permitted capacities, operational restrictions or emission standards in any previously issued air construction or Title V permits.\}

\section*{TESTING REQUIREMENTS}
2. Initial Compliance Tests: Each unit shall be tested to demonstrate initial compliance with the CO emissions standards specified in the Title \(V\) air operation permit. The initial tests shall be conducted within 60 days after completing construction of the oxidation catalyst project and achieving maximum production capacity, but not later than 180 days after initial operation of the unit with the oxidation catalyst. Satisfactory test results may be used to demonstrate annual compliance required by the Title V air operation permit for the year that the initial compliance test took place. [Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.]
3. Test Notifications: At least 15 days prior to the date on which each required test is to begin, the permittee shall notify the Compliance Authority of the date, time, and place of each test. The notification shall also include the name and phone number of the contact person who will be responsible for coordinating and having the tests conducted. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]

\section*{A. Combustion Turbine Units (EU-003 and -004)}
4. Test Methods: Required tests shall be performed in accordance with the following reference methods.
\begin{tabular}{|c|l|}
\hline Method & Description of Method and Comments \\
\hline 10 & \begin{tabular}{l} 
Determination of Carbon Monoxide Emissions from Stationary Sources (The method shall be \\
based on a continuous sampling train.)
\end{tabular} \\
\hline 19 & \begin{tabular}{l} 
Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, \\
and Nitrogen Oxides Emission Rates (Optional F-factor method may be used to determine flow \\
rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.)
\end{tabular} \\
\hline
\end{tabular}

The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62204.800 , F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800 and Appendix A of 40 CFR 60]

\section*{RECORDS AND REPORTS}
5. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix \(D\) (Common Testing Requirements) of this permit. For each test run, the report shall also indicate load (MW), the heat input rate (MMBtu per hour), fuel firing rate, \(\mathrm{NO}_{\mathrm{X}}\) emissions monitored by the CEMS, ambient temperature ( \({ }^{\circ} \mathrm{F}\) ), turbine inlet temperature \(\left({ }^{\circ} \mathrm{F}\right)\), and water-tofuel ratio. [Rule 62-297.310(8), F.A.C.]
6. Testing Capacity: The permittee shall conduct compliance testing of emissions with each CT operating at capacity. Capacity is defined as \(90-100\) percent of the manufacturer's rated heat input achievable for the average compressor inlet conditions during the test. If it is impracticable to test at capacity, then each CT may be tested at less than capacity. In such cases, the entire curve or table shall be adjusted downward by the increment that reflects the reduced rate of operation at which compliance was demonstrated. This increment is equal to the difference between the manufacturer's heat input or fuel usage value and 110 percent of the value reached during the test. In this case, the data and calculations necessary to demonstrate the heat input or fuel usage rate correction shall be submitted to the department with the compliance test report. Procedures for these tests shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) as given in Appendix \(D\) of this permit. [Rule 62-4.070(3), F.A.C.]

\section*{NOTIFICATIONS}
7. Construction Notifications: Within 15 days of completing construction, the permittee shall notify the Compliance Authority that construction has been completed. The notification shall include an updated proposed schedule of activities through the initial shakedown period and initial testing.
[Rule 62-4.070(3), F.A.C.]

\section*{SECTION 4. APPENDICES}

\section*{Contents}

Appendix A. Citation Formats and Glossary of Common Terms
Appendix B. General Conditions
Appendix C. Common Conditions
Appendix D. Common Testing Requirements

\section*{SECTION 4. APPENDIX A}

\section*{Citation Formats and Glossary of Common Terms}

\section*{CITATION FORMATS}

The following illustrate the formats used in the permit to identify applicable requirements from permits and regulations.

\section*{Old Permit Numbers}

Example: Permit No. AC50-123456 or Permit No. AO50-123456
Where: "AC" identifies the permit as an Air Construction Permit

\section*{New Permit Numbers}

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV
Where: " 099 " represents the specific county ID number in which the project is located
" 2222 " represents the specific facility ID number for that county
"001" identifies the specific permit project number
" \(A C\) " identifies the permit as an air construction permit
"AF" identifies the permit as a minor source federally enforceable state operation permit
"AO" identifies the permit as a minor source air operation permit
" AV " identifies the permit as a major Title V air operation permit

\section*{PSD Permit Numbers}

Example: Permit No. PSD-FL-317
Where: "PSD" means issued pursuant to the preconstruction review requirements of the Prevention of Significant Deterioration of Air Quality
"FL" means that the permit was issued by the State of Florida
"317" identifies the specific permit project number
Florida Administrative Code (F.A.C.)
Example: [Rule 62-213.205, F.A.C.]
Means: \(\quad\) Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

\section*{Code of Federal Regulations (CFR)}

Example: [40 CRF 60.7]
Means: \(\quad\) Title 40, Part 60, Section 7

\section*{GLOSSARY OF COMMON TERMS}
\({ }^{\circ}\) F: degrees Fahrenheit
AAQS: Ambient Air Quality Standard acfm: actual cubic feet per minute
ARMS: Air Resource Management System (Department's database)

BACT: best available control technology
bhp: brake horsepower
Btu: British thermal units
CAM: compliance assurance monitoring
CEMS: continuous emissions monitoring system
cfm: cubic feet per minute
CFR: Code of Federal Regulations

\section*{SECTION 4. APPENDIX A}

\section*{Citation Formats and Glossary of Common Terms}

CAA: Clean Air Act
CMS: continuous monitoring system
CO: carbon monoxide
\(\mathrm{CO}_{2}\) : carbon dioxide
COMS: continuous opacity monitoring system
DARM: Division of Air Resource Management
DEP: Department of Environmental Protection
Department: Department of Environmental Protection
dscfm: dry standard cubic feet per minute
EPA: Environmental Protection Agency
ESP: electrostatic precipitator (control system for reducing particulate matter)
EU: emissions unit
F.A.C.: Florida Administrative Code
F.A.W.: Florida Administrative Weekly
F.D.: forced draft
F.S.: Florida Statutes

FGD: flue gas desulfurization
FGR: flue gas recirculation
Fl: fluoride
\(\mathrm{ft}^{2}\) : square feet
\(\mathbf{f t}^{3}\) : cubic feet
gpm: gallons per minute
gr: grains
HAP: hazardous air pollutant
Hg: mercury
I.D.: induced draft

ID: identification
kPa: kilopascals
lb: pound
MACT: maximum achievable technology
MMBtu: million British thermal units
MSDS: material safety data sheets
MW: megawatt
NESHAP: National Emissions Standards for Hazardous Air Pollutants
\(\mathbf{N O}_{\mathbf{x}}\) : nitrogen oxides
NSPS: New Source Performance Standards
O\&M: operation and maintenance
\(\mathrm{O}_{2}\) : oxygen
Pb: lead
PM: particulate matter
\(\mathbf{P M}_{10}\) : particulate matter with a mean aerodynamic diameter of 10 microns or less
ppm: parts per million
ppmv: parts per million by volume
ppmvd: parts per million by volume, dry basis
QA: quality assurance
QC: quality control
PSD: prevention of significant deterioration
psi: pounds per square inch
PTE: potential to emit
RACT: reasonably available control technology
RATA: relative accuracy test audit
RBLC: EPA's RACT/BACT/LAER Clearinghouse
SAM: sulfuric acid mist
scf: standard cubic feet
scfm: standard cubic feet per minute
SIC: standard industrial classification code
SIP: State Implementation Plan
SNCR: selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)
\(\mathbf{S O}_{2}\) : sulfur dioxide
TPD: tons/day
TPH: tons per hour
TPY: tons per year
TRS: total reduced sulfur
UTM: Universal Transverse Mercator coordinate system
VE: visible emissions
VOC: volatile organic compounds

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.
1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections \(403.141,403.727\), or 403.859 through 403.861 , F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in subsections \(403.987(6)\) and \(403.722(5)\), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal lmprovement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
a. Have access to and copy any records that must be kept under conditions of the permit;
b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.
8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
a. A description of and cause of noncompliance; and
b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.
9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

\section*{SECTION 4. APPENDIX B}

\section*{General Conditions}
10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.
11. This permit is transferable only upon Department approval in accordance with Rules \(62-4.120\) and \(62-730.300\), F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
a. Determination of Best Available Control Technology (not applicable);
b. Determination of Prevention of Significant Deterioration (not applicable); and
c. Compliance with New Source Performance Standards (units are subject to NSPS Subparts A and KKKK).
14. The permittee shall comply with the following:
a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
c. Records of monitoring information shall include:
(a) The date, exact place, and time of sampling or measurements;
(b) The person responsible for performing the sampling or measurements;
(c) The dates analyses were performed;
(d) The person responsible for performing the analyses;
(e) The analytical techniques or methods used;
(f) The results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

\section*{SECTION 4. APPENDIX C}

\section*{Common Conditions}

Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at the facility.

\section*{EMISSIONS AND CONTROLS}
1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed 2 hours in any 24 -hour period unless specifically authorized , by the Department for longer duration. Pursuant to Rule 62-210.700(5), F.A.C., the permit subsection may specify more or less stringent requirements for periods of excess emissions. Rule 62-210-700(Excess Emissions), F.A.C., cannot vary or supersede any federal NSPS or NESHAP provision. [Rule 62-210.700(1), F.A.C.]
4. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
5. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permittee shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]
6. VOC or OS Emissions: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]
7. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(Definitions), F.A.C.]
8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than \(20 \%\) opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]
9. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

\section*{RECORDS AND REPORTS}
10. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 5 years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rule 62-213.440(1)(b)2, F.A.C.]

\section*{11. Emissions Computation and Reporting:}
a. Applicability. This rule sets forth required methodologies to be used by the owner or operator of a facility for computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for computing emissions for purposes of the reporting requirements of subsection 62-210.370(3) and paragraph 62-212.300(1)(e), F.A.C., or of any permit condition that requires emissions be computed in accordance

\section*{Common Conditions}
with this rule. This rule is not intended to establish methodologies for determining compliance with the emission limitations of any air permit. [Rule 62-210.370(1), F.A.C.]
b. Computation of Enissions. For any of the purposes set forth in subsection 62-210.370(1), F.A.C., the owner or operator of a facility shall compute emissions in accordance with the requirements set forth in this subsection.
(1) Basic Approach. The owner or operator shall employ, on a pollutant-specific basis, the most accurate of the approaches set forth below to compute the emissions of a pollutant from an emissions unit; provided, however, that nothing in this rule shall be construed to require installation and operation of any continuous emissions monitoring system (CEMS), continuous parameter monitoring system (CPMS), or predictive emissions monitoring system (PEMS) not otherwise required by rule or permit, nor shall anything in this rule be construed to require performance of any stack testing not otherwise required by rule or permit.
(a) If the emissions unit is equipped with a CEMS meeting the requirements of paragraph 62-210.370(2)(b), F.A.C., the owner or operator shall use such CEMS to compute the emissions of the pollutant, unless the owner or operator demonstrates to the department that an alternative approach is more accurate because the CEMS represents still-emerging technology.
(b) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C, but emissions of the pollutant can be computed pursuant to the mass balance methodology of paragraph 62\(210.370(2)(c)\), F.A.C., the owner or operator shall use such methodology, unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
(c) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., and emissions cannot be computed pursuant to the mass balance methodology, the owner or operator shall use an emission factor meeting the requirements of paragraph 62-210.370(2)(d), F.A.C., unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
(2) Continuous Emissions Monitoring System (CEMS).
(a) An owner or operator may use a CEMS to compute emissions of a pollutant for purposes of this rule provided:
1) The CEMS complies with the applicable certification and quality assurance requirements of 40 CFR Part 60, Appendices B and F, or, for an acid rain unit, the certification and quality assurance requirements of 40 CFR Part 75, all adopted by reference at Rule 62-204.800, F.A.C.; or
2) The owner or operator demonstrates that the CEMS otherwise represents the most accurate means of computing emissions for purposes of this rule.
(b) Stack gas volumetric flow rates used with the CEMS to compute emissions shall be obtained by the most accurate of the following methods as demonstrated by the owner or operator:
1) A calibrated flow meter that records data on a continuous basis, if available; or
2) The average flow rate of all valid stack tests conducted during a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
(c) The owner or operator may use CEMS data in combination with an appropriate f-factor, heat input data, and any other necessary parameters to compute emissions if such method is demonstrated by the owner or operator to be more accurate than using a stack gas volumetric flow rate as set forth at subparagraph 62-210.370(2)(b)2., F.A.C., above.
(3) Mass Balance Calculations.
(a) An owner or operator may use mass balance calculations to compute emissions of a pollutant for purposes of this rule provided the owner or operator:
1) Demonstrates a means of validating the content of the pollutant that is contained in or created by

\section*{SECTION 4. APPENDIX C}

\section*{Common Conditions}
all materials or fuels used in or at the emissions unit; and
2) Assumes that the emissions unit emits all of the pollutant that is contained in or created by any material or fuel used in or at the emissions unit if it cannot otherwise be accounted for in the process or in the capture and destruction of the pollutant by the unit's air pollution control equipment.
(b) Where the vendor of a raw material or fuel which is used in or at the emissions unit publishes a range of pollutant content from such material or fuel, the owner or operator shall use the highest value of the range to compute the emissions, unless the owner or operator demonstrates using site-specific data that another content within the range is more accurate.
(c) In the case of an emissions unit using coatings or solvents, the owner or operator shall document, through purchase receipts, records and sales receipts, the beginning and ending VOC inventories, the amount of VOC purchased during the computational period, and the amount of VOC disposed of in the liquid phase during such period.
(4) Emission Factors.
a. An owner or operator may use an emission factor to compute emissions of a pollutant for purposes of this rule provided the emission factor is based on site-specific data such as stack test data, where available, unless the owner or operator demonstrates to the department that an alternative emission factor is more accurate. An owner or operator using site-specific data to derive an emission factor, or set of factors, shall meet the following requirements.
1) If stack test data are used, the emission factor shall be based on the average emissions per unit of input, output, or gas volume, whichever is appropriate, of all valid stack tests conducted during at least a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
2) Multiple emission factors shall be used as necessary to account for variations in emission rate associated with variations in the emissions unit's operating rate or operating conditions during the period over which emissions are computed.
3) The owner or operator shall compute emissions by multiplying the appropriate emission factor by the appropriate input, output or gas volume value for the period over which the emissions are computed. The owner or operator shall not compute emissions by converting an emission factor to pounds per hour and then multiplying by hours of operation, unless the owner or operator demonstrates that such computation is the most accurate method available.
b. If site-specific data are not available to derive an emission factor, the owner or operator may use a published emission factor directly applicable to the process for which emissions are computed. If no directly-applicable emission factor is available, the owner or operator may use a factor based on a similar, but different, process.
(5) Accounting for Emissions During Periods of Missing Data from CEMS, PEMS, or CPMS. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of missing data from CEMS, PEMS, or CPMS using other site-specific data to generate a reasonable estimate of such emissions.
(6) Accounting for Emissions During Periods of Startup and Shutdown. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of startup and shutdown of the emissions unit.
(7) Fugitive Emissions. In computing the emissions of a pollutant from a facility or emissions unit, the owner or operator shall account for the fugitive emissions of the pollutant, to the extent quantifiable, associated with such facility or emissions unit.

\section*{SECTION 4. APPENDIX C}

\section*{Common Conditions}
(8) Recordkeeping. The owner or operator shall retain a copy of all records used to compute emissions pursuant to this rule for a period of five years from the date on which such emissions information is submitted to the department for any regulatory purpose.
[Rule 62-210.370(2), F.A.C.]
c. Annual Operating Report for Air Pollutant Emitting Facility
(1) The Annual Operating Report for Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) shall be completed each year for the following facilities:
a. All Title V sources.
b. All synthetic non-Title V sources.
c. All facilities with the potential to emit ten (10) tons per year or more of volatile organic compounds or twenty-five (25) tons per year or more of nitrogen oxides and located in an ozone nonattainment area or ozone air quality maintenance area.
d. All facilities for which an annual operating report is required by rule or permit.
(2) Notwithstanding paragraph 62-210.370(3)(a), F.A.C., no annual operating report shall be required for any facility operating under an air general permit.
(3) The annual operating report shall be submitted to the appropriate Department of Environmental Protection (DEP) division, district or DEP-approved local air pollution control program office by April 1 of the following year, except that the annual operating report for year 2008 shall be submitted by May 1, 2009. If the report is submitted using the Department's electronic annual operating report software, there is no requirement to submit a copy to any DEP or local air program office.
(4) Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C., for purposes of the annual operating report.
(5) Facility Relocation. Unless otherwise provided by rule or more stringent permit condition, the owner or operator of a relocatable facility must submit a Facility Relocation Notification Form (DEP Form No. \(62-\) \(210.900(6)\) ) to the Department at least 30 days prior to the relocation. A separate form shall be submitted for each facility in the case of the relocation of multiple facilities which are jointly owned or operated.
[Rule 62-210.370(3), F.A.C.]

\section*{SECTION 4. APPENDIX D}

\section*{Common Testing Requirements}

Unless otherwise specified in the permit, the following testing requirements apply to all emissions units at the facility.

\section*{COMPLIANCE TESTING REQUIREMENTS}
1. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. [Rule 62297.310(2), F.A.C.]
2. Applicable Test Procedures - Opacity Compliance Tests: When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
a. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.
b. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.
c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.
[Rule 62-297.310(4), F.A.C.]
3. Determination of Process Variables:
a. Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
b. Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within \(10 \%\) of its true value.
[Rule 62-297.310(5), F.A.C.]
4. Frequency of Compliance Tests: The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.
a. General Compliance Testing.
1. The owner or operator of a new or modified emissions unit that is subject to an emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining an operation permit for such emissions unit.
2. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicabie emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air

\section*{SECTION 4. APPENDIX D}

\section*{Common Testing Requirements}
operation permit pursuant to sub-subparagraph 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
(a) Did not operate; or
(b) In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours,
3. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for visible emissions, if there is an applicable standard.
4. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
b. Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.
[Rule 62-297.310(7), F.A.C.]

\section*{RECORDS AND REPORTS}
5. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report shall provide the following information.
a. The type, location, and designation of the emissions unit tested.
b. The facility at which the emissions unit is located.
c. The owner or operator of the emissions unit.
d. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
e. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
f. The date, starting time and end time of the observation.
g. The test procedures used.
h. The names of individuals who furnished the process variable data, conducted the test, and prepared the report.
i. The applicable emission standard and the resulting maximum allowable emission rate for the emissions unit plus the test result in the same form and unit of measure.
j. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.
[Rule 62-297.310(8), F.A.C.]

ATTACHMENT LC-FI-C6
LIST OF EQUIPMENT/ACTIVITIES REGULATED UNDER TITLE VI

\section*{ATTACHMENT LC-FI-C6 \\ List of Equipment/Activities Regulated under Title VI}

The Lake Cogen facility currently has over 10 refrigeration and air conditioning units on the plant site. Of these, 2 chiller units currently meet the 50 pound threshold established by the Department.

Model Name. Number
Trane Centravac Water Chiller Model CVHF 1270

\section*{General Area}

CT/HRSG Chiller (2 units)

Amount
\(2,200 \mathrm{lb}\) (each unit)

REQUESTED CHANGES TO CURRENT TITLE V AIR OPERATION PERMIT

A summary of the requested revisions is as follows:
- Revision in the nominal MW ratings of the facilities;
- Page 2, subsection A - Change from 52MW to 50 MW .
- Revise to remove the distinction between the normal operating mode and the SPRINT mode, as the units will primarily be operating in the SPRINT mode. Please see the attached proposed permit language;
- Revise the annual test scheduling to be consistent with a FY basis; and
- Page 13, section A24 - Change from the July 15 requirement to fiscal year requirement.
- It is requested that a footnote be added to the CO emission limits in Condition A. 6 of the current TV permit, indicating that the limits are corrected to 15 percent O2. This is consistent with other similar BACT determinations for CO and may have been implied in the current permit, although not specifically addressed.
- Request to remove units and activities in the insignificant activities list that either no longer exist or that do not emit "emissions-limited" pollutants. Please see the attached proposed list of insignificant activities;
- Request to categorize EU 002, the fuel oil storage tank, as an insignificant emission unit instead of a regulated emission unit. Please see attachment LC-EU3-I1 for detailed fuel oil storage tank calculations with 40 CFR 60 Subpart Kb applicability analysis. Please see the attached proposed list of insignificant activities;
- Under the National Emission Standards for Hazardous Air Pollutants (NESHAP), EU 005 diesel fuel fired emergency generator and EU 006 fire pump are subject to Subpart ZZZZ for reciprocating internal combustion engines. EU 005 and EU 006 are classified as an existing area source and are subject to the requirements of Table 2d Subpart ZZZZ of Part 63- Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions. Please categorize EU 005, the diesel fuel fired emergency generator, and EU 006, the fire pump, as regulated emission units. Please see attachment LC-EU2-Il for a 40 CFR 63 Subpart ZZZZ applicability analysis. Please see the attached proposed list of unregulated emissions units and/or activities;
- Request revised permit language of Section III, Subpart A. 1 for EU 003 and EU 004. Please see the attached proposed permit language; and
- Request permit language of Section IIl, Subpart A for EU 003 and EU 004 with respect to component replacements. Please see the attached proposed permit language.

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\section*{ATTACHMENT LC-FI-C4 \\ List of Insignificant Activities}

\section*{List of Insignificant Emissions Units and/or Activities.}

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, are exempt from the permitting requirements of Chapters 62-210 and \(62-4\), F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rule \(62-210.300(3)(a)\), F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rule 62.210 .300 (3)(a), F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

Items in red or red are proposed units to be added or removed from the insignificant activities list.

\section*{Brief Description of Emissions Units and/or Activities:}
\begin{tabular}{|c|c|c|}
\hline Area & Emission Unit Description & Number of Units \\
\hline \multirow{13}{*}{CT/ST/BUILDING AREA} & Fuel Oil Storage Tank (170,000 gal) & 1 \\
\hline & CT Lube Oil Vents & 2 \\
\hline & CT Lube Oil Storage Tank & 2 \\
\hline & ST Lube Oil Tank Vent & 1 \\
\hline & ST Lube Oil Filter Vent & 1 \\
\hline & Electric Generator Mineral Oil & 2 \\
\hline & Vent & \\
\hline & Furbine-Cleaning Operation & 2 \\
\hline & Water Wash Tanks & 3 \\
\hline & Furbine Cooling Air & 2 \\
\hline & Various Pumps & Multiple \\
\hline & Miscellaneous Tank Drains & Multiple \\
\hline & Hydraulic Equipment & Multiple \\
\hline \multirow{3}{*}{HRSG} & Natural Gas Relief Valves & Multiple \\
\hline & Various Steam Vents \& Pressure Relief Valves & Various \\
\hline & HPS Breather Vent & Multiple \\
\hline
\end{tabular}

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\begin{tabular}{|c|c|c|}
\hline & Alitrogen Lines & Multiple \\
\hline \multirow{4}{*}{HRSG AREA} & Blowdown-Quench-Tank & Aubltiple \\
\hline & Blowdown-Flash Tank & 4 \\
\hline & Various Pumps (feedwater, and chemical feed) & Multiple \\
\hline & CEM Equipment \& Calibration Gas Venting & 2 Systems \\
\hline \multirow[t]{20}{*}{WATER TREATMENT (BOILER, WASTE WATER)} & Raw Water/Fire-Water Storage Fank; 376,012 gal-capacity & 7 \\
\hline & Chlorine Cylinders; 150 lb each & 1510 \\
\hline & Sulfuric Acid (H2SO4) Tank; 6,016 gal capacity & 1 \\
\hline & Boiler Feedwater Chemical Treatments Tanks & Multiple \\
\hline & \begin{tabular}{l}
Sodium Hydroxide ( NaOH ) \\
Tank; 6,610 gal capacity
\end{tabular} & 1 \\
\hline & Brine-Tank; 9,306-gatcapacity & 4 \\
\hline & Brine-Gontainment Tank; 16,545 gat-capacity & 4 \\
\hline & Chilled Water Storage Tank; 25,000-gat-capacity & 4 \\
\hline & RO.Strge Tank; 10,857-gat eapacity & 4 \\
\hline & Weak Waste Tank; 151, 222gal capacity & 4 \\
\hline & Condensate Return Tank; 25,000 gal-capacity & 4 \\
\hline & Demin Water Storage Tank; 102,000 gal capacity & 4 \\
\hline & Decarbonator/Degasifier; Removes CO2 from raw water & 1 \\
\hline & Equalization Tank; 22,000 gat capacity & 4 \\
\hline & Neutralization-Basin and-Pumps & 4 \\
\hline & Wastewater Cooling Tower & 4 \\
\hline & Filter Press & 1 \\
\hline & Various Pumps & Multiple \\
\hline & Crystallizer & 1 \\
\hline & Soda Ash Handling & 1 \\
\hline \multirow{4}{*}{COOLING TOWER} & Fresh Water Cooling Tower & 1 \\
\hline & Natco-7342(NaBr) Tank;-492 lb Gapacity & 4 \\
\hline & Gooling Water Pumps & Aultiple \\
\hline & Steam-Gondensing Unit & 4 \\
\hline \multirow[t]{2}{*}{CHILLER AREA} & Refrigeration Chillers & 3 \\
\hline & Chiller Condensate Tank & 1 \\
\hline
\end{tabular}

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\section*{Lake Cogeneration}

Facility ID No. 0694801
\begin{tabular}{|c|c|c|}
\hline & Various pumps & Multiple \\
\hline \multirow{8}{*}{GENERAL SITE} & Surface Coating <6.0 gal/day NA & NA \\
\hline & Sewer Vents Multiple & Muitiple \\
\hline & Emergency Generators; 250-kW
Diesel & 4 \\
\hline & Diesel Fuel Storage Tank 2 & 2 \\
\hline & Natural Gas Meter Station 1 & 1 \\
\hline & DieselFire-Pump-216 hp-4 & 4 \\
\hline & Diesel Fire Pump Storage Tank 1 & 1 \\
\hline & Diesel Portable Welder/Air Compressor & 1 \\
\hline \multirow{7}{*}{OFFICE SHOP AREA} & Degreaser Non-Halogenated Solvent & 1 \\
\hline & Laboratory & 1 \\
\hline & Propane Forklift & 1 \\
\hline & Air Compressor & 1 \\
\hline & Battery Room & 1 \\
\hline & \(\mathrm{CO}_{2}\) Fire System (Control Room) & 1 System \\
\hline & Bead Blaster & 1 \\
\hline \multirow[t]{2}{*}{SWITCHYARD/SUBSTATION AREA} & Transformers and Associated Equipment & Multiple \\
\hline & Breakers-SF6 & 2 \\
\hline PARKING LOT & Vehicles & Multiple \\
\hline \multirow{9}{*}{GENERAL} & Unit 1250 gallon wasto-lube oil reclaim tank & 1 \\
\hline & Unit 2250 gallon waste-lube oil reclaim tank & 1 \\
\hline & Natco Tower Brom Tank & 4 \\
\hline & 300 gallon waste oil storage tank & 1 \\
\hline & Unit \(1 \mathrm{CO}_{2}\) fire system & 10 cylinders \\
\hline & Unit \(2 \mathrm{CO}_{2}\) fire system & 10 cylinders \\
\hline & Electric Room \(\mathrm{CO}_{2}\) Fire System & 2 cylinders \\
\hline & Water Distillation Units Air Ejectors (vents) & 3 \\
\hline & 400,000 gallon distilled water tank (vent) & 4 \\
\hline
\end{tabular}

\section*{Subsection A. Facility Description.}

This facility includes two nominal 52.050 .0 megawatt (MW) combined cycle combustion turbines with duct burners that exhaust through heat recovery steam generators (HRSG) which are used to power a nominal 26.5 MW steam turbine. Nitrogen oxides (NOx) emissions are controlled by using water injection. The facility also includes an emergency generator and a fire pumpa fuel eilstage ( 170,000 gallen).

Also included in this permit are miscellaneous insignificant emission units and/or activities.
Based on the Title V permit application received on August 12, 2008, this facility is not a major source of hazardous air pollutants (HAP).
Subsection B. Summary of Emissions Unit ID Nos and Brief Descriptions.
\begin{tabular}{|c|l|}
\hline ID No. & Brief Description \\
\hline 002 & FuelOil Tant \\
\hline 003 & Combined Cycle Combustion Turbine (CT)/Duct Burner \\
\hline 004 & Combined Cycle Combustion Turbine (CT)/Duct Burner \\
\hline\(\underline{005}\) & Diesel Fuel Fired Emergency Generators (1 @, 250 kW\().\) \\
\hline\(\underline{006}\) & Diesel Fuel Fired Fire Pump (1 \((216 \mathrm{hp})\) \\
\hline
\end{tabular}

Please reference the Permit No., Facility ID No., and appropriate Emissions Units ID Nos. on all correspondence, test report submittals, applications, etc.

The "Permitting Notes" used throughout this permit are for informational purposes only and are not permit conditions.

\section*{Subsection A. Combined Cycle Units}
\begin{tabular}{|c|l|}
\hline ID No. & Brief Description \\
\hline 003 & \begin{tabular}{l} 
Combined Cycle Combustion Turbine (CT)/Duct Burner, with chiller system, SPRINT spray inter-cooling, and \\
heat recovery steam generator
\end{tabular} \\
\hline 004 & \begin{tabular}{l} 
Combined Cycle Combustion Turbine (CT)/Duct Burner, with chiller system, SPRINT spray inter-cooling, and \\
heat recovery steam generator
\end{tabular} \\
\hline
\end{tabular}

This cogeneration facility consists of two identical GE LM-6000 combustion turbines (CT). Each CT is equipped with: a chiller system (to maintain inlet combustion air at \(51^{\circ} \mathrm{F}\) and \(100 \%\) relative humidity); a SPRINT spray inter-cooling; a duct burner; and, a Zurn heat recovery steam generator. Each of the combustion turbines is connected to an electric generator rated at approximately 50 MW , while the two heat recovery steam generators provide steam to a common steam turbine which is connected to an electric generator rated at 26.5 MW . The gas turbines are fired with natural gas, with low sulfur No. 2 fuel oil as a backup fuel, at a nominal heat input rate approximately represented on the associated heat input curve attached to this permit as Appendix HI - Heat Input vs. Ambient Temperature Curve. The duct burners are each fired with natural gas at a maximum permitted heat input rate of 90 MMB /u/hour. Water injection is used to reduce NOx emissions from the combustion turbines when firing natural gas and low sulfur distillate oil. General Electric's "SPRINT" spray inter-cooling technology consists of a system that will automatically meter approximately 17 gpm of de-mineralized water to a series of 24 spray nozzles and injected between the high pressure and low pressure compressors. This significantly reduces the temperature which increases the mass flow rate resulting in higher output and increased efficiency.

The combustion turbine system generally consists of the following components: gas turbine, accessory drive system, air inlet and filtration system, fuel delivery system, cooling system, lubrication system, control system, starting system and exhaust system with stack. This aero-derivative gas turbine is designed with modular components to facilitate quick repairs. Common "wear items" include compressor vanes, turbine nozzles. compressor blades, turbine blades, fuel nozzles, combustion chambers and seals. The concept of modular design extends to the complete replacement of the gas turbine. Replacements are authorized provided the following requirements are met.
a. The gas turbine and components should be replaced with equivalent "like-kind" equipment. Replacement components should not increase the maximum heat input rate, capacity or emissions from the combustion turbine. Replacement components should be designed to achieve the emissions standards specified in this permit or better.
b. To up-rate the gas turbine, the permittee shall submit an application for an air construction permit.
\{Permitting note: These emission units are regulated under Standards of Performance for New Stationary Sources (NSPS) - 40 CFR 60, Subpart KKKK, Standards of Performance for Stationary Combustion Turbines, and Subpart A, General Provisions, adopted and incorporated by reference in Rule 62-204.800(8), F.A.C.; Rule 212.400, F.A.C., Prevention of Significant Deterioration (PSD) with a Best Available Control Technology (BACT) Determination, dated November 20, 1991, as currently modified; and Clean Air Interstate Rule (CAIR) Chapter 62-213, F.A.C. \(\}\)

\section*{Essential Potential to Emit (PTE) Parameters}

A1. Capacity
The maximum capacities are as follows:
a) Maximum distillate fuel oil consumption shall not exceed either of the following limitations: 2,921 gallons/hour/CT; 701,050 gallons/year/CT.
b) Maximum annual firing using distillate fuel oil shall not exceed an equivalent of 10 days ( 240 hours) per year at full load.
c) Maximum sulfur content in the oil shall not exceed 0.05 percent by weight. The maximum sulfur content of natural gas shall not exceed 1 grain/100 scf based on an annual average of pipeline vendor data. Pursuant NSPS Subpart KKKK, the maximum sulfur content of any fuel fired in the combustion turbine shall not exceed \(0.06 \mathrm{lb} \mathrm{SO} 2 / \mathrm{MMBtu}\).
d) Maximum heat input based on the lower heating value (HHV) while burning nafural gas, shall net

\section*{SECTION III. SPECIFIC CONDITIONS FOR EMISSIONS UNITS_(PROPOSED LANGUAGE)}

\section*{Subsection A. Combined Cycle Units}
 eorrected to International Organization for Standardization (ISO) conditions. The maximum heat imput, based on the LHV while burning distillate fuel oil, shall not exceed-424 MMBtuhr/CT at \(51^{\circ} \mathrm{FF}\) or \(406 \mathrm{MAMBtahr} / \mathrm{CT}\) when corrected to ISO conditions. The heat input to the combustion turbines are approximately represented on the associated heat input curve attached to this permit as Appendix HI - Heat Input vs. Ambient Temperature Curve. The nominal heat input values are based on the lower heating value (LHV) of each fuel, \(100 \%\) load, and inlet conditions of \(59^{\circ} \mathrm{F}\) temperature, \(60 \%\) relative humidity, and 14.7 psia. These nominal heat input rates will vary depending upon inlet conditions and the combustion turbine characteristics.
e) Duct firing shall be limited to natural gas firing only, with a maximum heat input of \(90 \mathrm{MMBtu} / \mathrm{hour}\) based on the higher heating value (HHV) of approximately \(1054.5 \mathrm{Btu} / \mathrm{ft} 3\).
f) Duct firing shall be limited to \(525,000 \mathrm{MMBtu} /\) year/HRSG-duct burner.
[Rule 62-210.200, (PTE), F.A.C., construction permit AC35-196459 and construction permit 0694801-010-AC (PSD-FL-176C)]
A2. Methods of Operation - Fuels. Each emission unit is permitted to use natural gas as the primary fuel and distillate oil as the emergency backup fuel.
[Rule 62-210.200, (PTE), F.A.C.; and construction permit AC35-196459]
A3. Hours of Operation. This emission unit is allowed to operate 8760 hours per year.
[Rule 62-210.200, (PTE), F.A.C.; and construction permit AC35-196459]
A4. Emissions Unit Operating Rate Limitation After Testing. See specific condition no. A26.
[Rule 62-297.310(2), F.A.C.]

\section*{Subseetion B. Fuel Tank}

This-stubseetion -addresses the emissions unit.
\begin{tabular}{|l|l|}
\hline ID \(\mathbf{N}_{0}\) - & Brief Description \\
\hline 602 & Fuel Oil Tank \\
\hline
\end{tabular}
(Permitting Note: Buse Hor apply to starage vessels with a capacity greater than or equal to 151 ms ( 39,890 gallens) storing a hiquid with-a maximm vaper pressure less than 3.5 kilopaseals ( 0.51 psia). The tank store distillate oil, whieh has a wpor preseure of approximately 0.009 psia \(70^{\circ} \mathrm{F}\). This is well below the vapor pressure specified in Subpant Kb for this size tank and shows that distillate oil is net considered to be watatile. Therefore, the tankis considered an unregulated eminsinsul.\}

\section*{APPENDIX I-1 (PROPOSED LANGUAGE)}

\section*{List of Insignificant Emission Units and/or Activities.}

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, or that meet the criteria specified in Rule 62-210.300(3)(b)1., F.A.C., Generic Emissions Unit Exemption, are exempt from the permitting requirements of Chapters 62-210, 62-212 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source. The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

\section*{Brief Description of Emissions Units and/or Activities}
\begin{tabular}{|c|c|c|}
\hline Area & Emission Unit Description & Number of Units \\
\hline \multirow{13}{*}{CT/ST/BUILDING AREA} & Fuel Oil Storage Tank (170,000 gal) & 1 \\
\hline & CT Lube Oil Vents & 2 \\
\hline & CT Lube Oil Storage Tank & 2 \\
\hline & ST Lube Oil Tank Vent & 1 \\
\hline & ST Lube Oil Filter Vent & 1 \\
\hline & Electric Generator Mineral-Oit & \(z\) \\
\hline & Vent & \\
\hline & Turbine Cleaning Operation & \(z\) \\
\hline & Water Wash Tanks & 3 \\
\hline & Turbine Cooling Aif & Z \\
\hline & Various Pumps & Multiple \\
\hline & Miscellaneous Tank Drains & Multiple \\
\hline & Hydraulic Equipment & Multiple \\
\hline \multirow{4}{*}{HRSG} & Natural Gas Relief Valves & Multiple \\
\hline & Various Steam Vents \& Pressure Relief Valves & Various \\
\hline & HPS Breather Vent & Multiple \\
\hline & Nitrogen Lines & Multiple \\
\hline \multirow{4}{*}{HRSG AREA} & Blowdown Quench Tank & Multiple \\
\hline & Blowdown Flash-Tank & 4 \\
\hline & Various Pumps (feedwater, and chemical feed) & Multiple \\
\hline & CEM Equipment \& Calibration Gas Venting & 2 Systems \\
\hline \multirow[t]{3}{*}{WATER TREATMENT (BOILER, WASTE WATER)} & Raw Water/Fire Water Storage Tank; 376,012 gal capacity & 1 \\
\hline & Chlorine Cylinders; 150 lb each & \(15 \underline{10}\) \\
\hline & Sulfuric Acid (H2SO4) Tank; & 1 \\
\hline
\end{tabular}

\section*{APPENDIX I-1 (PROPOSED LANGUAGE)}

\section*{List of Insignificant Emission Units and/or Activities.}
\begin{tabular}{|c|c|c|}
\hline & 6,016 gal capacity & \\
\hline & Boiler Feedwater Chemical Treatments Tanks & Multiple \\
\hline & \begin{tabular}{l}
Sodium Hydroxide ( NaOH ) \\
Tank; 6,610 gal capacity
\end{tabular} & 1 \\
\hline & Brine Tank; 9,306.gal capacity & 4 \\
\hline & Brine-Containment Tank; 16,545 gal-capacity & + \\
\hline & Chilled Water Sterage Tank; 25,000 gal capacity & + \\
\hline & ROSurge Tank; \(10,857 \mathrm{gat}\) eapacity & \(\pm\) \\
\hline & Weak Waste Tank; 151, 222 gat eapacity & + \\
\hline & Gendensate Retum Tank; 25,000 galeapacity & + \\
\hline & Demin Water Storage Tank; 102,000 gat capacify & + \\
\hline & Decarbonator/Degasifier; Removes CO 2 from raw water & 1 \\
\hline & Equalization Tank; 22,000 gat eapacity & + \\
\hline & Neutralization Basin and Pumps & \(+\) \\
\hline & Wastowater Cooling Tower & \(+\) \\
\hline & Filter Press & 1 \\
\hline & Various Pumps & Multiple \\
\hline & Crystallizer & 1 \\
\hline & Soda Ash Handling & 1 \\
\hline \multirow{4}{*}{COOLING TOWER} & Fresh Water Cooling Tower & 1 \\
\hline & Nalee 7342 (NaBr) Tank; 492 1b eapacity & + \\
\hline & Cooling Water Pumps & Multiple \\
\hline & SteamCondensing Unit & 4 \\
\hline \multirow{3}{*}{CHILLER AREA} & Refrigeration Chillers & 3 \\
\hline & Chiller Condensate Tank & 1 \\
\hline & Various pumps & Multiple \\
\hline \multirow{7}{*}{GENERAL SITE} & Surface Coating <6.0 gal/day NA & NA \\
\hline & Sewer Vents Multiple & Multiple \\
\hline & Emergency Generators; 250 kW Diesel & \(\pm\) \\
\hline & Diesel Fuel Storage Tank 2 & 2 \\
\hline & Natural Gas Meter Station 1 & 1 \\
\hline & Diesel Fire Pump 216 hp 1 & 4 \\
\hline & Diesel Fire Pump Storage Tank 1 & 1 \\
\hline
\end{tabular}

\section*{List of Insignificant Emission Units and/or Activities.}
\begin{tabular}{|c|c|c|}
\hline & Diesel Portable Welder/Air Compressor & 1 \\
\hline \multirow{7}{*}{OFFICE SHOP AREA} & Degreaser Non-Halogenated Solvent & 1 \\
\hline & Laboratory & 1 \\
\hline & Propane Forklift & 1 \\
\hline & Air Compressor & 1 \\
\hline & Battery Room & 1 \\
\hline & \(\mathrm{CO}_{2}\) Fire System (Control Room) & 1 System \\
\hline & Bead Blaster & 1 \\
\hline \multirow[t]{2}{*}{SWITCHYARD/SUBSTATION AREA} & Transformers and Associated Equipment & Multiple \\
\hline & Breakers-SF6 & 2 \\
\hline PARKING LOT & Vehicles & Multiple \\
\hline \multirow{9}{*}{GENERAL} & Unit 1250 gallon waste-lube oil reclaim tank & 1 \\
\hline & Unit 2250 gallon waste-lube oil reclaim tank & 1 \\
\hline & Nateo Tower Brom Tank & 1 \\
\hline & 300 gallon waste oil storage tank & 1 \\
\hline & Unit \(1 \mathrm{CO}_{2}\) fire system & 10 cylinders \\
\hline & Unit \(2 \mathrm{CO}_{2}\) fire system & 10 cylinders \\
\hline & Electric Room \(\mathrm{CO}_{2}\) Fire System & 2 cylinders \\
\hline & Water Distillation Units Aif Ejectors (vents) & 3 \\
\hline & 100,000 gallen distilled water tank (vent) & \(\pm\) \\
\hline
\end{tabular}

\section*{ATTACHMENT LC-FI-C8}

CAIR PART (DEP FORM NO. 62-210.900(1)(B))

\section*{Clean Air Interstate Rule (CAIR) Part}

For more information, see instructions and refer to 40 CFR 96.121, 96.122, 96.221, 96.222, 96.321 and 96.322 ; and Rule 62-296.470, F.A.C.
This submission is:NewRevisedRenewal

\section*{STEP 1}

Identify the source by plant name and ORIS or EIA plant code
\begin{tabular}{|l|l|l|}
\hline Plant Name: & State: & ORIS or EIA Plant Code: \\
Lake Cogen & Florida & 54423 \\
\hline
\end{tabular}

STEP 2

In column "a" enter the unit ID\# for every CAIR unit at the CAIR source.

In columns "b," "c," and " \(d\)," indicate to which CAIR program(s) each unit is subject by placing an " \(X\) " in the column(s).

For new units, enter the requested information in columns "e" and "f.
\begin{tabular}{|c|c|c|c|c|c|}
\hline a & b & c & d & e & f \\
\hline Unit ID\# & Unit will hold nitrogen oxides ( \(\mathrm{NO}_{\mathrm{X}}\) ) allowances in accordance with 40 CFR 96.106(c)(1) & Unit will hold sulfur dioxide \(\left(\mathrm{SO}_{2}\right)\) allowances in accordance with 40 CFR 96.206(c)(1) & Unit will
hold NOx Ozone
Season
allowances
in accordance
with 40 CFR
96.306(c)(1) & \begin{tabular}{l}
New Units \\
Expected Commence Commercial Operation Date
\end{tabular} & \begin{tabular}{l}
New Units \\
Expected Monitor Centification Deadline
\end{tabular} \\
\hline 003 & x & \(x\) & x & & \\
\hline 004 & x & \(x\) & \(x\) & & \\
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\section*{STEP 3}

Read the standard requirements.

\section*{CAIR NOx ANNUAL TRADING PROGRAM}

\section*{CAIR Part Requirements.}
(1) The CAIR designated representative of each CAIR NOx source and each CAIR NOX unit at the source shall: (i) Submit to the DEP a complete and certified CAIR Part form under 40 CFR 96.122 and Rule 62-296.470, F.A.C., in accordance with the deadlines specified in Rule 62-213.420, F.A.C.; and (ii) [Reserved];
(2) The owners and operators of each CAIR \(\mathrm{NO}_{x}\) source and each CAIR NOx unit at the source shall have a CAIR Part included in the Title V operating permit issued by the DEP under 40 CFR Part 96 , Subpart CC, and operate the source and the unit in compliance with such CAIR Part.

\section*{Monitoring, Reporting, and Recordkeeping Requirements.}
1) The owners and operators, and the CAIR designated representative, of each CAIR \(\mathrm{NO}_{x}\) source and each CAIR NOx unit at the source shal comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 96, Subpart HH, and Rule 62-296.470, F.A.C. (2) The emissions measurements recorded and reported in accordance with 40 CFR Part 96 , Subpart \(H H\), shall be used to determine compliance by each CAIR \(\mathrm{NO}_{x}\) source with the following CAIR \(\mathrm{NO}_{x}\) Emissions Requirements.

\section*{\(\mathrm{NO}_{x}\) Emission Requirements.}
(1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR \(\mathrm{NO}_{x}\) source and each CAIR \(\mathrm{NO}_{x}\) unit at the source shall hold, in the source's compliance account, CAIR NOx allowances available for compliance deductions for the control period under 40 CFR 96.154(a) in an amount not less than the tons of total NO \({ }_{x}\) emissions for the control period from all CAIR NO \({ }_{x}\) units at the source, as determined in accordance with 40 CFR Part 96 , Subpart HH.
(2) A CAIR \(\mathrm{NO}_{x}\) unit shall be subject to the requirements under paragraph (1) of the \(\mathrm{NO}_{x}\) Requirements starting on the later of January 1,2009 , or the deadline for meeting the unit's monitor certification requirements under 40 CFR 96.170 (b)(1) or (2) and for each control period thereafter.
(3) A CAIR \(\mathrm{NO}_{x}\) allowance shall not be deducted, for compliance with the requirements under paragraph (1) of the NO Requirements, for a control period in a calendar year before the year for which the CAIR \(\mathrm{NO}_{x}\) allowance was allocated.
(4) CAIR NO \({ }_{x}\) allowances shall be held in, deducted from, or transferred into or among CAIR NO Allowance Tracking System accounts in accordance with 40 CFR Part 96, Subparts FF and GG.
(5) A CAIR \(\mathrm{NO}_{x}\) allowance is a limited authorization to emit one ton of NO \(\mathrm{N}_{x}\) in accordance with the CAIR NO \(\mathrm{NO}_{x}\) Annual Trading Program. No provision of the CAIR NOx Annual Trading Program, the CAIR Part, or an exemption under 40 CFR 96.105 and no provision of law shall be construed to limit the authority of the state or the United States to terminate or limit such authorization.
(6) A CAIR NO \(x_{x}\) allowance does not constitute a property right.
(7) Upon recordation by the Administrator under 40 CFR Part 96, Subpart EE, FF, or GG, every allocation, transfer, or deduction of a CAIR NOX allowance to or from a CAIR NOx unit's compliance account is incorporated automatically in any CAIR Part of the source that includes the CAIR \(\mathrm{NO}_{x}\) unit.

\section*{Excess Emissions Requirements.}

If a CAIR NO \({ }_{x}\) source emits \(\mathrm{NO}_{x}\) during any control period in excess of the CAIR NO \(\mathrm{N}_{x}\) emissions limitation, then:
(1) The owners and operators of the source and each CAIR NOX unit at the source shall surrender the CAIR NOX allowances required for deduction under 40 CFR 96.154 (d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable state law; and
(2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96 , Subpart AA, the Clean Air Act, and applicable state law.

\section*{Recordkeeping and Reporting Requirements.}
(1) Unless otherwise provided, the owners and operators of the CAIR \(\mathrm{NO}_{x}\) source and each CAIR NO \(\mathrm{O}_{x}\) unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the DEP or the Administrator.
(i) The certificate of representation under 40 CFR 96.113 for the CAIR designated representative for the source and each CAIR NO \(\mathrm{N}_{\times}\)unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5 -year period until such documents are superseded because of the submission of a new certificate of representation under 40 CFR 96.113 changing the CAIR designated representative.
(ii) All emissions monitoring information, in accordance with 40 CFR Part 96, Subpart HH , of this part, provided that to the extent that 40 CFR Part 96, Subpart HH, provides for a 3-year period for recordkeeping, the 3 -year period shall apply.
(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR NO \({ }_{x}\) Annual Trading Program.
(iv) Copies of all documents used to complete a CAIR Part form and any other submission under the CAIR NOX Annual Trading Program or to demonstrate compliance with the requirements of the CAIR NO \({ }_{x}\) Annual Trading Program.
(2) The CAIR designated representative of a CAIR \(\mathrm{NO}_{x}\) source and each CAIR NO \(\mathrm{NO}_{x}\) unit at the source shall submit the reports required under the CAIR NOx Annual Trading Program, including those under 40 CFR Part 96, Subpart HH.
\begin{tabular}{|l|l|}
\hline Pann Name (tom Step i) & Lake Cogen \\
\hline
\end{tabular}

\section*{STEP 3,} Continued

\section*{Liability}
(1) Each CAIR NO \({ }_{x}\) source and each CAIR NOX unit shall meet the requirements of the CAIR \(\mathrm{NO}_{x}\) Annual Trading Program.
(2) Any provision of the CAIR \(\mathrm{NO}_{x}\) Annual Trading Program that applies to a CAIR \(\mathrm{NO}_{x}\) source or the CAIR designated representative of a CAIR \(\mathrm{NO}_{x}\) source shall also apply to the owners and operators of such source and of the CAIR \(\mathrm{NO}_{x}\) units at the source.
(3) Any provision of the CAIR NO \({ }_{x}\) Annual Trading Program that applies to a CAIR NO \(\mathrm{N}_{x}\) unit or the CAIR designated representative of a CAIR NO \(\mathrm{O}_{x}\) unit shall also apply to the owners and operators of such unit.

\section*{Effect on Other Authorities.}

No provision of the CAIR NOx Annual Trading Program, a CAIR Part, or an exemption under 40 CFR 96.105 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO \({ }_{x}\) source or CAIR NO \({ }_{x}\) unit from compliance with any other provision of the applicable, approved State Implementation Plan, a federally enforceable permit, or the Clean Air Act.

\section*{CAIR SO 2 TRADING PROGRAM}

\section*{CAIR Part Requirements.}
(1) The CAIR designated representative of each CAIR \(\mathrm{SO}_{2}\) source and each \(\mathrm{CAIR}_{\mathrm{SO}_{2}}\) unit at the source shall: (i) Submit to the DEP a complete and certified CAIR Part form under 40 CFR 96.222 and Rule 62-296.470, F.A.C., in accordance with the deadlines specified in Rule 62-213.420, F.A.C.; and
(ii) [Reserved]:
(2) The owners and operators of each CAIR \(\mathrm{SO}_{2}\) source and each \(\mathrm{CAIR}_{2} \mathrm{SO}_{2}\) unit at the source shall have a CAIR Part included in the Title \(V\) operating permit issued by the DEP under 40 CFR Part 96 , Subpart CCC, for the source and operate the source and each CAIR unit in compliance with such CAIR Part.

\section*{Monitoring, Reporting, and Recordkeeping Requirements.}
(1) The owners and operators, and the CAIR designated representative, of each CAIR \(\mathrm{SO}_{2}\) source and each \(\mathrm{SO}_{2} \mathrm{CAIR}\) unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 96 , Subpart HHH, and Rule 62-296.470, F.A.C. (2) The emissions measurements recorded and reported in accordance with 40 CFR Part 96 , Subpart HHH, shall be used to determine compliance by each CAIR \(\mathrm{SO}_{2}\) source with the following CAIR \(\mathrm{SO}_{2}\) Emission Requirements.

\section*{\(\mathrm{SO}_{2}\) Emission Requirements.}
(1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR SO \({ }_{2}\) source and each CAIR \(\mathrm{SO}_{2}\) unit at the source shall hold, in the source's compliance account, a tonnage equivalent in \(\mathrm{CAIR} \mathrm{SO}_{2}\) allowances available for compliance deductions for the control period, as determined in accordance with 40 CFR 96.254 (a) and (b), not less than the tons of total sulfur dioxide emissions for the control period from all CAIR \(\mathrm{SO}_{2}\) units at the source, as determined in accordance with 40 CFR Part 96 , Subpart HHH.
(2) A CAIR \(\mathrm{SO}_{2}\) unit shall be subject to the requirements under paragraph (1) of the Sulfur Dioxide Emission Requirements starting on the later of January 1,2010 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 96.270 (b)(1) or (2) and foreach control period thereafter.
(3) A CAIR \(\mathrm{SO}_{2}\) allowance shall not be deducted, for compliance with the requirements under paragraph (1) of the \(\mathrm{SO}_{2}\) Emission Requirements, for a control period in a calendar year before the year for which the CAIR \(\mathrm{SO}_{2}\) allowance was allocated.
(4) CAIR \(\mathrm{SO}_{2}\) allowances shall be held in, deducted from, or transferred into or among CAIR \(\mathrm{SO}_{2}\) Allowance Tracking System accounts in accordance with 40 CFR Part 96, Subparts FFF and GGG.
(5) A CAIR \(\mathrm{SO}_{2}\) allowance is a limited authorization to emit sulfur dioxide in accordance with the CAIR \(\mathrm{SO}_{2}\) Trading Program. No provision of the CAIR \(\mathrm{SO}_{2}\) Trading Program, the CAIR Part, or an exemption under 40 CFR 96.205 and no provision of law shall be construed to limit the authority of the state or the United States to terminate or limit such authorization.
(6) A CAIR \(\mathrm{SO}_{2}\) allowance does not constitute a property right.
(7) Upon recordation by the Administrator under 40 CFR Part 96 , Subpart FFF or GGG, every allocation, transfer, or deduction of aCAIR \(\mathrm{SO}_{2}\) allowance to or from a CAIR \(\mathrm{SO}_{2}\) unit's compliance account is incorporated automaticaily in any CAIR Part of the source that includes the CAIR \(\mathrm{SO}_{2}\) unit.

\section*{Excess Emissions Requirements.}

If a CAIR \(\mathrm{SO}_{2}\) source emits \(\mathrm{SO}_{2}\) during any control period in excess of the CAIR \(\mathrm{SO}_{2}\) emissions limitation, then:
(1) The owners and operators of the source and each \(\mathrm{CAIR} \mathrm{SO}_{2}\) unit at the source shall surrender the CAIR \(\mathrm{SO}_{2}\) allowances required for deduction under 40 CFR 96.254 (d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable state law; and
(2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96, Subpart AAA, the Clean Air Act, and applicable state law.
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Plant Name (from STEP 1) Lake Cogen

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\section*{Recordkeeping and Reporting Requirements.}
(1) Unless otherwise provided, the owners and operators of the CAIR \(\mathrm{SO}_{2}\) source and each CAIR \(\mathrm{SO}_{2}\) unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Department or the Administrator.
(i) The certificate of representation under 40 CFR 96.213 for the CAIR designated representative for the source and each CAIR \(\mathrm{SO}_{2}\) unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5 -year period until such documents are superseded because of the submission of a new certificate of representation under 40 CFR 96.213 changing the CAIR designated representative.
(ii) All emissions monitoring information, in accordance with 40 CFR Part 96 , Subpart HHH, of this part, provided that to the extent that 40 CFR Part 96, Subpart HHH, provides for a 3 -year period for recordkeeping, the 3 -year period shall apply.
(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the \(\mathrm{CAIR}_{2} \mathrm{SO}_{2}\) Trading Program.
(iv) Copies of all documents used to comptete a CAIR Part form and any other submission under the CAIR \(\mathrm{SO}_{2}\) Trading Program or to demonstrate compliance with the requirements of the CAIR \(\mathrm{SO}_{2}\) Trading Program.
(2) The CAIR designated representative of a CAIR \(\mathrm{SO}_{2}\) source and each CAIR \(\mathrm{SO}_{2}\) unit at the source shall submit the reports required under the CAIR \(\mathrm{SO}_{2}\) Trading Program, including those under 40 CFR Part 96, Subpart HHH.

\section*{Liability.}
(1) Each CAIR \(\mathrm{SO}_{2}\) source and each CAIR \(\mathrm{SO}_{2}\) unit shall meet the requirements of the CAIR \(\mathrm{SO}_{2}\) Trading Program.
(2) Any provision of the CAIR \(\mathrm{SO}_{2}\) Trading Program that applies to a CAIR \(\mathrm{SO}_{2}\) source or the CAIR designated representative of a CAIR \(\mathrm{SO}_{2}\) source shall also apply to the owners and operators of such source and of the CAIR \(\mathrm{SO}_{2}\) units at the source.
(3) Any provision of the CAIR \(\mathrm{SO}_{2}\) Trading Program that applies to a CAIR \(\mathrm{SO}_{2}\) unit or the CAIR designated representative of a CAIR \(\mathrm{SO}_{2}\) unit shall also apply to the owners and operators of such unit.

\section*{Effect on Other Authorities.}

No provision of the CAIR \(\mathrm{SO}_{2}\) Trading Program, a CAIR Part, or an exemption under 40 CFR 96.205 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a \(\mathrm{CAIR} \mathrm{SO}_{2}\) source or CAIR \(\mathrm{SO}_{2}\) unit from compliance with any other provision of the applicable, approved State Implementation Plan, a federally enforceable permit, or the Clean Air Act.

\section*{CAIR NO \({ }_{\mathrm{x}}\) OZONE SEASON TRADING PROGRAM}

\section*{CAIR Part Requirements.}
(1) The CAIR designated representative of each CAIR NO Ozone Season source and each CAIR NO Ozone Season unit at the source shall: (i) Submit to the DEP a complete and certified CAIR Part form under 40 CFR 96.322 and Rule 62-296.470, F.A.C., in accordance with the deadlines specified in Rule 62-213.420, F.A.C.; and
(ii) [Reserved];
(2) The owners and operators of each CAIR NO Ozone Season source required to have a Title \(V\) operating permit or air construction permit, and each CAIR \(\mathrm{NO}_{x}\) Ozone Season unit required to have a Title \(V\) operating permit or air construction permit at the source shall have a CAIR Part included in the Title \(V\) operating permit or air construction permit issued by the DEP under 40 CFR Part 96 , Subpart CCCC, for the source and operate the source and the unit in compliance with such CAIR Part.

\section*{Monitoring, Reporting, and Recordkeeping Requirements.}
(1) The owners and operators, and the CAIR designated representative, of each CAIR \(\mathrm{NO}_{x}\) Ozone Season source and each CAIR \(\mathrm{NO}_{x}\) Ozone Season unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 96 , Subpant HHHH, and Rule 62-296.470, F.A.C.
(2) The emissions measurements recorded and reported in accordance with 40 CFR Part 96 , Subpart HHHH, shall be used to determine compliance by each CAIR NO \(\mathrm{X}_{\times}\)Ozone Season source with the following CAIR \(\mathrm{NO}_{\times}\)Ozone Season Emissions Requirements.

\section*{\(\mathrm{NO}_{x}\) Ozone Season Emission Requirements.}
(1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO \({ }_{x}\) Ozone Season source and each CAIR NO \(\mathrm{N}_{\times}\)Ozone Season unit at the source shall hoid, in the source's compliance account, CAIR NOX Ozone Season allowances available for compliance deductions for the control period under 40 CFR 96.354(a) in an amount not less than the tons of total \(\mathrm{NO}_{x}\) emissions for the control period from all CAIR NOx Ozone Season units at the source, as determined in accordance with 40 CFR Part 96 , Subpart HHHH.
(2) A CAIR NO O Ozone Season unit shall be subject to the requirements under paragraph (1) of the NO, Ozone Season Emission Requirements starting on the later of May 1, 2009 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 96.370(b)(1),(2), or (3) and for each control period thereafter.
(3) A CAIR NOx Ozone Season allowance shall not be deducted, for compliance with the requirements under paragraph (1) of the \(\mathrm{NO}_{x} \mathrm{Oz}_{\mathrm{on}}\) ( Season Emission Requirements, for a control period in a calendar year before the year for which the CAIR NOX Ozone Season allowance was allocated.
(4) CAIR \(\mathrm{NO}_{x}\) Ozone Season allowances shall be held in, deducted from, or transferred into or among CAIR NOX Ozone Season Allowance Tracking System accounts in accordance with 40 CFR Part 96, Subparts FFFF and GGGG.
(5) A CAIR NO O Ozone Season allowance is a limited authorization to emit one ton of \(\mathrm{NO}_{x}\) in accordance with the CAIR NO \({ }_{x}\) Ozone Season Trading Program. No provision of the CAIR NOX Ozone Season Trading Program, the CAIR Part, or an exemption under 40 CFR 96.305 and no provision of law shall be construed to limit the authority of the state or the United States to terminate or limit such authorization. (6) A CAIR NO \(\mathrm{N}_{\times}\)Ozone Season allowance does not constitute a property right.
(7) Upon recordation by the Administrator under 40 CFR Part 96, Subpart EEEE, FFFF or GGGG, every allocation, transfer, or deduction of a CAIR \(\mathrm{NO}_{x}\) Ozone Season allowance to or from a CAIR \(\mathrm{NO}_{x}\) Ozone Season unit's compliance account is incorporated automatically in any CAIR Part of the source that includes the CAIR NOX Ozone Season unit.

STEP 3, Continued

\section*{STEP 4}

Read the certification statement; provide name, title, owner company name, phone, and e-mail address; sign, and date.

\section*{Certification (for designated representative or alternate designated representative only)}
(1) Each CAIR N
Trading Program.
(2) Any provision of the CAIR \(\mathrm{NO}_{x}\) Ozone Season Trading Program that applies to a CAIR NO \({ }_{x}\) Ozone Season source or the CAIR designated representative of a CAIR NO \({ }_{x}\) Ozone Season source shall also apply to the owners and operators of such source and of the CAIR \(\mathrm{NO}_{x}\) Ozone Season units at the source.
(3) Any provision of the CAIR \(\mathrm{NO}_{x}\) Ozone Season Trading Program that applies to a CAIR NOx Ozone Season unit or the CAIR designated representative of a CAIR NO \({ }_{x}\) Ozone Season unit shall also apply to the owners and operators of such unit.

\section*{Effect on Other Authorities.}

No provision of the CAIR NO Ozone Season Trading Program, a CAIR Part, or an exemption under 40 CFR 96.305 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO \(\mathrm{NO}_{\mathrm{x}}\) Ozone Season source or CAIR NOx Ozone Season unit from compliance with any other provision of the applicable, approved State Implementation Plan, a federally enforceable permit, or the Clean Air Act.

I am authorized to make this submission on behalf of the owners and operators of the CAIR source or CAIR units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I centify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or
imprisonment. imprisonment.
\begin{tabular}{|l|l|}
\hline Name Thomas Grace & \begin{tabular}{l} 
Duree for \\
Title Mgr. EH\&S
\end{tabular} \\
\hline
\end{tabular}

Company Owner Name Pasco Cogen Ltd.
\begin{tabular}{|l|l|l|}
\hline Phone \(917472-4593\) & E-mail Address tgrace@caithnessenergy.com \\
\hline & & Date 8.9 .11 \\
\hline
\end{tabular}

ATTACHMENT LC-EU1-I1 PROCESS FLOW DIAGRAM


\section*{ATTACHMENT LC-EU1-12}

FUEL ANALYSIS

\section*{ATTACHMENT LC-EU1-I2 \\ Fuel Analysis or Specification}

\section*{No. 2 Fuel Oil}

Parameter
API gravity @ \(60^{\circ} \mathrm{F}\)
Relative density
Heat content
\(\%\) sulfius
\% nitrogen
\% ash
\begin{tabular}{lc} 
Typical Value & Max Value \\
\(30^{1} \mathrm{lb}^{2}\) & - \\
\(7.1 \mathrm{lb} / \mathrm{gal}^{2}\) & \\
\(19.500 \mathrm{Bau} / \mathrm{lb}(\mathrm{HHV})\) & \(0.73^{3}\) \\
\(0.3^{2}\) & \\
\(0.025-0.03\) & \(0.1^{1}\) \\
negligible
\end{tabular}

Note: The values listed are "typical" values based upon 1) information gathered by laboratory analysis, and 2) fiel purchasing specifications. However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

1 Data taken from Lake Cogen's fuel procurement specification.
\({ }^{2}\) Data from laboratory analysis.
\({ }^{3}\) Data from current air permit.

\section*{Natural Gas}
\begin{tabular}{lll} 
Paranueter & \multicolumn{1}{c}{ Typical Value } & Max Value \\
\cline { 17 - 17 } & 0.58 (compared to air) & \\
Heat content & \(950-1.124 \mathrm{Bru} / \mathrm{cu} \mathrm{ft}\) & \\
\(\%\) sulfur & 0.43 grains/CCF & 1 grain/100 CF \\
\(\%\) uitrogen & \(0.8 \%\) by volume & \\
\(\%\) ash & negligible &
\end{tabular}

Note: The values listed are "typical" values based upon information supplied to Lake Cogeneration. However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.
\({ }^{1}\) Data from laboratory analysis.

Florida Gas makes no warranty or representation whatsoever as to the accuracy of the information provided.
his information is provided on a best efforts basis and is an estimate.
he information is not used for billing purposes.
Florida Gas is not responsible for any reliance on this information by any party.
Stream History
\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline Gas:Day & Avgppm & 和新Avg Crains/hcf & - Ayg ppm & Avg Grains/hef & Avgippin & Avg Grainslhef & Aygippm & Avg Grains/hof \\
\hline 06/21/2011 & 1.107 & 0.069 & 1.537 & 0.096 & 1.573 & 0.098 & 3.999 & 0.250 \\
\hline 06/21/2011 & 1.106 & 0.069 & 1.465 & 0.092 & 1.526 & 0.095 & 4.015 & 0.251 \\
\hline 06/20/2011 & 1.045 & 0.065 & 1.687 & 0.105 & 1.746 & 0.109 & 3.593 & 0.225 \\
\hline 06/19/2011 & 1.070 & 0.067 & 1.154 & 0.072 & 1.216 & 0.076 & 0.030 & 0.002 \\
\hline 06/18/2011 & 1.180 & 0.074 & 0.819 & 0.051 & 0.921 & 0.058 & 0.028 & 0.002 \\
\hline 06/17/2011 & 5.098 & 0.319 & 2.383 & 0.149 & 4.785 & 0.299 & 0.034 & 0.002 \\
\hline 06/16/2011 & 16.185 & 1.012 & 32.970 & 2.061 & 14.151 & 0.884 & 0.024 & 0.001 \\
\hline 06/15/2011 & 2.365 & 0.148 & 2.889 & 0.181 & 2.913 & 0.182 & 0.031 & 0.002 \\
\hline 06/14/2011 & 1.400 & 0.088 & 2.197 & 0.137 & 2.319 & 0.145 & 0.031 & 0.002 \\
\hline 06/13/2011 & 0.555 & 0.035 & 1.011 & 0.063 & 1.077 & 0.087 & 0.032 & 0.002 \\
\hline 06/12/2011 & 0.840 & 0.052 & 1.551 & 0.097 & 1.613 & 0.101 & 0.028 & 0.002 \\
\hline 06/11/2011 & 0.777 & 0.049 & 1.483 & 0.093 & 1.605 & 0.100 & 0.029 & 0.002 \\
\hline 06/10/2011 & 0.870 & 0.054 & 1.508 & 0.094 & 1.597 & 0.100 & 0.028 & 0.002 \\
\hline 06/09/2011 & 0.630 & 0.039 & 1.065 & 0.067 & 1.242 & 0.078 & 0.024 & 0.002 \\
\hline 06/08/2011 & 0.630 & 0.039 & 1.065 & 0.067 & 1.242 & 0.078 & 2.182 & 0.136 \\
\hline 06/07/2011 & 0.630 & 0.039 & 1.065 & 0.067 & 1.242 & 0.078 & 2.946 & 0.184 \\
\hline 06/06/2011 & 0.630 & 0.039 & 1.065 & 0.067 & 1.242 & 0.078 & 3.327 & 0.208 \\
\hline 06/05/2011 & 0.630 & 0.039 & 1.065 & 0.067 & 1.242 & 0.078 & 3.378 & 0.211 \\
\hline 06/04/2011 & 0.673 & 0.042 & 0.814 & 0.051 & 0.877 & 0.055 & 3.245 & 0.203 \\
\hline 5/03/2011 & 0.658 & 0.041 & 1.011 & 0.063 & 0.992 & 0.062 & 3.471 & 0.217 \\
\hline 06/02/2011 & 0.622 & 0.039 & 1.035 & 0.065 & 1.045 & 0.065 & 3.209 & 0.201 \\
\hline 06/01/2011 & 0.572 & 0.036 & 1.155 & 0.072 & 1.212 & 0.076 & 3.168 & 0.198 \\
\hline 05/31/2011 & 0.679 & 0.042 & 1.230 & 0.077 & 1.325 & 0.083 & 3.390 & 0.212 \\
\hline 05/30/2011 & 0.620 & 0.039 & 1.269 & 0.079 & 1.501 & 0.094 & 3.427 & 0.214 \\
\hline 05/29/2011 & 0.560 & 0.035 & 1.285 & 0.080 & 1.566 & 0.098 & 3.457 & 0.216 \\
\hline 05/28/2011 & 0.464 & 0.029 & 0.819 & 0.051 & 0.993 & 0.062 & 3.174 & 0.198 \\
\hline 05/27/2011 & 0.545 & 0.034 & 1.208 & 0.075 & 1.382 & 0.086 & 3.585 & 0.224 \\
\hline 05/26/2011 & 0.619 & 0.039 & 1.186 & 0.074 & 1.337 & 0.084 & 3.413 & 0.213 \\
\hline 05/25/2011 & 0.782 & 0.049 & 1.110 & 0.069 & 1.307 & 0.082 & 3.359 & 0.210 \\
\hline 05/24/2011 & 0.798 & 0.050 & 1.122 & 0.070 & 1.244 & 0.078 & 3.187 & 0.199 \\
\hline 05/23/2011 & 0.886 & 0.055 & 1.360 & 0.085 & 1.479 & 0.092 & 3.495 & 0.218 \\
\hline 05/22/2011 & 0.639 & 0.040 & 0.942 & 0.059 & 1.309 & 0.082 & 3.426 & 0.214 \\
\hline 05/21/2011 & 0.708 & 0.044 & 1.311 & 0.082 & 1.868 & 0.117 & 3.604 & 0.225 \\
\hline 05/20/2011 & 0.645 & 0.040 & 1.257 & 0.079 & 1.673 & 0.105 & 3.085 & 0.193 \\
\hline 05/19/2011 & 0.647 & 0.040 & 1.081 & 0.068 & 1.399 & 0.087 & 2.595 & 0.162 \\
\hline 05/18/2011 & 0.675 & 0.042 & 0.970 & 0.061 & 1.318 & 0.082 & 2.355 & 0.147 \\
\hline 05/17/2011 & 0.674 & 0.042 & 1.200 & 0.075 & 1.551 & 0.097 & 2.428 & 0.152 \\
\hline 05/16/2011 & 0.642 & 0.040 & 1.624 & 0.102 & 1.947 & 0.122 & 2.493 & 0.156 \\
\hline 05/15/2011 & 0.677 & 0.042 & 1.066 & 0.067 & 1.403 & 0.088 & 2.662 & 0.166 \\
\hline 05/14/2011 & 0.733 & 0.046 & 1.101 & 0.069 & 1.309 & 0.082 & 2.762 & 0.173 \\
\hline 05/13/2011 & 0.757 & 0.047 & 0.988 & 0.062 & 1.088 & 0.068 & 3.339 & 0.209 \\
\hline 05/12/2011 & 1.152 & 0.072 & 1.229 & 0.077 & 1.368 & 0.086 & 3.212 & 0.201 \\
\hline 05/11/2011 & 0.558 & 0.035 & 0.800 & 0.050 & 1.179 & 0.074 & 3.046 & 0.190 \\
\hline 05/10/2011 & 0.512 & 0.032 & 0.554 & 0.035 & 1.011 & 0.063 & 3.051 & 0.191 \\
\hline 05/09/2011 & 0.521 & 0.033 & 0.825 & 0.052 & 1.312 & 0.082 & 2.780 & 0.174 \\
\hline 05/08/2011 & 0.426 & 0.027 & 0.871 & 0.054 & 1.315 & 0.082 & 1.473 & 0.092 \\
\hline //07/2011 & 0.221 & 0.014 & 0.771 & 0.048 & 1.347 & 0.084 & 2.403 & 0.150 \\
\hline 05/06/2011 & 0.456 & 0.028 & 0.791 & 0.049 & 1.301 & 0.081 & 2.418 & 0.151 \\
\hline 05/05/2011 & 0.591 & 0.037 & 0.781 & 0.049 & 1.233 & 0.077 & 2.607 & 0.163 \\
\hline 05/04/2011 & 0.532 & 0.033 & 0.581 & 0.036 & 1.014 & 0.063 & 2.580 & 0.161 \\
\hline 05/03/2011 & 0.461 & 0.029 & 0.543 & 0.034 & 1.009 & 0.063 & 3.063 & 0.191 \\
\hline 05/02/2011 & 0.394 & 0.025 & 0.712 & 0.044 & 1.156 & 0.072 & 3.085 & 0.193 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline 05/01/2011 & 0.352 & 0.022 & 0.671 & 0.042 & 1.189 & 0.074 & 3.018 & 0.189 \\
\hline 9/30/2011 & 0.279 & 0.017 & 0.771 & 0.048 & 1.199 & 0.075 & 2.621 & 0.164 \\
\hline 4/29/2011 & 0.228 & 0.014 & 0.528 & 0.033 & 0.847 & 0.053 & 2.320 & 0.145 \\
\hline 04/28/2011 & 0.403 & 0.025 & 0.416 & 0.026 & 0.852 & 0.053 & 2.866 & 0.179 \\
\hline 04/27/2011 & 0.297 & 0.019 & 0.296 & 0.018 & 0.783 & 0.049 & 2.990 & 0.187 \\
\hline 04/26/2011 & 0.579 & 0.036 & 0.609 & 0.038 & 0.821 & 0.051 & 2.895 & 0.181 \\
\hline 04/25/2011 & 0.684 & 0.043 & 0.996 & 0.062 & 0.967 & 0.060 & 2.828 & 0.177 \\
\hline 04/24/2011 & 0.635 & 0.040 & 1.026 & 0.064 & 0.983 & 0.061 & 3.095 & 0.193 \\
\hline 04/23/2011 & 0.626 & 0.039 & 0.956 & 0.060 & 0.914 & 0.057 & 3.121 & 0.195 \\
\hline 04/22/2011 & 0.502 & 0.031 & 1.042 & 0.065 & 1.000 & 0.062 & 3.140 & 0.196 \\
\hline 04/21/2011 & 0.520 & 0.032 & 1.000 & 0.063 & 0.959 & 0.060 & 3.270 & 0.204 \\
\hline 04/20/2011 & 0.495 & 0.031 & 1.047 & 0.065 & 1.001 & 0.063 & 3.505 & 0.219 \\
\hline 04/19/2011 & 0.407 & 0.025 & 1.055 & 0.066 & 1.008 & 0.063 & 3.690 & 0.231 \\
\hline 04/18/2011 & 0.325 & 0.020 & 1.197 & 0.075 & 1.165 & 0.073 & 3.338 & 0.209 \\
\hline 04/17/2011 & 0.273 & 0.017 & 0.920 & 0.057 & 0.897 & 0.056 & 2.856 & 0.179 \\
\hline 04/16/2011 & 0.348 & 0.022 & 0.969 & 0.061 & 0.989 & 0.062 & 3.043 & 0.190 \\
\hline 04/15/2011 & 0.295 & 0.018 & 1.017 & 0.064 & 1.003 & 0.063 & 3.396 & 0.212 \\
\hline 04/14/2011 & 0.229 & 0.014 & 0.802 & 0.050 & 0.798 & 0.050 & 3.244 & 0.203 \\
\hline 04/13/2011 & 0.200 & 0.013 & 0.827 & 0.052 & 0.810 & 0.051 & 2.688 & 0.168 \\
\hline 04/12/2011 & 0.221 & 0.014 & 0.901 & 0.056 & 0.913 & 0.057 & 2.410 & 0.151 \\
\hline 04/11/2011 & 0.126 & 0.008 & 0.694 & 0.043 & 0.789 & 0.049 & 3.114 & 0.195 \\
\hline 04/10/2011 & 0.117 & 0.007 & 0.869 & 0.054 & 0.886 & 0.055 & 3.742 & 0.234 \\
\hline 04/09/2011 & 0.130 & 0.008 & 0.732 & 0.046 & 0.762 & 0.048 & 3.498 & 0.219 \\
\hline 04/08/2011 & 0.159 & 0.010 & 0.730 & 0.046 & 0.722 & 0.045 & 3.001 & 0.188 \\
\hline 04/07/2011 & 0.195 & 0.012 & 1.078 & 0.067 & 1.140 & 0.071 & 0.683 & 0.043 \\
\hline 04/06/2011 & 0.192 & 0.012 & 1.177 & 0.074 & 1.230 & 0.077 & 2.522 & 0.158 \\
\hline 04/05/2011 & 0.163 & 0.010 & 0.966 & 0.060 & 1.028 & 0.064 & 0.615 & 0.038 \\
\hline 04/04/2011 & 0.082 & 0.005 & 1.557 & 0.097 & 1.620 & 0.101 & 0.615 & 0.038 \\
\hline 24/03/2011 & 0.103 & 0.006 & 1.419 & 0.089 & 1.405 & 0.088 & 0.615 & 0.038 \\
\hline \(4 / 02 / 2011\) & 0.391 & 0.024 & 1.088 & 0.068 & 1.060 & 0.066 & 0.615 & 0.038 \\
\hline 04/01/2011 & 0.299 & 0.019 & 1.222 & 0.076 & 1.204 & 0.075 & 0.615 & 0.038 \\
\hline 03/31/2011 & 0.298 & 0.019 & 1.185 & 0.074 & 1.166 & 0.073 & 0.615 & 0.038 \\
\hline 03/30/2011 & 0.289 & 0.018 & 1.265 & 0.079 & 1.254 & 0.078 & 0.615 & 0.038 \\
\hline 03/29/2011 & 0.340 & 0.021 & 1.583 & 0.099 & 1.561 & 0.098 & 0.615 & 0.038 \\
\hline 03/28/2011 & 0.264 & 0.016 & 1.542 & 0.096 & 1.497 & 0.094 & 0.615 & 0.038 \\
\hline 03/27/2011 & 0.210 & 0.013 & 1.480 & 0.093 & 1.577 & 0.099 & 0.615 & 0.038 \\
\hline 03/26/2011 & 0.098 & 0.006 & 1.081 & 0.068 & 1.091 & 0.068 & 0.615 & 0.038 \\
\hline 03/25/2011 & 0.245 & 0.015 & 1.383 & 0.086 & 1.442 & 0.090 & 0.615 & 0.038 \\
\hline 03/24/2011 & 0.189 & 0.012 & 1.434 & 0.090 & 1.408 & 0.088 & 0.615 & 0.038 \\
\hline 03/23/2011 & 0.264 & 0.016 & 1.362 & 0.085 & 1.337 & 0.084 & 0.615 & 0.038 \\
\hline 03/22/2011 & 0.286 & 0.018 & 1.499 & 0.094 & 1.477 & 0.092 & 0.615 & 0.038 \\
\hline 03/21/2011 & 0.304 & 0.019 & 1.460 & 0.091 & 1.588 & 0.099 & 0.615 & 0.038 \\
\hline 03/20/2011 & 0.233 & 0.015 & 0.840 & 0.052 & 1.426 & 0.089 & 0.615 & 0.038 \\
\hline & \multicolumn{4}{|l|}{} & \multicolumn{2}{|l|}{Perry 24 ' Stream \#3} & \multicolumn{2}{|l|}{Brooker 24" Stream} \\
\hline
\end{tabular}

\section*{Date Requested: Jun 232011 8:26 AM}

The data contained herein is preliminary data and therefore should be used for contemporaneous operational purposes only and may be subject to change at month end. This data is provided to assist our customers in tracking their gas usage as closely as possible on a real-time basis. The information contained on this web page is not to be considered billable information. This data will be subject to additional verification and possible modification prior to billing. Florida Gas is not responsible for any reliance on this information by any party.
\begin{tabular}{|c|c|c|c|}
\hline [] & FGT Chromatograph By Id & & - \\
\hline & Chromatograph Name: 8001 - MAINLINE (BROOKER) & - & [1] \\
\hline  & & & E \\
\hline [包] & download-lab-delimited lile & & \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Date BTU CO2 N2 G & & & & & & & & & \\
\hline /21/2011 10151.3860 .4550 .58396 .095 & 1.754 & 0.186 & 0.037 & 0.039 & 0.015 & 0.009 & 0.0250.0000.0000.000 & 1330 & 14 \\
\hline 06/20/201 I I016 1.3510 .4520 .58296 .110 & 1.778 & 0.184 & 0.036 & 0.037 & 0.015 & 0.010 & 0.0260.0000.0000.000 & 1331 & 2 \\
\hline 06/19/20111015 1.3460.4120.58296.298 & 1.639 & 0.177 & 0.037 & 0.038 & 0.016 & 0.011 & 0.0270.0000.0000.000 & 1332 & 12 \\
\hline 06/18/20111016 1.3180.4200.58296.293 & 1.654 & 0.180 & 0.038 & 0.040 & 0.017 & 0.011 & 0.0280.0000.0000.000 & 1332 & \\
\hline 06/17/201110171.2930.4610.58296.169 & 1.745 & 0.200 & 0.039 & 0.041 & 0.016 & 0.011 & 0.0270.0000.0000.000 & 1333 & \\
\hline 06/16/201 I 10171.2250 .4680 .58196 .233 & 1.746 & 0.204 & 0.037 & 0.039 & 0.014 & 0.009 & 0.025 0.0000.0000.000 & 1334 & 14 \\
\hline 06/15/201110161.345 0.5100.58395.967 & 1.863 & 0.1 & 0.035 & 0.037 & 0.014 & 0.010 & 0.0250 .0000 .0000 .000 & 1331 & \\
\hline 06/14/201110171.3410.5040.58395.945 & 1.883 & 0.200 & 0.037 & 0.038 & 0.015 & 0.010 & 0.0260.0000.0000.000 & 1331 & 12 \\
\hline \(06 / 13 / 201110171.3320 .4610 .58396 .064\) & 1.830 & 0.189 & 0.036 & 0.037 & 0.015 & 0.010 & 0.0260.0000.0000.000 & 1332 & 12 \\
\hline \(06 / 12 / 201110171.3100 .4540 .58396 .063\) & 1.861 & 0.187 & 0.036 & 0.037 & 0.015 & 0.010 & 0.0260.0000.0000.000 & 33 & 2 \\
\hline 06/11/201110181.2970.4490.58396.059 & 1.870 & 0.195 & 0.039 & 0.039 & 0.016 & 0.010 & 0.0260.0000.0000.000 & 1333 & 13 \\
\hline 06/10/2011 10171.3090 .4480 .58396 .068 & 1.845 & 0.197 & 0.040 & 0.041 & 0.016 & 0.010 & 0.0260.0000.0000.000 & 1333 & 13 \\
\hline 06/09/2011 10161.3170 .4230 .58296 .217 & 1.729 & 0.185 & 0.038 & 0.040 & 0.016 & 0.010 & 0.025 0.0000.0000.000 & 1332 & -14 \\
\hline \(06 / 08 / 201110161.3350 .4330 .58296 .164\) & 1.745 & 0.192 & 0.039 & 0.040 & 0.016 & 0.010 & 0.0250 .0000 .0000 .000 & 1332 & -14 \\
\hline 06/07/2011 10171.3040 .4450 .58296 .149 & 1.776 & 0.195 & 0.039 & 0.040 & 0.016 & 0.010 & 0.0260.0000.0000.000 & 1333 & 12 \\
\hline 06/06/2011 10181.2830 .4570 .58396 .059 & 1.849 & 0.209 & 0.042 & 0.044 & 0.017 & 0.011 & 0.0280.0000.0000.000 & 1334 & -11 \\
\hline 06/05/2011 10181.2990 .4660 .58396 .045 & 1.834 & 0.212 & 0.042 & 0.044 & 0.018 & 0.011 & 0.0290.0000.0000.000 & 1333 & -10 \\
\hline 06/04/2011 10191.2700 .4630 .58395 .973 & 1.900 & 0.235 & 0.046 & 0.052 & 0.020 & 0.013 & 0.0290.0000.0000.000 & 1335 & 9 \\
\hline 06/03/2011 10191.2710 .4670 .58395 .962 & 1.915 & 0.231 & 0.046 & 0.049 & 0.019 & 0.012 & 0.0290.0000.0000.000 & 1334 & -10 \\
\hline 06/02/2011 10191.1970 .4740 .58296 .065 & 1.904 & 0.216 & 0.043 & 0.045 & 0.018 & 0.011 & 0.0280 .0000 .0000 .000 & 1336 & -10 \\
\hline 06/01/2011 10191.1910 .4750 .58296 .095 & 1.893 & 0.208 & 0.041 & 0.042 & 0.017 & 0.011 & 0.0280.0000.0000.000 & 1336 & -11 \\
\hline 05/31/2011 10191.1780 .4780 .58296 .135 & 1.877 & 0.199 & 0.040 & 0.039 & 0.017 & 0.010 & 0.0270.0000.0000.000 & 1336 & 2 \\
\hline 05/30/201110191.2110.4670.58296.047 & 1.936 & 0.204 & 0.041 & 0.040 & 0.017 & 0.011 & 0.0270.0000.0000.000 & 1336 & \\
\hline 05/29/2011 10191.2310 .4370 .58296 .136 & 1.853 & 0.206 & 0.041 & 0.041 & 0.017 & 0.011 & 0.0270.0000.0000.000 & 1335 & 2 \\
\hline \(05 / 28 / 201110181.2360 .4410 .58296 .217\) & 1.786 & 0.187 & 0.039 & 0.040 & 0.017 & 0.011 & 0.0280.0000.0000.000 & 1335 & 1 \\
\hline 05/27/2011 10191.2530 .4480 .58396 .051 & 1.904 & 0.202 & 0.042 & 0.042 & 0.018 & 0.011 & 0.0280.0000.0000.000 & 1335 & 10 \\
\hline 05/26/201110181.3100.4570.58395.978 & 1.911 & 0.204 & 0.042 & 0.042 & 0.018 & 0.011 & 0.0280.0000.0000.000 & 1333 & 10 \\
\hline 05/25/201 I 10171.3050 .4440 .58296 .126 & 1.810 & 0.189 & 0.038 & 0.038 & 0.016 & 0.010 & 0.0250 .0000 .0000 .000 & 1333 & -13 \\
\hline 05/24/201 I 10171.2760 .4550 .58296 .139 & 1.802 & 0.197 & 0.039 & 0.040 & 0.016 & 0.011 & 0.025 0.0000.0000.000 & 1333 & -13 \\
\hline 05/23/201110181.2820.4650.58396.065 & 1.845 & 0.210 & 0.040 & 0.041 & 0.016 & 0.011 & 0.0250.0000.0000.000 & 1333 & -13 \\
\hline 05/22/201110171.2700.4530.58296.165 & 1.783 & 0.199 & 0.039 & 0.040 & 0.016 & 0.011 & 0.0250.0000.0000.000 & 1334 & -14 \\
\hline 05/21/20111017 1.2900.4420.58296.138 & 1.807 & 0.192 & 0.039 & 0.039 & 0.016 & 0.011 & 0.0250 .0000 .0000 .000 & 1333 & 3 \\
\hline 05/20/20111018 1.2890.4530.58396.063 & 1.857 & 0.202 & 0.041 & 0.041 & 0.017 & 0.011 & 0.0260.0000.0000.000 & 1333 & 12 \\
\hline 05/19/201110181.2840.4550.58396.048 & 1.879 & 0.198 & 0.040 & 0.041 & 0.017 & 0.012 & 0.0260.0000.0000.000 & 1334 & 3 \\
\hline 05/18/201110171.3010.4590.58296.101 & 1.815 & 0.192 & 0.039 & 0.039 & 0.017 & 0.012 & 0.0250.0000.0000.000 & 1333 & -14 \\
\hline 05/17/2011 10161.3680 .4490 .58396 .107 & 1.749 & 0.195 & 0.039 & 0.039 & 0.017 & 0.012 & 0.0260.0000.0000.000 & 1331 & 13 \\
\hline 05/16/201110171.3420.4660.58396.077 & 1.766 & 0.208 & 0.042 & 0.043 & 0.018 & 0.012 & 0.0250.0000.0000.000 & 1332 & -13 \\
\hline 05/15/201110161.3580.4540.58396.143 & 1.706 & 0.205 & 0.040 & 0.042 & 0.017 & 0.011 & 0.024 0.0000.0000.000 & 1331 & \\
\hline \(05 / 14 / 201110151.3660 .4360 .58296 .239\) & 1.651 & 0.186 & 0.037 & 0.037 & 0.015 & 0.009 & 0.0230 .0000 .0000 .000 & 1331 & 15 \\
\hline 05/13/201110161.3080.4620.58296.167 & 1.745 & 0.190 & 0.038 & 0.039 & 0.016 & 0.010 & 0.024 0.0000.0000.000 & 1332 & 14 \\
\hline 05/12/201110161.3310.4610.58296.177 & 1.695 & 0.202 & 0.040 & 0.041 & 0.017 & 0.011 & 0.0250 .0000 .0000 .000 & 1332 & 3 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline & & & & & & & & & \\
\hline & & & & & & & & & \\
\hline & & & & & & & & & \\
\hline & & & & & & & & & \\
\hline & & & 0.053 & 0.050 & 0.02 & 0.013 & & & \\
\hline & 1.721 & 0.231 & 0.051 & 0.049 & 0.020 & 0.013 & 0.0 & 332 & \\
\hline 05/05/2011 10161.3710 .4120 .58296 .272 & 1.58 & 0.214 & 0.048 & 0.045 & 0.019 & 0.012 & 0.0270.0000.0000.00 & 133 & \\
\hline . 3 & 1.63 & 0.189 & 0.040 & 0.04 & 0.017 & 0.011 & 0.02 & 1331 & \\
\hline 5/03/2011 10151.3530 .4500 .58296 .226 & 1.66 & 0.1 & 0.037 & 0.037 & 0.015 & 0.0 & 0.0250.0000.0000.00 & 133 & \\
\hline 5/02/2011 10161.2930 .4590 .58296 .17 & 1.76 & 0.186 & 0.0 & 0.038 & 0.016 & 0.010 & 0.0 & 3 & \\
\hline 01/2011 10181.2600 .4510 .58296 .0 & 1.9 & 0. & 0.038 & 0.039 & 0.016 & 0.010 & 0.02 & 133 & \\
\hline 1022 I.1500.4200.5839 & 2.3 & 0.1 & 0.033 & 0.034 & 0.014 & 0.009 & 0.020 & & \\
\hline 022 & 2.36 & 0.1 & 0.031 & 0.0 & 0.013 & 0.009 & 0.02 & & \\
\hline 1018 1.1960.4430.581 & 1.872 & 0.1 & 0.032 & 0.033 & 0.014 & 0.009 & 0.0230.0000.0000.000 & & \\
\hline 0151.2960 .5070 .58290 & 1.644 & 0.18 & 0.0 & 0.0 & 0.015 & 0.010 & 0.0250.0000.0000.000 & & \\
\hline 04/26/2011 10151.3200 .4770 .58296 .222 & 1.6 & 0.191 & 0.038 & 0.039 & 0.016 & 0.010 & 0.0260.0000.0000.000 & & \\
\hline 04/25/2011 10151.3310 .4600 .58296 .216 & 1.687 & 0.183 & 0.036 & 0.037 & 0.016 & 0.010 & 0.0250 .0000 .0000 .00 & & \\
\hline 04/24/2011 10151.3010 .4330 .58196 .342 & 1.63 & 0.171 & 0.034 & 0.035 & 0.01 & 0.009 & . 02 & & \\
\hline 04/23/2011 10151.2700 .4550 .58196 .386 & 1.56 & 0.189 & 0.039 & 0.039 & . 016 & 0.011 & & & \\
\hline 4/22/2011 1016 1.3070.4650.58296.233 & 1.679 & 0.189 & 0.038 & 0.038 & . & & & & \\
\hline 04/21/20111015 1.3440.4450.58296.240 & 1.658 & 0.186 & 0.038 & 0.038 & 0.01 & 0.010 & & & \\
\hline 4/20/20111015 1.3200.4450.58196.339 & 1.595 & 0.180 & 0.036 & 0.036 & 0.015 & 0.009 & & & \\
\hline 4/19/201110161.3070.4520.58296.205 & 1.712 & 0.190 & 0.039 & 0.040 & 0.017 & 0.011 & & & \\
\hline 10171.2480 .4710 .5829 & 778 & 0.186 & 03 & 0.03 & 0.016 & 0.01 & 0.0 & & \\
\hline 10171.2610 .4670 .581 & 1.72 & 0.194 & 0.038 & 0.03 & 0.01 & 0.01 & 0.02 & & \\
\hline 10161.3100 .4860 .5 & 1.7 & 0.202 & 0.040 & 0.04 & 0.01 & 0.01 & . 026 & & \\
\hline 10171.3140 .4930 .5 & 1.835 & 0.196 & 0.038 & 0.03 & 0.016 & 0.01 & 0.0250.0000.0 & & \\
\hline 0.5 & 1.7 & 0.19 & 0.038 & 0.038 & 0.016 & 0.01 & 0.0240.0000.000 & & \\
\hline 04/13/2011 10151.3110 .4920 .582961 & 1.703 & 0.18 & 0.037 & 0.037 & 0.0 & 0.010 & 024 & & \\
\hline 04/12/201| 1015 1.3140.4 & 1.6 & 0.19 & 0.038 & 0.038 & 0.0 & 0.01 & 02 & & \\
\hline 04/11/2011 10161.3090 & 1:693 & 0.208 & 0.04 & 0.042 & 0.01 & 0.01 & 0.02 & & \\
\hline 04/10/2011 10171.3050 .49 & 1.76 & 0.2 & 0.04 & 0.041 & 0.01 & 0.0 & 0.02 & & \\
\hline 04/09/2011 10161.2400 .4660 .581 & 1.670 & 0.185 & 0.03 & 0.037 & 0.015 & & 0.0230.0000.0000.000 & & \\
\hline 110161.2460 .4800 .58196 & 1.685 & 0.18 & 0.03 & 0.037 & 0.015 & & & & \\
\hline 1071.2570 .4580 .58196 .25 & 1.717 & 0.18 & 0.03 & 0.03 & 0.01 & & .0250.0000.0000.000 & & \\
\hline 10211.3000 .4840 .58296 & 1.731 & 0.192 & 0.03 & 0.0 & 0.01 & & 0.0300.0000.0000.000 & & \\
\hline 0211.282 & 1.70 & 0.21 & 0.04 & & 016 & & 03100000.000 & & \\
\hline 10211.233 & 2.041 & 0.218 & 0.04 & & 01 & & & & \\
\hline 10211.233 & 2.041 & 218 & 042 & & . 01 & & & & \\
\hline 110211.2350 .4260 .58296 & & 18 & , & . 0 & 0.01 & & & & \\
\hline 11 & & , 18 & 0.034 & 0.03 & 0.01 & & & & \\
\hline 21.3 & & 0.186 & , & 0.032 & 0.013 & & & & \\
\hline 110211.2770 .4800 .58296 .21 & 1.727 & , 19 & 0.034 & 0.032 & 0.013 & & & & \\
\hline 10211.2930 .4790 .58296 .13 & 1.770 & 197 & , 36 & . 03 & 0.01 & . 01 & & & \\
\hline 03/28/2011 10211.2740 .4580 .58296 .176 & 1.771 & 0.195 & 0.036 & 0.035 & 0.015 & 0.010 & 0.030 & 133 & \\
\hline 03/27/2011 10211.2690 .4480 .58296 .228 & 1.726 & 0.197 & . 038 & 0.036 & 0.016 & 0.011 & 0.0310 .0000 .0000 .00 & 133 & \\
\hline 110211.2920 .4410 .58296 .280 & 1.650 & . 201 & . 04 & 0.03 & 0.01 & 0.010 & . 0310.000 & 133 & \\
\hline . 455 & 1.644 & 0.206 & . 04 & 0.03 & 0.017 & 0.010 & 0.0320.0000.000 & 133 & \\
\hline & & & & & & & & & \\
\hline
\end{tabular}

\section*{Water Injection System}

A water injection system is used to reduce NOx emissions. The water-to-fuel ratio is monitored continuously and adjusted by the automatic control system based on load conditions.

\section*{Oxidation Catalyst System}

Oxidation catalyst systems in the Heat Recovery Steam Generator to control or reduce CO and VOC emissions associated with each of the combustion turbines. The catalyst (stainless steel foil coated with calcined alumina with platinum metal) enhances the chemical reaction between oxygen and CO and forms \(\mathrm{CO}_{2}\), which generally provides for emission control of CO in the range of 50 to \(70 \%\).

\section*{ATTACHMENT LC-EU1-14 Procedures for Startup and Shutdown}

Startup for the combustion turbines begins with "lighting off" of the machines on natural gas or distillate oil. A period of up to several hours can be required to allow metal temperatures in the heat recovery steam generator (HRSG) and in the steam turbine to equilibrate without undue metal stress, before putting the unit "on the line" and sending electrical power to the grid.

The combustion turbines (CTs) utilize water injection for NOx control during startup and shutdown. Emissions are continuously monitored by Continuous Monitor in System (CMS) for water to fuel ratio and Continuous Emission Monitoring System (CEMS) for NOx. If excess emissions are encountered during startup or shutdown, the nature and cause of any malfunction is identified, along with the corrective actions taken or preventative measures adopted. Corrective actions may include switching the unit from automatic (remote) to local control, or changing fuel combination(s). Best Operating Practices are adhered to and all efforts to minimize both the level and duration of excess emissions are undertaken.

Shutdown is performed by reducing the unit load (electrical production) to a minimum level, opening the breaker (which disconnects the unit from the system electrical grid), shutting off the fuel and coasting down to stop. The CT is then put "on turning gear" to prevent possible disfiguration of the turbine components.

\section*{ATTACHMENT LC-EU1-I5}

\section*{CAM PLAN}

\title{
COMPLIANCE ASSURANCE MONITORING PLAN (CAM PLAN) \\ for
}

CARBON MONOXIDE

\section*{Lake Cogeneration Plant \\ Caithness Corporations \\ Lake County, Florida}

\section*{I. EMISSION UNITS REQUIRING CAM PLANS}

\section*{A. CAM Rule Applicability Definition}

This permit revision application requests incorporation of the provisions of Permit No. 0694801-012-AC, and, therefore, requires changes to conditions of the current Title V Air Operation Permit No. 0694801-011-AV to incorporate these provisions. As a result of the instillation of oxidation catalyst control systems for carbon monoxide (CO) control, a Compliance Assurance Monitoring (CAM) plan has been developed, since the CT units are not equipped with CO CEMS as a continuous compliance determination method.

As part of the Title \(V\) renewal/revision process, EPA, through regulations adopted in Title 40, Part 64 of the Code of Federal Regulations ( 40 CFR 64), is requiring submittal of Compliance Assurance Monitoring (CAM) Plans. This regulation has been incorporated by reference by FDEP in Rule 62-204.800 and implemented in Rule 62-213.440.

CAM plans are required for all Title \(V\) permitted emission units using control devices to meet federally enforceable emission limits or standards with pre-control emissions greater than "major" source thresholds. The term "major" is defined as in the Title V Regulations ( 40 CFR 70), but applied on a source-by-source basis. However, there are some specific exemptions to the applicability of the CAM Rule.

\section*{B. Emissions Units Requiring CAM Plans}

A review of emission units at Lake Cogeneration Plant was conducted to determine the applicability of the CAM Rule. This evaluation process resulted in a determination that both CTs (DEP Emission Unit ID Nos. 003, and 004) are subject to the CAM requirements for CO. Specific exemptions to the applicability of the CAM Rule were also considered in this evaluation.

\section*{Combined Cycle Combustion Turbines/ Duct Burner (E.U. ID No. 003 and 004)}

The Lake Cogeneration facility consists of two GE LM-6000 combustion turbine units (CTs), each unit equipped with an inlet chiller and a supplementary fired duct burner (DB) and exhausting through Heat Recovery Steam Generator (HRSG) stacks. The CTs have dual fuel (natural gas and distillate fuel) capability. Both CTs recently underwent a SPRay INTercooling (SPRINT) upgrade for enhanced efficiency. Permit No. 0694801-012-AC authorized the installation of an oxidation catalyst in the HRSG associated with each of the two CTs.

\section*{II. CAM PLAN FOR CARBON MONOXIDE EMISSIONS}

\section*{A. Control Technology}

CO is controlled or reduced by the use of a catalytic oxidation system, which is effectively a passive control system. The catalyst (stainless steel foil coated with calcined alumina with platinum metal) enhances the chemical reaction between oxygen and carbon monoxide and forms carbon dioxide as the end product. This reaction generally provides for emission control in the range of 50 to \(70 \%\), depending on the exhaust gas temperature. The catalyst normally operates at a temperature around \(700^{\circ} \mathrm{F}\) with corresponding CO removal efficiencies of approximately \(70 \%\). This system is designed and certified by the manufacturer to operate while the plant is burning either natural gas or new No. 2 diesel fuel oil.

A plant operator occupies the plant control room 24 hours per day, which allows the plant personnel to monitor two key catalyst operating parameters. Namely, catalyst inlet temperature and pressure drop across the catalyst bed. A high temperature alarm is proposed to alert the operator if the catalyst inlet temperature becomes excessive to protect the bed from thermal damage, and a high-pressure alarm sounds if the pressure drop across the catalyst bed becomes excessive. The pressure reading serves two purposes: to ensure that there is airflow across the bed, thus verifying that the system is operating, and to alert the plant operator if a possible plugging or fouling has occurred.

\section*{B. Monitoring Approach}

The key elements of the monitoring approach are presented in Table 1. The selected performance indicators are catalyst inlet temperature, pressure drop across the catalyst bed, and annual analysis of a catalyst test plug. The plant operator manually logs the temperature and the pressure drop once a day, monitors the alarms, and takes action if the readings are outside the allowable operating range. The test plug is analyzed annually to enable the catalyst manufacture to certify the condition of the catalyst.

TABLE 1. MONITORING APPROACH
\begin{tabular}{|c|c|c|}
\hline & Indicator No. 1 & Indicator No. 2 \\
\hline \multirow[t]{2}{*}{I. Indicator
Measurement Approach} & Catalyst inlet temperature and pressure differential & Annual test plug analysis. \\
\hline & Thermocouples Pressure sensors & A test plug of the catalytic material is removed for the manufacturer's laboratory analysis. \\
\hline \begin{tabular}{l}
II. Indicator Range \\
QIP Threshold (optional)
\end{tabular} & \begin{tabular}{l}
Maximum Temperature: \\
\(1,000^{\circ} \mathrm{F}\left(537^{\circ} \mathrm{C}\right)\) \\
Maximum Pressure Difference: \\
\(2^{\prime \prime}\) water column (w.c.) \\
An excursion is defined as rising above \(1,000^{\circ} \mathrm{F}\left(537^{\circ} \mathrm{C}\right)\), or rising above \(2^{\prime \prime}\) w.c, during normal operations.
\end{tabular} & Manufacturer certifies whether or not the catalyst is within operating specifications. \\
\hline \begin{tabular}{l}
III. Performance Criteria \\
A. Data Representativeness
\end{tabular} & The thermocouples are located at the inlet face of the catalyst bed. The pressure sensors are located on the inlet and outlet faces of the catalyst bed. & A representative sample is removed from the catalyst bed in accordance with manufacturer's operational instructions. \\
\hline B. Verification of Operational \(\begin{array}{r}\text { Status }\end{array}\) & Plant control room operators monitor the alarm system 24 hours/day and records data once per day. & Manufacturer certified condition of catalyst after initial installation and annually thereafter. \\
\hline C. QA/QC Practices and Criteria & Annually testing/calibration of the temperature and pressure sensor transmitters. & NA \\
\hline D. Monitoring Frequency & Daily & Annual \\
\hline Data Collection Procedures & Temperature and pressure readings are recorded daily. & Test plugs are removed when the plant is shut down for annual maintenance. \\
\hline Averaging Period & NA (monitoring data does not correspond to actual emissions rate.) & NA \\
\hline
\end{tabular}

Lake Cogeneration Ltd.
Lake Cogeneration Plant
Facility ID No. 0694801

\section*{ATTACHMENT LC-EU1-I6 Compliance Demonstration Reports/Records}
\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{4}{|c|}{Lake Cogeneration Plant Permit No. 0694801-012-AC} \\
\hline Permit Condition & Description & Method or means used to determine compliance & Compliant/ noncompliant \\
\hline \multicolumn{4}{|l|}{Section 2 Administrative Requirements} \\
\hline 7. & The permittee shall apply for a Title \(\checkmark\) air operation permit at least 90 days prior to expiration date (June 1, 2011) of this construction permit, but no later than 180 days after commencing operations of the oxidation catalyst systems. & Compliance testing conducted August 17, 2010. & In compliance \\
\hline \multicolumn{4}{|l|}{Section 3 Emissions Unit Specific Conditions} \\
\hline 1 & The permittee shall install an EmeraChem (or equivalent) oxidation catalyst system in the HRSG of each CT unit. & & In compliance \\
\hline 2 & Each unit shall be tested to demonstrate initial compliance with the CO emissions standards specified in the Title \(V\) air operation permit. The initial tests shall be conducted within 60 days after completing construction of the oxidation catalyst project and achieving maximum production capacity, but not later than 180 days after initial operation of the unit with the oxidation catalyst. & CO CT NG Test Results: Attachment A CO DB NG Test Results: Attachment A CO CT \& NG Combined Results: Attachment A & In compliance \\
\hline 3 & At least 15 days prior to the date on which each required test is to begin, the permittee shall notify the Compliance Authority of the date, time, and place of each test. & CO CT NG Test Notification CO CT DFO Test Notification CO DB NG Test Notification & In compliance \\
\hline 4 & The permittee shall conduct compliance testing of emissions with each CT operating at capacity. & CO CT NG Test Report: Attachment A CO DB NG Test Report: Attachment A & In compliance \\
\hline 5 & Within 15 -day of completing construction, the permittee shall notify the Compliance Authority that construction has been completed. & Construction completion letter & In compliance \\
\hline
\end{tabular}

\section*{ATTACHMENT A}

\section*{Air Emissions Compliance Test Report}

Completed for:

\section*{Lake Cogeneration Ltd.}

Lake Cogeneration Facility Combustion Turbine Units 1 and 2
(EU -003 and -004)

Test Report Number: 20-4237-0102-001
Test Completed: August 17, 2010
\begin{tabular}{|c|c|}
\hline \multicolumn{2}{|l|}{Project Background} \\
\hline Name of Source Owner. & Lake Cogeneration Ltd. \\
\hline Address of Owner: & 39001 Golden Gem Drive Umatilla, Florida 32784 \\
\hline Source Identification: & \begin{tabular}{l}
Facility ID: 0694801 \\
Emissions Unit: 1 (EU -003) and 2 (EU -004)
\end{tabular} \\
\hline Location of Source: & Lake County, Florida \\
\hline Type of Operation: & SIC Code: 4911 \\
\hline Tests Performed: & \begin{tabular}{l}
Method 1 - Traverse Points \\
Method 3A - Determination of Oxygen and Carbon Dioxide \\
Method 7E - Determination of Nitrogen Oxides \\
Method 9 - Visible Determination of Visible Emissions \\
Method 10 - Determination of Carbon Monoxide \\
Method 19 - Determination of Nitrogen Oxide Emissions Rates
\end{tabular} \\
\hline Test Supervisor: & Mr. Robert Douglas \\
\hline Date(s) Tests Conducted: & August 17, 2010: RATA and Compliance on Units 1 and 2 \\
\hline Site Test Coordinator: & Mr. Allan Oliver \\
\hline State Regulatory Observers: & No observers present \\
\hline
\end{tabular}

\section*{C.E.M. Solutions, Inc Test Personnel}
Project Field Manager:
Mr. Robert Douglas
Test Technicians:
Mr. Chris Harrell Mr. Josh Cooper

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Appendix C: Reference Method Calibration Gas Certificates of Analysis
Appendix D: Sample Location Diagram and Traverse Points
Appendix E: Reference Method Quality Assurance/Quality Control Checks
Appendix F: Reference Method Data
Appendix G: NOx CEMS RATA Data

\subsection*{1.0 Introduction}

Lake Cogeneration Ltd. retained C.E.M. Solutions, Inc. to perform source emissions testing and Relative Accuracy Test Audits (RATA) on the combustion turbine (CT) Unit 1 (EU-003) and Unit 2 (EU-004) located at its facility in Umatilla, Florida.

The test program was conducted in order to evaluate the compliance status of the CT's exhaust, while firing pipeline natural gas, in respect to the United States Environmental Protection Agency (USEPA) Standards of Performance for Stationary Turbines (Title 40 of the Code of Federal Regulations, Part 60, Subpart GG) and the Florida Department of Environmental Protection (FDEP) permit number 0694801-011-AV. The test program and results are presented and discussed in this report. Also, RATA tests were conducted in order to evaluate the accuracy of the Unit 1 and 2 CEMS in accordance with the United States Environmental Protection Agency (USEPA) requirements in the Code of Federal Regulations. Title 40, Part 75, Appendix B, and Section 2.3.1 and Title 40, Part 60, Appendix F, Section 5.1.3.

Mr. Allan Oliver of Lake Cogeneration Facility coordinated plant operations throughout the test program. All testing was conducted in accordance with test methods promulgated by the USEPA.

The Lake CT was found to be in compliance with permit number 0694801-011AV while operating at over \(90 \%\) capacity. The results of the test program are summarized in Table 1.

\footnotetext{
Lake Cogeneration Facility
Compliance Test
August 17, 2010
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Table 1: Summary of Compliance Test
Lake Cogeneration Facility
Units 1 and 2
\begin{tabular}{|c|c|c|c|}
\hline Unit Number & Emission & Result & Status \\
\hline \multirow{6}{*}{Unit 1CT} & \(\mathrm{NO}_{\mathrm{x}}\) lbs/mmBtu Part 75 RATA & \(0.006 \mathrm{lb} / \mathrm{mmbtu}\) & PASS \\
\hline & \[
\begin{gathered}
\mathrm{NO}_{\times} \mathrm{ppm} @ 15 \% \mathrm{O}_{2} \\
\text { Part 60RATA } \\
\hline
\end{gathered}
\] & 8.3\% & PASS \\
\hline & CO (CT only) & 18.7 ppmvd, \(17.4 \mathrm{lb} / \mathrm{hr}\) & PASS \\
\hline & CO (CT \& DB) & \(15.7 \mathrm{lb} / \mathrm{hr}\) & PASS \\
\hline & V.E. \% (CT only) & 0.0\% & PASS \\
\hline & V.E. \% (CT \& DB) & 0.0\% & PASS \\
\hline \multirow[b]{2}{*}{Unit 1 DB} & \(\mathrm{NO}_{\mathrm{x}}\) & \[
\begin{gathered}
\hline 0.4 \mathrm{lb} / \mathrm{hr}, \\
0.009 \mathrm{lb} / \mathrm{mmBtu} \\
\hline
\end{gathered}
\] & PASS \\
\hline & CO & \[
\begin{gathered}
0.0 \mathrm{lb} / \mathrm{hr} \\
0.000 \mathrm{lb} / \mathrm{mmBtu} \\
\hline
\end{gathered}
\] & PASS \\
\hline \multirow{6}{*}{Unit 2 CT} & \(\mathrm{NO}_{\mathrm{x}} \mathrm{lbs} / \mathrm{mmBtu}\) Part 75 RATA & \(0.006 \mathrm{lb} / \mathrm{mmbtu}\) & PASS \\
\hline & \(\mathrm{NO}_{\mathrm{x}} \mathrm{ppm}\) @ 15\% \(\mathrm{O}_{2}\) Part 60 RATA & 7.8\% & PASS \\
\hline & CO (CT only) & 5.9 ppmvd ,
\(5.4 \mathrm{lb} / \mathrm{hr}\) & PASS \\
\hline & CO (CT \& DB) & \(6.3 \mathrm{lb} / \mathrm{hr}\) & PASS \\
\hline & V.E. \% (CT only) & 0.0 \% & PASS \\
\hline & V.E. \% (CT \& DB) & 0.0\% & PASS \\
\hline \multirow[b]{2}{*}{Unit 2 DB} & \(\mathrm{NO}_{\mathrm{x}}\) & \[
\begin{array}{|c|}
\hline 0.5 \mathrm{lb} / \mathrm{hr}, \\
0.010 \mathrm{lb} / \mathrm{mmBtu} \\
\hline
\end{array}
\] & PASS \\
\hline & CO & \[
\begin{gathered}
1.0 \mathrm{lb} / \mathrm{hr} \\
0.019 \mathrm{lb} / \mathrm{mmBtu}
\end{gathered}
\] & PASS \\
\hline
\end{tabular}

Lake Cogeneration Facility Compliance Tes
August 17,2010
August 17, 2010

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\subsection*{2.0 Facility Description}

The CT Units 1 and 2 are each 52.0 MW, combined cycle combustion turbines with duct burners that exhaust through a heat recovery steam generator (HRSG).

\subsection*{2.1 Process Equipment}

Units 1 and 2 each have a maximum heat input rating of \(450 \mathrm{mmBtu} / \mathrm{hr}\) while firing natural gas. Calculations are based on the low heating value (LHV) of each fuel to each unit.

Control measures and equipment consists of water injection. The combustion turbines incorporate a heat recovery steam generator. Emissions are exhausted through separate 150 ft . stacks, having inner diameters of 11 ft .

\subsection*{2.2 Regulatory Requirements}

The Lake Cogeneration Facility is required to conduct annual emissions tests for the following pollutants while operating at 90 to 100 percent of the heat input curve. Emission testing was conducted to determine the compliance status of the following pollutants:
- \(\mathrm{NO}_{\mathrm{x}}\) (demonstrated by CEMS Relative Accuracy Test Audit)
- CO in ppmvd and pounds per hour
- Visible Emissions in percent

In accordance with permit condition A.10, ongoing \(\mathrm{NO}_{x}\) compliance is determined by the Continuous Emissions Monitoring System (CEMS) located on the CT Unit 2 stack. The CEMS was also evaluated during the test program to determine monitoring accuracy.

Table 2 summarizes the applicable emissions and CEMS accuracy limits for the CT unit.

\footnotetext{
Lake Cogeneration Facility Compliance Test August 17, 2010
}

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Table 2: Summary of Emissions and CEMS Accuracy Limits
Lake Cogeneration Facility
Units 1 and 2
\begin{tabular}{|c|c|c|c|c|}
\hline Pollutant & Unit & \begin{tabular}{c} 
Control \\
Technology
\end{tabular} & \begin{tabular}{c} 
Emission Limit, \\
Performance \\
Specification
\end{tabular} & \begin{tabular}{c} 
Permit \\
Condition
\end{tabular} \\
\hline NOX Ib/mmBtu & CT \(1 \& 2\) & \begin{tabular}{c} 
Water \\
Injection
\end{tabular} & \begin{tabular}{c} 
RA \(\leq 7.5 \%\) of average \\
RM value or \(\pm 0.015\) \\
lb/mmBtu
\end{tabular} & Part 75 \\
\hline \begin{tabular}{c}
\(\mathrm{NO}_{\times}\)ppm @ 15\% \\
\(\mathrm{O}_{2}\)
\end{tabular} & CT \(1 \& 2\) & \begin{tabular}{c} 
Water \\
Injection
\end{tabular} & \begin{tabular}{c} 
RA \(\leq 20 \%\) of average \\
RM
\end{tabular} & A. 6 \\
\hline \(\mathrm{NO}_{\times}\) & DB \(1 \& 2\) & \begin{tabular}{c} 
Water \\
Injection
\end{tabular} & \begin{tabular}{c}
\(0.1 \mathrm{lb} / \mathrm{mmBtu}\), \\
\(18.0 \mathrm{lb} / \mathrm{hr}\)
\end{tabular} & A. 6 \\
\hline CO & CT \(1 \& 2\) & \begin{tabular}{c} 
Good \\
Combustion
\end{tabular} & \begin{tabular}{c}
\(\leq 28 \mathrm{ppmvd}, 56.0 \mathrm{lb} / \mathrm{hr}\) \\
\((\mathrm{CT})\) \\
\(92.0 \mathrm{lb} / \mathrm{hr}(\mathrm{CT} \& \mathrm{DB})\)
\end{tabular} & A. 6 \\
\hline CO & DB \(1 \& 2\) & \begin{tabular}{c} 
Good \\
Combustion
\end{tabular} & \begin{tabular}{c}
\(0.2 \mathrm{lb} / \mathrm{mmBtu}\), \\
\(36.0 \mathrm{lb} / \mathrm{hr}\)
\end{tabular} & A. 6 \\
\hline Visible Emissions & CT \(1 \& 2\) & \begin{tabular}{c} 
Good \\
Combustion
\end{tabular} & \(\leq 10 \%\) & A. 5 \\
\hline
\end{tabular}

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\section*{Lake Cogeneration Facility \\ Compliance Test
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\subsection*{4.0 Test Methods}

All testing was performed in accordance with methods approved by the USEPA and FDEP. The following discusses the methods, as well as quality assurance and sample handling procedures.

\subsection*{4.1 Instrument Analyzer Procedures}
\(\mathrm{NO}_{x}\) and CO reference method (RM) data was determined using instrument analyzer procedures. In addition, diluent gas concentrations of oxygen \(\left(\mathrm{O}_{2}\right)\) were also measured via instrumental methods.

NO \(\times\) RM data was determined using instrument analyzer procedures as well. NOx EPA Method 7E was used for a Relative Accuracy Test Audit (RATA) on the Unit 1 and 2 CEMS NOx analyzers.

Mathematical equations used to determine calculated emissions standards are located in Appendix B.

Table 3 summarizes the EPA methods and instrumentation:
Table 3: Summary of EPA Instrument Reference Methods Lake Cogeneration Facility

Units 1 and 2
\begin{tabular}{|c|c|c|c|c|}
\hline Pollutant & Unit & EPA Method & Instrument & Serial Number \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 1 & 7 E & TEl Model 42CHL & \(42 \mathrm{CHL}-59277-322\) \\
\hline \(\mathrm{O}_{2}\) & 1 & 3 A & Servomex 1440 & \(1420 \mathrm{D} / 3379\) \\
\hline CO & 1 & 10 & TEI Model 48C & \(48 \mathrm{C}-74094-375\) \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 2 & 7 E & TEl Model 42CHL & \(42 \mathrm{CHL}-74122-375\) \\
\hline \(\mathrm{O}_{2}\) & 2 & 3 A & Servomex 1440 & \(1420 \mathrm{C} / 2784\) \\
\hline CO & 2 & 10 & TEl Model 48C & \(48 \mathrm{C}-68844-361\) \\
\hline
\end{tabular}

All reference method analyzers used meet or exceed applicable performance specifications detailed in the appropriate method.

Gas samples were continuously extracted from the stack by a gas sample probe. Samples were then transported to a gas sample conditioner via a heated sample line operating at \(250^{\circ} \mathrm{F}\) or above. The gas sample conditioner lowers the dew point of the sample gas to approximately \(5^{\circ} \mathrm{C}\) through minimum interference heat exchangers. The dry, cool sample is then sent to the gas analyzers, located in the environmentally controlled test trailer for analysis by the reference method analyzers.
\begin{tabular}{lr} 
Lake Cogeneration Facility & Page 6 of 18 \\
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\end{tabular}
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Instrument outputs were recorded continuously with a Windows compatible personal computer, compiled into 15 second averages, and stored in a database for future reference

Instrument ranges and calibration gases were chosen in accordance with each pollutant's applicable EPA method. Instrument ranges and calibration gases used are shown in Table 4

Table 4: Reference Method Calibration Span and Calibration Gases Used Lake Cogeneration Facility

Units 1 and 2
\begin{tabular}{|c|c|c|c|}
\hline Pollutant & Test Location & Calibration Span & \begin{tabular}{c} 
Calibration \\
Gases
\end{tabular} \\
\hline \multirow{2}{*}{\(\mathrm{NO}_{\mathrm{x}}\)} & Units \(1 \& 2\) & 45.64 ppm & \begin{tabular}{r}
0.0 ppm NO \\
19.82 ppm NO \\
45.64 ppm NO
\end{tabular} \\
\hline \multirow{2}{*}{\(\mathrm{O}_{2}\)} & & & \begin{tabular}{r}
\(0.0 \% \mathrm{O}_{2}\) \\
\end{tabular} \\
& Units \(1 \& 2\) & \(20.44 \%\) & \begin{tabular}{r}
\(10.34 \% \mathrm{O}_{2}\) \\
\(20.44 \% \mathrm{O}_{2}\)
\end{tabular} \\
\hline \multirow{2}{*}{CO} & Units \(1 \& 2\) & 45.55 ppm & \begin{tabular}{r}
0.0 ppm CO \\
19.81 ppm CO \\
45.55 ppm CO
\end{tabular} \\
\hline
\end{tabular}

Concentrations of NO CO and \(\mathrm{O}_{2}\) are in a balance of purified nitrogen ( \(\mathrm{N}_{2}\) ). All analyzers were zeroed with ultra high purity \(\mathrm{N}_{2}\). All calibration gases have been certified to NIST traceable standards.

Calibration gas Certificates of Analysis can be found in Appendix C

\subsection*{4.1.1 Sampling Location/Traverse Points/Test Run Duration}

Units 1and 2 exhaust stack inner diameter, at the sample location, is 11 feet (132 inches). The emissions sampling location on Units 1 and 2 is 45 feet downstream from the nearest flow disturbance and 11 feet from the stack exhaust. A diagram of the sample location can be viewed in Appendix C.

A 12 point gaseous stratification test was completed during Run 1 of the RATA test. It was conducted in accordance with 40CFR, Part 75, Appendix A, Section 6.5.6.1. The points were located at \(4.4 \% ~\left(5.8^{\prime \prime}\right), 14.6 \%\) ( \(19.3^{\prime \prime}\) ) and \(29.6 \%\) ( \(39.1^{\prime \prime}\) ) of the inner stack diameter and were sampled from 4 ports. Traverse test results are located in Appendix D.

Units 1 and 2 both meet the single sample point criteria and a single reference method measurement point was used during the remainder of the test program The sample location was no less than 1.0 meter from the stack wall along one of
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the measurement lines used in the stratification test in accordance with 40CFR, Part 75, Appendix A, Section 6.5.6(b)(4).

Run 1 (stratification test run) was 37 minutes in duration. Runs 2 through 9 were 21 minutes in duration. Three (3) test runs were conducted with the duct burners on. These runs were 1 hour in duration

\subsection*{4.1.2 Quality Assurance/Quality Control Procedures}

All sampling, analytical, and Quality Assurance/Quality Control (QA/QC) procedures outlined in the EPA methods were followed. All test equipment was calibrated before or during use in the field. Interference checks, response time checks, and \(\mathrm{NO}_{2}\) to NO converter checks were performed on each instrumenta analyzer, as applicable, before field use. In the field, each analyzer and the entire instrument measurement system was checked for system bias before and following each test run using the calibration gases listed in Table 4.

Appendix E contains the QA/QC checks.

\subsection*{4.2 Determination of Visible Emissions}

USEPA Method 9 was utilized to determine visible emissions.
Visible emissions observations were performed by a FDEP certified visible emissions reader. Readings were taken at 15 second intervals and reduced into six minute averages as required by the applicable EPA standard. One-sixty minute visible emissions run was performed as required in permit condition A. 13 while the unit was operating at. maximum capacity.

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\subsection*{5.0 Test Results}

The test program results are presented below. The CT Unit 1 and \(2 \mathrm{NO}_{x}\) CEMS RATAs are summarized in Tables 5 through 7 and tables 9 through 11. Tables 8 and 12 summarize the compliance test results for \(\mathrm{NO}_{x}, \mathrm{CO}\) and Visible Emissions. Supporting RM CO and NOx field data, fuel analysis reports, and calculated values are presented in Appendix F. The RATA CEMS data is located in Appendix A
5.1 Unit 1 (EU-003)
5.1.1 Nitrogen Oxides ( \(\mathrm{NO}_{\mathrm{x}}\) )

The difference between the Unit \(1 \mathrm{NO}_{\mathrm{x}} \mathrm{Ib} / \mathrm{mmBtu}\) CEMS and the Reference method was \(0.006 \mathrm{lb} / \mathrm{mmbtu}\), passing the Part 75 alternative annual performance method was \(0.006 \mathrm{lb} / \mathrm{mmbtu}\), passing the Part 75 alternative annual performand test. A BAF of 1.000 has been assigned to the Unit 1 NOx lb/mmBtu CEMS.

The Unit \(1 \mathrm{NO}_{\mathrm{x}} \mathrm{ppm}\) @ \(15 \% \mathrm{O}_{2}\) CEMS relative accuracy was \(8.3 \%\) passing the Part 60 annual performance specification of \(\leq 20.0 \%\) RA.

The three-run average \(\mathrm{NO}_{\mathrm{x}}\) emission for the duct burner was calculated to be 0.4 \(\mathrm{lb} / \mathrm{hr}\) and \(0.009 \mathrm{lb} / \mathrm{mmBtu}\), passing the \(18.0 \mathrm{lb} / \mathrm{hr}\) and \(0.100 \mathrm{lb} / \mathrm{mmB}\) tu permit limitation
5.1.2 Carbon Monoxide (CO)

The average of the three (3) carbon monoxide (CO) test runs on Unit 1 while the duct burners were OFF was 18.7 ppmvd, passing the permit limitation of 28 ppmvd. The average \(\mathrm{CO} \mathrm{lb} / \mathrm{hr}\) during duct burner OFF operation was \(17.4 \mathrm{lb} / \mathrm{hr}\), passing the permit limitation of \(56.0 \mathrm{lb} / \mathrm{hr}\).

The average \(\mathrm{CO} \mathrm{lb} / \mathrm{hr}\) during duct burner ON operation was \(15.8 \mathrm{lb} / \mathrm{hr}\), passing the permit limitation of \(92.0 \mathrm{lb} / \mathrm{hr}\).

The three-run average CO emission for the Unit 1 duct burner was calculated to be \(0.0 \mathrm{lb} / \mathrm{hr}\) and \(0.000 \mathrm{lb} / \mathrm{mmBtu}\), passing the \(36.0 \mathrm{lb} / \mathrm{hr}\) and \(0.200 \mathrm{lb} / \mathrm{mmBtu}\) permit limitation.
5.1.3 Visible Emissions

The highest visible emissions observed in any six-minute average on Unit 1 during the 60 minute test runs conducted during duct burner on and duct burner off operation was \(0.0 \%\), passing the \(10 \%\) emission limitation.
\begin{tabular}{lrr} 
Lake Cogeneration Facility & Page 9 of 18 & \begin{tabular}{r} 
C.E.M. Solutions, Inc.
\end{tabular} \\
Compliance Test & & \begin{tabular}{rl} 
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\end{tabular}
\end{tabular}

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\subsection*{5.2 Unit 2 (EU-004)}

\subsection*{5.2.1 Nitrogen Oxides \(\left(\mathrm{NO}_{\mathrm{x}}\right)\)}

The difference between the Unit \(2 \mathrm{NO}_{x} \mathrm{lb} / \mathrm{mmBtu}\) CEMS and the Reference method was \(0.006 \mathrm{lb} / \mathrm{mmbtu}\), passing the Part 75 alternative annual performance specification of \(\leq 0.015 \mathrm{lb} / \mathrm{mmbtu}\). Unit \(2 \mathrm{NO}_{x}\)-diluent CEMS passed the BAF test. A BAF of 1.000 has been assigned to the Unit 2 NOx \(16 / m m B t u\) CEMS

The Unit \(2 \mathrm{NO}_{\times} \mathrm{ppm}\) @ \(15 \% \mathrm{O}_{2}\) CEMS relative accuracy was \(7.8 \%\) passing the Part 60 annual performance specification of \(\leq 20.0 \%\) RA.

The three-run average \(\mathrm{NO}_{x}\) emission for the duct burner was calculated to be 0.5 \(\mathrm{lb} / \mathrm{hr}\) and \(0.010 \mathrm{lb} / \mathrm{mmBtu}\), passing the \(18.0 \mathrm{lb} / \mathrm{hr}\) and \(0.100 \mathrm{lb} / \mathrm{mmBtu}\) permit limitation.

\subsection*{5.2.2 Carbon Monoxide (CO)}

The average of the three (3) carbon monoxide ( CO ) test runs on Unit 2 while the duct burners were OFF was 5.9 ppmvd, passing the permit limitation of 28 ppmvd. The average CO lb/hr during duct burner OFF operation was \(5.4 \mathrm{lb} / \mathrm{hr}\) passing the permit limitation of \(56.0 \mathrm{lb} / \mathrm{hr}\).

The average \(\mathrm{CO} \mathrm{lb} / \mathrm{hr}\) during duct burner ON operation was \(6.3 \mathrm{lb} / \mathrm{hr}\), passing the permit limitation of \(92.0 \mathrm{lb} / \mathrm{hr}\).

The three-run average CO emission for the Unit 2 duct burner was calculated to be \(1.0 \mathrm{lb} / \mathrm{hr}\) and \(0.019 \mathrm{lb} / \mathrm{mmB}\) tu, passing the \(36.0 \mathrm{lb} / \mathrm{hr}\) and \(0.200 \mathrm{lb} / \mathrm{mmBtu}\) permit limitation.
5.2.3 Visible Emissions

The highest visible emissions observed in any six-minute average on Unit 2 during the 60 minute test runs conducted during duct burner on and duct burner off operation was \(0.0 \%\), passing the \(10 \%\) emission limitation.
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Table 5: Unit \(1 \mathrm{NO}_{\mathrm{x}}\) lbs/mmBtu Relative Accuracy Test Audit Summary
Lake Cogeneration Facility
Relative Accuracy Determination
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline \multicolumn{6}{|l|}{Test Performed For Caithness} & \multicolumn{2}{|l|}{Test Performed By: C.E.M. Solutions, Inc.} \\
\hline \multicolumn{6}{|l|}{Lake Cogeneration Facility} & \multicolumn{2}{|l|}{183 E . Onerdrive Cicrle} \\
\hline \multicolumn{6}{|l|}{Unit 1} & \multicolumn{2}{|l|}{Hernando, FL 34442} \\
\hline \multicolumn{6}{|l|}{Rata} & \multicolumn{2}{|l|}{h: 352-489-4337} \\
\hline \multicolumn{8}{|l|}{Date:817/10} \\
\hline \multirow[t]{2}{*}{\[
\begin{gathered}
\text { Run } \\
\text { Number }
\end{gathered}
\]} & \multirow[t]{2}{*}{Date of Run} & \multirow[t]{2}{*}{Start Time} & \multirow[t]{2}{*}{\begin{tabular}{l}
Stop \\
Time
\end{tabular}} & \multirow[t]{2}{*}{Unit Load MW} & \multirow[t]{2}{*}{\[
\begin{gathered}
\mathrm{NO}_{\mathrm{x}}^{\mathrm{RM}} \mathrm{l} \\
\text { lbs/mmBtion }
\end{gathered}
\]} & \multirow[t]{2}{*}{\[
\begin{gathered}
\text { CEM } \\
\text { |bs/mmBtu }
\end{gathered}
\]} & Difference \\
\hline & & & & & & & Like libs/mmetu - \\
\hline Run 1 & 17-Aug & 6:13:00 & 6:50:00 & 48 & 0.080 & 0.085 & \({ }^{-0.005}\) \\
\hline Run 2 & 17-Aug & 7:36:00 & 7:57:00 & 48 & 0.084 & 0.088 & -0.004 \\
\hline Run 3 & 17-Aug & 8:13:00 & 8:34:00 & 48 & 0.082 & 0.088 & -0.006 \\
\hline Run 4 & 17-Aug & 8:50:00 & 9:11:00 & 48 & 0.082 & 0.088 & -0.006 \\
\hline Run 5 & 17.Aug & 9:27:00 & 9:48:00 & 48 & 0.082 & 0.088 & 0.006 \\
\hline Run 6 & 17-Aug & 10:04:00 & 10:25:00 & 48 & 0.081 & 0.088 & -0.007 \\
\hline Run 7 & 17-Aug & 10:41:00 & 11:02:00 & 48 & 0.081 & 0.088 & 0.007 \\
\hline Run 8 & 17-Aug & 11:18:00 & 11:39:00 & 48 & 0.081 & 0.088 & -0.007 \\
\hline Run 9 & 17-Aug & 11:55:00 & 12:16:00 & 48 & 0.082 & 0.088 & 0.006 \\
\hline \multicolumn{4}{|c|}{Average:} & 48 & 0.082 & 0.088 & -0.006 los/mmetu \\
\hline \multicolumn{5}{|c|}{Blas Test (passfail): Passed} & \multicolumn{2}{|r|}{Standard Deviation:} & 0.0010 \\
\hline \multicolumn{5}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{l}
Blas Adjustment Factor: 1.000 \\
Method of RA Determination: Part 75, Low Enitter
\end{tabular}}} & \multicolumn{2}{|r|}{Confidence Coefficient.} & 0.0008 \\
\hline & & & & & \multicolumn{2}{|r|}{\multirow[t]{2}{*}{Number of runs Reported:}} & 2.306 \\
\hline \multicolumn{5}{|l|}{Method of RA Detarmination: Part 75, Low Emitter} & & & 9 \\
\hline \multicolumn{5}{|l|}{Note:} & \multicolumn{2}{|r|}{Relative Accuracy:} & 0.006 \\
\hline \multicolumn{5}{|l|}{All ppm values are corrected to ibs/mmBtu \(\mathrm{NO}_{x}\)} & \multicolumn{2}{|r|}{Maximum RA} & 0.02 \\
\hline \multicolumn{5}{|l|}{using RM 02 and CEM O 2 as diluents} & & RA Status & Passod \\
\hline
\end{tabular}
using RM 02 and CEM O 2 as diluents

Maximum RA RA Statu

\subsection*{0.02} Pass

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\section*{Table 6: Unit 1 NO \(\mathbf{N O}_{\mathrm{x}}\) ppm @ \(15 \% \mathrm{O}_{\mathbf{2}}\) Relative Accuracy Test Audit Summary}

\section*{Relative Accuracy Determination}
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline \multicolumn{6}{|l|}{Test Perforned For.} & \multicolumn{2}{|l|}{Test Performed By:} \\
\hline \multicolumn{6}{|l|}{\multirow[t]{2}{*}{Cathness Lake Cogeneration Facility}} & & \\
\hline & & & & & & 1183 E . Overrtive Cicte & cirle \\
\hline \multicolumn{6}{|l|}{Unit 1 )} & \multicolumn{2}{|l|}{Hemando. FL 34442} \\
\hline \multicolumn{6}{|l|}{Rata} & \multicolumn{2}{|l|}{Ph: 352-489-4337} \\
\hline \multicolumn{8}{|l|}{Date:817/10} \\
\hline \multirow[t]{2}{*}{\[
\begin{gathered}
\text { Run } \\
\text { Number }
\end{gathered}
\]} & \multirow[t]{2}{*}{Date of Run} & \multirow[t]{2}{*}{\[
\begin{aligned}
& \text { Slart } \\
& \text { Time }
\end{aligned}
\]} & \multirow[t]{2}{*}{\[
\begin{aligned}
& \text { Stop } \\
& \text { Time }
\end{aligned}
\]} & \multirow[t]{2}{*}{Unit Load MW} & \multirow[t]{2}{*}{\[
\begin{aligned}
& \mathrm{NO}_{x} \mathrm{RM} \text { (Dyy) } \\
& \text { ppm@15\% O2 }
\end{aligned}
\]} & \multirow[t]{2}{*}{\(\mathrm{NO}_{\mathrm{x}} \mathrm{CEM}\) (Dy) pome15\% 02} & \multirow[t]{2}{*}{Difference ppm@15\% O2} \\
\hline & & & & & & & \\
\hline Run 1 & 17-Aug & 6:13:00 & 6:50:00 & 48 & 21.8 & 23.0 & -1.2 \\
\hline Run 2 & 17-Aug & 7:36:00 & 7:57:00 & 48 & 22.7 & 24.0 & -1.3 \\
\hline Run 3 & 17-Aug & 8:13:00 \({ }^{\text {² }}\) & 8:34:00 & 48 & 22.3 & 24.0 & -1.7 \\
\hline Run 4 & 17.Aug & 8:50:00 & 9:11:00 & 48 & 22.2 & 24.0 & -1.8 \\
\hline Run 5 & 17-Aug & 9:27:00 & 9:48:00 & 48 & 22.3 & 24.0 & -1.7 \\
\hline Run 6 & 17-Aug & 10:04:00 & 10:25:00 & 48 & 22.1 & 24.0 & -1.9 \\
\hline Run 7 & 17-Aug & 10:41:00 & 11:02:00 & 48 & 22.1 & 24.0 & -1.9 \\
\hline Run 8 & 17-Aug & 11:18:00 & 11:39:00 & 48 & 22.1 & 24.0 & -1.8 \\
\hline Run 9 & 17-Aug & 11:55:00 & 12:16:00 & 48 & 22.3 & 24.0 & -1.7 \\
\hline & & Average: & & 48 & 22.2 & 23.9 & -1.6 ppm \\
\hline & & & & & & Standard Deviation: & 0.2461 \\
\hline & & & & & & idence Coefficient: & 0.1892 \\
\hline Mathod of & RA Dotarm & mination: & Average R & Rm value & & T-Factor: & 2.306 \\
\hline & & & & & Number & of runs Reported: & - \\
\hline & & & & & & pplicable Standard: & 0.0 ppm \\
\hline Note: & & & & & & lative Accuracy: & 8.3\% \\
\hline All ppm velues & are corec & cled to \(15 \%\) & 02 & & & Maximum RA & 20.0\% \\
\hline using RM O2 & nd CEM & O as dilue & & & & RA Status & Passed \\
\hline
\end{tabular}

Table 7: Unit \(1 \mathrm{O}_{\mathbf{2}}\) Relative Accuracy Test Audit Summary

\section*{Relative Accuracy Determination}
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline \multicolumn{6}{|l|}{\multirow[t]{2}{*}{Test Performed For.}} & \multicolumn{2}{|l|}{Test Perromed By:} \\
\hline & & & & & \multicolumn{3}{|l|}{Caithness C.E.M. Solutions, Inc.} \\
\hline \multicolumn{8}{|l|}{Lake Cogeneration Facility \(\quad 1183 \mathrm{E}\). Overdive Circle} \\
\hline \multicolumn{8}{|l|}{\multirow[t]{2}{*}{\(\begin{array}{ll}\text { Unit } 1 & \text { Hernando. FL } 34442 \\ \text { RATA }\end{array}\)}} \\
\hline & & & & & & & \\
\hline \multicolumn{8}{|l|}{Date:8/17/10} \\
\hline \multirow[t]{2}{*}{Run Number} & \multirow[t]{2}{*}{Date of Run} & \multirow[t]{2}{*}{Start Time} & \multirow[t]{2}{*}{Stop} & \multirow[t]{2}{*}{Unit Load} & \multirow[t]{2}{*}{\[
\begin{gathered}
\mathrm{O} 2 \mathrm{RM} \\
\mathrm{DRY} \% \mathrm{VN}
\end{gathered}
\]} & \(\mathrm{O}_{2}\) CEM & \(\mathrm{O}_{2}\) Difference \\
\hline & & & & & & DRY \% vN & Like \% VN \\
\hline Run 1 & 17-Aug & 6:13:00 & 6:50:00 & 48 & 14.1 & 14.2 & 0.1 \\
\hline Run 2 & 17-Aug & 7:36:00 & 7:57:00 & 48 & 14.2 & 14.3 & -0. 1 \\
\hline Run 3 & 17-Aug & 8:13:00 & 8:34:00 & 48 & 14.2 & 14.3 & -0.1 \\
\hline Run 4 & 17-Aug & 8:50:00 & 9:11:00 & 48 & 14.2 & 14.3 & -0.1 \\
\hline Run 5 & 17-Aug & 9:27:00 & 9:48:00 & 48 & 14.2 & 14.3 & -0.1 \\
\hline Run 6 & 17-Aug & 10:04:00 & 10:25:00 & 48 & 14.2 & 14.3 & -0.1 \\
\hline Run 7 & 17-Aug & 10:41:00 & 11:02:00 & 48 & 14.2 & 14.3 & -0.1 \\
\hline Run 8 & 17-Aug & 11:18:00 & 11:39:00 & 48 & 14.2 & 14.3 & -0.1 \\
\hline Run 9 & 17-Aug & 11:55:00 & 12:16:00 & 48 & 14.2 & 14.3 & 0.1 \\
\hline \multicolumn{4}{|c|}{Average:} & 48 & 14.2\% & 14.3\% & -0.1\% \\
\hline \multicolumn{8}{|r|}{Stardard Deviation: 0.0205} \\
\hline & & & & & & ence Coefficient: & 0.0157 \\
\hline \multicolumn{6}{|l|}{\multirow[t]{2}{*}{Method of RA Determination: Part 75, 1\% Volume Diffrence \({ }^{\text {Nuriber }}\)}} & T-Factor: & 2.306 \\
\hline & & & & & & of runs Reported: & 9 \\
\hline \multicolumn{8}{|r|}{Relative Accuracy:
Maximum Ra} \\
\hline \multicolumn{8}{|r|}{RA Status Passod} \\
\hline
\end{tabular}
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Table 8: Unit 1 Compliance Test Results Summary
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Table 10: Unit \(2 \mathrm{NO}_{\mathbf{x}}\) ppm @ 15\% \(\mathrm{O}_{2}\) Relative Accuracy Test Audit
Summary
Relative Accuracy Determination
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline \multicolumn{6}{|l|}{Test Pertormed For. Caithness} & \multicolumn{2}{|l|}{Test Pertormed By: C.E.M. Solutions, Inc.} \\
\hline \multicolumn{6}{|l|}{Lake Cogeneration Facilily} & \multicolumn{2}{|l|}{1183 E . Overntive Circle} \\
\hline \multicolumn{6}{|l|}{Uni 2} & \multicolumn{2}{|l|}{Hemando. FL 34442} \\
\hline \multicolumn{8}{|l|}{\multirow[t]{2}{*}{RATA
Date: 8171710}} \\
\hline & & & & & & & \\
\hline \multirow[t]{2}{*}{Run Number} & \multirow[t]{2}{*}{Date of Run} & \multirow[t]{2}{*}{\begin{tabular}{l}
Start \\
Time
\end{tabular}} & \multirow[t]{2}{*}{\begin{tabular}{l}
Stop \\
Time
\end{tabular}} & \multirow[t]{2}{*}{Unit Load MW} & \multirow[t]{2}{*}{\[
\begin{aligned}
& \mathrm{NO}_{\mathrm{x}} \mathrm{RM}(\mathrm{Dry}) \\
& \text { Ppm@15\% O2 }
\end{aligned}
\]} & \multirow[t]{2}{*}{\(\mathrm{NO}_{x}\) CEM (Dy) ppm@15\% 02} & \multirow[t]{2}{*}{Difference ppm@15\% O2} \\
\hline & & & & & & & \\
\hline Run 1 & 17-Aug & 6:13:00 & 6:50:00 & 49 & 22.3 & 23.0 & -0.7 \\
\hline Run 2 & 17-Aug & 7:36:00 & 7:57:00 & 49 & 22.1 & 23.5 & -1.4 \\
\hline Run 3 & 17-Aug & 8:13:00 & 8:34:00 & 49 & 22.0 & 23.5 & -1.5 \\
\hline Run 4 & 17-Aug & 8:50:00 & 9:11:00 & 49 & 21.9 & 23.5 & -1.6 \\
\hline Run 5 & 17-Aug & 9:27:00 & 9:48:00 & 49 & 22.0 & 23.5 & -1.5 \\
\hline Run 6 & 17-Aug & 10:04:00 & 10:25:00 & 49 & 21.8 & 23.5 & -1.7 \\
\hline Run 7 & 17-Aug & 10:41:00 & 11:02:00 & 49 & 21.9 & 23.5 & -1.6 \\
\hline Run 8 & 17-Aug & 11:18:00 & 11:39:00 & 49 & 21.7 & 23.5 & -1.8 \\
\hline \multirow[t]{2}{*}{Run 9} & 17-Aug & 11:55:00 & 12:16:00 & 49 & 21.9 & 23.5 & -1.6 \\
\hline & \multicolumn{3}{|c|}{Average:} & 49 & 22.0 & 23.4 & -1.5 ppm \\
\hline & & & & & & Standard Deviation: & 0.3103 \\
\hline \multicolumn{5}{|l|}{} & \multicolumn{2}{|r|}{Confidence Coefficient:} & 0.2385 \\
\hline \multicolumn{5}{|l|}{Method of RA Determination: Average RM Value} & & T-Factor. & 2.308 \\
\hline & & & & & \multicolumn{2}{|r|}{Number of uns Reported:} & 吅 \\
\hline \multicolumn{5}{|l|}{\multirow[t]{2}{*}{Note:}} & \multicolumn{2}{|r|}{Applicable Standars:} & 0.0 ppm \\
\hline & & & & & \multicolumn{2}{|r|}{Relative Accuracy:} & 7.8\% \\
\hline \multicolumn{5}{|l|}{} & \multicolumn{2}{|r|}{Maximum RA} & 20.0\% \\
\hline \multicolumn{5}{|l|}{All ppm values are corrected to \(15 \%\) O2 using RM O2 and CEM O2 as diluents} & & RA Status & Passad \\
\hline
\end{tabular}

Table 11: Unit \(2 \mathrm{O}_{\mathbf{2}}\) Relative Accuracy Test Audit Summary
Relative Accuracy Determination
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline \multicolumn{6}{|l|}{Test Performed For.} & \multicolumn{2}{|l|}{Test Pertormed By:} \\
\hline Caithness & & & & & & E.M. Solutions. & \\
\hline \multicolumn{6}{|l|}{Lake Cogeneration Facility.} & \multicolumn{2}{|l|}{1183 E. Overdive Circte} \\
\hline \multicolumn{6}{|l|}{Unit 2} & \multicolumn{2}{|l|}{Hemando, FL 34442} \\
\hline \multicolumn{6}{|l|}{Rata} & \multicolumn{2}{|l|}{Ph: 352-489-4337} \\
\hline \multicolumn{8}{|l|}{Date:8/17/10} \\
\hline \multirow[t]{2}{*}{Run
Number} & \multirow[t]{2}{*}{Date of Run} & \multirow[t]{2}{*}{\begin{tabular}{l}
Start \\
Time
\end{tabular}} & \multirow[t]{2}{*}{\[
\begin{aligned}
& \text { Stop } \\
& \text { Time }
\end{aligned}
\]} & \multirow[t]{2}{*}{\begin{tabular}{l}
Unit Load \\
MW
\end{tabular}} & \multirow[t]{2}{*}{\[
\begin{gathered}
\mathrm{O} 2 \mathrm{RM} \\
\text { DRY \% VN }
\end{gathered}
\]} & \multirow[t]{2}{*}{\[
\begin{gathered}
\mathrm{O}_{2} \text { CEM } \\
\text { DRY } \% \mathrm{VN}
\end{gathered}
\]} & \(\mathrm{O}_{2}\) Difference \\
\hline & & & & & & & Like \% VN \\
\hline Run 1 & 17-Aug & 6:13:00 & 6:50:00 & 49 & 14.0 & 14.1 & -0.1 \\
\hline Run 2 & 17-Aug & 7:36:00 & 7:57:00 & 49 & 14.0 & 14.1 & -0.1 \\
\hline Run 3 & 17-Aug & 8:13:00 & 8:34:00 & 49 & 14.0 & 14.1 & -0.1 \\
\hline Run 4 & 17-Aug & 8:50:00 & 9:11:00 & 49 & 14.0 & 14.1 & -0.1 \\
\hline Run 5 & 17-Aug & 9:27:00 & 9:48:00 & 49 & 14.0 & 14.1 & -0.1 \\
\hline Run 6 & 17.Aug & 10:04:00 & 10:25:00 & 49 & 14.0 & 14.1 & -0.1 \\
\hline Run 7 & 17-Aug & 10:41:00 & 11:02:00 & 49 & 14.0 & 14.1 & -0.1 \\
\hline Run 8 & 17-Aug & 11:18:00 & 11:39:00 & 49 & 14.0 & 14.1 & -0.1 \\
\hline Run 9 & 17-Aug & 11:55:00 & 12:16:00 & 49 & 14.0 & 14.1 & -0.1 \\
\hline \multicolumn{4}{|c|}{Average:} & 49 & 14.0\% & 14.1\% & 0.1\% \\
\hline \multicolumn{8}{|r|}{Slandard Deviation: 0.0130} \\
\hline & & & & & & ence Coefficient: & 0.0100 \\
\hline \multicolumn{6}{|l|}{} & \multicolumn{2}{|l|}{Method of RA Detormination: Pari 75, 1\% Volume Difference \(\quad\) T-Faclor: \({ }^{2.306}\)} \\
\hline & & & & & Numb & funs Reported: & 9 \\
\hline \multicolumn{8}{|r|}{\multirow[t]{2}{*}{\(\begin{array}{cc}\text { Relativg Accuracy: } & 0.1 \\ \text { Maximum RA } & 1.0\end{array}\)}} \\
\hline & & & & & & & \\
\hline \multicolumn{8}{|r|}{RA Status Passod} \\
\hline
\end{tabular}

\footnotetext{
ake Cogeneration Facility Compliance Test
August 17, 2010
}
C.E.M. Solutions, Inc Report: 20-4237-0102-00 Last Updated: 09/08/2010

Table 12: Unit 2 Compliance Test Results Summary Lake Cogeneration Facility


CeDAR 1-Minute Data
LAKE COGEN
Data for 8/17/2010 6:13 AM thru 8/17/2010 6:50 AM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 1) } \\
\text { 75-NOx ppm } \\
\text { 1-Min }
\end{gathered}
\] & (Turbire 1) NOX ppm © \(15 \% \mathrm{O}\) 1-Min & \[
\begin{gathered}
\text { (Tubine 1) } \\
75 \text {-Nox } \\
\text { (b/mm8tu 1-Miln }
\end{gathered}
\] & (Turbine 1) 75-02\% 1-MAin & (Turbine 1) CT Gas Flow sci/min 1-Min & (Turbine 1) DB Gas Flow kssefhr 1-Min & \begin{tabular}{l}
(Turbine 1) \\
Sorint Flow \\
gal/min 1-Min
\end{tabular} & (Turbine 1) Watar Injection -1-Min galmin & (Turbine 1) CT Megawatts 1-Min \\
\hline 8/17 6:13 & 25.97 & 22.94 & 0.0845 & 14.22 & 7698 & \(0.00<133\) & 17.38 & 43.68 & 47.8 \\
\hline 8/17 6:14 & 26.08 & 23.03 & 0.0849 & 14.22 & 7885 & \(0.00<13>\) & 17.38 & 43.59 & 47.8 \\
\hline 8/17 6:15 & 26.08 & 22.98 & 0.0847 & 14.21 & 7885 & \(0.00<13>\) & 17.38 & 43.46 & 47.8 \\
\hline 8/17 6:16 & 28.21 & 23.11 & 0.0852 & 14.21 & 7688 & \(0.00<13>\) & 17.38 & 43.61 & 47.8 \\
\hline 8/17 6:17 & 26.10 & 22.95 & 0.0845 & 14.10 & 7691 & \(0.00<13>\) & 17.39 & 43.88 & 47.9 . \\
\hline 8/17 6:98 & 25.88 & 22.76 & 0.0838 & 14.19 & 7697 & \(0.00<13>\) & 17.36 & 43.77 & 47.9 \\
\hline 8/17 8:19 & 25.90 & 22.84 & 0.0841 & 14.21 & 7700 & \(0.00<13>\) & 17.38 & 43.80 & 47.9 \\
\hline 8/17 6:20 & 25.98 & 22.91 & 0.0844 & 14.21 & 7889 & \(0.00<13>\) & 17.38 & 43.50 & 47.9 \\
\hline 8/17 6:21 & 26.21 & 23.18 & 0.0854 & 14.23 & 7682 & \(0.00<13>\) & 17.37 & 43.40 & 47.9 \\
\hline 8/17 8:22 & 28.38 & 23.37 & 0.0861 & 14.24 & 7690 & \(0.00<13>\) & 17.38 & 43.68 & 47.9 \\
\hline 8/17 6:23 & 26.22 & 23.19 & 0.0854 & 14.23 & 7696 & \(0.00<13>\) & 17.40 & 43.89 & 47.9 \\
\hline 8/17 8:24 & 25.88 & 22.82 & 0.0841 & 14.21 & 7696 & \(0.00<13>\) & 17.38 & 43.72 & 47.9 \\
\hline 8/17 6:26 & 26.04 & 22.97 & 0.0848 & 14.21 & 7702 & \(0.00<13>\) & 17.37 & 43.89 & 47.9 \\
\hline 8/17 6:26 & 25.87 & 22.78 & 0.0839 & 14.20 & 7701 & \(0.00<13>\) & 17.38 & 43.69 & 47.9 \\
\hline 8/17 6:27 & 25.94 & 22.84 & 0.0842 & 14.20 & 7694 & 0.00<13> & 17.39 & 43.63 & 47.8 \\
\hline 8/17 6:28 & 26.14 & 22.98 & 0.0847 & 14.19 & 7687 & \(0.00<13>\) & 17.38 & 43.53 & 47.9 \\
\hline 8/17 6:29 & 28.21 & 23.11 & 0.0852 & 14.21 & 7686 & \(0.00<13>\) & 17.38 & 43.84 & 47.9 \\
\hline 8177 6:30 & 26.09 & 23.01 & 0.0848 & 14.21 & 7691 & \(0.00<13>\) & 17.39 & 43.80 & 47.9 \\
\hline 8/17 6:31 & 26.07 & 22.99 & 0.0847 & 14.21 & 7687 & \(0.00<13>\) & 17.36 & 43.74 & 47.9 \\
\hline 8/17 6:32 & 26.08 & 23.07 & 0.0850 & 14.23 & 7680 & \(0.00<13>\) & 17.41 & 43.73 & 47.8 \\
\hline 8/17 8:33 & 26.10 & 23.08 & 0.0851 & 14.23 & 7691 & \(0.00<13>\) & 17.37 & 43.84 & 47.8 \\
\hline 8/176:34 & 26.00 & 22.96 & 0.0848 & 14.22 & 7892 & \(0.00<13>\) & 17.37 & 43.81 & 47.9 \\
\hline 8/17 6:35 & 28.04 & 22.93 & 0.0845 & 14.20 & 7696 & \(0.00<13>\) & 17.43 & 43.81 & 48.0 \\
\hline 8/17 8:38 & 28.03 & 22.92 & 0.0844 & 14.20 & 7684 & \(0.00<13>\) & 17.39 & 43.75 & 47.9 \\
\hline 8/17 6:37 & 26.02 & 22.88 & 0.0843 & 14.19 & 7688 & \(0.00<13>\) & 17.37 & 43.58 & 47.9 \\
\hline 8/17 6:38 & 26.19 & 23.03 & 0.0848 & 14.18 & 7691 & \(0.00<13>\) & 17.40 & 43.71 & 47.9 \\
\hline 8/17 6:39 & 28.07 & 22.98 & 0.0846 & 14.20 & 7696 & \(0.00<13>{ }^{\text {' }}\) & 17.40 & 43.64 & 47.9 \\
\hline 8/17 6:40 & 28.11 & 22.99 & 0.0847 & 14.20 & 7691 & \(0.00<13>\) & 17.38 & 43.61 & 47.9 \\
\hline 8/17 6:41 & 26.15 & 23.10 & 0.0861 & 14.22 & 7686 & \(0.00<13>\) & 17.35 & 43.63 & 47.9 \\
\hline 8/17 0:42 & 28.16 & 23.14 & 0.0852 & 14.23 & 7684 & \(0.00<13>\) & 17.41 & 43.63 & 47.9 \\
\hline 8/17 6:43 & 26.18 & 23.11 & 0.0851 & 14.22 & 7687 & \(0.00<13>\) & 17.42 & 43.82 & 47.9 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine I) } \\
\text { 75-NOXppm } \\
\text { 1-Min } \\
\hline
\end{gathered}
\] & (Turtime 1) NOxpm (315\% 02 1-Min & (Turbine 1) 75-NOX iblmmetu 1-Min & \begin{tabular}{l}
(Turbine 1) \\
75-02\% 9-4in
\end{tabular} & (Turbine 1) CT Ges Flow sexfmin 1-Min & (Turbine 1) DB Gas Flow kschihr 1-Min & (Turbine 1) Sprint Flow galronin 1-Min & (Turbine 1) Water injactlon \(-1-\mathrm{Miln}\) gal/min & (Turbine 1) CT Megawats 1-Min \\
\hline 8/17 8:44 & 26.08 & 23.00 & 0.0847 & 14.21 & 7685 & \(0.00<13\) > & 17.40 & 43.70 & 47.9 \\
\hline 8/17 6:45 & 28.08 & 22.97 & 0.0846 & 14.20 & T688 & \(0.00<13>\) & 17.40 & 44.03 & 47.9 \\
\hline 8/17 6:46 & 25.85 & 22.78 & 0.0838 & 14.20 & 7688 & \(0.00<13>\) & 17.41 & 43.78 & 47.9 \\
\hline 8117 6:47 & 26.01 & 22.90 & 0.0844 & 14.20 & 7682 & \(0.00<13>\) & 17.40 & 43.63 & 47.9 \\
\hline 8/17 6:48 & 26.10 & 23.02 & 0.0848 & 14.21 & 7677 & \(0.00<132\) & 17.38 & 43.61 & 47.9 \\
\hline 8117 6:49 & 28.27 & 23.20 & 0.0855 & 14.22 & 7683 & \(0.00<13>\) & 17.40 & 43.76 & 47.9 \\
\hline 3/17 0:50 & 28.11 & 23.03 & 0.0848 & 14.21 & 7681 & \(0.00<13 \gg\) & 17.38 & 43.88 & 47.9 \\
\hline Average (ail) & 26.07 & 23.00 & 0.0847 & 14.21 & 7690 & 0.00 & 17.38 & 43.72 & 47.9 \\
\hline Total (ell) & - & - & - & - & - & - & - & - & - \\
\hline Minimum (all) & 25.85 & 22.76 & 0.0838 & 14.19 & 7677 & 0.00 & 17.35 & 43.40 & 47.8 \\
\hline Maximum (ali) & 26.38 & 23.37 & 0.0861 & 14.24 & 7702 & 0.00 & 17.43 & 44.03 & 48.0 \\
\hline Average (valid values only) & 26.07 & 23.00 & 0.0847 & 14.21 & 7690 & - & 17.39 & 43.72 & 47.9 \\
\hline Totai (valld values only) & - & - & - & - & - & - & - & -* & - \\
\hline count (valid volues anly) & 38 & 38 & 38 & 38 & 38 & 0 & 38 & 38 & 38 \\
\hline <13> = Down & & & & & & & & & \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Tubline 1) } \\
75 \text {-NOX ppm } \\
\text { 1-Min }
\end{gathered}
\] & \[
\begin{gathered}
\text { (Tubing } 1 \text { 1) } \\
\text { NOx ppm } \\
@ 15 \% \mathrm{OL} \\
1-\mathrm{Mln} \\
\hline
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turbine 1) } \\
\text { 75-NOx } \\
\text { |bimmBuew 1-Min }
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turtine 1) } \\
75-02 \% \text { 1-Min }
\end{gathered}
\] & (Turbine 1) CT Gar Flow sctimin 1-Min & (Turtine 1) OB Gas Flow ksedfre 1-Min & \begin{tabular}{l}
(Turtine 1) \\
Sprint Flow gavimin 1-Min
\end{tabular} & \begin{tabular}{l}
(Turtine 1) Woter injection \\
- 1 -Min \(\mathrm{gal} / \mathrm{m} \mathrm{mh}\)
\end{tabular} & Purtine 1) \(C T\) Megawath 1 Min \\
\hline 8/177:36 & 26.89 & 23.89 & 0.0880 & 14.28 & 7652 & \(0.00<13>\) & 17.38 & 42.83 & 47.8 \\
\hline 8/17 7:37 & 27.00 & 23.85 & 0.0882 & 14.25 & 7881 & \(0.00<13>\) & 17.37 & 42.78 & 47.8 \\
\hline 8/17 7:36 & 26.81 & 23.88 & 0.0880 & 14.25 & 7659 & \(0.00<13>\) & 17.40 & 42.74 & 47.8 \\
\hline 8:177:39 & 28.89 & 23.79 & 0.0876 & 14.23 & 7652 & \(0.00<43>\) & 17.38 & 42.63 & 47.8 \\
\hline 81177:40 & 26.83 & 23.82 & 0.0878 & 14.23 & 7650 & \(0.00<13>\) & 17.38 & 42.26 & 47.7 \\
\hline 8117 7:41 & 27.35 & 24.23 & 0.0893 & 14.24 & 7653 & \(0.00<13>\) & 17.42 & 42.50 & 47.8 \\
\hline 8/177:42 & 27.10 & 24.04 & 0.0886 & 14.25 & 7657 & 0.00 <13> & 17.37 & 42.88 & 47.3 \\
\hline 81777:43 & 28.82 & 23.80 & 0.0877 & 14.25 & 7852 & \(0.00<13>\) & 17.41 & 42.48 & 47.7 \\
\hline 81177:44 & 27.15 & 24.09 & 0.0887 & 14.25 & 7856 & \(0.00<13>\) & 17.37 & 42.65 & 47.7 \\
\hline 8/177:45 & 27.03 & 23.98 & 0.0883 & 74.25 & 7655 & \(0.00<13>\) & 17.40 & 42.63 & 47.7 \\
\hline 8117 7:49 & 27.02 & 23.97 & 0.0883 & 14.25 & 7652 & \(0.00<13\) * & 17.41 & 42.61 & 47.7 \\
\hline 8117 7:47 & 26.92 & 23.88 & 0.0880 & 14.25 & 7844 & \(0.00<13>\) & 17.36 & 42.36 & 47.7 \\
\hline 8/177:48 & 27.28 & 24.20 & 0.0882 & 14.25 & 7847 & \(0.00<13>\) & 17.41 & 42.50 & 47.7 \\
\hline 8/177:49 & 27.02 & 23.94 & 0.0882 & 14.24 & 7645 & \(0.00<13>\) & 17.38 & 42.49 & 47.8 \\
\hline 8/177:50 & 27.02 & 23.90 & 0.0880 & 14.23 & 7647 & \(0.00<13>\) & 17.38 & 42.36 & 47.7 \\
\hline 8/177.51 & 27.11 & 23.88 & 0.0883 & 14.23 & 7644 & \(0.00<13>\) & 17.38 & 42.24 & 47.7 \\
\hline 8/17 7:52 & 27.20 & 24.13 & 0.0889 & 14.25 & 7836 & \(0.00<13>\) & 17.38 & 42.39 & 47.5 \\
\hline 8/177:53 & 27.25 & 24.24 & 0.0882 & 14.26 & 7849 & \(0.00<13>\) & 17.36 & 42.91 & 47.6 \\
\hline 8/177:54 & 26.74 & 23.72 & 0.0874 & 14.25 & 7654 & \(0.00<13>\) & 17.37 & 42.57 & 47.7 \\
\hline 8/17 7:55 & 26.99 & 23.98 & 0.0883 & 14.26 & 7665 & \(0.00<13>\) & 17.36 & 42.64 & 47.8 \\
\hline 8/177:56 & 27.00 & 23.99 & 0.0884 & 14.26 & 7654 & \(0.00<13>\) & 17.40 & 42.35 & 47.7 \\
\hline 8/17 7:57 & 27.15 & 24.12 & 0.0889 & 14.25 & 7649 & \(0.00<13>\) & 17.43 & 42.73 & 47.8 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \begin{tabular}{l}
(Turblae 1) \\
- 75-NOx pprm 1-Min
\end{tabular} & (Turbine 1) NOX ppm (915\% \({ }^{(1) 2}\) 1-Min & \[
\begin{gathered}
\text { (Turbine 1) } \\
75-\text { NOx } \\
\text { ia/mmBtu 1-Min }
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turbine 1) } \\
76-02 \% ~ 1-M i n
\end{gathered}
\] & (Turbine 1) CT - Ges Flow scifmin 1-Min & (Turtine 1) DB Ges Flow kscflhr 1-Min & (Turbine 1) Sprint Flow gal/min 1-Min & (Turblne 1) Water Injection -1-Min ga/min & (Turblne 1) CT Megawalts 1-Min \\
\hline Average (all) & 27.04 & 23.98 & 0.0883 & 14.25 & 7651 & 0.00 & 17.39 & 42.56 & 47.7 \\
\hline Total (all) & - & - & - & - & - & - & - & - & - \\
\hline Minlmum (all) & 28.74 & 23.72 & 0.0874 & 14.23 & 7836 & 0.00 & 17.38 & 42.24 & 47.8 \\
\hline Maximum (all) & 27.35 & 24.23 & 0.0683 & 14.26 & 7661 & 0.00 & 17.43 & 42.91 & 47.8 \\
\hline Average (valid values only) & 27.04 & 23.98 & 0.0883 & 14.25 & 7651 & - & 17.39 & 42.58 & 47.7 \\
\hline Total (valld values only) & - & - & \({ }^{-}\) & \({ }^{-}\) & - & \({ }^{-}\) & - & - & \({ }^{-}\) \\
\hline Count (valid values only) & 22 & 22 & 22 & 22 & 22 & 0 & 22 & 22 & 22 \\
\hline <13> = Down & & & & & & & & & \\
\hline
\end{tabular}

\section*{CeDAR 1-Minute Data}

LAKE COGEN
Data for 8/17/2010 8:13 AM thru 8/17/2010 8:34 \({ }^{\circ} \mathrm{AM}\)
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Tumine 1) } \\
\text { 75-NOx ppm } \\
\text { 1-Min }
\end{gathered}
\] & \begin{tabular}{l}
(Turbine 1) NOxppm \\
(315\% 02 \\
1-Min
\end{tabular} & (Turbine 1) 75-NOx lb/mmBtu 1-Mln & (Turbine 1) 75-02\% 1-Min & (Turbine 1) CT Gas Fiow sci/min 1-Mln & (Turblne 1) DB Gas Fiow kscf/hr 1-Min & (Tubine 1) Sprint Flow gali/min 1-Min & (Turbine 1) Water Injection - 1-Min gal/min & (Turbine 1) CT Megawatts 1-Min \\
\hline 8/17 8:13 & 28.94 & 23.90 & 0.0881 & 14.25 & 7847 & 0.00 <13> & 17.38 & 42.53 & 47.7 \\
\hline 8/17 8:14 & 27.02 & 23.97 & 0.0883 & 14.25 & 7854 & \(0.00<13>\) & 17.37 & 42.78 & 47.7 \\
\hline 8:17 8:15 & 26.76 & 23.71 & 0.0873 & 14.24 & 7646 & \(0.00<13)\) & 17.40 & 42.30 & 47.6 \\
\hline 81778:16 & 27.10 & 24.01 & 0.0884 & 14.24 & 7643 & \(0.00<13>\) & 17,41 & 42,19 & 47.7 \\
\hline 8117 8:17 & 27.19 & 24.12 & 0.0889 & 14.25 & 7847 & \(0.00<13>\) & 17.38 & 42.47 & 47.7 \\
\hline 81178:10 & 26.99 & 23.91 & 0.0881 & 14.24 & 7651 & \(0.00<13>\) & 17.37 & 42.40 & 47.8 \\
\hline 8/17 8:19 & 26.87 & 23.84 & 0.0878 & 14.25 & 7655 & \(0.00<13>\) & 17.43 & 42.32 & 47.6 \\
\hline 8/17 8:20 & 27.14 & 24.12 & 0.0888 & 14.26 & 7839 & \(0.00<13>\) & 17.42 & 42.08 & 47.6 \\
\hline 8/17 8:21 & 27.21 & 24.21 & 0.0882 & 14.27 & 7642 & \(0.00<13>\) & 17.41 & 42.52 & 47.7 \\
\hline 8/17 8:22 & 27.09 & 24.07 & 0.0887 & 14.26 & 7651 & \(0.00<13>\) & 17.40 & 42.54 & 47.7 \\
\hline 8/17 8:23 & 26.91 & 23.91 & 0.0881 & 14.28 & 7853 & \(0.00<13>\) & 17.42 & 42.55 & 47.7 \\
\hline 8/17 8:24 & 26.85 & 23.82 & 0.0878 & 14.25 & 7653 & \(0.00<13>\) & 17.38 & 42.38 & 47.7 \\
\hline 8/17 8:25 & 27.06 & 23.97 & 0.0883 & 14.24 & 7852 & \(0.00<13>\) & 17.37 & 42.48 & 47.7 \\
\hline 8/17 8:28 & 26.96 & 23.88 & 0.0880 & 14.24 & 7865 & \(0.00<13>\) & 17.37 & 42.47 & 47.7 \\
\hline 8/17 8:27. & 26.99 & 23.95 & 0.0882 & 14.25 & 7652 & \(0.00<13>\) & 17.38 & 42.32 & 47.6 \\
\hline 8117 8:28 & 27.03 & 24.02 & 0.0885 & 14.26 & 7648 & \(0.00<13>\) & 17.37 & 42.27 & 47.6 \\
\hline 8117 8:29 & 27.10 & 24.08 & 0.0887 & 14.26 & 7644 & \(0.00<13>\) & 17.38 & 42.31 & 47.8 \\
\hline 8/17 8:30 & 27.17 & 24.18 & 0.0891 & 14.27 & 7643 & \(0.00<13>\) & 17.36 & 42.45 & 47.6 \\
\hline 8/47 8:31 & 28.97 & 24.00 & 0.0884 & 14.27 & 7656 & \(0.00<13>\) & 17.38 & 42.75 & 47.6 \\
\hline 8/17 8:32 & 26.67 & 23.66 & 0.0872 & 14.25 & 7646 & \(0.00<13>\) & 17.36 & 42.37 & 47.6 \\
\hline 8/17 8:33 & 26.97 & 23.98 & 0.0883 & 14.26 & 7643 & \(0.00<13>\) & 17.39 & 42.12 & 47.6 \\
\hline 8/17 8:34 & 27.18 & 24.11 & 0.0888 & 14.25 & 7649 & 0.00<13> & 17.36 & 42.37 & 47.7 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{aligned}
& \text { (Turbine 1) } \\
& \text { 75-NOx ppm } \\
& \text { 1-Min }
\end{aligned}
\] & (Turblne 1) NOX pom © \(15 \%\) O2 1-MIn & \[
\begin{gathered}
\text { (Turtine 1) } \\
\text { 75-NOx } \\
\text { Ib/mmBitu 1-Min }
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turbine 1) } \\
75-02 \% \text { 1-Min }
\end{gathered}
\] & (Turbine 1) CT Ges Flow sctimin 1-Min & (Turbine 1) DB Gas Ftow kscthr 1-Min & (Turbine 1) Sprint Flow gal/min 1-Min & (Turbine 1) Water injection - 1-Min galmin & (Turbine 1) CT Megawatts 1-Min \\
\hline Average (ail) & 27.01 & 23.97 & 0.0883 & 14.25 & 7649 & 0.00 & 17.39 & 42.41 & 47.7 \\
\hline Tatal (all) & - & - & - & - & - & - & - & - & - \\
\hline Minimum (all) & 28.87 & 23.66 & 0.0872 & 14.24 & 7639 & 0.00 & 17.36 & 42.08 & 47.6 \\
\hline Maximum (all) & 27.21 & 24.21 & 0.0892 & 14.27 & 7658 & 0.00 & 17.43 & 42.78 & 47.7 \\
\hline Average (valto values only) & 27.04 & 23.97 & 0.0883 & 14.25 & 7849 & - & 17.38 & 42.41 & 47.7 \\
\hline Total (valld) values only) & - & - & - & - & - & - & - & - & - \\
\hline Count (valid values only) & 22 & 22 & 22 & 22 & 22 & 0 & 22 & 22 & 22 \\
\hline
\end{tabular}

CeDAR 1-Minute Data
LAKE COGEN
Data for \(8 / 17 / 2010\) 8:50 AM thru 8/17/2010 9:11 AM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Tutbine 1) } \\
\text { 75-NOxppm } \\
\text { 1-Min }
\end{gathered}
\] & (Turbine 1) NOxpmm @15\% 02 4-Min & \[
\begin{gathered}
\text { (Turbine 1) } \\
75-\mathrm{NOx} \\
\text { Ib/mmBtu 1-Min }
\end{gathered}
\] & (Turbine 1) 75-02\% 1-Min & (Tubline 1) CT Gas Flow secf/min 1-Min & (Turbine 1) DB Ges Fow kscef/hr 1-Min & \begin{tabular}{l}
(Turbine 1) \\
Spant Flow galmin 1-Min
\end{tabular} & (Turtine 1) Water Injection -1-Min gal/min & (Turtine 1) CT Megawalts 1-Min \\
\hline 8/17 8:50 & 27.15 & 24.12 & 0.0888 & 14.26 & 7655 & \(0.00<13>\) & 17.38 & 42.67 & 47.7 \\
\hline 8/17 8:51 & 26.91 & 23.91 & 0.0881 & 14.26 & 7680 & \(0.00<13>\) & 17.38 & 42.84 & 47.7 \\
\hline 8/17 B:52 & 26.56 & 23.53 & 0.0867 & 14.24 & 7663 & \(0.00<13>\) & 17.36 & 42.52 & 47.7 \\
\hline 8/17 8:53 & 26.89 & 23.88 & 0.0879 & 14.25 & 7855 & \(0.00<13>\) & 17.37 & 42.24 & 47.7 \\
\hline 8/17 8:54 & 27.06 & 24.04 & 0.0886 & 14.28 & 7880 & \(0.00<13>\) & 17.37 & 42.36 & 47.7 \\
\hline 81178:55 & 27.02 & 24.04 & 0.0886 & 14.27 & 7663 & \(0.00<13>\) & 17.40 & 42.22 & 47.7 \\
\hline 6/17 8:58 & 27.25 & 24.25 & 0.0893 & 14.27 & 7662 & \(0.00<13>\) & 17.40 & 42.40 & 47.7 \\
\hline 8/17 8:57 & 27.12 & 24.13 & 0.0889 & 14.27 & 7872 & \(0.00<13>\) & 17.39 & 42.86 & 47.8 \\
\hline 8/17 8:58 & 26.75 & 23.84 & 0.0678 & 14.28 & 7675 & \(0.00<13>\) & 17.40 & 42.76 & 47.7 \\
\hline 8/17 8:59 & 26.74 & 23.83 & 0.0878 & 14.28 & 7889 & \(0.00<13>\) & 17.37 & 42.30 & 47.7 \\
\hline 8/17 9:00 & 27.12 & 24.17 & 0.0890 & 14.28 & 7671 & \(0.00<13>\) & 17.39 & 42.73 & 47.8 \\
\hline 8/17 9:01 & 26.80 & 23.81 & 0.0877 & 14.26 & 7684 & \(0.00<13>\) & 17.37 & 42.89 & 47.7 \\
\hline 8/17 9:02 & 20.62 & 23.62 & 0.0870 & 14.25 & 7677 & \(0.00<13>\) & 17.41 & 42.49 & 47.7 \\
\hline 8/17 9:03 & 26.94 & 23.94 & 0.0882 & 14.28 & 7870 & \(0.00<13>\) & 17.38 & 42.35 & 47.7 \\
\hline 8/17 9:04 & 27.09 & 24.07 & 0.0887 & 14.26 & 7874 & \(0.00<13>\) & 17.38 & 42.46 & 47.7 \\
\hline 8/17 9:06 & 28.98 & 24.01 & 0.0884 & 14.27 & 7677 & \(0.00<13>\) & 17.39 & 42.82 & 47.7 \\
\hline \(8 / 179006\) & 26.83 & 23.84 & 0.0978 & 14.26 & 7678 & \(0.00<13>\) & 17.39 & 42.63 & 47.7 \\
\hline 8/179:07 & 26.83 & 23.91 & 0.0881 & 14.28 & 7873 & \(0.00<13>\) & 17.39 & 42.78 & 47.7 \\
\hline 8179:08 & 26.63 & 23.88 & 0.0880 & 14.27 & 7868 & \(0.00<13>\) & 17.35 & 42.22 & 47.6 \\
\hline 8/17 9:09 & 27.04 & 24.14 & 0.0889 & 14.29 & 7670 & 0.00 <13> & 17.37 & 42.45 & 47.7 \\
\hline 8/479:10 & 27.03 & 24.09 & 0.0887 & 14.28 & 7871 & \(0.00<13>\) & 17.41 & 42.60 & 47.7 \\
\hline 8/17 9:11 & 26.90 & 23.67 & 0.0879 & 14.25 & 7673 & \(0.00<13>\) & 17.38 & 42.53 & 47.7 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{aligned}
& \text { (Turbine 1) } \\
& \text { 75-NOx ppm } \\
& \text { 1-Min }
\end{aligned}
\] & (Turbine 1) NOX ppm (6) \(15 \%\) O2 1-Mln & \begin{tabular}{l}
(Turbine 1) \\
75-NOx \\
Lb/mmBtu 9 -Min
\end{tabular} & \[
\begin{gathered}
\text { (Turbine 1) } \\
75-02 \% ~ 1-M i n
\end{gathered}
\] & (Turbine 1) CT Gas Flow sch/min 1-Min & (Turbine 1) DB Ges flow kscffor 1-Min & (Turbine 1) Sprint Flow gal/min 1-Min & (Turbine 1) Water injection - 1-Min gavmin & (Turblne 1) CT Megawatts 1-Min \\
\hline Average (all) & 28.83 & 23.95 & 0.0882 & 14.27 & 7688 & 0.00 & 17.38 & 42.54 & 47.7 \\
\hline Total (all) & - & - & - & - & - & - & - & - & - \\
\hline Minimum (all) & 26.56 & 23.53 & 0.0867 & 14.24 & 7655 & 0.00 & 17.35 & 42.22 & 47.8 \\
\hline Maximum (all) & 27.25 & 24.25 & 0.0893 & 14.29 & 7884 & 0.00 & 17.41 & 42.89 & 47.8 \\
\hline Average (valld values only) & 28.93 & 23.95 & 0.0882 & 14.27 & 7889 & - & 17.38 & 42.54 & 47.7 \\
\hline Total (valld values onty) & - & - & - & -- & - & - & - & - & - \\
\hline Count (valid values only) & 22 & 22 & 22 & 22 & 22 & 0 & 22 & 22 & 22 \\
\hline <13>- Down & & & & & & & & & \\
\hline
\end{tabular}

CeDAR 1-Minute Data
LAKE COGEN
Data for 8/17/2010 9:27 AM thru 8/17/2010 9:48 AM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 1) } \\
\text { 75-NOx ppm } \\
\text { 1-Min }
\end{gathered}
\] & \begin{tabular}{l}
(Turbine 1) NOX ppm \\
615\% O2 \(1-\mathrm{Min}\)
\end{tabular} & \[
\begin{gathered}
\text { (Turbine 1) } \\
\text { 75-NOx } \\
\text { Ib/mmEtu 1-Min }
\end{gathered}
\] & \begin{tabular}{l}
(Turbine 1) \\
75-O2\% 7-Min
\end{tabular} & (Turbine 1) CT Ges Flow setfomin 1-Min & (Turbine 1) DG Gas Flow \(\mathrm{ksc} / \mathrm{hr}\) 1-MIn & (Turbine 1) Sprint flow gal/min 1-Min & (Turbina 1) Water Injection -1-Min gaVmin & (Turbine 1) CT Megawatts 1-Min \\
\hline 9/47 9:27 & 28.88 & 23.92 & 0.0881 & 14.27 & 7684 & \(0.00<13>\) & 17.38 & 42.42 & 47.7 \\
\hline 8/17 8:28 & 27.03 & 24.05 & 0.0888 & 14.27 & 7681 & \(0.00<13>\) & 17.38 & 42.41 & 47.7 \\
\hline 8/17 9:29 & 27.17 & 24.18 & 0.0891 & 14.27 & 7681 & \(0.00<13>\) & 17.38 & 42.71 & 47.8 \\
\hline 8/17 9:30 & 28.98 & 23.94 & 0.0882 & 14.25 & 7687 & \(0.00<13>\) & 17.38 & 42.67 & 47.8 \\
\hline 8/17 9:31 & 26.77 & 23.72 & 0.0874 & 14.24 & 7679 & \(0.00<13>\) & 17.37 & 42.39 & 47.7 \\
\hline 8/17 9:32 & 27.05 & 24.00 & 0.0884 & 14.25 & 7685 & \(0.00<13>\) & 17.38 & 42.42 & 47.8 \\
\hline 8/17 9:33 & 27.13 & 24.03 & 0.0885 & 14.24 & 7682 & \(0.00<13>\) & 17.34 & 42.57 & 47.7 \\
\hline 8/17 9:34 & 27.04 & 23.98 & 0.0884 & 14.25 & 7893 & \(0.00<13>\) & 17.38 & 42.59 & 47.7 \\
\hline 8/17 9:35 & 27.05 & 24.04 & 0.0885 & 14.28 & 7687 & 0.00 <13> & 17.38 & 42.56 & 47.7 \\
\hline 8/17 9:38 & 27.08 & 24.08 & 0.0887 & 14.27 & 7684 & \(0.00<13>\) & 17.36 & 42.72 & 47.8 \\
\hline 8/17 9:37 & 26.80 & 23.90 & 0.0881 & 14.26 & 7880 & \(0.00<13>\) & 17.38 & 42.62 & 47.7 \\
\hline 8/17 9:38 & 26.95 & 23.95 & 0.0882 & 14.26 & 7682 & \(0.00<13>\) & 17.34 & 42.63 & 47.7 \\
\hline 8/17 9:39 & 26.93 & 23.86 & 0.0879 & 14.24 & 7580 & \(0.00<13>\) & 17.41 & 42.62 & 47.7 \\
\hline 8/179:40 & 26.92 & 23.85 & 0.0879 & 14.24 & 7875 & \(0.00<13>\) & 17.41 & 42.42 & 47.7 \\
\hline 8/17 9:41 & 27.04 & 24.03 & 0.0885 & 14.26 & 7675 & \(0.00<13>\) & 17.39 & 42.30 & 47.7 \\
\hline 8/17 9:42 & 27.18 & 24.13 & 0.0689 & 14.28 & 7887 & \(0.00<13>\) & 17.40 & 42.82 & 47.8 \\
\hline 81179:43 & 27.04 & 24.03 & 0.0855 & 14.28 & 7693 & \(0.00<13>\) & 17.38 & 42.70 & 47.8 \\
\hline 8/17 9:44 & 26.84 & 23.61 & 0.0877 & 14.25 & 7695 & \(0.00<13>\) & 17.38 & 42.57 & 47.7 \\
\hline 81779.45 & 27.01 & 24.04 & 0.0885 & 14.27 & 7687 & \(0.00<13>\) & 17.41 & 42.29 & 47.7 \\
\hline 8/17 9:46 & 27.21 & 24.21 & 0.0892 & 14.27 & 7679 & 0.00 <13) & 17.39 & 42.55 & 47.7 \\
\hline 8/17 9:47 & 27.03 & 24.02 & 0.0885 & 14.26 & 7692 & \(0.00<13>\) & 17.38 & 42.78 & 47.7 \\
\hline 8/17 9:48 & 26.85 & 23.86 & 0.0879 & 14.26 & 7892 & 0.00 <13> & 17.36 & 42.73 & 47.7 \\
\hline
\end{tabular}


\section*{CeDAR 1-Minute Data}

LAKE COGEN
Data for 8/17/2010 10:04 AM thru 8/17/2010 10:25 AM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{aligned}
& \text { (Turbine 1) } \\
& \text { 75-NOx ppm } \\
& \text { 1-MIn }
\end{aligned}
\] & \begin{tabular}{l}
(Turbine 1) NOx ppm \\
(15\% O2 1-Min
\end{tabular} & \[
\begin{gathered}
\text { (Turblne 1) } \\
\text { 75-NOx } \\
\text { Ib/mmBtu 1-Min }
\end{gathered}
\] & \begin{tabular}{l}
(Turbine 1) \\
76-02\% 4 -Min
\end{tabular} & (Turbine 1) CT Gas Flow geffimin 1-Min & (Turtine 1) DB Gss Flow ksefme 1-Min & (Turbine 1) Sprint Flow galimin 1-Min & (Turbine 1) Water Iniection - 1-Min ga/min & (Turbine 1) CT Megawatts 1-Min \\
\hline 8/47 10:04 & 28.54 & 23.62 & 0.0870 & 14.27 & 7714 & \(0.00<13>\) & 17.37 & 42.71 & 47.8 \\
\hline 817 10:05 & 26.82 & 23.83 & 0.0878 & 14.28 & 7708 & \(0.00<13>\) & 17.40 & 42.47 & 47.8 \\
\hline 8/17 10:06 & 27.00 & 23.99 & 0.0884 & 14.28 & 7698 & \(0.00<13 \gg\) & 17.38 & 42.49 & 47.8 \\
\hline 8/17 10:07 & 27.14 & 24.12 & 0.0888 & 14.26 & 7697 & \(0.00<13>\) & 17.38 & 42.60 & 47.8 \\
\hline \(81710: 08\) & 27.03 & 24.05 & 0.0886 & 14.27 & 7699 & \(0.00<13>\) & 17.38 & 42.71 & 47.8 \\
\hline \(817710: 09\) & 26.92 & 23.99 & 0.0884 & 14.28 & 7700 & \(0.00<13>\) & 17.37 & 42.54 & 47.8 \\
\hline 8/17 10:10 & 27.05 & 24.11 & 0.0888 & 14.28. & 7705 & \(0.00<13>\) & 17.36 & 42.74 & 47.8 \\
\hline 8/17 10:11 & 26.93 & 24.04 & 0.0886 & 14.29 & 7703 & \(0.00<13>\) & 17.38 & 42.62 & 47.8 \\
\hline 8/17 10:12 & 27.01 & 24.11 & 0.0888 & 14.281 & 7712 & \(0.00<13>\) & 17.35 & 43.18 & 47.8 \\
\hline 8/17 10:13 & 28.57 & 23.84 & 0.0871 & 14.27 & 7709 & 0.00 <13> & 17.35 & 42.61 & 47.8 \\
\hline 8/17 10:14 & 28.78 & 23.83 & 0.0878 & 14.27 & 7701 & \(0.00<13>\) & 17.37 & 42.49 & 47.8 \\
\hline 8/17 10:15 & 27.03 & 24.02 & 0.0885 & 14.26 & 7703 & \(0.00<13 \sim\) & 17.38 & 42.71 & 47.8 \\
\hline \(8 / 17\) 10:18 & 28.88 & 23.85 & 0.0879 & 14.25 & 7701 & \(0.00<13>\) & 17.94 & 42.43 & 47.7 \\
\hline 8/17 10:17 & 27.00 & 23.99 & 0.0884 & 14.28 & 7892 & \(0.00<13>\) & 17.35 & 42.45 & 47.7 \\
\hline 8/17 10:18 & 27.09 & 24.11 & 0.0888 & 14.27 & 7692 & \(0.00<13>\) & 17.36 & 42.61 & 47.7 \\
\hline 8177 10:19 & 28.94 & 24.01 & 0.0885 & 14.28 & 7890 & \(0.00<13>\) & 17.38 & 42.49 & 47.7 \\
\hline 817 10:20 & 27.05 & 24.11 & 0.0888 & 14.28 & 7899 & \(0.00<13>\) & 17.39 & 42.87 & 47.7 \\
\hline 8/17 10:21 & 28.94 & 24.01 & 0.0885 & 14.28 & 7696 & \(0.00<13>\) & 17.39 & 42.69 & 47.8 \\
\hline 8/17 10:22 & 28.96 & 24.03 & 0.0885 & 14.28 & 7702 & \(0.00<13>\) & 17.39 & 42.78 & 47.8 \\
\hline 8/17 10:23 & 26.83 & 23.88 & 0.0880 & 14.27 & 7709 & \(0.00<13>\) & 17.38 & 42.85 & 47.8 \\
\hline 8/17 10:24 & 26.78 & 23.83 & 0.0878 & 14.27 & 7702 & \(0.00<13>\) & 17.41 & 42.60 & 47.8 \\
\hline (117 10:25 & 28.83 & 23.80 & 0.0877 & 14.25 & 7700 & \(0.00<13>\) & 17.38 & 42.52 & 47.8 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{aligned}
& \text { (Turbine 1) } \\
& \text { 75-NOx ppm } \\
& \text { 1-Min }
\end{aligned}
\] & \begin{tabular}{l}
(Turtine 1) NOX ppm \\
215\% 02 \\
1-Min
\end{tabular} & (Turbine 1) 75-NOx 10/mmBtu 1-Min & \[
\begin{gathered}
\text { (Turbine 1) } \\
75-02 \% ~ i-M 1 n
\end{gathered}
\] & (Turbine 1) CT Gas fiow sctimin 1-Min & (Turtine 1) DB Gab flow kscthr 1-Min & (Turbine 1) Sprint Flow galimin 1 - Min & (Turbine 1) Water Injection - 1-Min gaVmin & (Turbine 1) CT Megawatts 1-Min \\
\hline Average (all) & 26.91 & 23.85 & 0.0883 & 14.27 & 7701 & 0.00 & 17.37 & 42.63 & 47.8 \\
\hline Total (8ll) & - & - & - & - & - & - & - & - & - \\
\hline Minimum (all) & 26.54 & 23.62 & 0.0870 & 14.25 & 7890 & 0.00 & 17.34 & 42.43 & 47.7 \\
\hline Maximum (all) & 27.14 & 24.12 & 0.0888 & 14.29 & 7714 & 0.00 & 17.41 & 43.18 & 47.8 \\
\hline Average (velid values only) & 26.91 & 23.95 & 0.0883 & 14.27 & 7701 & - & 17.37 & 42.63 & 47.8 \\
\hline Total (valid values only) & - & \({ }^{-}\) & - & \({ }^{-}\) & - & - & - & \({ }^{-}\) & - \\
\hline Count (valid values anly) & 22 & 22 & 22 & 22 & 22 & 0 & 22 & 22 & 22 \\
\hline
\end{tabular}

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 1) } \\
\text { 75-NOx ppm } \\
1 \mathrm{Mln}
\end{gathered}
\] & \begin{tabular}{l}
(Turbine 1) NOx pom \\
(c) \(15 \% 02\) 1-Min
\end{tabular} & (Turbine 1)
75-NGx
lb/mmatu 1-Min & \[
\begin{gathered}
\text { (Tumine 1) } \\
\text { 76-02\% 1-Min }
\end{gathered}
\] & \begin{tabular}{l}
(Turbine 1) CT \\
Gas Flow scffimin 1-Min
\end{tabular} & (Turbine 1) DB Gas Flow ksct/hr 1-Min & \begin{tabular}{l}
(Turblne 1) \\
Sprint Flow gal/min 1Amin
\end{tabular} & (Turbine 1) Water Injection - 1-Min ga/min & (Turbine 1) CT Megawatts 1-Min \\
\hline Average (all) & 26.98 & 23.98 & 0.0883 & 14.27 & 7724 & 0.00 & 17.38 & 42.98 & 47.9 \\
\hline Total (all) & - & \(\cdots\) & - & - & \(\cdots\) & - & - & - & - \\
\hline Minimum (all) & 28.43 & 23.41 & 0.0863 & 14.24 & 7710 & 0.00 & 17.38 & 42.38 & 47.8 \\
\hline Maximum (all) & 27.44 & 24.38 & 0.0888 & 14.29 & 7745 & 0.00 & 17.41 & 43.62 & 48.1 \\
\hline Average (valid values only) & 26.96 & 23.88 & 0.0883 & 14.27 & 7724 & - & 17.38 & 42.98 & 47.9 \\
\hline Total (valld vatues only) & - & \(\stackrel{\square}{ }\) & - & \({ }^{-}\) & \({ }^{-}\) & \({ }^{-}\) & \({ }^{-}\) & \(\cdots\) & - \\
\hline Count (valid values only) & 22 & 22 & 22 & 22 & 22 & 0 & 22 & 22 & 22 \\
\hline
\end{tabular}

CeDAR 1-Minute Data
LaKE COGEN
Data for 8/17/2010 14:18 AM thru 8/17/2010 11:39 AM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timastamp & \[
\begin{gathered}
\text { (Tumbine 1) } \\
75 \text {-NOx ppm } \\
1 \text { Min }
\end{gathered}
\] & \begin{tabular}{l}
(Turbina 1) NOX ppm \\
@15\% 02 1-MHn
\end{tabular} & \[
\begin{gathered}
\text { (Tubine 1) } \\
\text { 76-NOx } \\
\text { mmBru 1-Min }
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turtina 1) } \\
\text { 75-02\% 1-MIn }
\end{gathered}
\] & \[
\begin{aligned}
& \text { (Tubbine 1) CT } \\
& \text { Gas Fiow } \\
& \text { sci/min } 1-\mathrm{Min}
\end{aligned}
\] & (Tumbine 1) DB Ges Fow ksethr 1-Min & \begin{tabular}{l}
(Turbine 1) \\
Spint Flow gat/min 1-Min
\end{tabular} & (Turbine 1) Water injection - 1-Min gal/min & (Turbine 1) CT Megawatts 1-Min \\
\hline 8/17 17:18 & 25.58 & 23.62 & 0.0870 & 14.26 & 7761 & \(0.00<13>\) & 17.38 & 43.56 & 48.2 \\
\hline 8/17 11:19 & 28.88 & 23.78 & 0.0878 & 14.28 & 7749 & \(0.00<13>\) & 17.37 & 43.01 & 48.1 \\
\hline 8/17 11:20 & 27.24 & 24.28 & 0.0894 & 14.28 & 7753 & \(0.00<13>\) & 17.37 & 43.10 & 48.1 \\
\hline 8/17 11:21 & 27.18 & 24.22 & 0.0892 & 14.28 & 7751 & \(0.00<13>\) & 17.40 & 43.69 & 48.1 \\
\hline \(8 / 17\) 11:22 & 28.87 & 23.70 & 0.0873 & 14.28 & 7754 & \(0.00<13>\) & 17.36 & 43.12 & 48.1 \\
\hline \(8 / 17\) 11:23 & 26.92 & 23.92 & 0.0881 & 14.26 & 7741 & \(0.00<13>\) & 17.38 & 43.10 & 48.1 \\
\hline 8/17 11:24 & 27.00 & 24.03 & 0.0885 & 14.27 & 7739 & \(0.00<13>\) & 17.38 & 43.27 & 40.1 \\
\hline 8/17 11:25 & 28.93 & 23.98 & 0.0883 & 14.27 & 7740 & \(0.00<13>\) & 17.38 & 43.23 . & 48.0 \\
\hline 8/17 11:28 & 28.94 & 24.01 & 0.0885 & 14.28 & 7743 & 0.00 <13> & 17.38 & 43.21 & 48.0 \\
\hline \(8 / 17\) 11:27 & 26.93 & 24.00 & 0.0884 & 14.28 & 7738 & \(0.00<13>\) & 17.36 & 43.18 & 48.0 \\
\hline 8/17 11:28 & 28.92 & 23.99 & 0.0884 & 14.28 & 7728 & \(0.00<13>\) & 17.38 & 43.19 & 48.0 \\
\hline 0/17 11:29 & 26.84 & 23.96 & 0.0883 & 14.29 & 7729 & 0.00 <13) & 17.38 & 43.18 & 48.0 \\
\hline 8/17 11:30 & 28.87 & 23.95 & 0.0882 & 14.28 & 7733 & \(0.00<13>\) & 17.40 & 43.19 & 48.0 \\
\hline 8817 11:31 & 28.84 & 23.85 & 0.0879 & 14.28 & 7727 & \(0.00<13>\) & 17.38 & 43.08 & 47.9 \\
\hline 8/17 11:32 & 26.84 & 23.88 & 0.0880 & 14.27 & 7134 & \(0.00<13>\) & 17.33 & 43.04 & 48.0 \\
\hline \(8 / 17\) 11:33 & 26.97 & 24.00 & 0.0884 & 14.27 & 7733 & \(0.00<13>\) & 17.34 & 42.91 & 47.9 \\
\hline 8/17 11:34 & 27.09 & 24.11 & 0.0888 & 14.27 & 7730 & \(0.00<13>\) & 17.36 & 43.01 & 47.9 \\
\hline 8/17 11:35 & 26.93 & 24.00 & 0.0884 & 14.28 & 7725 & \(0.00<13>\) & 17.36 & 43.13 & 47.9 \\
\hline 8/17714:36 & 27.03 & 24.09 & 0.0887 & 14.28 & 7729 & \(0.00<13>\) & 17.37 & 43.20 & 48.0 \\
\hline \(8 / 17\) 11:37 & 28.82 & 23.90 & 0.0881 & 14.28 & 7729 & \(0.00<13>\) & 17.34 & 43.27 & 48.0 \\
\hline 8817 11:38 & 28.76 & 23.85 & 0.0879 & 14.28 & 7734 & \(0.00<13>\) & 17.40 & 43.23 & 47.9 \\
\hline 8/17 11:39 & 26.76 & 23.81 & 0.0877 & 14.27 & 7727 & \(0.00<13>\) & 17.37 & 42.89 & 47.8 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Tinestamp & \[
\begin{gathered}
\text { (Turbine 1] } \\
\text { 75-NOx ppm } \\
\text { 1 Min }
\end{gathered}
\] & (Turbine 1) NOx ppm (6) \(15 \%-02\) 1-Min & (Turbine 1) 75NOX lbmmBtu 1-Min & \[
\begin{gathered}
\text { (Tumbitre 1) } \\
\text { 75-02\% 1-Min }
\end{gathered}
\] & (Turbine 1) CT Gas Flow sct/min 1-Min & (Turblne 1) DB Gas Flow kseffri 1-Min & (Turtine 1) Sprint Flow galmin 1-Min & (Turbine 1) Watar Injection - 1-Min gaVmin & (Turaine 1) CT Megawatts 1-Min \\
\hline Avarage (all) & 28.90 & 23.95 & 0.0882 & 14.27 & 7738 & 0.00 & 17.37 & 43.17 & 48.0 \\
\hline Total (ell) & - & . & - & - & - & - & - & - & -- \\
\hline Minlmum (all) & 26.58 & 23.62 & 0.0870 & 14.28 & 7725 & 0.00 & 17.33 & 42.89 & 47.8 \\
\hline Maximum (all) & 27.24 & 24.28 & 0.0894 & 14.29 & 7761 & 0.00 & 17.40 & 43.89 & 48.2 \\
\hline Average (valid values only) & 28.90 & 23.85 & 0.0882 & 14.27 & 7738 & - & 17.37 & 43.17 & 48.0 \\
\hline Total (valid values only) & - & - & - & - & - & - & - & - & - \\
\hline count (velid values only) & 22 & 22 & 22 & 22 & 22 & 0 & 22 & 22 & 22 \\
\hline \(<13>=\) Down & & & & & & & & & \\
\hline
\end{tabular}

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 1) } \\
\text { 75-Nox ppm } \\
1 \text { Min } \\
\hline
\end{gathered}
\] & (Turbine 1)
NOX ppm (15\% O2 1-Min & \[
\begin{gathered}
\text { Turbine 1) } \\
\text { 75-NOx } \\
\text { ib/mmbtu 1-Min }
\end{gathered}
\] & \[
\begin{gathered}
\text { (ruibine 1) } \\
75 \text {-02\% 1-Min }
\end{gathered}
\] & (Turbine 1) CT Gas flow \(\mathrm{sc} /\) /min \(1-\mathrm{Min}\) & (Turbine 1) DB Gas Flow ksct/hr 1-Min & (Turbine 1)
Sprint Flow gal/min 1-Min & (Turbine 1) Watar Injection -1-Min galmin & \begin{tabular}{c} 
(Tutbine 1) CT \\
\(\begin{array}{c}\text { Megawatts } \\
\text { 1-Min }\end{array}\) \\
\hline
\end{tabular} \\
\hline Averrage (all) & 26.96 & 23.98 & 0.0883 & 14.27 & 7725 & 0.00 & 17.37 & 42.95 & 47.9 \\
\hline Total (all) & - & - & & - & - & & - & & - \\
\hline M1nimum (all) & 26.68 & 23.74 & 0.0875 & 14.25 & 7708 & 0.00 & 17.34 & 42.49 & 47.8 \\
\hline Maximum (all) & 27.31 & 24.30 & 0.0896 & 14.29 & 7737 & 0.00 & 17.41 & 43.31 & 47.9 \\
\hline Average (valld values only) & 26.96 & 23.98 & 0.0883 & 14.27 & 7725 & - & 17.37 & 42.85 & 47.9 \\
\hline Total (valid & - & - & - & - & - & - & - & - & \\
\hline values only) Count (valio valuas only) & 22 & 22 & 22 & 22 & 22 & 0 & 22 & 22 & 22 \\
\hline
\end{tabular}

CeDAR 1-Minute Data
LAKE COGEN
Data for 8/17/2010 3:41 PM thru 8/17/2010 4:41 PM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 1) } \\
\text { 75-Nox ppm } \\
\text { 1-Min }
\end{gathered}
\] & (Turbine 1) NOX ppm (1) \(15 \% 02\) 1-Min & \[
\begin{gathered}
\text { (Tubine 1) } \\
\text { 75-NOx } \\
\text { lbmmetu 1-Min }
\end{gathered}
\] & \[
\begin{aligned}
& \text { (Turbine 1) } \\
& \text { 75-02\% 1-Min }
\end{aligned}
\] & (Turbina 1) CT Gas Flow sct/min 1-Min & (Tumbina 1) DB Gas Flow \(\mathrm{kec} / \mathrm{hr} 1\)-Min & (Turtine 1) Sprint Flow galmin 1-Min & (Tubtere 1) Water Injection - 1-Min galmin & (Turtine 1) CT Megawalts \(1-\mathrm{Min}\) \\
\hline 8/17 15:41 & 27.87 & 22.58 & 0.0831 & 13.61 & 7648 & '45.40 & 17.25 & 42.09 & 47.4 \\
\hline 8/17 15:42 & 28.05 & 22.52 & 0.0829 & 13.55 & 7651 & 45.94 & 17.27 & 42.09 & 47.4 \\
\hline 8/17 15:43 & 28.02 & 22.46 & 0.0827 & 13.54 & 7659 & 48.09 & 17.28 & 42.15 & 47.4 \\
\hline 8/17 15:44 & 27.89 & 22.36 & 0.0824 & 13.54 & 7861 & 46.12 & 17.30 & 41.95 & 47.3 \\
\hline 8/1715:45 & 28.08 & 22.54 & 0.0830 & 13.55 & 7660 & 46.14 & 17.29 & 41.80 & 47.3 \\
\hline 6/17 15:46 & 28.15 & 22.60 & 0.0832 & 13.55 & 7657 & 46.19 & 17.26 & 41.82 & 47.3 \\
\hline \(8 / 1715: 47\) & 28.08 & 22.57 & 0.0832 & 13.56 & 7657 & 46.18 & 17.29 & 41.99 & 47.4 \\
\hline 8/17 15:48 & 28.05 & 22.52 & 0.0829 & 13.55 & 7659 & 46.20 & 17.25 & 41.91 & 47.3 \\
\hline 8/17 15:49 & 28.14 & 22.62 & 0.0833 & 13.56 & 7656 & 46.18 & 17.29 & 42.02 & 47.3 \\
\hline 8/17 15:50 & 28.09 & 22.58 & 0.0632 & 13.56 & 7659 & 46.20 & 17.30 & 42.06 & 47.4 \\
\hline \(8 / 1715: 51\) & 27.98 & 22.49 & 0.0829 & 13.56 & 7655 & 48.20 & 17.27 & 41.94 & 47.3 \\
\hline 8/17 15:52 & 28.19 & 22.56 & 0.0831 & 13.55 & 7859 & 46.27 & 17.29 & 42.04 & 47.4 \\
\hline 8/17 15:53 & 28.00 & 22.45 & 0.0827 & 13.54 & 7659 & 46.29 & 17.27 & 41.77 & 47.4 \\
\hline 8/17 15:54 & 28.21 & 22.84 & 0.0834 & 13.55 & 7857 & 46.26 & 17.27 & 41.93 & 47.4 \\
\hline 8/17 15:55 & 28.03 & 22.50 & 0.0829 & 13.55 & 7659 & 46.29 & 17.24 & 42.07 & 47.4 \\
\hline 8/1715:56 & 28.05 & 22.49 & 0.0828 & 13.54 & 7659 & 45.31 & 17.27 & 41.97 & 47.4 \\
\hline 8/17 16:67 & 28.05 & 22.52 & 0.0830 & 13.55 & 785 & 48.33 & 17.26 & 41.73 & 47.3 \\
\hline 8/17 15:58 & 28.26 & 22.75 & 0.0838 & 13.57 & 7656 & 48.37 & 17.28 & 49.75 & 47.3 \\
\hline 8/17 15:59 & 28.35 & 22.82 & 0.0841 & 13.57 & 7652 & 46.40 & 17.29 & 41.90 & 47.3 \\
\hline 8/17 16:00 & 28.19 & 22.65 & 0.0835 & 13.58 & 7654 & 46.44 & 17.27 & 41.92 & 47.3 \\
\hline 8/17 16:01 & 28.02 & 22.49 & 0.0829 & 13.66 & 7648 & 46.52 & 17.25 & 41.95 & 47.3 \\
\hline 8/17 16:02 & 28.20 & 22.81 & 0.0833 & 13.54 & 7652 & 46.52 & 17.23 & 41.77 & 47.3 \\
\hline 8/17 16:03 & 28.19 & 22.80 & 0.0833 & 13.54 & 7646 & 46.55 & 17.28 & 41.92 & 47.3 \\
\hline 8/17 96:04 & 28.16 & 22.57 & 0.0832 & 13.54 & 7661 & 46.62 & 17.28 & 41.77 & 47.3 \\
\hline 8/17 16:05 & 28.19 & 22.63 & 0.0834 & 13.55 & 7665 & 48.81 & 17.30 & 42.01 & 47.4 \\
\hline 8/17 16:06 & 28.10 & 22.56 & 0.0831 & 13.55 & 7664 & 46.52 & 17.29 & 42.05 & 47.4 \\
\hline 8/17 19:07 & 28.12 & 22.57 & 0.0332 & 13.55 & 7658 & 46.50 & 17.29 & 41.78 & 47.3 \\
\hline 8/1716:08 & 28.22 & 22,71 & 0.0837 & 13.57 & 7658 & 48.46 & 17.27 & 41.96 & 47.4 \\
\hline 8/17 16:09 & 28.11 & 22.60 & 0.0832 & 13.56 & 7653 & 48.47 & 17.27 & 41.92 & 47.3 \\
\hline 8/17 18:10 & 28.00 & 22.51 & 0.0829 & 13.56 & 7854 & 45.50 & 17.28 & 42.14 & 47.3 \\
\hline 8/17 16:11 & 27.82 & 22.33 & 0.0823 & 13.55 & 7662 & 46.49 & 17.29 & 42.07 & 47.3 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 1) } \\
\text { 75-NOx ppm } \\
1-\mathrm{Mhn}
\end{gathered}
\] & (Turbine 1) NOx ppm (13) 02 1-MIn & (Turbine 1) 75-NOX lb/mmBla 1 AMin & \begin{tabular}{l}
(Turbine 1) \\
75-02\% 1-Min
\end{tabular} & (Tirbine 1) CT Gas Flow scfimin 1-Min & (Turblne 1) DB Gas Flow ksc/f/hr 1-Min & (Tuthise 1) Sprint Flow gatman 1-Min & (Turtina 1) Water hinaction - 1-Min galmin & (Turbine 1) CT Megawatts 1-Min \\
\hline 8/17 16:12 & 27.87 & 22.43 & 0.0826 & 13.57 & 7650 & 48.49 & 17.28 & 41.95 & 47.3 \\
\hline 8/17 16:13 & 27.88 & 22.41 & 0.0826 & 13.56 & 7648 & 46.49 & 17.30 & 41.97 & 47.3 \\
\hline 8/17 16:14 & 27.94 & 22.43 & 0.0826 & 13.55 & 7848 & 46.50 & 17.26 & 41.87 & 47.3 \\
\hline 8/17 16:15 & 28.03 & 22.47 & 0.0823 & 13.54 & 7646 & 46.48 & 17.31 & 42.05 & 473 \\
\hline 8/17 16:16 & 27.75 & 22.22 & 0.0818 & 13.53 & 7656 & 48.49 & 17.28 & 42.02 & 47.3 \\
\hline 8/17 16:17 & 27.70 & 22.21 & 0.0816 & 13.54 & 7845 & 48.52 & 17.27 & 41.85 & 47.3 \\
\hline 8/17 16:18 & 28.05 & 22.49 & 0.0828 & 13.54 & 7651 & 46.51 & 17.26 & 41.77 & 47.3 \\
\hline 8/17 16:19 & 28.00 & 22.48 & 0.0828 & 13.55 & 7540 & 48.49 & 17.25 & 41.85 & 47.3 \\
\hline 8/17 16:20 & 28.08 & 22.56 & 0.0831 & 13.55 & 7850 & 46.48 & 17.28 & 41.70 & 47.3 \\
\hline 8/17 16:21 & 28.19 & 22.86 & 0.0835 & 13.56 & 7651 & 48.47 & 17.28 & 44.92 & 47.3 \\
\hline 8/17 16:22 & 28.18 & 22.84 & 0.0834 & 13.56 & 7659 & 48.42 & 17.29 & 41.96 & 47.3 \\
\hline 8/17 16:23 & 28.04 & 22.54 & 0.0830 & 13.58 & 7655 & 48.42 & 17.30 & 42.12 & 47.3 \\
\hline 8,4716:24 & 27.85 & 22.36 & 0.0824 & 13.55 & 7648 & 48.40 & 17.30 & 41.76 & 47.3 \\
\hline 8/17 16:25 & 28.06 & 22.59 & 0.0832 & 13.57 & 7544 & 46.38 & 17.28 & 44.71 & 47.3 \\
\hline 8/17 16:26 & 28.31 & 22.73 & 0.0837 & 13.55 & 7650 & 46.34 & 17.25 & 41.88 & 47.3 \\
\hline 8/17 16:27 & 28.09 & 22.52 & 0.0830 & 13.54 & 7655 & 48.35 & 17.27 & 41.82 & 47.3 \\
\hline 8/17 18:28 & 28.09 & 22.49 & 0.0828 & 13.53 & 7655 & 48.38 & 17.29 & 41.83 & 47.3 \\
\hline 8/17 16:29 & 28.15 & 22.54 & 0.0830 & 13.53 & 7649 & 48.37 & 17.26 & 41.98 & 47.3 \\
\hline 8/17 16:30 & 27.99 & 22.44 & 0.0827 & 13.54 & 7650 & 45.37 & 17.28 & 41.85 & 47.3 \\
\hline 8/17 16:31 & 28.03 & 22.60 & 0.0829 & 13.55 & 7652 & 46.35 & 17.27 & 44.73 & 47.3 \\
\hline 8/17 16:32 & 28.29 & 22.74 & 0.0838 & 13.56 & 7657 & 46.35 & 17.28 & 42.05 & 47.4 \\
\hline 8/17 16:33 & 27.96 & 22.44 & 0.0827 & 13.55 & 7645 & 48.35 & 17.29 & 41.96 & 47.3 \\
\hline 8/17 18:34 & 28.03 & 22.53 & 0.0830 & 13.56 & 7648 & 46.38 & 17.28 & 41.97 & 47.3 \\
\hline 8/17 16:35 & 28.07 & 22.56 & 0.0831 & 13.56 & 7658 & 46.39 & 17.24 & 41.85 & 47.3 \\
\hline 8/17 16:36 & 27.96 & 22.47 & 0.0828 & 13.56 & 7645 & 48.38 & 17.28 & 41.86 & 47.3 \\
\hline 8/47 10:37 & 28.09 & 22.55 & 0.0831 & 13.55 & 7641 & 46.35 & 17.28 & 41.82 & 47.2 \\
\hline 8/17 16:38 & 28.06 & 22.49 & 0.0829 & 13.54 & 7640 & 46.34 & 17.27 & 42.27 & 47.3 \\
\hline 8/17 16:39 & 27.65 & 22.17 & 0.0817 & 13.54 & 7848 & 48.35 & 17.25 & 42.00 & 47.3 \\
\hline 8/47 16:40. & 27.90 & 22.34 & 0.0823 & 13.53 & 7652 & 46.34 & 17.30 & 41.93 & 47.3 \\
\hline 9/17 16:41 & 27.87 & 22.38 & 0.0825 & 13.53 & 7858 & 46.31 & 17.27 & 42.24 & 47.3 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{aligned}
& \text { (Turbine 1) } \\
& \text { 75-NOx pom } \\
& \text { 1-Min }
\end{aligned}
\] & \begin{tabular}{l}
(Turbine 1) NOx ppm \\
(6) \(15 \%\) 1-Min
\end{tabular} & \[
\begin{gathered}
\text { (Turbine 1) } \\
75 \text {-NOx } \\
\text { Ib/mmBtu 1-Min }
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turbine 1) } \\
75-\mathrm{O} \% \\
1-\mathrm{Min}
\end{gathered}
\] & \[
\begin{aligned}
& \text { (Turbine 1) CT } \\
& \text { Gas Flow } \\
& \text { sctimin 1-M|n }
\end{aligned}
\] & (Turtine 1) DB Ges Flow kscffri 1-Min & (Turbine 1) Sprint Flow galimin 1-Min & (Turtine 1) Water Injection - 1-Ming galmin & (Turbine 1) CT Megawatts \({ }^{1}-\mathrm{Min}\) \\
\hline Average (all) & 28.05 & 2252 & 0.0830 & 13.55 & 7653 & 46.36 & 17.28 & 41.93 & 47.3 \\
\hline Total (all) & - & - & - 00817 & - \({ }^{-1}\) & --7 & 45.40 & 4723 & 41.70 & 47.2 \\
\hline Minimum (all) & 27.65 & 22.17 & 0.0817 & 13.53 & 7640
7665 & 45.40 & 17.23
17.31 & 41.70
42.27 & 47.2
47.4 \\
\hline Maximum (all) & 28.35 & 22.82 & 0.0881 & 13.61 & 7665
7653 & 46.82
46.35 & 17.28 & 41.93 & 47.3 \\
\hline Averege (valld vahres only) & 28.05 & 22.52 & 0.0830 & 13.56 & 7653 & 46.36 & & & \\
\hline Total (valid values only) & - & \(\square\) & - & - & - & \({ }^{-}\) & 81 & & \\
\hline Count (valind values only) & 61 & 61 & 61 & 81 & 61 & 61 & 81 & 61 & 61 \\
\hline
\end{tabular}

CeDAR 1-Minute Data
LAKE COGEN
Data for 8/17/2010 4:58 PM thru 3/17/2010 5:58 PM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{aligned}
& \text { (Turbine 1) } \\
& \text { 76-NOx ppm } \\
& \text { 1-MIn }
\end{aligned}
\] & \[
\begin{aligned}
& \text { (Turbine 1) } \\
& \text { NOx ppm } \\
& \text { Q15\% O2 } \\
& \text { 1-Min }
\end{aligned}
\] & (Turbine 1) 75-NOX \(\mathrm{lo} / \mathrm{mmR}\) itu \(1-\mathrm{Min}\) & \[
\begin{gathered}
\text { (Tuitine 1) } \\
75-\mathrm{O} 2 \% \text { 1-Min }
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turbine 1) CT } \\
\text { Gas Flow } \\
\text { sce/min 1-Min } \\
\hline
\end{gathered}
\] & \[
\begin{aligned}
& \text { (Tu內tine 1) DB } \\
& \text { Guss Flow } \\
& \text { kscthr t-Min }
\end{aligned}
\] & (Turtine 1) Sprint Flow ga/min 1-Min & (Turbine 1) Water Injoction - 1-Min gal/min & (Turtine 1) CT Megawatts 1-Min \\
\hline 8/17 16:58 & 27.98 & 22.38 & 0.0825 & 13.53 & 7849 & 46.67 & 17.28 & 42.15 & 47.3 \\
\hline 8/17 16:59 & 27.92 & 22.35 & 0.0823 & 13.53 & 7849 & 46.66 & 17.27 & 42.13 & 47.3 \\
\hline 8/17 17:00 & 27.88 & 22.35 & 0.0823 & 13.54 & 7650 & 46.62 & 17.24 & 42.18 & 47.3 \\
\hline 8/17 17:01 & 27.93 & 22.33 & 0.0823 & 13.52 & 7655 & 46.71 & 17.28 & 42.86 & 47.4 \\
\hline 8/17 17:02 & 27.31 & 21.80 & 0.0803 & 13.51 & 7673 & 46.68 & 17.29 & 42.78 & 47.4 \\
\hline 8/17 17:03 & 27.19 & 21.71 & 0.0800 & 13.51 & 7662 & 46.71 & 17.29 & 42.59 & 47.4
47.4 \\
\hline 8117 17:04 & 27.51 & 21.99 & 0.0810 & 13.52 & 7665 & 48.70 & 17.30 & 42.72 & 47.4 \\
\hline 8/17 17:05 & 27.40 & 21.68 & 0.0806 & 13.51 & 7870 & 48.65 & 17.30 & 42.98 & 47.4 \\
\hline 8177 17:06 & 27.29 & 21.79 & 0.0803 & 13.54 & 7667 & 48.65 & 17.28 & 42.83 & 47.4 \\
\hline 8117 17:07 & 27.39 & 21.90 & 0.0807 & 13.52 & 7869 & 46.66 & 17.26 & 42.82 & 47.4 \\
\hline 8/17 17:08 & 27.37 & 21.88 & 0.0806 & 13.52 & 7669 & 48.69 & 17.25 & 42.87 & 47.4
47.4 \\
\hline 8117 17:09 & 27.35 & 21.87 & 0.0808 & 13.52 & 7666 & 46.66 & 17.28 & 42.78 & 47.4 \\
\hline 81717:10 & 27.35 & 21.87 & 0.0806 & 13.52 & 7664 & 48.69 & 17.28 & 42.71 & 47.4 \\
\hline \(8 / 17\) 17:11 & 27.45 & 21.85 & 0.0806 & 13.52 & 7666 & 46.68 & 17.25 & 42.74 & 47.4 \\
\hline \(817717: 12\) & 27.56 & 22.06 & 0.0813 & 13.53 & 7674 & 46.71 & 17.27 & 42.80 & 47.4 \\
\hline 8/17 17:13 & 27.41 & 21.91 & 0.0807 & 13.52 & 7675 & 46.65 & 17.28 & 42.82 & 47.4 \\
\hline 817 17:14 & 27.39 & 21.93 & 0.0808 & 13.63 & 7669 & 46.67 & 17.26 & 42.54 & 47.4 \\
\hline 8/17 17:16 & 27.63 & 22.09 & 0.0814 & 13.52 & 7672 & 46.71 & 17.24 & 42.98 & 47.5 \\
\hline 8/17 17:16 & 27.23 & 21.77 & 0.0802 & 13.52 & 7668 & 46.65 & 17.27 & 42.84 & 47.5 \\
\hline 8/17 17:17 & 27.34 & 21.89 & 0.0806 & 13.53 . & 7670 & 46.69 & 17.28 & 42.87 & 47.4 \\
\hline 8/17 17:18 & 27.45 & 21.92 & 0.0807 & 13.51 & 7678 & 46.74 & 17.27 & 42.91 & 47.5 \\
\hline 8/17 17:19 & 27.32 & 21.84 & 0.0805 & 13.52 & 7870 & 46.67 & 17.26 & 42.49 & 47.4 \\
\hline 8/17 17:20 & 27.63 & 22.09 & 0.0814 & 13.52 & 7872 & 46.74 & 17.31 & 43.05 & 47.5 \\
\hline 8/17 17:21 & 27.30 & 21.83 & 0.0804 & 13.52 & 7679 & 46.70 & 17.28 & 42.83 & 47.4
47.5 \\
\hline 8/17 17:22 & 27.34 & 21.89 & 0.0806 & 13.53 & 7871 & 46.71 & 17.29 & 42.77 & 47.5 \\
\hline 8/1717:23 & 27.49 & 22.01 & 0.0811 & 13.53 & 7888 & 46.76 & 17.25 & 42.72 & \\
\hline 8/17 17:24 & 27.51 & 22.02 & 0.0811 & 13.53 & 7688 & 46.67 & 17.30 & 42.58 & 47.4 \\
\hline 6/1717:25 & 27.61 & 22.10 & 0.0814 & 13.53 & 7872 & 46.75 & 17.27 & 42.63 & 47.5 \\
\hline 8/17 17:26 & 27.48 & 21.95 & 0.0809 & 13.52 & 7670 & 46.67 & 17.28 & 42.68 & 47.5 \\
\hline 8147 17:27 & 27.43 & 21.93 & 0.0808 & 13.52 & 7662 & 46.68 & 17.27
1726 & 42.68
42.35 & 47.4 \\
\hline 8/17 17:28 & 27.58 & 22.08 & 0.0813 & 13.53 & 7684 & 46.75 & 17.26 & 42.35 & 47.4 \\
\hline DAR Foparts & 010 6:00 PM, & R t-Minuta & & & & & & & \begin{tabular}{l}
Paye 1 of 6 \\
Rma 42
\end{tabular} \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline -Timestamp & \[
\begin{gathered}
\text { (Turbine 1) } \\
\text { 75-NOx ppm } \\
\text { 1-MIn }
\end{gathered}
\] & (Turbine 1) NOX ppm (13) \(15 \%\) 1-MIn & (Turbine 1) 75-NOX \(\mathrm{lb} / \mathrm{mmBta} 1-\mathrm{Mln}\) & \begin{tabular}{l}
(Turbing 1) \\
75-02\% 1-MIn
\end{tabular} & (Turbine 1) CT Ges Flow setfmin 1-Min & (Turbine 1) DB Ges Flow \(\mathrm{ksct} / \mathrm{hr}\) 1-Min & (Tubine 1) Sprint Flow gal/min 1-Min & (Turbine 1) Water Injaction -1-Min gal/min & (Turbine 1) CT Megawatts 1-Mh \\
\hline 8/17 17:29 & 27.80 & 22.26 & 0.0820 & 13.53 & 7662 & 48.65 & 17.29 & 42.54 & 47.4 \\
\hline 8/47 17:30 & 27.75 & 22.25 & 0.0820 & 13.54 & 7875 & 46.69 & 17.31 & 42.85 & 47.5 \\
\hline 8:17 17:31 & 27.42 & 21.88 & 0.0810 & 13.54 & 7672 & 46.73 & 17.34 & 42.55 & 47.5 \\
\hline 8/17 17:32 & 27.64 & 22.18 & 0.0816 & 13.54 & 7682 & 46.64 & 17.28 & 42.88 & 47.5 \\
\hline Q17 17:33 & 27.48 & 22.00 & 0.0810 & 13.53 & 7870 & 48.71 & 17.28 & 42.55 & 47.5 \\
\hline 8/17 17:34 & 27.74 & 22.24 & 0.0810 & 13.54 & 7670 & 48.68 & 17.27 & 42.86 & 47.5 \\
\hline 8/17 17:35 & 27.38 & 21.98 & 0.0810 & 13.55 & 7868 & 46.69 & 17.28 & 42.64 & 47.5 \\
\hline 8/17 17:36 & 27.70 & 22.21 & 0.0818 & 13.54 & 767 & 46.60 & 17.27 & 42.74 & 47.5 \\
\hline 8/17 17:37 & 27.71 & 22.21 & 0.0818 & 13.54 & 7674 & 46.57 & 17.28 & 42.50 & 47.5 \\
\hline 8/17 17:38 & 27.75 & 22.25 & 0.0820 & 13.54 & 7672 & 46.57 & 17.27 & 42.73 & 47.5 \\
\hline 8/17 17:30 & 27.61 & 2207 & 0.0813 & 13.52 & 7678 & 46.55 & 17.27 & 42.89 & 47.5 \\
\hline 8/17 17:40 & 27.44 & 21.91 & 0.0807 & 13.51 & 7681 & 46.57 & 17.30 & 42.74 & 47.5 \\
\hline 8/17 17:41 & 27.56 & 22.00 & 0.0811 & 13.51 & 7672 & 46.54 & 17.27 & 42.61 & 47.5 \\
\hline 8/17 17:42 & 27.74 & 22.18 & 0.0817 & 13.53 & 7675 & 48.39 & 17.28 & 42.36 & 47.5 \\
\hline 8/1717:43 & 27.97 & 22.42 & 0.0826 & 13.54 & 7885 & 48.33 & 17.25 & 43.06 & 47.5 \\
\hline 8/17 17:44 & 27.45 & 21.97 & 0.0810 & 13.53 & 7679 & 46.34 & 17.27 & 42.77 & 47.5 \\
\hline 8/17 17:45 & 27.66 & 22.20 & 0.0818 & 13.55 & 7880 & 48.29 & 17.29 & 43.05 & 47.5 \\
\hline 8/17 17:46 & 27.33 & 21.91 & 0.0807 & 13.54 & 7681 & 46.24 & 17.28 & 42.73 & 47.5 \\
\hline B/17 17:47 & 27.70 & 22.18 & 0.0817 & 13.53 & 7680 & 46.35 & 17.29 & 42.49 & 47.6 \\
\hline 8/17 17:48 & 27.83 & 22.31 & 0.0822 & 13.54 & 7680 & 48.26 & 17.29 & 42.66 & 47.5 \\
\hline 817717:49 & 27.81 & 22.28 & 0.0820 & 13.53 & 7684 & 46.33 & 17.30 & 43.25 & 47.6 \\
\hline 8/17 17:50 & 27.24 & 21.78 & 0.0802 & 13.52 & 7685 & 46.32 & 17.28 & 43.14 & 47.6 \\
\hline 8/17 17:51 & 27.28 & 21.81 & 0.0803 & 13.52 & 7678 & 46.22 & 17.29 & 42.40 & 47.5 \\
\hline 8/17 17:52 & 27.81 & 22.31 & 0.0822 & 13.52 & 7677 & 46.25 & 17.30 & 42.81 & 47.5 \\
\hline 8/17 17:53 & 27.59 & 22.03 & 0.0811 & 13.51 & 7682 & 46.17 & 17.28 & 42.73 & 47.6 \\
\hline 8/17 17:54 & 27.58 & 22.05 & 0.0812 & 13.52 & 7678 & 46.12 & 17.20 & 42.71 & 47.5 \\
\hline 8/17 17:55 & 27.72 & 22.19 & 0.0818 & 13.53 & 7679 & 46.14 & 17.30 & 42.89 & 47.5 \\
\hline 8/17 17:56 & 27.53 & 22.07 & 0.0813 & 13.54 & 7877 & 46.01 & 17.30 & 42.85 & 47.5 \\
\hline 8/17 17:57 & 27.51 & 22.05 & 0.0812 & 13.54 & 7683 & 45.94 & 17.28 & 42.84 & 47.5 \\
\hline 8/17 17:58 & 27.51 & 22.08 & 0.0814 & 13.55 & 7675 & 45.92 & 17.27 & 42.97 & 47.5 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Himestamp & \[
\begin{aligned}
& \text { Turbine 1) } \\
& \text { 75-NOx ppm } \\
& 1-\mathrm{Mln}
\end{aligned}
\] & \begin{tabular}{l}
(Turine 1) NOX ppm \\
(3) \(15 \%\) 1-Min
\end{tabular} & \[
\begin{aligned}
& \text { (Turbing 1) } \\
& \text { 75-NOx } \\
& \text { IbdmmBtut 1-Min }
\end{aligned}
\] & \[
\begin{gathered}
\text { (Turbine 1) } \\
75-02 \% ~ 1-M \mid n
\end{gathered}
\] & \[
\begin{aligned}
& \text { TTurbine 1) CT } \\
& \text { Gas Flow } \\
& \text { sclimin 1-Min }
\end{aligned}
\] & ```
(Turbine 1) DB
    Gas Flow
kscf/hr 1-Min
``` & (Turbine 1) Sphnt Flow gal/min 1-Min & (Turbine 1) Water Injection \(-1-\mathrm{M} \mid \mathrm{ngalmln}\) & \begin{tabular}{c} 
(Turbine 1) CT \\
\begin{tabular}{c} 
Megawatts \\
1-Mm
\end{tabular} \\
\hline
\end{tabular} \\
\hline Average (all) & 27.55 & 22.04 & 0.0812 & 13.53 & 7672 & 46.54 & 17.28 & 42.73 & 47.5 \\
\hline Total (ell) & - & - & - & - & -- & - & - & - & - \\
\hline Minimum (all) & 27.19 & 21.71 & 0.0800 & 13.51 & 7649 & 45.92 & 17.24 & 42.13 & 47.3 \\
\hline Maximum (ad) & 27.97 & 22.42 & 0.0826 & 13.55 & 7685 & 48.76 & 17.34 & 43.25 & 47.6 \\
\hline Average (yalid values only) & 27.55 & 22.04 & \(0.08 \pm 2\) & 13.53 & 7672 & 46.54 & 17.28 & 42.73 & 47.5 \\
\hline Total (valid values only) & - & - & - & - & -- & - & - & - & - \\
\hline Count (valid values anly) & 61 & 61 & 61 & 61 & 61 & 61 & 61 & 61 & 61 \\
\hline
\end{tabular}

CeDAR 1-Minute Data
LAKE COGEN
Data for 8/17/20106:16 PM thru 8/17/2010 7:16"PM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 1) } \\
75-\mathrm{NO} \mathrm{Pppm} \\
\text { 1-Min }
\end{gathered}
\] & (Turbirie 1) NOX ppm (1) \(15 \%\) O2 1-Min & \[
\begin{gathered}
\text { (Turbine 1) } \\
75-\mathrm{NOx} \\
\text { Ib/mmbtulu 1-Min }
\end{gathered}
\] & \begin{tabular}{l}
(Turbine 1) \\
75-02\% 1-Min
\end{tabular} & (Turbine 1) CT Gas Flow sectronk 1-Min & (Turbine 1) OB Gas flow \(\mathrm{kscf} / \mathrm{hr} 1\)-Min & \begin{tabular}{l}
(Turblno 1) \\
Sptint Ftow \\
galimin 1-Min
\end{tabular} & (Turtne 1) Watar Injection - 1-Min gelmin & (Turbine 1) CT Megawatts 1-Min \\
\hline 8/17 18:18 & 27.32 & 21.90 & 0.0807 & 13.54 & 7837 & 45.35 & 17.27 & 42.56 & 47.3 \\
\hline 8/17 18:17 & 27.36 & 21.93 & 0.0808 & 13.54 & 7629 & 45.38 & 17.29 & 42.44 & 47.3 \\
\hline 8/17 18:18 & 27.42 & 21.98 & 0.0810 & 13.54 & 7623 & 45.34 & 17.28 & 42.31 & 47.2 \\
\hline 8/17 18:19 & 27.49 & 22.10 & 0.0814 & 13.56 & 7631 & 45.27 & 17.27 & 42.59 & 47.3 \\
\hline 8/17 18:20 & 27.43 & 21.99 & 0.0810 & 13.54 & 7633 & 45.21 & 17.29 & 42.60 & 47.3 \\
\hline 8/47 18:21 & 27.37 & 21.97 & 0.0809 & 13.55 & 7643 & 45.19 & 17.31 & 42.60 & 47.3 \\
\hline 8/17 18:22 & 27.40 & 22.02 & 0.0811 & 13.56 & 7642 & 45.14 & 17.30 & 42.60 & 47.4 \\
\hline 8/1718:23 & 27.40 & 21.99 & 0.0810 & 13.55 & 7643 & 45.12 & 17.26 & 42.61 & 47.4 \\
\hline 8/17 18:24 & 27.43 & 22.02 & 0.0811 & 13.55 & 7843 & 45.21 & 17.27 & 42.63 & 47.4 \\
\hline 8/17 18:25 & 27.40 & 21.99 & 0.0810 & 13.55 & 7639 & 45.17 & 17.25 & 42.81 & 47.4 \\
\hline 8/17 18:26 & 27.32 & 21.90 & 0.0807 & 13.54 & 7639 & 45.22 & 17.28 & 42.60 & 47.4 \\
\hline 8/17 18:27 & 27.44 & 22.03 & 0.0811 & 13.55 & 7843 & 45.11 & 17.26 & 42.60 & 47.4 \\
\hline 8/17 18:28 & 27.45 & 22.06 & 0.0813 & 13.56 & 7644 & 45.14 & 17.33 & 42.61 & 47.4 \\
\hline 8/17 18:29 & 27.48 & 22.09 & 0.0814 & 13.56 & 7638 & 45.18 & 17.28 & 42.82 & 47.4 \\
\hline 8/17 18:30 & 27.45 & 22.06 & 0.0813 & 13.56 & 7834 & 45.15 & 17.33 & 42.59 & 47.4 \\
\hline 8/17 18:31 & 27.48 & 22.09 & 0.0814 & 13.56 & 7638 & 45.14 & 17.29 & 42.57 & 47.4 \\
\hline 8/1718:32 & 27.45 & 22.03 & 0.0812 & 13.55 & 7634 & 45.19 & 17.31 & 42.60 & 47.3 \\
\hline 8/17 18:33 & 27.40 & 21.99 & 0.0810 & 13.55 & 7638 & 45.08 & 17.33 & 42.59 & 47.4 \\
\hline \(8 / 17\) 18:34 & 27.40 & 21.99 & 0.0810 & 13.55 & 7646 & 45.10 & 17.30 & 42.61 & 47.4 \\
\hline 8/17 16:35 & 27.47 & 22.05 & 0.0812 & 13.55 & 7638 & 44.94 & 17.30 & 42.59 & 47.4 \\
\hline 8/17 18:36 & 27.45 & 22.06 & 0.0813 & 13.58 & 7637 & 44.80 & 17.31 & 42.62 & 47.4 \\
\hline 8/1718:37 & 27.51 & 22.14 & 0.0816 & 13.57 & 7637 & 44.94 & 17.31 & 42.62 & 47.4 \\
\hline 8/17 18:38 & 27.49 & 22.13 & 0.0815 & 13.57 & 7638 & 44.91 & 17.32 & 42.62 & 47.4 \\
\hline 8/17 18:39 & 27.57 & 22.19 & 0.0818 & 13.57 & 7640 & 44.97 & 17.33 & 42.59 & 47.4 \\
\hline 8iTT 18:40 & 27.63 & 22.19 & 0.0817 & 13.58 & 7838 & 44.85 & 17.28 & 42.60 & 47.4 \\
\hline Q17 18:41 & 27.54 & 22.14 & 0.0816 & 13.56 & 7631 & 44.84 & 17.30 & 42.61 & 47.4 \\
\hline Q171718:42 & 27.49 & 22.07 & 0.0813 & 13.55 & 7639 & 44.82 & 17.36 & 42.64 & 47.4 \\
\hline 8/17 18:43 & 27.43 & 22.02 & 0.0811 & 13.55 & 7642 & 44.89 & 17.28 & 42.58 & 47.4 \\
\hline 8/17 18:44 & 27.53 & 22.15 & 0.0814 & 13.55 & 7635 & 44.72 & 17.31 & 42.59 & 47.4 \\
\hline 8/17 18:45 & 27.54 & 22.14 & 0.0816 & 13.58 & 7632 & 44.77 & 17.32 & 42.58 & 47.4 \\
\hline 8/17 18:48 & 27.56 & 22.18 & 0.0817 & 13.57 & 7634 & 44.71 & 17.29 & 42.61 & 47.4 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { Tuubine 1] } \\
75-\mathrm{NOx} \mathrm{ppm} \\
1 \text {-Min }
\end{gathered}
\] & (Turbine 1) NOX ppm (16) \(15 \% 02\) 1-M1n & \[
\begin{gathered}
\text { (Turbina 1) } \\
75-\mathrm{NOX} \\
\text { ibimmBtu 1-Min }
\end{gathered}
\] & \begin{tabular}{l}
(Turbine-1) \\
75-02\% 1-Min
\end{tabular} & (Turbine 1) CT Gas flow sct/min 1-Min & (Turbine 1) DB Gas Ftow \(\mathrm{ksec} / \mathrm{hr} 1\)-Min & \begin{tabular}{l}
(Turbine 1) \\
Sprint Flow gaV/min 1 -Min
\end{tabular} & (Turbine 1) Water Injection - 1-Min gaVmin & (Turbine 1) CT Megewatts 1-Min \\
\hline 8/17 18:47 & 27.53 & 22.16 & 0.0816 & 13.57 & 7632 & 44.83 & 17.29 & 42.02 & 47.4 \\
\hline 8/17 18:48 & 27.58 & 22.23 & 0.0818 & 13.58 & 7637 & 44.68 & 17.31 & 42.59 & 47.4 \\
\hline 8/17 18:49 & 27.58 & 22.23 & 0.0819 & 13.58 & 7632 & 44.85 & 17.30 & 42.61 & 47.4 \\
\hline 8/17 18:50 & 27.57 & 22.19 & 0.0818 & 13.57 & 7628 & 45.02 & 47.28 & 42.62 & 47.4 \\
\hline 8/17 18:51 & 27.52 & 22.12 & 0.0815 & 13.56 & 7631 & 44.89 & 17.28 & 42.61 & 47.4 \\
\hline 8/17 18:52 & 27.55 & 22.15 & 0.0816 & 13.58 & 7636 & 45.00 & 17.31 & 42.61 & 47.5 \\
\hline 8417 16:53 & 27.58 & 22.20 & 0.0818 & 13.57 & 7640 & 45.23 & 17.30 & 42.58 & 47.5 \\
\hline 8117 18:54 & 27.68 & 22.25 & 0.0820 & 13.56 & 7634 & 45.20 & 17.28 & 42.61 & 47.5 \\
\hline 8/17 18:55 & 27.65 & 22.28 & 0.0820 & 13.57 & 7634 & 45.12 & 17.30 & 42.62 & 47.5 \\
\hline 8/17 18:56 & 27.74 & 22.33 & 0.0823 & 13.57 & 7640 & 45.15 & 17.30 & 42.59 & 47.5 \\
\hline 8/17 18:57 & 27.73 & 22.35 & 0.0823 & 13.58 & 7639 & 45.11 & 17.30 & 42.60 & 47.5 \\
\hline 8/17 18:58 & 27.67 & 22.30 & 0.0822 & 73.58 & 7635 & 45.16 & 17.30 & 42.60 & 47.4 \\
\hline 8/17 18:50 & 27.69 & 22.28 & 0.0821 & 13.5 r & 7635 & 45.14 & 17.32 & 42.63 & 47.5 \\
\hline 8817 19:00 & 27.70 & 22.27 & 0.0820 & 13.58 & 7831 & 45.09 & 17.32 & 42.44 & 47.4 \\
\hline 8/17 19:01 & 27.61 & 22.38 & 0.0825 & 13.57 & 7629 & 45.15 & 17.28 & 42.55 & 47.5 \\
\hline 8/17 19:02 & 27.70 & 22.27 & 0.0820 & 13.56 & 7833 & 45.14 & 17.28 & 42.57 & 47.5 \\
\hline 8/17 19:03 & 27.77 & 22.32 & 0.0822 & 13.50 & 7627 & 45.12 & 17.33 & 42.55 & 47.5 \\
\hline 8/17 18:04 & 27.86 & 22.39 & 0.0825 & 13.56 & 7627 & 45.08 & 17.27 & 42.45 & 47.5 \\
\hline 8'17 19:05 & 27.88 & 22.52 & 0.0830 & 13.57 & 7631 & 45.07 & 17.30 & 42.49 & 47.5 \\
\hline 8/17 19:08 & 28.00 & 22.57 & 0.0831 & 13.58 & 7635 & 45.07 & 17.34 & 42.82 & 47.5 \\
\hline 8/17 19:07 & 27.87 & 22.48 & 0.0828 & 13.58 & 7829 & 45.10 & 17.33 & 42.63 & 47.5 \\
\hline 8/17 19:08 & 27.87 & 22.46 & 0.0823 & 13.58 & 7333 & 45.08 & 17.30 & 42.63 & 47.5 \\
\hline 8/17 19:09 & 27.87 & 22.43 & 0.0826 & 13.57 & 7636 & 45.13 & 97.30 & 42.63 & 47.5 \\
\hline 8/17 18:10 & 27.81 & 2235 & 0.0824 & 13.56 & 7833 & 45.08 & 17.25 & 42.82 & 47.5 \\
\hline 8/17 19:11 & 27.82 & 22.36 & 0.0824 & 13.58 & 7633 & 45.09 & 17.28 & 42.48 & 47.5 \\
\hline 8/17 19:12 & 27.90 & 22.43 & 0.0826 & 13.56 & 7637 & 45.08 & 17.28 & 42.62 & 47.5 \\
\hline 8/17 18:13 & 27.84 & 22.35 & 0.0823 & 13.55 & 7639 & 45.04 & 17.27 & 42.62 & 47.5 \\
\hline 8/17 18:14 & 27.81 & 22.38 & 0.0825 & 13.57 & 7639 & 45.02 & 17.30 & 42.63 & 47.6 \\
\hline \(8 / 1719: 15\) & 27.87 & 22.43 & 0.0826 & 13.57 & 7634 & 45.104 & 17.28 & 42.62 & 47.5 \\
\hline 9/17 18:16 & - < \(18>\) & -<18> & \(-<18>\) & - < 18> & - <18> & - <18> & \(-<18>\) & - < \(18>\) & - <18> \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Triestamp & \[
\begin{gathered}
\text { (Turbine 1) } \\
\text { 75-NOXppm } \\
\text { 1-MIn }
\end{gathered}
\] & \begin{tabular}{l}
(Turbine 1) NOX ppm \\
(1)15\% O2. \\
1-Min
\end{tabular} & (Turbine 1) 75-NOX lb/mmBtu 1 H Min & \begin{tabular}{l}
(Turtine 1) \\
75-O2\% 1-Min
\end{tabular} & (Tuntine 1) CT Gas Flow sefimin 1-Min & (Turbine 1) OB Gas Flow \(\mathrm{ksct} / \mathrm{hr} 1-\mathrm{Min}\) & \begin{tabular}{l}
(Turbine 1) \\
- Sprint Flow gal/min 1-Min
\end{tabular} & (Turbine 1) Water Injection - 1-Min galmin & (Turtine 1) CT Megawatts 1-Min \\
\hline Averaga (all) & 27.59 & 22.18 & 0.0817 & 13.56 & 7836 & 45.06 & 17.30 & 42.59 & 47.4 \\
\hline Total (all) & - & -- & - & - & - & \(\cdots\) & - & - & - \\
\hline Minimum (all) & 27.32 & 21.90 & 0.0807 & 13.54 & 7623 & 44.68 & 17.25 & 42.31 & 47.2 \\
\hline Maximum (all) & 28.00 & 22.57 & 0.0831 & 13.58 & 7846 & 45.38 & 17.35 & 42.64 & 47.6 \\
\hline Average (valid values only) & 27.59 & 22.18 & 0.0817 & 13.58 & 7636 & 45.06 & 17.30 & 42.59 & 47.4 \\
\hline Total (valid values only) & - & - & - & - & - & - & - & - & - \\
\hline Court (valld values only) & 60 & 60 & 60 & \(\theta 0\) & 60 & 60 & 60 & 60 & 60 \\
\hline
\end{tabular}

CeDAR 1-Minute Data
LAKE COGEN
Data for 8/17/2010 6:13 AM thru 8/17/2010 6:50 AM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOX ppm } \\
\text { 1 Min }
\end{gathered}
\] & (Turbine 2) NOxppm 615\% O2 1-Min & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOx } \\
\text { Ib/mmEtu 1-Min }
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turtine 2) } \\
\text { 75-02\% 1-Min }
\end{gathered}
\] & (Turbine 2) CT Gas Flow \(\mathrm{sc} / \mathrm{min} 1-\mathrm{Min}\) & (Turtine 2) \(0 B\) Gas Flow ksci/hr 1-Min & (Turbine 2) Sprint Flow gal/min 1-Min & (Turbine 2) Watar Injaction \(-1-M i n g a l / m i n\) & (Turtine 2) CT Megawatts 1 Min \\
\hline 8/17 8:13 & 26.65 & 22.99 & 0.0847 & 14.06 & 7717 & \(0.00<13>\) & 17.74 & 42.47 & 48.7 \\
\hline 8/17 0:14 & 26.62 & 22.93 & 0.0845 & 14.05 & 7720 & 0.00 -13> & 17.79 & 42.62 & 48.7 \\
\hline 8/17 6:15 & 28.81 & 23.09 & 0.0851 & 14.05 & 7719 & 0.00 <13> & 17.81 & 42.69 & 48.7 \\
\hline 8/17 6:16 & 26.59 & 22.80 & 0.0844 & 14.05 & 7724 & \(0.00<13>\) & 17.75 & 42.77 & 48.7 \\
\hline 8/17 6:17 & 26.41 & 22.75 & 0,0836 & 14.05 & 7719 & \(0.00<13>\) & 17.77 & 42.47 & 48.7 \\
\hline 8/17 8:18 & 26.84 & 23.15 & 0.0853 & 14.06 & 7715 & \(0.00<13>\) & 17.81 & 42.32 & 48.7 \\
\hline 8/77 6:18 & 26.68 & 22.88 & 0.0847 & 14.05 & 7721 . & 0.00 <13> & 17.81 & 42.82 & 48.7 \\
\hline 8/176:20 & 28.54 & 22.89 & 0.0843 & 14.06 & 7717 & 0.00 <13> & 17.80 & 42.72 & 48.7 \\
\hline 8117 6:21 & 26.52 & 22.88 & 0.0843 & 14.05 & 7716 & 0.00 <13> & 17.84 & 42.53 & 48.7 \\
\hline 8/17 6:22 & 26.89 & 23.18 & 0.0853 & 14.05 & 7713 & \(0.00<13>\) & 17.77 & 42.30 & 48.7 \\
\hline 8117 8:23 & 26.89 & 23.18 & 0.0854 & 14.08 & 7721 & \(0.00 \times 13>\) & 17.85 & 42.67 & 48.7 \\
\hline 8/176:24 & 20.52 & 22.81 & 0.0840 & 14.04 & 7722 & \(0.00<13>\) & 17.78 & 43.03 & 48.8 \\
\hline 8/17 6:25 & 26.42 & 22.76 & 0.0838 & 14.05 & 7715 & \(0.00<13>\) & 17.72 & 42.16 & 48.7 \\
\hline 81776:26 & 27.05 & 23.33 & 0.0860 & 14.06 & 7707 & \(0.00<13>\) & 17.67 & 42.29 & 48.7 \\
\hline 8177 6:27 & 26.76 & 23.08 & 0.0850 & 14.06 & 7712 & \(0.00<13>\) & 17.67 & 42.67 & 48.7 \\
\hline 8/17 6:28 & 26.43 & 22.76 & 0.0839 & 14.05 & 7718 & \(0.00<13>\) & 17.78 & 42.77 & 48.7 \\
\hline 8/17 6:29 & 28.81 & 23.18 & 0.0863 & 14.07 & 7711 & \(0.00<13>\) & 17.68 & 42.20 & 48.7 \\
\hline 8/17 8:30 & 28.89 & 23.19 & 0.0854 & 14.06 & 7713 & \(0.00<13>\) & 17.65 & 42.81 & 48.7 \\
\hline 8/17 6:31 & 26.40 & 22.74 & 0.0838 & 14.05 & 7717 & \(0.00<13>\) & 17.74 & 42.46 & 48.7 \\
\hline 8/17 6:32 & 26.65 & 22.90 & 0.0847 & 14.06 & 7713 & \(0.00<13>\) & 17.82 & 42.52 & 46.7 \\
\hline 8/17 6:33 & 26.72 & 23.01 & 0.0848 & 14.05 & 7715 & \(0.00<13>\) & 17.79 & 42.46 & 48.7 \\
\hline 8/17 6:34 & 26.70 & 23.00 & 0.0847 & 14.05 & 7715 & \(0.00<13>\) & 17.90 & 42.76 & 46.7 \\
\hline 8/17 6:36 & 26.36 & 22.67 & 0.0835 & 14.04 & 7719 & 0.00 <13> & 17.79 & 42.43 & 48.7 \\
\hline 8/17 8:36 & 26.91 & 23.18 & 0.0854 & 14.05 & 7714 & 0.00 <13> & 17.85 & 42.41 & 48.7 \\
\hline 8117 6:37 & 26.93 & 23.23 & 0.0858 & 14.08 & 7714 & \(0.00<13>\) & 17.62 & 42.59 & 48.7 \\
\hline 8/17 6:38 & 28.60 & 22.94 & 0.0845 & 14.06 & 7717 & \(0.00<13>\) & 17.71 & 42.74 & 48.7 \\
\hline 8117 6:39 & 26.38 & 22.72 & 0.0837 & 14.05 & 7717 & 0.00 <13> & 17.77 & 42.81 & 48.7 \\
\hline 81176:40 & 26.67 & 23.00 & 0.0847 & 14.08 & 7707 & \(0.00<13>\) & 17.68 & 42.22 & 48.7 \\
\hline 8117 6:41 & 26.89 & 23.19 & 0.0854 & 14.06 & 7706 & \(0.00<13>\) & 17.68 & 42.60 & 48.7 \\
\hline 8/17 6:42 & 26.45 & 2278 & 0.0839 & 14.05 & 7715 & \(0.00<13>\) & 17.56 & 43.08 & 48.7 \\
\hline 8/17 6:43 & 28.41 & 22.75 & 0.0838 & 14.05 & 7716 & \(0.00<132\) & 17.69 & 42.40 & 48.8 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestomp & \[
\begin{gathered}
\text { (Turtine 2) } \\
\text { 75-NOx ppm } \\
1 \text { 1-Mln }
\end{gathered}
\] & \begin{tabular}{l}
(Turbine 2) NOXpm \\
@15\% 02 1-MIn
\end{tabular} & \[
\begin{gathered}
\text { (Turbine 2) } \\
75-\mathrm{NOx} \\
\mathrm{Ib} / \mathrm{mm} \mathrm{Bta} 1-\mathrm{Min}
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turbtre 2) } \\
\text { 75-O2\% 1-Min }
\end{gathered}
\] & \[
\begin{aligned}
& \text { (Tubline 2) CT } \\
& \text { Gas Flow } \\
& \text { sctimin 1-Min }
\end{aligned}
\] & (Turblne 2) DB Ges Flow \(\mathrm{ksct} / \mathrm{hr} 1\) - Min & \begin{tabular}{l}
(Turbine 2) \\
Spint Flaw \\
gal/min 1-Min
\end{tabular} & (Turbine 2) Water Injection - 1-Min galmin & (Turbine 2) CT Megawatts 1AMin \\
\hline 8/17 6;44 & 26.90 & 23.17 & 0.0854 & 14.05 & 7708 & \(0.00<13>\) & 17.98 & 42.46 & 48.7 \\
\hline 8/17 6;45 & 28.88 & 23.17 & 0.0854 & 14.08 & 7710 & 0.00 <13> & 17.87 & 42.55 & 48.7 \\
\hline 8/17 6:46 & 26.63 & 22.97 & 0.0846 & 14.08 & 7708 & \(0.00<13>\) & 17.64 & 42.55 & 48.7 \\
\hline 8/17 8:47 & 26.70 & 23.03 & 0.0848 & 14.06 & 7706 & \(0.00<13>\) & 17.70 & 42.55 & 48.7 \\
\hline 8/17 8:48 & 26.66 & 23.00 & 0.0847 & 14.08 & 7708 & \(0.00<13>\) & 17.73 & 42.94 & 48.7 \\
\hline 81176:49 & 26.36 & 22.70 & 0.0838 & 14.05 & 7706 & \(0.00<13>\) & 17.78 & 42.54 & 48.7 \\
\hline 8/17 6:50 & 26.88 & 23.19 & 0.0854 & 14.08 & 7702 & \(0.00<13>\) & 17.70 & 42.31 & 48.7 \\
\hline Averaga (all) & 26.87 & 22.89 & 0.0847 & 14.05 & 7714 & 0.00 & 17.77 & 42.57 & 48.7 \\
\hline Total (ali) & - & - & - & - & - & -0 & - & - & \(\vec{\square}\) \\
\hline Minimum (all) & 26.36 & 22.67 & 0.0835 & 14.04 & 7702 & 0.00 & 17.56 & 42.18 & 48.7 \\
\hline Maxdrumm (all) & 27.05 & 23.33 & 0.0860 & 14.07 & 7724 & 0.00 & 17.98 & 43.08 & 48.8 \\
\hline Averege (valld values onify) & 26.67 & 22.99 & 0.0847 & 14.05 & 7714 & - & 17.77 & 42.57 & 48.7 \\
\hline Total (valld values only) & - & - & - & - & - & - & - & - & - \\
\hline Count (valitid values only) & 38 & 38 & 38 & 38 & 38 & 0 & 38 & 38 & 38 \\
\hline \(<13\rangle=\) Down & & & & - & & & & & \\
\hline
\end{tabular}

CeDAR 1-Minute Data
LAKE COGEN
Data for 8/17/2010 7:36 AM thru 8/i7/2010 7:57 AM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOx ppm } \\
\text { 1-Mln }
\end{gathered}
\] & (Turbine 2) NOX ppm (6)15\% 02 1-Min & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOx } \\
\text { Ib/mmextur 1-Min }
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-O2\% 1-M|n }
\end{gathered}
\] & (Turbine 2) CT Gas Flow sct/min 1-Min & (Turblne 2) DB Gas Flow \(\mathrm{ksec} / \mathrm{hr} 1-\mathrm{M}] \mathrm{n}\) & (Tubline 2) Sprint Flow gal/min 1-Min & (Turbine 2) Water injection - 1-Min gal/min & (Turbine 2) CT Megawants 1 A Min \\
\hline 2/177:36 & 27.02 & 23.34 & 0.0860 & 14.07 & 7697 & \(0.00<13>\) & 17.84 & 42.12 & 48.6 \\
\hline 8/177:37 & 28.85 & 23.28 & 0.0858 & 14.07 & 7899 & \(0.00<13>\) & 17.85 & 41.88 & 48.7 \\
\hline 8/177:38 & 27.28 & 23.60 & 0.0869 & 14.08 & 7695 & \(0.00<13>\) & 17.82 & 42.13 & 48.7 \\
\hline 8/17 7:39 & 26.95 & 23.28 & 0.0856 & 14.07 & 7694 & \(0.00<13>\) & 17.74 & 42.01 & 48.6 \\
\hline 8/17 7:40 & 27.17 & 23.50 & 0.0866 & 14.08 & 7888 & \(0.00<13>\) & 17.60 & 41.99 & 48.8 \\
\hline 8/17 7:41 & 27.23 & 23.56 & 0.0868 & 14.08 & 7683 & \(0.00<13>\) & 17.63 & 41.64 & 48.6 \\
\hline 8/177:42 & 27.58 & 23.89 & 0.0880 & 14.09 & 7685 & \(0.00<13>\) & 17.84 & 42.28 & 48.6 \\
\hline 8117 7:43 & 26.76 & 23.12 & 0.0852 & 14.07 & 7698 & \(0.00<13>\) & 17.75 & 42.16 & 48.6 \\
\hline 8/177:44 & 27.16 & 23.50 & 0.0888 & 14.08 & 7592 & \(0.00<13>\) & 17.83 & 41.84 & 48.6 \\
\hline 8117 7:45 & 27.21 & 23.54 & 0.0867 & 14.08 & 7689 & \(0.00<13>\) & 17.82 & 42.05 & 48.6 \\
\hline 8117 7:46 & 27.07 & 23.42 & 0.0863 & 14.08 & 7889 & \(0.00<13>\) & 17.82 & 42.02 & 48.6 \\
\hline 8/17 7:47 & 27.23 & 23.56 & 0.0888 & 14.08 & 7694 & \(0.00<13>\) & 17.89 & 41.91 & 48.7 \\
\hline 8117 7:48 & 27.23 & 23.58 & 0.0868 & 14.08 & 7691 & \(0.00<13>\) & 17.81 & 41.98 & 48.6 \\
\hline 8117 7:49 & 27.32 & 23.63 & 0.0871 & 14.08 & 7693 & \(0.00<13>\) & 17.85 & 42.00 & 48.6 \\
\hline 8/17 7:50 & 26.93 & 23.26 & 0.0857 & 14.07 & 7699 & \(0.00<13>\) & 17.83 & 42.26 & 48.7 \\
\hline 8117 7:51 & 27.14 & 23.48 & 0.0865 & 14.08 & 7690 & \(0.00<13>\) & 17.88 & 41.66 & 48.6 \\
\hline 8/17 7-52 & 27.29 & 23.61 & 0.0870 & 14.08 & 7690 & \(0.00<13>\) & 17.78 & 42.12 & 48.6 \\
\hline 8/177:53 & 26.97 & 23.33 & 0.0860 & 14.08 & 7699 & \(0.00<13>\) & 17.89 & 42.05 & 48.6 \\
\hline 8117 7:54 & 27.07 & 23.42 & 0.0863 & 14.08 & 7695 & \(0.00<13>\) & 17.76 & 41.86 & 48.8 \\
\hline 8117 7:55 & 27.30 & 23.62 & 0.0870 & 14.08 & 7690 & 0.00 <13> & 17.70 & 42.07 & 48.8 \\
\hline 8/177:56 & 27.18 & 23.51 & 0.0866 & 14.08 & 7690 & \(0.00<13>\) & 17.78 & 42.08 & 48.6 \\
\hline 81177:57 & 27.19 & 23.52 & 0.0867 & 14.08 & 7694 & 0.00 <13> & 17.74 & 42.25 & 48.6 \\
\hline
\end{tabular}

CoDAR Reports 817/2010 7:59 AM, CoDAR TMAnute Date


\section*{CeDAR 1-Minute Data}

LAKE COGEN
Data for 8/17/2010 8:13 AM thru 8/17/2010 8:34 AM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOx ppom } \\
\text { 4-Min }
\end{gathered}
\] & (Turbine 2) NOxpm (1) \(15 \% 02\) 1-Mis & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOX } \\
\text { LImmBul 1-Min }
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-O2\% 1-Min }
\end{gathered}
\] & (Turtine 2) CT Gas Flow set/min 1-Min & (Turbine 2) DB Gas Flow kscffirr 1-Min & (Turbine 2) Sprint Flow gal/min 1 - Min & (Turtine 2) Water injection - 1-Min gavmin & (Turbine 2) CT Megeweits 1-Min \\
\hline 8/17 8:13 & 27.30 & 23.58 & 0.0869 & 14.07 & 7683 & \(0.00<13>\) & 17.90 & 41.63 & 48.5 \\
\hline 8177 8:14 & 27.15 & 23.48 & 0.0865 & 14.08 & 7889 & \(0.00<13>\) & 17.72 & 42.00 & 48.5 \\
\hline 81178:35 & 27.00 & 23.36 & 0.0860 & 14.08 & 7681 & \(0.00<132\) & 17.55 & 41.98 & 48.5 \\
\hline 8/17 8:16 & 27.28 & 23.80 & 0.0889 & 14.08 & 7879 & \(0.00<132\) & 17.69 & 41.31 & 48.5 \\
\hline 8/17 8:17 & 27.61 & 23.92 & 0.0881 & 14.09 & 7684 & \(0.00<13>\) & 17.73 & 41.88 & 48.8 \\
\hline 8117 8:18 & 27.15 & 23.49 & 0.0865 & 14.08 & 7698 & \(0.00<13>\) & 17.79 & 42.32 & 48.6 \\
\hline 8/17 8:19 & 26.73 & 23.09 & 0.0851 & 14.07 & 7897 & \(0.00<13>\) & 17.97 & 42.03 & 48.5 \\
\hline 8/17 8:20 & 27.04 & 23.38 & 0.0851 & 14.07 & 7694 & \(0.00<13>\) & 18.04 & 42.03 & 48.6 \\
\hline 8/47 8:21 & 27.22 & 23.51 & 0.0866 & 14.07 & 7688 & \(0.00<13>\) & 17.75 & 41.28 & 48.5 \\
\hline 8/17 8:22 & 27.41 & 23.71 & 0.0874 & 14.08 & 7698 & \(0.00<13>\) & 17.77 & 42.12 & 48.5 \\
\hline 3/17 8:23 & 26.96 & 23.28 & 0.0858 & 14.07 & 7680 & \(0.00<13>\) & 17.82 & 41.73 & 48.5 \\
\hline 8/17 8:24 & 27.42 & 23.78 & 0.0875 & 14.09 & 7688 & \(0.00<13>\) & 17.79 & 41.73 & 48.5 \\
\hline 8:17 8:25 & 27.13 & 23.47 & 0.0865 & 14.08 & 7699 & 0.00 <13> & 17.85 & 41.96 & 48.6 \\
\hline 8/17 8:26 & 27.03 & 23.38 & 0.0864 & 14.09 & 7703 & \(0.00<13>\) & 17.77 & 42.38 & 48.6 \\
\hline 8/17 8:27 & 26.63 & 23.00 & 0.0847 & 14.07 & 7698 & \(0.00<132\) & 17.82 & 41.68 & 48.5 \\
\hline 8/178:28 & 27.21 & 23.54 & 0.0867 & 14.08 & 7688 & \(0.00<13>\) & 17.78 & 42.08 & 48.5 \\
\hline 8/17 8:29 & 27.06 & 23.41 & 0.0862 & 14.08 & 7685 & \(0.00<13>\) & 17.80 & 41.64 & 48.5 \\
\hline 8117 8:30 & 27.34 & 23.55 & 0.0871 & 14.08 & 7685 & \(0.00<13>\) & 17.81 & 41.78 & 48.5 \\
\hline 8/178:31 & 27.04 & 23.39 & 0.0862 & 14.08 & 7695 & \(0.00<13>\) & 17.00 & 42.00 & 48.5 \\
\hline 81178:32 & 27.12 & 23.48 & 0.0864 & 14.08 & 7690 & \(0.00<13>\) & 17.66 & 41.53 & 48.5 \\
\hline 8/178:33 & 27.41 & 23.75 & 0.0875 & 14.09 & 7887 & \(0.00<13>\) & 17.80 & 41.97 & 48.5 \\
\hline 8/17 8:34 & 28.85 & 23.31 & 0.0858 & 14.08 & 7695 & \(0.00<13>\) & 17.81 & 41.85 & 48.6 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Tumine 2) } \\
\cdot \begin{array}{c}
75-\mathrm{NO} \mathrm{pppm} \\
1+\mathrm{Min}
\end{array}
\end{gathered}
\] & \begin{tabular}{l}
(Twbine 2) NOX ppm \\
(15\% O2 1-Min
\end{tabular} & \[
\begin{aligned}
& \text { (Turting 2) } \\
& \text { 75-NOx } \\
& \text { ldmm8tu 1-Min }
\end{aligned}
\] & \[
\begin{gathered}
\text { (Turbine 2) } \\
75-02 \% \text { 1-winn }
\end{gathered}
\] & \begin{tabular}{l}
(Turblne 2) CT \\
- Gas Flow scithnin 1-Min
\end{tabular} & \[
\begin{aligned}
& \text { (Turbine 2) DB } \\
& \text { Gas Flow } \\
& \mathrm{kgcthr} \\
& \text { 1-MIn }
\end{aligned}
\] & \begin{tabular}{l}
(Turbine 2) \\
Sprint Fow gaVmin 1-Min
\end{tabular} & (Turtine 2) Water Injection - 1-Min galmin & (Turbine 2) CT Megawatts 1-Min \\
\hline Average (all) & 27.15 & 23.48 & 0.0865 & 14.08 & 7691 & 0.00 & 17.60 & 41.86 & 48.5 \\
\hline Total (ali) & - & - & - & - & - & - & - & - & - \\
\hline Minimum (all) & 20.63 & 23.00 & 0.0847 & 14.07 & 7679 & 0.00 & 17.55 & 41.28 & 48.5 \\
\hline Maximum (all) & 27.81 & 23.92 & 0.0881 & 14.09 & 7703 & 0.00 & 18.04 & 42.38 & 48.6 \\
\hline Average (valld values only) & 27.15 & 23.48 & 0.0885 & 14.08 & 7691 & - & 17.80 & 41.88 & 48.5 \\
\hline Total (malic values only) & - & - & - & - & - & - & - & - & - \\
\hline Count (valld values only) & 22 & 22 & 22 & 22 & 22 & 0 & 22 & 22 & 22 \\
\hline <13> = Down & & & & & & & & & \\
\hline
\end{tabular}

\section*{CeDAR 1-Minute Data}

LAKE COGEN
Data for 8/17/2010 8:50 AM thru 8/17/2010 9:11 AM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOx pom } \\
1-\mathrm{Min}
\end{gathered}
\] & (Turbine 2) NOX ppm (155\% O2 1-Min & (Turbine 2) 75-NOx \(\mathrm{b} / \mathrm{mmB}\) tu 1 MMn & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-O2\% 1-Min }
\end{gathered}
\] & (Turbine 2) CT Gas Flow \(\mathrm{sc} /\) /min \(1-\mathrm{Min}\) & (Turbine 2) DB Gas Fbow ksciflar 1-Min & (Turbine 2) Sprint Fiow \(\mathrm{ga} / \mathrm{min} 1-\mathrm{Min}\) & (Turbine 2) Water Injection - 1-Min gal/min & (Turbine 2) CT Megawatts 1-Min \\
\hline 8197 8:50 & 27.21 & 23.57 & 0.0868 & 14.08 & 7693 & \(0.00<13>\) & 17.67 & 42.11 & 48.5 \\
\hline 8/17 8:51 & 28.89 & 23.30 & 0.0858 & 14.09 & 7694 & \(0.00<13>\) & 17.76 & 41.85 & 48.5 \\
\hline 8117 8:52 & 27.13 & 23.50 & 0.0866 & 14.09 & 7893 & 0.00 <13> & 17.92 & 41.89 & 48.6 \\
\hline 8117 8:53 & 27.11 & 23.45 & 0.0864 & 14.08 & 7704 & \(0.00<13>\) & 17.82 & 42.11 & 48.6 \\
\hline 8/17 8:54 & 27.15 & 23.52 & 0.0867 & 14.09 & 7702 & \(0.00<13>\) & 18.00 & 41.73 & 48.6 \\
\hline 8/17 8:55 & 27.44 & 23.77 & 0.0876 & 14.09 & 7703 & \(0.00<13>\) & 17.77 & 41.95 & 48.6 \\
\hline 8/17 8:56 & 27.00 & 23.43 & 0.0863 & 14.10 & 7707 & \(0.00<13>\) & 17.63 & 42.26 & 48.6 \\
\hline 8117 8:57 & 28.98 & 23.37 & 0.0861 & 14.09 & 7704 & \(0.00<13>\) & 17.61 & 41.84 & 48.6 \\
\hline 8117 8:58 & 27.22 & 23.58 & 0.0869 & 14.09 & 7705 & \(0.00<13>\) & 17.85 & 42.32 & 48.6 \\
\hline 8/17 8:59 & 26.84 & 23.25 & 0.0857 & 14.09 & 7710 & \(0.00<13>\) & 17.94 & 41.93 & 48.6 \\
\hline 8/17 9:00 & 27.20 & 23.57 & 0.0868 & 14.09 & 7708 & \(0.00<13>\) & 17.83 & 41.88 & 48.6 \\
\hline 8/17 9:01 & 27.27 & 23.63 & 0.0870 & 14.09 & 7713 & \(0.00<13>\) & 17.91 & 42.51 & 48.6 \\
\hline 8/17 9:02 & 27.00 & 23.36 & 0.0860 & 14.08 & 7716 & \(0.00<13>\) & 17.75 & 42.34 & 48.7 \\
\hline 8/17 9:03 & 26.87 & 23.25 & 0.0856 & 14.08 & 7714 & \(0.00<13>\) & 17.85 & 41.91 & 48.6 \\
\hline 8117 9:04 & 27.32 & 23.67 & 0.0872 & 14.09 & 7706 & \(0.00<13>\) & 17.82 & 41.70 & 48.6 \\
\hline 8117 9:05 & 27.12 & 23.50 & 0.0866 & 14.09 & 7718 & \(0.00<13>\) & 17.86 & 42.33 & 48.7 \\
\hline 8/17 9:08 & 26.92 & 23.32 & 0.0859 & 14.09 & 7714 & \(0.00<13>\) & 17.75 & 41.81 & 48.6 \\
\hline 817 9:07 & 27.21 & 23.57 & 0.0888 & 14.08 & 7711 & \(0.00<13>\) & 17.74 & 42.14 & 48.6 \\
\hline 817 9:08 & 28.89 & 23.30 & 0.0858 & 14.09 & 7709 & \(0.00<13 \times\) & 17.77 & 41.81 & 48.5 \\
\hline 81179:09 & 27.45 & 23.78 & 0.0876 & 14.09 & 7705 & \(0.00<13>\) & 17.75 & 42.08 & 48.6 \\
\hline 8/17 8:10 & 26.88 & 23.25 & 0.0857 & 14.08 & 7711 & \(0.00<13>\) & 17.76 & 42.06 & 48.6 \\
\hline 817 9:11 & 27.00 & 23.39 & 0.0862 & 14.09 & 772 & \(0.00<13>\) & 17.88 & 41.80 & 48.6 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Tmestamp & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOxppm } \\
\text { 1-M1n } \\
\hline
\end{gathered}
\] & (Turblne 2) NO mpm 15\% O2 1-Min & (Tumbine 2) 75-NOx \(\mathrm{lb} / \mathrm{mm}\) Btu \(1-\mathrm{Mm}\) & \[
\begin{gathered}
\text { (Turbiner-2) } \\
75-\mathrm{O} \% 1 \text { Min }
\end{gathered}
\] & (Turbine 2) CT Gas flow seffmin 1-Min & (Turbine 2) DB Gas Flow \(\mathrm{kse} / \mathrm{hr} 1-\mathrm{Min}\) & (Turbine 2) Sprint Flow gal/min 1-Min & (Turbise 2) Watar Injaction -1-Min galmin & (Turbine 2) CT Megewatts 1-Min \\
\hline Average (all) Total (all) & 27.10 & 23.47 & 0.0865 & 14.09 & 7707 & 0.00 & 17.80 & 42.02 & 48.6 \\
\hline Minimum (ail) & 26.84 & 23.25 & 0.0858 & 14.08 & 7693 & 0.00 & 17.61 & 41.70 & 48.5 \\
\hline Maximum (all) & 27.45 & 23.78 & 0.0876 & 14.10 & 7716 & 0.00 & 18.00 & 42.51 & 48.7 \\
\hline Average (valld values only) & 27.10 & 23.47 & 0.0865 & 14.09 & 7707 & - & 17.80 & 42.02 & 48.6 \\
\hline Total (valld velves only) & - & - & - & - & \(\cdots\) & - & - & - & - \\
\hline Count (valid values only) & 22 & 22 & 22 & 22 & 22 & 0 & 22 & 22 & 22 \\
\hline
\end{tabular}
<13> = Down
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline \multicolumn{10}{|c|}{CeDAR 1-Minute Data} \\
\hline \multicolumn{10}{|c|}{\begin{tabular}{l}
LAKE COGEN. \\
Data for 8/17/2010 9:27 AM thru \(\dot{8} / 17 / 2010\) 9:48 AM
\end{tabular}} \\
\hline Trmastamp & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NDxppm } \\
\text { 1-Min }
\end{gathered}
\] & (Turbine 2) NOx ppm © \(15 \% 02\) 1-Min & \[
\begin{gathered}
\text { (Turtine 2) } \\
75 \text {-NOx } \\
\text { lbimmltu 1-Mb }
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turbine 2) } \\
75-02 \% \text { 1-Min }
\end{gathered}
\] & (Turbine 2) CT Gas Flow sctimin 1-Min & (Turble 2) DB Gas Flow kscthr 1-Min & \begin{tabular}{l}
(Turbine 2) \\
Sprint Flow gal/min 1-Min
\end{tabular} & (Turbine 2) Water injection - 1-Min gav/min & (Turbine 2) CT Megawatts I-Min \\
\hline 8/17 9:27 & 27.32 & 23.67 & 0.0872 & 14.09 & 7710 & \(0.00<13>\) & 17.8; & 41.80 & 48.6 \\
\hline 8/47 9:28 & 27.23 & 23.59 & 0.0889 & 14.09 & 7716 & \(0.00<13>\) & 17.77 & 42.09 & 48.6 \\
\hline 8/17 9:29 & 27.04 & 23.39 & 0.0882 & 14.08 & 716 & 0.00 <13> & 17.77 & 42.14 & 48.6 \\
\hline 8/17 9:30 & 27.20 & 23.53 & 0.0887 & 14.08 & 716 & \(0.00<13>\) & 17.81 & 42.08 & 48.8 \\
\hline 84179:31 & 27.22 & 23.55 & 0.0868 & 14.08 & 7722 & \(0.00<13>\) & 17.78 & 42.03 & 48.6 \\
\hline 8/17 9:32 & 27.08 & 23.43 & 0.0863 & 14.08 & 7729 & \(0.00<13>\) & 17.89 & 42.29 & 48.7 \\
\hline 8/17 9:33 & 26.79 & 23.18 & 0.0854 & 14.08 & 7727 & \(0.00<13>\) & 17.88 & 41.87 & 48.7 \\
\hline 217 9:34 & 27.30 & 23.65 & 0.0871 & 14.09 & 7724 & \(0.00<13>\) & 17.87 & 42.01 & 48.7 \\
\hline 8/17 9:35 & 27.07 & 23.42 & 0.0863 & 14.08 & 7727 & \(0.00<13>\) & 17.91 & 42.23 & 48.7 \\
\hline 8/17 9:36 & 27.07 & 23.42 & 0.0863 & 14.08 & 7723 & \(0.00<13>\) & 17.80 & 42.14 & 48.6 \\
\hline 8/17 9:37 & 27.23 & 23.56 & 0.0868 & 14.08 & 7720 & \(0.00<13>\) & 17.97 & 41.77 & 48.8 \\
\hline 8/17 9:38 & 27.64 & 23.95 & 0.0882 & 14.09 & 7712 & 0.00 <13> & 17.87 & 41.70 & 48.6 \\
\hline 8/17 9:39 & 27.22 & 23.55 & 0.0868 & 14.08 & 7715 & 0.00 <13> & 17.84 & 42.21 & 48.6 \\
\hline 8/17 9:40 & 26.96 & 23.32 & 0.0869 & 14.08 & 7726 & \(0.00<13>\) & 17.78 & 42.35 & 48.7 \\
\hline 8/17 9:41 & 28.88 & 23.25 & 0.0857 & 14.08 & 7723 & \(0.00<13>\) & 17.77 & 42.17 & 48.7 \\
\hline 8/17 9:42 & 27.06 & 23.44 & 0.0864 & 14.08 & 7724 & 0.00 <13> & 17.83 & 42.02 & 48.7 \\
\hline 8/17 9:43 & 27.14 & 23.51 & 0.0866 & 14.08 & 7718 & \(0.00<13>\) & 17.70 & 41.98 & 48.7 \\
\hline 8/179:44 & 27.25 & 23.57 & 0.0868 & 44.08 & 7720 & \(0.00<13>\) & 17.81 & 42.10 & 48.6 \\
\hline 8/17 9:46 & 27.23 & 23.56 & 0.0868 & 14.08 & 7725 & \(0.00<13>\) & 17.65 & 42.36 & 48.7 \\
\hline 8/17 9:46 & 26.85 & 23.31 & 0.0859 & 14.08 & 7724 & 0.00 <13> & 17.74 & 42.09 & 48.7 \\
\hline 8817 9:47 & 27.17 & 23.50 & 0.0866 & 14.08 & 7725 & 0.00 <13> & 17.80 & 41.96 & 48.6 \\
\hline 8/179:48 & 27.34 & 23.69 & 0.0873 & 14.09 & 7719 & \(0.00<13>\) & 17.77 & 41.90 & 48.6 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Tutbine 2) } \\
\text { 75-NOx pom } \\
\text { 1-Min } \\
\hline
\end{gathered}
\] & \begin{tabular}{l}
(Turbine 2) NOX ppm \\
(15\% O2 1-Min
\end{tabular} & \[
\begin{gathered}
\text { (Turbine 2) } \\
75-\mathrm{NOx} \\
\text { ib/mmBte 1-MIn }
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-02\% 1-M1n }
\end{gathered}
\] & (Turbine 2) CT Gas Flow \(\mathrm{sc} / \mathrm{/min} 1 \rightarrow \mathrm{Min}\) & (Turtine 2) DB Ges Fow kscffhr 1-Min & (Turbine 2) Sprint Flow gal/min 1-Min & (Turbine 2) Water injection \(-1-\mathrm{Min} \mathrm{ga} / \mathrm{m} / \mathrm{m}\) & (Turbine 2) CT Megawatts 1-Min \\
\hline Average (all) Total (all) & 27.15 & 23.50 & 0.0888 & 14.08 & 772 & 0.00 & 17.81 & 42.06 & 48.6 \\
\hline Minimum (all) & 28.79 & 23.18 & 0.0854 & 14.08 & 7710 & 0.00 & 17.65 & 41.70 & 48.6 \\
\hline Maximum (all) & 27.64 & 23.95 & 0.0882 & 14.09 & 7729 & 0.00 & 17.91 & 42.35 & 48.7 \\
\hline Averags (vallod values only) & 27.15 & 23.50 & 0.0866 & 14.08 & 7721 & - & 17.81 & 42.06 & 48.6 \\
\hline Total (valid values only) & - & - & - & - & - & . - & - & - & - \\
\hline Count (valld vaiues only) & 22 & 22 & 22 & 22 & 22 & 0 & 22 & 22 & 22 \\
\hline
\end{tabular}

CeDAR 1-MInute Data
lake cogen
Data for 8/17/2010 10:04 AM thru 8/17/2010 10:25 AMM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Tlimestamp & \[
\begin{gathered}
\text { (Turbine 2) } \\
75-\mathrm{NO} \mathrm{pDom} \\
\text { 1-Min }
\end{gathered}
\] & \begin{tabular}{l}
(Turbine 2) NOX ppm \\
(15\% 02 1-Min
\end{tabular} & \[
\begin{gathered}
\text { (Turbine 2) } \\
75-\mathrm{NOx} \\
\text { Ib/mmBtu } 1 \text { 1-Min }
\end{gathered}
\] & (Turbine 2) 75-02\% 1-Min & (Turbine 2) CT Gas Flow scf/min 1-Min & \[
\begin{aligned}
& \text { (Turioine 2) D8 } \\
& \text { Gas Flow } \\
& \text { ksctmrn 1-Min }
\end{aligned}
\] & (Turbina 2) Sprint Flow galmin \(1-\mathrm{Mln}\) & (Turbine 2) Water injection -1 -Min gal/min & (Turbine 2) CT Megewatts 1-Min \\
\hline \(817710: 04\) & 27.17 & 23.64 & 0.0867 & 14.09 & 7732 & \(0.00<13>\) & 17.84 & 42.24 & 48.7 \\
\hline 8177 10:05 & 27.03 & 23.42 & 0.0863 & 14.09 & 7734 & 0.00 <13> & 17.74 & 42.16 & 48.7 \\
\hline 8/17 10:08 & 27.23 & 23.58 & 0.0869 & 14.09 & 7735 & 0.00 <13> & 17.70 & 42.16 & 48.7 \\
\hline 8/17 10:07 & 27.14 & 23.48 & 0.0855 & 14.06 & 733 & \(0.00<13>\) & 17.69 & 42.27 & 48.6 \\
\hline 8117 10:08 & 27.23 & 23.59 & 0.0869 & 14.09 & 7729 & \(0.00<13>\) & 17.85 & 41.93 & 48.7 \\
\hline 8/17 10:09 & 27.07 & 23.42 & 0.0863 & 14.08 & 7734 & \(0.00<13>\) & 17.94 & 42.23 & 48.7 \\
\hline 8/17 10:10 & 27.05 & 23.44 & 0.0863 & 14.09 & 7740 & 0.00 <13> & 17.94 & 42.59 & 48.7 \\
\hline 8/17 10:11 & 26.70 & 23.10 & 0.0851 & 14.08 & 7739 & \(0.00<13>\) & 17.92 & 42.43 & 48.7 \\
\hline 8/17 10:12 & 27.00 & 23.39 & 0.0862 & 14.09 & 7726 & \(0.00<13>\) & 17.72 & 41.98 & 48.6 \\
\hline 8/17 10:13 & 27.41 & 23.75 & 0.0876 & 14.09 & 7719 & \(0.00<13>\) & 17.74 & 41.91 & 48.8 \\
\hline 8/17 10:14 & 27.41 & 23.75 & 0.0875 & 14.09 & 7119 & \(0.00<13>\) & 17.71 & 41.98 & 48.6 \\
\hline \(8 / 17\) 10:15 & 27.15 & 23.52 & 0.0867 & 14.09 & 7726 & \(0.00<13>\) & 17.74 & 42.03 & 48.6 \\
\hline 8/17 10:16 & 27.12 & 23.50 & 0.0868 & 14.09 & 7731 & 0.00 <13> & 17.75 & 42.28 & 48.7 \\
\hline 8/17 10:17 & 28.89 & 23.26 & 0.0857 & 14.08 & 7731 & \(0.00<13>\) & 17.86 & 42.22 & 48.6 \\
\hline 8/17 10:18 & 27.01 & 23.40 & 0.0862 & 14.09 & 7727 & \(0.00<13>\) & 17.80 & 41.92 & 48.6 \\
\hline 8/17 10:19 & 27.29 & 23.84 & 0.0871 & 14.09 & 7728 & \(0.00<13>\) & 17.84 & 42.20 & 48.6 \\
\hline 8/17 10:20 & 26.91 & 23.28 & 0.0858 & 14.08 & 7732 & \(0.00<13>\) & 17.85 & 42.17 & 48.8 \\
\hline 8/17 10:21 & 27.40 & 23.74 & 0.0875 & 14.09 & 7729 & \(0.00<13>\) & 17.88 & 41.92 & 48.6 \\
\hline 8/17 10:22 & 27.44 & 23.77 & 0.0878 & 14.09 & 7731 & \(0.00<13>\) & 17.89 & 42.30 & 48.7 \\
\hline 8/17 10:23 & 26.78 & 23.17 & 0.0853 & 14.08 & 7743 & \(0.00<13>\) & 17.80 & 42.41 & 48.7 \\
\hline 8/17 10:24 & 26.97 & 23.33 & 0.0860 & 14.08 & 7742 & \(0.00<13>\) & 17.76 & 42.35 & 48.7 \\
\hline 8/17 10:25 & 28.96 & 23.36 & 0.0880 & 14.09 & 7738 & \(0.00<13>\) & 17.78 & 41.98 & 48.6 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOX ppm } \\
\text { 1-Min } \\
\hline
\end{gathered}
\] & (Turbine 2) NOx ppm (1) \(15 \% \mathrm{O} 2\) 1-Min & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOx } \\
\text { Ib/mmBtu 1-Min }
\end{gathered}
\] & \begin{tabular}{l}
(Turbine 2) • \\
75-02\% 1-MIn
\end{tabular} & (Turtine 2) CT Ges Flow sct/min 1-Mm & (Turbine 2) DB Gas Fow kscf/hr 1-Min & (Turbine 2) Sprint Flow gal/min 1-Min & (Turbine 2) Water Injection - 1-MIn gal/min & \begin{tabular}{l}
(Turbine 2) CT \\
- Megawatts \(1-\mathrm{Min}\)
\end{tabular} \\
\hline Avarage (all) & 27.11 & 23.47 & 0.0865 & 14.09 & 7732 & 0.00 & 17.81 & 42.17 & 48.7 \\
\hline Total (all) & - & - & - & -- & - & - & - & -- & -- \\
\hline Minimum (ell) & 26.70 & 23.10 & 0.0851 & 14.08 & 719 & 0.00 & 17.69 & 41.91 & 48.6 \\
\hline Maximum (all) & 27.44 & 23.77 & 0.0878 & 14.09 & 7743 & 0.00 & 17.98 & 42.59 & 48.7 \\
\hline Average (valld values only) & 27.11 & 23.47 & 0.0865 & 14.09 & 7732 & - & 17.81 & 42.17 & 48.7 \\
\hline Tatal (velled values only) & - & - & - & - & \(\cdots\) & - & - & - & - \\
\hline count (valld values only) & 22 & 22 & 22 & 22 & 22 & 0 & 22 & 22 & 22 \\
\hline
\end{tabular}
<13> = Down

CeDAR 1-Minute Data
LAKE COGEN
Data for 8/17/2010 10:41 AM thru 8/17/20́10 11:02 AM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & (Turtina 2) 75-NOx ppm 1-Min & (Turbine 2) NOx pom (215\% 02 1-Min & \[
\begin{gathered}
\text { (Turbing 2) } \\
\text { 75+NOx } \\
\text { ubmBBu } 9 \text {-Min }
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turtine 2) } \\
76-02 \% \\
\text { 1-Min }
\end{gathered}
\] & (Turbine 2) CT Gas Flow \(\mathrm{sc} /\) /min 1-Min & (Turbine 2) \(D B\) Ges flow kecthr 1-Min & (Turtine 2) Sprint flow galmin 1-Mln & (Turbine 2) Water injection - 1-Min galmin & (Turbine 2) CT Megawalts 1-Min \\
\hline \(8 \times 17\) 10:41 & 27.17 & 23.50 & 0.0986 & 14.08 & 7746 & \(0.00<13>\) & 17.87 & 41.97 & 48.7 \\
\hline 8/17 10:42 & 27.27 & 23.63 & 0.0870 & 14.09 & 7746 & \(0.00<13>\) & 17.80 & 42.38 & 48.8 \\
\hline \(8 / 17\) 10:43 & 27.24 & 23.57 & 0.0868 & 14.08 & 7752 & \(0.00<13>\) & 17.75 & 42.43 & 48.8 \\
\hline 8177 10:44 & 28.94 & 23.31 & 0.0859 & 14.08 & 7753 & \(0.00<13>\) & 17.79 & 42.53 & 48.8 \\
\hline \(817710: 45\) & 26.97 & 23.33 & 0.0660 & 14.08 & 7753 & \(0.00<13>\) & 17.74 & 42.30 & 48.8 \\
\hline 8/17 10:46 & 27.25 & 23.61 & 0.0870 & 14.09 & 7743 & \(0.00<13>\) & 17.78 & 41.93 & 48.7 \\
\hline 8/17 10:47 & 27.18 & 23.65 & 0.0888 & 14.09 & 7744 & \(0.00<13>\) & 17.87 & 42.54 & 48.7 \\
\hline 8/17 10:48 & 28.86 & 23.24 & 0.0856 & 14.08 & 7748 & \(0.00<13>\) & 17.86 & 42.41 & 48.7 \\
\hline 8/17 10:49 & 27.21 & 23.57 & 0.0888 & 14.08 & 7745 & \(0.00<13>\) & 17.80 & 42.00 & 48.7 \\
\hline 8/17 10:50 & 27.50 & 23.83 & 0.0878 & 14.09 & 7750 & \(0.00<13>\) & 17.80 & 42.57 & 48.8 \\
\hline 8/17 10:51 & 28.84 & 23.22 & 0.0855 & 14.08 & 7758 & \(0.00<13\) & 17.79 & 42.68 & 48.0 \\
\hline 8/17 10:52 & 27.06 & 23.44 & 0.0864 & 14.00 & 7757 & \(0.00<13>\) & 17.78 & 42.20 & 48.8 \\
\hline 8/17 10:53 & 27.08 & 23.43 & 0.0863 & 14.08 & 7752 & \(0.00<13>\) & 17.78 & 42.15 & 48.8 \\
\hline 8/17 10:54 & 27.14 & 23.51 & 0.0868 & 14.09. & 7751 & \(0.00<13>\) & 17.74 & 42.45 & 48.8 \\
\hline 8/17 10:55 & 27.03 & 23.42 & 0.0863 & 14.08 & 775 & \(0.00<13>\) & 17.77 & 42.29 & 48.9 \\
\hline 8/17 10:58 & 27.20 & 23.57 & 0.0858 & 14.09 & 7757 & \(0.00<13>\) & 17.82 & 42.56 & 48.9 \\
\hline 8/17 10:57 & 27.22 & 23.58 & 0.0889 & 14.09 & 7765 & \(0.00<13>\) & 17.79 & 42.52 & 48.8 \\
\hline 8/17 10:58 & 27.11 & 23.45 & 0.0864 & 14.08 & 7761 & \(0.00<13>\) & 17.77 & 42.60 & 48.9 \\
\hline 8/17 10:59 & 27.15 & 23.49 & 0.0865 & 14.08 & 7765 & \(0.00<13>\) & 17.72 & 42.57 & 48.9 \\
\hline 8/17 11:00 & 27.05 & 23.44 & 0.0863 & 14.09 & 7763 & \(0.00<13>\) & 17.79 & 42.40 & 48.9 \\
\hline \(8 / 17\) 11:04 & 27.24 & 23.57 & 0.0888 & 14.08 & 7763 & \(0.00<13>\) & 17.88 & 42.62 & 48.9 \\
\hline \(8 / 1711102\) & 27.11 & 23.45 & 0.0864 & 14.08 & 7766 & \(0.00<13>\) & 17.79 & 42.61 & 48.9 \\
\hline
\end{tabular}

CoDAR Reports 8/1/2010 11:03 AM, CeDAR 1-Minute Data
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{aligned}
& \text { (Turbine 2) } \\
& \text { 75-NOx ppm } \\
& \text { 1-MIn }
\end{aligned}
\] & \begin{tabular}{l}
(Turbine 2) NOX ppm \\
(915\% O2 1-Min
\end{tabular} & \[
\begin{gathered}
\text { (Turtine 2) } \\
\text { 75-NOx } \\
\text { IbimmBux 1-Min }
\end{gathered}
\] & - (Turbina 2)
75-02\% 1 MMIn & (Tubine 2) CT Gas Ftow sctimin 1-Min & (Turbine 2) DB Gas fow ksefhr 1-Min & (Turbint 2) Sprint Flow gal/min 1-Mfin & (Turbine 2) Water injection - 1-Min galmin & (Turbine 2) CT Mogawatts 1-Min \\
\hline Average (all) & 27.13 & 23.48 & 0.0865 & 14.09 & 7754 & 0.00 & 17.79 & 42.40 & 48,8 \\
\hline Total (all) & - & - & - & - & - & - & - & - & - \\
\hline Minimum (all) & 28.84 & 23.22 & 0.0655 & 14.08 & 7743 & 0.00 & 17.72 & 41.93 & 48.7 \\
\hline Maximum (all) & 27.50 & 23.83 & 0.0878 & 14.08 & 7765 & 0.00 & 17.87 & 42.68 & 48.9 \\
\hline Avarage (valld values only) & 27.13 & 23.49 & 0.0865 & 14.09 & 7754 & - & 17.79 & 42.40 & 48.8 \\
\hline Total (valid values only) & - & - & - & - & - & - & - & - & - \\
\hline Count (valld values only) & 22 & 22 & 22 & 22 & 22 & 0 & 22 & 22 & 22 \\
\hline
\end{tabular}

\section*{CeDAR 1-Minute Data}

\section*{lake coocen}

Data for 8/17/2010 11:18 AM thru B/17/2010 11:39 AM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 2) } \\
75-\mathrm{NOXppm} \\
\text { 1-Min } \\
\hline
\end{gathered}
\] & \begin{tabular}{l}
(Turbine 2) NOX ppm \\
(215\% 02 1-Min
\end{tabular} & \[
\begin{gathered}
\text { (Turbine 2) } \\
75-\mathrm{NO} \mathrm{x} \\
\mathrm{It} / \mathrm{mmBlut} 1-\mathrm{Min}
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-C2\% 1-Min }
\end{gathered}
\] & (Turtine 2) CT Ges Flow sctimin 1-Min & (Turblne 2) DB Gas flow ksethr 1-Min & (Turtine 2) Sprint Flaw galimin f-Min & (Turtine 2) Water Injection -1-Min gelmin & (Turbine 2) CT Megawatts 1-Min \\
\hline 8/17 11:18 & 27.08 & 23.46 & 0.0864 & 14.09 & 7780 & \(0.00<13>\) & 17.82 & 42.90 & 49.0 \\
\hline 8/17 11:19 & 27.12 & 23.46 & 0.0864 & 14.08 & 7784 & 0.00 <13> & 17.88 & 43.08 & 49.1 \\
\hline 8/17 11:20 & 26.86 & 23.24 & 0.0856 & 14.08 & 7785 & \(0.00<13>\) & 17.90 & 42.78 & 49.0 \\
\hline \(8 / 1714 \cdot 21\) & 27.32 & 23.67 & 0.0872 & 14.08 & 771 & \(0.00<13>\) & 17.94 & 42.65 & 49.0 \\
\hline 8/17 11:22 & 27.02 & 23.41 & 0.0852 & 14.09 & 7778 & \(0.00<13>\) & 17.83 & 42.97 & 49.0 \\
\hline 8/17 11:23 & 26.85 & 23.23 & 0.0856 & 14.08 & 7775 & \(0.00<13>\) & 17.75 & 42.71 & 48.9 \\
\hline B/17 11:24 & 27.19 & 23.56 & 0.0888 & 14.08 & 7764 & \(0.00<13>\) & 17.86 & 42.34 & 48.9 \\
\hline 8/17 11:25 & 27.09 & 23.47 & 0.0865 & 14.09 & 7768 & \(0.00<13>\) & 17.81 & 42.90 & 49.0 \\
\hline 8/17 19:26 & 27.03 & 23.42 & 0.0863 & 14.09 & 7768 & \(0.00<13>\) & 17.86 & 42.33 & 48.9 \\
\hline 8117 11:27 & 27.45 & 23.82 & 0.0877 & 14.10 & 7784 & \(0.00<13>\) & 17.65 & 42.73 & 46.9 \\
\hline 8/17 11:28 & 26.99 & 23.35 & 0.0860 & 14.08 & 756 & \(0.00<13>\) & 17.63 & 42.77 & 48.8 \\
\hline 8/17 11:29 & 26.84 & 23.25 & 0.0857 & 14.09 & 7765 & 0.00 <13> & 17.72 & 42.62 & 48.9 \\
\hline 8/17 11:30 & 27.10 & 23.51 & 0.0866 & 14.10 & 7759 & \(0.00<13>\) & 17.73 & 42.85 & 48.9 \\
\hline 8/17 11:31 & 27.05 & 23.44 & 0.0863 & 14.09 & 7756 & \(0.00<13>\) & 17.82 & 42.39 & 48.8 \\
\hline 8/17 11:32 & 27.08 & 23.45 & 0.0864 & 14.09 & 7758 & \(0.00<13>\) & 17.95 & 4247 & 48.8 \\
\hline 8/17 11:33 & 27.34 & 23.89 & 0.0873 & 14.09 & 7757 & \(0.00<13>\) & 17.89 & 42.62 & 48.8 \\
\hline 8/17 11:34 & 26.86 & 23.27 & 0.0857 & 14.09 & 7763 & \(0.00<13>\) & 17.94 & 42.88 & 48.8 \\
\hline 8/47 11:35 & 26.79 & 23.21 & 0.0855 & 14.09 & 7755 & \(0.00<433\) & 47.89 & 42.34 & 48.8 \\
\hline 8/17 11:36 & 27.29 & 23.68 & 0.0872 & 14.10 & 7745 & \(0.00<13>\) & 17.84 & 42.13 & 48.7 \\
\hline 8/17 11:37 & 27.01 & 23.40 & 0.0862 & 14.09 & 7752 & \(0.00<13>\) & 17.75 & 42.49 & 48.7 \\
\hline 8/17 11:38 & 27.05 & 23.47 & 0.0885 & 14.10 & 7746 & \(0.00<13>\) & 17.70 & 42.47 & 48.7 \\
\hline 8/17 11:39 & 26.97 & 23.37 & 0.0861 & 14.09 & 7741 & 0.00 <13> & 17.71 & 42.25 & 48.7 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turtine 2) } \\
\text { 75-NOX ppm } \\
\text { 1-Min }
\end{gathered}
\] & (Turbine 2) NOx ppm © \(46 \% \mathrm{O} 2\) 1-Min & \[
\begin{gathered}
\text { (Turbine 2) } \\
=75-\mathrm{NOx} \\
\mathrm{lb} / \mathrm{mm} \mathrm{mtu} 1-\mathrm{M} / \mathrm{n}
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turtine 2) } \\
75-02 \% ~ 1-M i n
\end{gathered}
\] & (Turbine 2) CT Gas Flow scefmin 1-Min & (Tumbe 2) DB Gas Flow kscffhr 1-Min & \begin{tabular}{l}
(Turbine 2) \\
Sprint Flow gal/min 1-Min
\end{tabular} & (Turbine 2) Water Injection - 1-Min gal/min & (Turbine 2) CT Megawatts 1-Min \\
\hline Avarage (all) & 27.08 & 23.45 & 0.0864 & 14.08 & 7764 & 0.00 & 17.81 & 42.61 & 48.9 \\
\hline Total (all) & - & - & - & - & - & - & - & - & \\
\hline Mintimum (all) & 28.79 & 23.21 & 0.0855 & 14.08 & 7741 & 0.00 & 17.63 & 42.13 & 48.7 \\
\hline Maximum (all) & 27.45 & 23.82 & 0.0877 & 14.10 & 7785 & 0.00 & 17.85 & 43.06 & 49.1 \\
\hline Average (valid values only) & 27.06 & 23.45. & 0.0864 & 14.09 & 7784 & . - & 17.81 & 42.61 & 48.9 \\
\hline Totas (valid values only) & \({ }^{-}\) & - & - & - & - & - & - & - & - \\
\hline Count (valld values only) & 22 & 22 & 22 & 22 & 22 & 0 & 22 & 22 & 22 \\
\hline
\end{tabular}

\title{
CeDAR 1-MInute Data
}

LAKE COGEN
Date for 8/17/2010 11:55 AM thru 8/17/2010 12:16 PM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOx ppm } \\
\text { 1-Mln } \\
\hline
\end{gathered}
\] & \begin{tabular}{l}
(Turbins 2) NOX ppm \\
(1) \(15 \%\) 1-Min
\end{tabular} & \[
\begin{gathered}
\text { (Turbine 2) } \\
75-\mathrm{NOx} \\
\mathrm{lb} / \mathrm{mmBut} \\
\text { 1-Min }
\end{gathered}
\] & \[
\begin{gathered}
\text { (Tumbine 2) } \\
75-02 \% ~ 1-M i n
\end{gathered}
\] & (Turbine 2) CT Gas Flow scifmln 1-Min & (Turbine 2) DB Gas Flow kscifhr 1-Min & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { Sprint Flow, } \\
\text { galimin 1-Min } \\
\hline
\end{gathered}
\] & (Turbing 2) Water injaction - 1-Min galmin & (Turbine 2) CT Megawatts 1-Min \\
\hline 8/47 11:55 & 27.27 & 23.63 & 0.0870 & 14.09 & 7751 & \(0.00<13>\) & 17.78 & 42.57 & 48.8 \\
\hline 8/47 11:56 & 28.90 & 23.31 & 0.0858 & 14.09 & 7748 & \(0.00<13>\) & 17.79 & 42.48 & 48.8 \\
\hline 8/17 11:57 & 27.03 & 23.42 & 0.0863 & 14.09 & 7750 & \(0.00<13>\) & 17.78 & 42.37 & 48.7 \\
\hline 8/17 11:58 & 26.98 & 23.37 & 0.0861 & 14.09 & 7748 & 0.00 <13> & 17.85 & 42.34 & 48.8 \\
\hline 8/17 11:59 & 27.05 & 23.44 & 0.0863 & 14.09 & 7750 & \(0.00<13>\) & 18.00 & 42.38 & 48.8 \\
\hline \(\mathbf{8} 1712.00\) & 27.05 & 23.44 & 0.0863 & 14.09 & 7750 & \(0.00<13>\) & 18.02 & 42.30 & 48.8 \\
\hline 8/17 12:01 & 27.12 & 23.46 & 0.0864 & 14.08 & 7749 & \(0.00<13>\) & 17.84 & 42.45 & 48.7 \\
\hline 8/17 12:02 & 27.08 & 23.46 & 0.0864 & 14.09 & 7744 & 0.00<13> & 17.87 & 42.28 & 48.7 \\
\hline 8/17 12:03 & 27.29 & 23.64 & 0.0871 & 14.09 & 7736 & \(0.00<13>\) & 17.74 & 42.03 & 48.7 \\
\hline 8/17 12:04 & 27.21 & 23.61 & 0.0870 & 14.10 & 7739 & \(0.00<13>\) & 17.73 & 42.49 & 48.8 \\
\hline 6/17 12:05 & 26.64 & 23.05 & 0.0849 & 14.08 & 7746 & \(0.00<13>\) & 17.59 & 42.69 & 48.7 \\
\hline 8/17 12:06 & 27.09 & 23.50 & 0.0866 & 14.10 & 7736 & \(0.00<13>\) & 17.72 & 41.73 & 48.7 \\
\hline 8817 12:07 & 27.61 & 23.96 & 0.0883 & 14.10 & 7734 & \(0.00<13>\) & 17.97 & 42.28 & 48.7 \\
\hline 8/17 12:08 & 28.92 & 23.29 & 0.0858 & 14.08 & 7755 & \(0.00<13>\) & 17.90 & 42.85 & 48.8 \\
\hline \(8 / 1712.09\) & 20.91 & 23.28 & 0.0858 & 14.08 & 7754 & \(0.00<13>\) & 17.86 & 42.41 & 48.8 \\
\hline 8/47 12:10 & 27.17 & 23.50 & 0.0888 & 14.08 & 7748 & \(0.00<13>\) & 17.71 & 42.21 & 48.7 \\
\hline 8/17 12:11 & 27.20 & 23.57 & 0.0868 & 14.09 & 7750 & \(0.00<13>\) & 17.79 & 42.48 & 48.8 \\
\hline 8/17 12:12 & 27.00 & 23.39 & 0.0862 & 14.09 & 7754 & \(0.00<13>\) & 17.81 & 42.42 & 48.8 \\
\hline 8/17 12:13 & 27.03 & 23.42 & 0.0883 & 14.09 & 7755 & \(0.00<13>\) & 17.75 & 42.45 & 48.8 \\
\hline 8/17 12:14 & 27.21 & 23.57 & 0.0868 & 14.09 & 7750 & \(0.00<13>\) & 17.82 & 42.12 & 48.8 \\
\hline 8/17 12:15 & 27.23 & 23.59 & 0.0869 & 14.09 & 7766 & \(0.00<13>\) & 17.77 & 42.47 & 48.8 \\
\hline 8/17 12:18 & 27.05 & 23.44 & 0.0863 & 14.09 & 7754 & \(0.00<43>\) & 17.81 & 42.45 & 48.8 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Tmestamp & \[
\begin{gathered}
\text { (Tumbine 2) } \\
\text { 75-NOx opmr } \\
\text { 1-Min } \\
\hline
\end{gathered}
\] & \begin{tabular}{l}
(Turblne 2) \\
NOX ppm \\
사 \(16 \%{ }^{\circ}\) \\
1-Min
\end{tabular} & \[
\begin{gathered}
\text { (Turbino 2) } \\
\text { 75-NOx } \\
\text { lb/mmBtu 1-Min } \\
\hline
\end{gathered}
\] & (Turbine 2) 75-02\% 1-M1n & (Tubins 2) CT Gas flow sct/min 1-Min & (Turbine 2) DB Gas Flow kschihr 1-Min & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { Sprint Fibw } \\
\text { gal/min 1-Min } \\
\hline
\end{gathered}
\] & (Turbine 2) Water Injection - 1-MIn galmin & (Turbine 2) CT Megawatts 1-Min \\
\hline Average (all) & 27.08 & 23.47 & 0.0865 & 14.09 & 7748 & 0.00 & 17.82 & 42.37 & 48.8 \\
\hline Total (ali) & - & - & - & - & \(\cdots\) & - & - & - & - \\
\hline Minimum (all) & 28.64 & 23.05 & 0.0849 & 14.08 & 7734 & 0.00 & 17.59 & 41.73 & 48.7 \\
\hline Maxdmum (all) & 27.61 & 23.86 & 0.0883 & 14.10 & 7755 & 0.00 & 18.02 & 42.85 & 48.8 \\
\hline Average (valid values onty) & 27.08 & 23.47 & 0.0865 & 14.09 & 7748 & - & 17.82 & 42.37 & 48.8 \\
\hline Total (valld values only) & - & \(\stackrel{\square}{ }\) & \({ }^{-}\) & - & - & \({ }^{-}\) & - & - & \(\stackrel{ }{-}\) \\
\hline count (valld values onty) & 22 & 22 & 22 & 22 & 22 & 0 & 22 & 22 & 22 \\
\hline
\end{tabular}

\section*{CeDAR 1-MInute Data}

LAKE COGEN
Data for 8/17/2010 2:13 PM thru 8/47/2010 3:13 PM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timastarnp & \[
\begin{aligned}
& \text { (Turbine 2) } \\
& \text { 75-NOx ppm } \\
& \text { 1-Min }
\end{aligned}
\] & (Turbine 2) NOX ppm (1) \(15 \% \mathrm{O}\) 1-Min & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOX } \\
\mathrm{lb} / \mathrm{mmP} \text { 1u 1-Min }
\end{gathered}
\] & \[
\begin{gathered}
\text { (Tuibine 2) } \\
\text { 75-02\% 1-Min }
\end{gathered}
\] & (Turbine 2) CT Ges Flow scffimin 1-Min & (Turbine 2) DB Gas Pow ksch/hr t-Min & \[
\begin{aligned}
& \text { (Turtine 2) } \\
& \text { Sprint Flow } \\
& \text { gal/min 1-Min }
\end{aligned}
\] & (Turbine 2) Weter injection -1 Min galmin & (Turbine 2) CT Mexgawatts 1-MIn \\
\hline 8/17 14:13 & 28.00 & 21.74 & 0.0801 & 13.30 & 7753 & 50.12 & 17.80 & 42.12 & 48.6 \\
\hline 8177 14:14 & 28.32 & 22.01 & 0.0819 & 13.31 & 7752 & 50.09 & 17.88 & 42.20 & 48.6 \\
\hline 8/17 14:15 & 28.14 & 21.82 & 0.0804 & 13.30 & 7756 & 50.11 & 17.79 & 42.38 & 48.7 \\
\hline 8/17 14:16 & 27.81 & 21.64 & 0.0797 & 13.29 & 7759 & 50.05 & 17.90 & 42.29 & 48.6 \\
\hline 8/17 14:17 & 28.08 & 21.80 & 0.0803 & 13.30 & 7758 & 50.10 & 17.89 & 42.49 & 48.7 \\
\hline 6/17 14:18 & 27.94 & 21.69 & 0.0799 & 13.30 & 7759 & 50.08 & 17.92 & 42.53 & 48.7 \\
\hline 8/17 14:18 & 28.08 & 21.80 & 0.0803 & 13.30 & 7780 & 50.08 & 17.77 & 42.40 & 48.6 \\
\hline 8/17 14:20 & 28:25 & 21.93 & 0.0808 & 13.30 & 7753 & 50.07 & 17.64 & 42.08 & 48.6 \\
\hline 8/17 14:21 & 28.05 & 21.75 & 0.0801 & 13.29 & 7754 & 50.08 & 17.79 & 42.48 & 48.6 \\
\hline 8/17 14:22 & 27.80 & 21.55 & 0.0794 & 13.29 & 7751 & 49.98 & 17.77 & 42.33 & 48.6 \\
\hline 8/17 14:23 & 27.94 & 21.69 & 0,0799 & 13.30 & 7749 & 50.04 & 17.74 & 42.12 & 48.0 \\
\hline \(8 / 17\) 14:24 & 28.25 & 21.99 & 0.0810 & 13.32 & 7744 & 50.07 & 17.71 & 42.45 & 48.6 \\
\hline \(8 / 1714: 25\) & 27.88 & 21.64 & 0.0797 & 13.30 & 7748 & 50.02 & 17.88 & 42.55 & 48.6 \\
\hline \(817714: 26\) & 28.13 & 21.87 & 0.0806 & 13.31 & 7750 & 50.13 & 17.77 & 42.29 & 48.6 \\
\hline 8/17 14:27 & 28.11 & 21.85 & 0.0805 & 13.31 & 7755 & 50.10 & 17.63 & 42.55 & 48.6 \\
\hline 8117 14:28 & 27.94 & 21.69 & 0.0799 & 13.30 & 7754 & 50.11 & 17.82 & 42.26 & 48.8 \\
\hline \(817714: 29\) & 28.11 & 21.82 & 0.0804 & 13.30 & 7747 & 50.12 & 17.96 & 42.32 & 48.6 \\
\hline 8/17 14:30 & 28.13 & 21.84 & 0.0804 & 13.30 & 7748 & 60.09 & 17.86 & 42.27 & 48.6 \\
\hline 8/17 14:31 & 28.09 & 21.81 & 0.0803 & 13.30 & 7743 & 50.04 & 17.89 & 42.19 & 48.6 \\
\hline 8/17 14:32 & 28.07 & 29.78 & 0.0802 & 13.29 & 7744 & 50.09 & 17.76 & 42.23 & 48.6 \\
\hline 8/17 14:33 & 27.85 & 21.67 & 0.0798 & 13.20 & 7746 & 50.12 & 17.60 & 42.39 & 48.6 \\
\hline 8/17 14:34 & 28.05 & 21.75 & 0.0801 & 13.29 & 7743 & 50.05 & 17.81 & 42.44 & 48.5 \\
\hline 8/17 14:35 & 28.03 & 21.73 & 0.0801 & 13.29 & 7740 & 50.03 & 17.80 & 42.30 & 48.5 \\
\hline 81714 148 & 27.85 & 21.59 & 0.0795 & 13.29 & 7737 & 48.98 & 17.79 & 42.27 & 48.5 \\
\hline 8117 14:37 & 27.89 & 21.62 & 0.0797 & 13.29 & 7738 & 50.02 & 17.74 & 42.33 & 48.5 \\
\hline 8/17 14:38 & 27.94 & 21.66 & 0.0788 & 13.28 & 7743 & 50.07 & 17.75 & 42.46 & 48.5 \\
\hline 8/17 14:39 & 27.89 & 21.62 - & 0.0797 & 13.29 & 7746 & 50.09 & 17.69 & 42.34 & 48.5 \\
\hline 8/17 14:40 & 27.97 & 21.69 & 0.0799 & 13.29 & 7743 & 50.16 & 17.72 & 42.29 & 48.6 \\
\hline 8/17 14:41 & 28.07 & 21.76 & 0.0802 & 13.29 & 7741 & 50.12 & 17.73 & 42.33 & 48.6 \\
\hline 8/17 14:42 & 28.00 & 21.71 & 0.0800 & 13.29 & 7738 & 50.07 & 17.80 & 42.33 & 48.5 \\
\hline \(8 / 17\) 14:43 & 27.90 & 21.63 & 0.0797 & 13.29 & 7741 & 50.02 & 17.76 & 42.35 & 48.5 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turtine 2) } \\
\text { 75-NOx ppm } \\
\text { 1-Min }
\end{gathered}
\] & (Turbine 2) NOX ppm (t) \(15 \%\) 1-Mln & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOK } \\
\text { lb/mmBtu 1-Min }
\end{gathered}
\] & (Turtine 2) 75-02\% 1-Min & (Turbine 2) CT Ges Flow scfimin 1-Min & (Turbine 2) DB Ges Fow kechihr 1-Min & (Turbine 2) Sprint Flow galmin 1-Min & (Turtine 2) Water Injection - 1-Min gal/min & (Turbine 2) CT Megawatts 1-Min \\
\hline 8/17 14:44 & 27.87 & 21.51 & 0.0756 & 13.29 & 7739 & 50.05 & 17.74 & 42.21 & 48.5 \\
\hline 8/17 14:45 & 27.89 & 21.62 & 0.0797 & 13.29 & 7738 & 50.09 & 17.81 & 42.33 & 48.8 \\
\hline 8/17 14:46 & 27.81 & 21.56 & 0.0794 & 13.29 & 7738 & 50.13 & 17.76 & 42.41 & 48.5 \\
\hline 8/17 14:47 & 27.05 & 21.59 & 0.0795 & 13.29 & 7738 & 50.16 & 17.71 & 42.45 & 48.5 \\
\hline 8/17 14:48 & 27.94 & 21.66 & 0.0798 & 13.29 & 7733 & 50.16 & 17.70 & 42.17 & 48.5 \\
\hline 8/17 14:49 & 28.13 & 21.81 & 0.6803 & 13.29 & 7735 & 50.21 & 17.60 & 42.12 & 48.5 \\
\hline 8/17 14:50 & 27.99 & 21.73 & 0.0800 & 13.30 & 7738 & 50.20 & 17.83 & 42.25 & 48.5 \\
\hline 8/17 14:5t & 27.80 & 21.63 & 0.0797 & 13.29 & 7729 & 50.12 & 17.81 & 42.25 & 48.5 \\
\hline 8/17 14:52 & 27.93 & 21.65 & 0.0798 & 13.29 & 7732 & 50.08 & 17.81 & 42.39 & 48.5 \\
\hline 8/1714:53 & 27.83 & 21.58 & 0.0795 & 13.29 & 7738 & 50.10 & 17.84 & 42.45 & 48.5 \\
\hline 817714.54 & 27.85 & 21.56 & 0.0794 & 13.28 & 7732 & 50.08 & 17.81 & 42.16 & 48.5 \\
\hline 8/1714:55 & 28.12 & 21.77 & 0.0802 & 13.28 & 7724 & 50.06 & 17.81 & 42.26 & 48.5 \\
\hline 8/17 14:56 & 28.16 & 21.80 & 0.0803 & 13.28 & 7728 & 50.04 & 17.82 & 42.01 & 48.5 \\
\hline 8/17 14:57 & 27.87 & 21.68 & 0.0798 & 13.28 & 7729 & 50.02 & 17.78 & 42.30 & 48.5 \\
\hline 8/17 14:58 & 27.85 & 21.59 & 0.0795 & 13.29 & 7731 & 49.97 & 17.76 & 42.15 & 48.5 \\
\hline 8/17 14:59 & 27.93 & 21.65 & 0.0798 & 13.29 & 7733 & 49.90 & 17.76 & 42.39 & 48.5 \\
\hline 8/17 15:00 & 27.82 & 21.57 & 0.0795 & 13.29 & 7739 & 49.83 & 17.80 & 42.56 & 48.5 \\
\hline 8/1715:01 & 27.63 & 21.39 & 0.0788 & 13.28 & 7739 & 49.73 & 17.71 & 42.39 & 48.5 \\
\hline 8/17 15:02 & 27.77 & 21.50 & 0.0792 & 13.28 & 7740 & 49.71 & 17.76 & 42.63 & 48.5 \\
\hline 8/1715:03 & 27.78 & 21.51 & 0.0792 & 13.28 & 7738 & 49.72 & 17.74 & 42.14 & 48.5 \\
\hline 8/17 15:04 & 27.98 & 21.69 & 0.0799 & 13.29 & 7731 & 49.76 & 17.73 & 42.28 & 48.5 \\
\hline 8/17 15:05 & 28.05 & 21.75 & 0.0801 & 13.29 & 7733 & 49.78 & 17.73 & 42.04 & 48.5 \\
\hline 8/17 15:00 & 27.93 & 21.63 & 0.0797 & 13.28 & 7732 & 49.78 & 17.82 & 42.16 & 48.5 \\
\hline \(817715: 07\) & 28.04 & 21.74 & 0.0801 & 13.29 & 7728 & 49.79 & 17.73 & 41.87 & 48.5 \\
\hline 8/17 15:08 & 28.23 & 21.89 & 0.0806 & 13.29 & 7723 & 49,85 & 17.78 & 41.74 & 48.5 \\
\hline 8/17 15:09 & 29.45 & 22.06 & 0.0813 & 13.29 & 7724 & 48.86 & 17.80 & 41.92 & 48.5 \\
\hline 8171710 & 28.20 & 21.86 & 0.0805 & 13.29 & 7730 & 49.32 & 17.85 & 42.15 & 48.5 \\
\hline 8/17 15:11 & 27.94 & 21.69 & 0.0799 & 13.30 & 7733 & 49.61 & 17.85 & 42.35 & 48.5 \\
\hline 8/17 16:12 & 27.87 & 21.61 & 0.0788 & 13.29 & 7731 & 49.54 & 17.75 & 42.25 & 48.5 \\
\hline 8/17 15:13 & 27.85 & 21.62 & 0.0796 & 13.30 & 7728 & 49.75 & 17.75 & 42.14 & 48.5 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{aligned}
& \text { (Turbine 2) } \\
& \text { 75-NOx ppm } \\
& \text { 1-Min }
\end{aligned}
\] & (Turbine 2) NOX ppm © \(15 \%\) O2 1-MIn & \[
\begin{aligned}
& \text { (Turbine 2) } \\
& \text { 75-NOx } \\
& \mathrm{lb} / \mathrm{mmBl} \text { 1-Min }
\end{aligned}
\] & (Turbine 2) 75-02\% 1-Min & (Tublne 2) CT Gas Flow set/min 7 - Min & (Turbine 2) DB Gas Flow kseffre 1-Min & (Turbine 2) Sprint Flow gal/min 1-Min & (Turbine 2) Weter Injection - 1-Min galtoln & (Tunbine 2) et Megawats 1-Min \\
\hline Average (all) & 27.89 & 21.71 & 0.0800 & 1329 & 7741 & 50.00 & 17.78 & 42.28 & 48.5 \\
\hline Total (all) & - & - & - & - & - & - & - & - & - \\
\hline Mintmum (eil) & 27.83 & 21.39 & 0.0788 & 13.28 & 7723 & 49.32 & 17.63 & 41.74 & 48.5 \\
\hline Maximum (all) & 28.45 & 22.06 & 0.0813 & 13.32 & 7760 & 50.21 & 17.96 & 42.63 & 48.7 \\
\hline Average (valit values only) & 27.98 & 21.71 & 0.0800 & 13.29 & 774 & 50,00 & 17.78 & 42.28 & 48.5 \\
\hline Total (valid values only) & - & - & - & - & - & - & - & - & - \\
\hline Count (valld values only) & 61 & 81 & \[
61
\] & 61 & 81 & 61 & 81 & 51 & 61 \\
\hline <13> = Down & & & & & & & & & \\
\hline
\end{tabular}

Data for 8/17/2010 3:41 PM thru 8/17/2010 4:41 PM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOx ppm } \\
\text { 1-Min }
\end{gathered}
\] & \begin{tabular}{l}
(Turbine 2) NOx ppm \\
(6)15\% O2 1-Min
\end{tabular} & \[
\begin{gathered}
\text { (Turbine 2) } \\
75-\mathrm{NOx} \\
\text { Ib/mmBtu } 1 \text {-Min }
\end{gathered}
\] & \begin{tabular}{l}
(Turblne 2) \\
75-02\% 1-Min
\end{tabular} & (Turbhe 2) CT Gas Fiow sct/min 1-Min & (Turtine 2) DB Gas Flow \(\mathrm{ksc} / \mathrm{hr} 1\) 1-Min & (Turbine 2) Sprint Flow galimin 1*Aln & (Turtine 2) Water Injection - 1-Min gal/min & (Turbine 2) CT Megowatts 1-MAin \\
\hline 8/17 15:41 & 27.88 & 21.60 & 0.0788 & 13.29 & 7706 & 49.96 & 17.73 & 42.06 & 48.3 \\
\hline 8/47 95:42 & 27.87 & 21.55 & 0.0794 & 13.27 & 7702 & 50.84 & 17.80 & 44.88 & 48.3 \\
\hline 8/17 15:43 & 27.87 & 21.55 & 0.0794 & 13.27 & 7698 & 50.79 & 17.72 , & 41.99 & 49.3 \\
\hline 8/17 15:44 & 27.85 & 21.54 & 0.0793 & 13.27 & 7695 & 50.83 & 17.91 & 41.78 & 48.3 \\
\hline 8/17 16:46 & 28.10 & 21.78 & 0.0802 & 13.28 & 7688 & 50.80 & 17.91 & 41.81 & 48.3 \\
\hline 8/17 15:46 & 28.08 & 21,71 & 0.0800 & 13.27 & 7696 & 50.83 & 17.92 & 41.99 & 48.3 \\
\hline 817715:47 & 27.84 & 21.53 & 0.0793 & 13.27 & 7697 & 50.82 & 17.86 & 42.17 & 48.3 \\
\hline 8117 15:48 & 27.72 & 21.43 & 0.0780 & 13.27 & 7687 & 50.85 & 17.87 & 42.04 & 48.2 \\
\hline 8/17 15:49 & 27,75 & 21.46 & 0.0791 & 13.27 & 7693 & 50.85 & 17.71 & 41.94 & 48.2 \\
\hline 8/17 15:50 & 28.02 & 21.70 & 0.0799 & 13.28 & 7683 & 50.84 & 17.68 & 41.77 & 48.2 \\
\hline 8/17 15:51 & 27.87 & 21.65 & 0.0794 & 13.27 & 7692 & 50.91 & 17.88 & 41.80 & 48.3 \\
\hline 8/1715:52 & 27.92 & 21.82 & 0.0798 & 13.28 & 7697 & 50.91 & 17.87 & 41.82 & 48.3 \\
\hline 8/17 15:53 & 28.05 & 21.69 & 0.0799 & 13.27 & 7687 & 50.94 & 17.83 & 41.98 & 48.3 \\
\hline 8/1715:54 & 27.90 & 21.57 & 0.0795 & 13.27 & 7702 & 50.93 & 17.84 & 42.17 & 48.3 \\
\hline 8/17 15:55 & 27.78 & 21.48 & 0.0791 & 13.27 & 7700 & 50.94 & 17.82 & 42.00 & 48.3 \\
\hline 8/17 15:56 & 27.89 & 21.57 & 0.0794 & 13.27 & 7688 & 50.96 & 17.86 & 41.85 & 48.3 \\
\hline 8/17 15:57 & 27.84 & 21.53 & 0.0793 & 13.27 & 7888 & 50.59 & 17.78 & 42.02 & 48.3 \\
\hline 8/17 15:58 & 27.94 & 21.60 & 0.0798 & 13.27 & 7897 & 51.10 & 17.65 & 41.87 & .48.3 \\
\hline \(811715: 59\) & 27.88 & 21.82 & 0.0798 & 13.27 & 7684 & 51.11 & 17.68 & 42.01 & 48.3 \\
\hline 8/17 16:00 & 28.11 & 21.74 & 0.0801 & 13.27 & 7682 & 51.20 & 17.68 & 41.94 & 48.3 \\
\hline 8/17 16:01 & 27.95 & 21.58 & 0.0795 & 13.26 & 7895 & 51.35 & 17.84 & 41.69 & 48.3 \\
\hline 8/17 16:02 & 27.95 & 21.58 & 0.0795 & 13.26 & 7693 & 51.36 & 17.68 & 42.06 & 48.3 \\
\hline 8/17 16:03 & 27.85 & 21.54 & 0.0793 & 13.27 & 7693 & 51.40 & 17.77 & 42.04 & 48.3 \\
\hline 8/17 18:04 & 27.87 & 21.52 & 0.0793 & 13.26 & 7688 & 51.55 & 17.81 & 41.92 & 48.3 \\
\hline 8/17 16:05 & 27.94 & 21.80 & 0.0796 & 13.27 & 7697 & 51.62 & 17.87 & 41.99 & 48.3 \\
\hline 8/17 16:0B & 27.80 & 21.55 & 0.0794 & 13.26 & 7898 & 51.52 & 17.87 & 42.11 & 48.3 \\
\hline 8/17 18:07 & 27.92 & 21.56 & 0.0794 & 13.26 & 7694 & 51.43 & 17.80 & 41.98 & 48.3 \\
\hline 8/17 16:08 & 27.98 & 21.82 & 0.0796 & 13.27 & 7693 & 51.45 & 17.77 & 41,97 & 48.3 \\
\hline 817 16:09 & 27.79 & 21.49 & 0.0792 & 13.27 & 7692 & 51.44 & 17.73 & 41.94 & 48.2 \\
\hline 8/17 18:10 & 27.75 & 21.46 & 0.0791 & 13.27 & 7688 & 51.46 & 17.72 & 41.99 & 48.2 \\
\hline 8/17 18:11 & 27.79 & 21.48 & 0.0791 & 13.26 & 7687 & 51.47 & 17.77 & 41.99 & 48.2 \\
\hline \multicolumn{9}{|l|}{} & \[
\begin{aligned}
& \text { Paga } 4016 \\
& \text { Ram } 22
\end{aligned}
\] \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline TIrnestamp & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOxppm } \\
\text { 1-Mhm }
\end{gathered}
\] & (Turbine 2) NOx ppm (016\% O2 1-Min & \[
\begin{gathered}
\text { (Turbine 2) } \\
75-\mathrm{NOx} \\
\mathrm{lb} / \mathrm{mmBh} \\
\hline
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turbine 2) } \\
76-02 \% 1-\mathrm{Min}
\end{gathered}
\] & (Turtine 2) CT Gas Flow scilmin 1-Min & (Turbine 2) DB Gas Flow kscithr 1-Mln & (Turbine 2) Sprint Flow gal/min 1-Min & (Turbine 2) Water injection - 1-Min gal/min & (Turbine 2) CT Megawatts 1-Min \\
\hline 8/17 16:12 & 27.69 & 21.38 & 0.0788 & 13.26 & 7888 & 51.48 & 17.71 & 41.86 & 48.2 \\
\hline \(817716: 13\) & 27.88 & 21.53 & 0.0793 & 13.26 & 7683 & 51.44 & 17.78 & 41.78 & 48.2 \\
\hline 817 16:14 & 27.93 & 21.57 & 0.0795 & 13.26 & 7685 & 51.45 & 17.71 & 41.97 & 48.2 \\
\hline 8/17 16:15 & 27.82 & 21.48 & 0.0791 & 13.26 & 7686 & 61.45 & 17.64 & 41.85 & 48.2 \\
\hline 8/17 18:18 & 27.88 & 21.51 & 0.0793 & 13.26 & 7686 & 51.47 & 17.71 & 41.82 & 48.2 \\
\hline 8/17 16:17 & 27.97 & 21.60 & 0.0788 & 13.26 & 7684 & 51.48 & 17.61 & 41.74 & 48.2 \\
\hline 8/17 16:18 & 27.80 & 21.47 & 0.0791 & 13.26 & 7686 & 61:48 & 17.74 & 41.84 & 48.2 \\
\hline 8/17 16:19 & 27.85 & 21.54 & 0.0793 & 13.27 & 7687 & 51.44 & 17.83 & 41.81 & 48.2 \\
\hline 8/17 16:20 & 27.81 & 21.55 & 0.0784 & 13.26 & 7685 & 51.44 & 17.83 & 41.76 & 48.2 \\
\hline 8/17 16:21 & 28.08 & 21.68 & 0.0798 & 13.26 & 7688 & 51.41 & 17.81 & 41.83 & 48.2 \\
\hline 8/17 16:22 & 28.17 & 21.75 & 0.0801 & 13.26 & 7688 & 51.39 & 17.74 & 41.69 & 48.2 \\
\hline 8/17 16:73 & 28.14 & 21.73 & 0.0801 & 13.28 & 7690 & 51.38 & 17.81 & 41.88 & 48.2 \\
\hline 8117 16:24 & 27.97 & 21.52 & 0.0793 & 13.28 & 7688 & 51.33 & 17.70 & 41.83 & 48.3 \\
\hline 8117 18:25 & 27.98 & 21.59 & 0.0795 & 13.26 & 7694 & 51.31 & 17.93 & 41.92 & 48.3 \\
\hline 8/17 18:28 & 27.81 & 21.46 & 0.0781 & 13.26 & 7692 & 51.40 & 17.69 & 41.97 & 48.2 \\
\hline 8/17 16:27 & 27.74 & 21.42 & 0.0789 & 13.26 & 7692 & 51.42 & 17.67 & 41.88 & 48.2 \\
\hline 8/17 16:28 & 28.02 & 21.64 & 0.0787 & 13.28 & 7691 & 51.45 & 17.72 & 42.01 & 48.3 \\
\hline 8/17 16:29 & 27.98 & 21.81 & 0.0798 & 13.26 & 7893 & 51.46 & 17.75 & 41.83 & 48.3 \\
\hline 8/47 18:30 & 28.02 & 21.64 & 0.0797 & 13.26 & 7689 & 51.44 & 17.72 & 41.83 & 48.3 \\
\hline 8/17 16:31 & 27.99 & 21.62 & 0.0796 & 13.26 & 7887 & 51.29 & 17.77 & 41.77 & 48.2 \\
\hline 8/17 16:32 & 28.05 & 21.67 & 0.0798 & 13.28 & 7887 & 51.14 & 17.71 & 41.81 & 48.2 \\
\hline 8/17 16:33 & 27.82 & 21.56 & 0.0794 & 13.28 & 7887 & 51.17 & 17.77 & 41.78 & 48.2 \\
\hline 8/17 18:34 & 27.85 & 21.58 & 0.0785 & 13.26 & 7693 & 51.15 & 17.74 & 41.88 & 48.3 \\
\hline 8/17 16:35 & 28.04 & 21.65 & 0.0798 & 13.28 & 7890 & 51.18 & 17.80 & 41.79 & 48.2 \\
\hline 8/17 16:36 & 28.00 & 21.59 & 0.0796 & 13.25 & 7690 & 51.07 & 17.70 & 42.03 & 48.2 \\
\hline \(8 / 47\) 18:37 & 27.96 & 21.59 & 0.0795 & 13.26 & 7687 & 51.00 & 17.71 & 41.82 & 48.2 \\
\hline 8/17 16:38 & 27.91 & 21.53 & 0.0793 & 13.25 & - 7689 & 51.16 & 17.73 & 41.87 & 48.2 \\
\hline 8/17 16:39 & 27.79 & 21.43 & 0.0790 & 13.25 & 7692 & 51.15 & 17.86 & 42.11 & 48.2 \\
\hline 8/17 16:40 & 27.81 & 21.45 & 0.0790 & 13.25 & 7894 & 51.18 & 17.81 & 41.88 & 48.2 \\
\hline 8/17 16:41 & 27.74 & 21.39 & 0.0788 & 13.25 & 7892 & 51.23 & 17.85 & 41.93 & 48.2 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{aligned}
& \text { (Turbine 2) } \\
& \text { 76-NOx ppmn } \\
& \text { 1-M1n }
\end{aligned}
\] & (Turbine 2) NOX ppm @15\% 02 1-Min & \[
\begin{gathered}
\text { (Turbine 2) } \\
75-\mathrm{NOx} \\
\text { ibimmBtu } 1 \mathrm{Min}
\end{gathered}
\] & (Turbine 2) 75-02\% 1-Min & (Tumbine 2) CT Gas Fow \(\mathrm{sc} / \mathrm{min} 1-\mathrm{M} / \mathrm{n}\) & \[
\begin{aligned}
& \text { (Turbine 2) DB } \\
& \text { Gas Flow } \\
& \text { kscthr 1-Min }
\end{aligned}
\] & \begin{tabular}{l}
(Turblne 2) \\
Sprint Flow gal/min 1-Min
\end{tabular} & (Turbine 2) Water Injection - 1-Min galmin & (Turbine 2) CT Megawatts 1-MIn \\
\hline Average (all) & 27.91 & 21.57 & 0.0794 & 13.26 & 7692 & 51.20 & 17.76 & 41.92 & 48.3 \\
\hline Total (ati) & - & - & - & - & - & - & - & - & - \\
\hline Minimum (all) & 27.69 & 21.38 & 0.0788 & 13.25 & 7683 & 48.86 & 17.61 & 41.89 & 48.2 \\
\hline Maximum (all) & 28.17 & 21.76 & 0.0802 & 13.28 & 7706 & 51.62 & 17.83 & 42.17 & 48.3 \\
\hline Average (valid values only) & 27.94 & 21.57 & 0.0794 & 13.26 & 7682 & 51.20 & 17.76 & 41.82 & 48.3 \\
\hline Total (valld values only) & - & - & - & - & - & - & - & - & - \\
\hline Count (valld values only) & 61 & 61 & 61 & 61 & 61 & 61 & 81 & 61 & 81 \\
\hline
\end{tabular}

CeDAR 1-Minute Data
LAKE COGEN
Data for 8/17/2010 4:58 PM thru 8/17/2010 5:58 PM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOx ppm } \\
\text { 1-Mtn } \\
\hline
\end{gathered}
\] & (Tubine 2) NOx ppm @16\% 02 1-Min & \[
\begin{gathered}
\text { (Turtine 2) } \\
\text { 75-NOx } \\
\text { lb/mmatu 1-Min }
\end{gathered}
\] & (Turbine 2) 75-02\% 1-Min & (Turbine 2) CT Gas flow sclimin 1-Min & (Turblne 2) \(D B\) Ges flow kscifhr 1-Min & (Turb|ne 2) Sprint Flow gelfmin 1-Min & (Turbins 2) Weter injection - 1-Min gal/min & (Turbine 2) CT Megawatts 1-Min \\
\hline 8/17 16:58 & 28.23 & 21.88 & 0.0805 & 13.26 & 7884 & 48.47 & 17.88 & 41.89 & 48.2 \\
\hline \(8 / 1718159\) & 27.98 & 21.65 & 0.0798 & 13.28 & 7885 & 49.46 & 17.78 & 41.60 & 48.2 \\
\hline 8/17 17:00 & 28.14 & 21.79 & 0.0803 & 13.28 & 7885 & 48.44 & 17.79 & 41.89 & 48.3 \\
\hline 8/17 17:01 & 27.94 & 21.63 & 0.0797 & 13.28 & 7688 & 49.22 & 17.73 & 42.06 & 48.3 \\
\hline 8/17 17:02 & 27.81 & 21.56 & 0.0794 & 13.29 & 7895 & 49.09 & 17.71 & 42.00 & 48.3 \\
\hline 8/17 17:03 & 27.79 & 21.55 & 0.0794 & 13.29 & 7897 & 49.03 & 17.74 & 42.03 & 48.3 \\
\hline 8/17 17:04 & 27.95 & 21.67 & 0.0798 & 13.29 & 7694 & 48.85 & 17.75 & 41.87 & 48.3 \\
\hline 817 17:05 & 28.07 & 21.79 & 0.0803 & 13.30 & 7695 & 48.73 & 17.72 & 42.28 & .48,4 \\
\hline 8117 17:08 & 27.68 & 21.46 & 0.0791 & 13.29 & 7700 & 40.75 & 17.78 & 42.32 & 48.3 \\
\hline 6/17 17:07 & 27.58 & 21,38 & 0.0788 & 13.29 & 7697 & 48.81 & 17.72 & 42.18 & 48.3 \\
\hline 8/17 17:08 & 27.72 & 21.48 & 0.0792 & 13.29 & 7899 & 48.60 & 17.69 & 42.24 & 48.3 \\
\hline 8/17 17:09 & 27.66 & 21.47 & 0.0791 & 13.30 & 7701 & 48.61 & 17.79 & 42.27 & 48.3 \\
\hline 8/17 17:10 & 27.65 & 21.47 & 0.0791 & 13.30 & 7699 & 48.48 & 17.77 & 42.26 & 48.3 \\
\hline 8/17 17:11 & 27.77 & 21.63 & 0.0793 & 13.29 & 7899 & 48.43 & 17.89 & 42.15 & 48.3 \\
\hline 8/17 17:12 & 27.95 & 21.70 & 0.0799 & 13.30 & 7700 & 48,44 & 17.82 & 42.15 & 48.3 \\
\hline 8/17 17:13 & 27.84 & 21.61 & 0.0796 & 13.30 & 7704 & 48.44 & 17.78 & 42.26 & 48.4 \\
\hline \(8 / 1717: 14\) & 27.70 & 21.50 & 0.0792 & 13.30 & 7889 & 48.28 & 17.85 & 42.23 & 48.3 \\
\hline 8/17 17:15 & 27.62 & 21.41 & 0.0789 & 13.29 & 7699 & 48.26 & 17.84 & 42.20 & 48.3 \\
\hline 8/17 17:18 & 27.71 & 21.51 & 0.0792 & 13.30 & 7705 & 48.35 & 17.68 & 42.25 & 48.4 \\
\hline 8/17 17:17 & 27.69 & 21.50 & 0.0782 & 13.30 & 7705 & 48.27 & 17.70 & 42.27 & 48.3 \\
\hline \(811717: 18\) & 27.74 & 21.54 & 0.0793 & 13.30 & 7702 & 48.23 & 17.78 & 42.25 & 48.3 \\
\hline 8/17 17:19 & 27.78 & 21.57 & 0.0794 & 13.30 & 7702 & 48.24 & 17.63 & 42.20 & 48.3 \\
\hline 8/17 17:20 & 27.87 & 21.64 & 0.0797 & 13.30 & 7701 & 48.15 & 17.77 & 42.21 & 48.3 \\
\hline 8/17 17:21 & 27.85 & 21.62 & 0.0798 & 13.30 & 7700 & 48.21 & 17.77 & 42.01 & 48.3 \\
\hline 8/17 17:22 & 27.88 & 21.69 & 0.0798 & 13.32 & 7697 & 48.16 & 17.67 & 42.13 & 48.3 \\
\hline 8/47 17:23 & 27.69 & 21.52 & 0.0793 & 13.31 & 7700 & 48.17 & 17.77 & 42.23 & 48.4 \\
\hline -817717:24 & 27.75 & 21.57 & 0.0795 & 13.31 & 7701 & 48.23 & 17.74 & 42.21 & 48.4 \\
\hline 8/17 17:25 & 27.79 & 21,80 & 0.0798 & 13.31 & 7700 & 48.19 & 17.67 & 42.08 & 48.4 \\
\hline 8/17 17:26 & 27.83 & 21.60 & 0.0796 & 13.30 & 7699 & 48.31 & 17.78 & 42.21 & 48.3 \\
\hline 8/17 17:27 & 27.96 & 21.73 & 0.0801 & 13.31 & 7697 & 48.33 & 17.67 & 42.11 & 48.3 \\
\hline 8/17 17:26 & 27.87 & 21.64 & 0.0797 & 13.30 & 7898 & 48.32 & 17.72 & 42.05 & 48.3 \\
\hline \multicolumn{9}{|l|}{CaCAR Reparts 8/172010 6:00 PM, CeDar f-Minute Data} & Page 4 of 0 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOx ppm } \\
\text { 1-Min }
\end{gathered}
\] & (Turbine 2) NOxppm (215\% O2. 1-Min & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOx } \\
\text { lommilu 1-Min }
\end{gathered}
\] & (Turbine 2) 75-02\% 1-Min & (Turbine 2) CT Gas Flow setimin 1-Min & \[
\begin{gathered}
\text { (Turbine 2) } \mathrm{GB} \\
\mathrm{ksct/hr} \text { Fiow } 1 \text {-Min }
\end{gathered} \text {. }
\] & (Turblne 2) Sprint Flow gal/min 1-Min & (Turbine 2) Wator Injection - 1-Min ga/min & (Turtine 2) CT Megawatts 1-Min \\
\hline 8/17 17:29 & 27.88 & 21.67 & 0.0798 & 13.31 & 7897 & 48.38 & 17.77 & 42.07 & 48.3 \\
\hline 8/1717:30 & 27.89 & 21.68 & 0.0799 & 13.31 & 7698 & 48.26 & 17.74 & 42.22 & 48.4 \\
\hline 8/17 17:31 & 27.83 & 21.63 & 0.0797 & 13.31 & 7704 & 48.29 & 17.77 & 42.14 & 48.4 \\
\hline 8/17 17:32 & 27.84 & 21.81 & 0.0796 & 13.30 & 7706 & 48.38 & 17.83 & 42.11 & 48.3 \\
\hline 8/17 17:33 & 27.77 & 21.58 & 0.0795 & 13.31 & 7710 & 48.36 & 17.82 & 42.34 & 48.4 \\
\hline 8/1717:34 & 27.84 & 21.61 & 0.0796 & 13.30 & 7704 & 48.48 & 17.87 & 42.10 & 48.4 \\
\hline 8/17 17:35 & 27.92 & 21.67 & 0.9798 & 13.30 & 7702 & 48.40 & 17.86 & 42.28 & 48.4 \\
\hline 8/17 17:38 & 27.67 & 21.48 & 0.0791 & 13.30 & 7709 & 48.48 & 17.83 & 42.47 & 48.4 \\
\hline 8/17 17:37 & 27.61 & 21.41 & 0.0789 & 19.28 & 7707 & 48.64 & 17.81 & 42.07 & 48.4 \\
\hline 8/17 17:38 & 28.03 & 21.76 & 0.0802 & 13.30 & 7699 & 48.78 & 17.52 & 42.15 & 48.3 \\
\hline 8/17 17:39 & 2788 & 21.64 & 0.0797 & 13.30 & 7703 & 48.69 & 17.50 & 42.09 & 48.4 \\
\hline 8/17 17:40 & 27.87 & 21.64 & 0.0797 & 13.30 & 7712 & 48.74 & 17.71 & 42.33 & 48.5 \\
\hline 8/17 17:41 & 27.80 & 21.55 & 0.0794 & 13.29 & 7715 & 48.60 & 17.78 & 42.38 & 48.4 \\
\hline 8/17 17:42 & 27.84 & 21.61 & 0.0796 & 13.30 & 7712 & 48.47 & 17.80 & 42.38 & 48.4 \\
\hline 8/17 17:43 & 27.58 & 21.41 & 0.0789 & 13.30 & 7713 & 48.17 & 17.76 & 42.34 & 48.4 \\
\hline 8/17 17:44 & 27.60 & 21.43 & 0.0789 & 13.30 & 7713 & 48.17 & 17.78 & 42.81 & 48.4 \\
\hline 8117 17:45 & 27.51 & 21.36 & 0.0787 & 13.30 & 7708 & 48.11 & 17.84 & 42.08 & 48.4 \\
\hline 8/17 17:46 & 27.97 & 21.74 & 0.0801 & 13.31 & 7702 & 48.21 & 17.79 & 42.09 & 48.4 \\
\hline 8/17 17:47 & 27.92 & 21.67 & 0.0788 & 13.30 & 7707 & 48.15 & 17.64 & 42.38 & 48.4 \\
\hline 8/17717:48 & 27.87 & 21.64 & 0.0797 & 13.30 & 7706 & 48.22 & 17.82 & 42.19 & 48.4 \\
\hline 8/17 17:49 & 28.09 & 21.84 & 0.0804 & 13.31 & 7703 & 48.22 & 17.80 & 42.11 & 48.4 \\
\hline 8/17 17:50 & 27.95 & 21.73 & 0.0800 & 13.31 & 7701 & 48.13 & 17.78 & 42.32 & 48.4 \\
\hline 8/17 17:51 & 27.90 & 21.69 & 0.0799 & 13.31 & 7696 & 48.23 & 17.63 & 41.89 & 48.4 \\
\hline 8/17 17:52 & 27.98 & 21.75 & 0.0801 & 13.31 & 7701 & 48.16 & 17.72 & 42.26 & 48.4 \\
\hline 8/17 17:53 & 27.78 & 21.57 & 0.0794 & 13.30 & 7702 & 48.17 & 17.67 & 42.34 & 48.4 \\
\hline 8/17 17:54 & 27.77 & 21.59 & 0.0795 & 13.31 & 7709 & 48.25 & 17.70 & 42.31 & 48.4 \\
\hline 8/17 17:55 & 27.87 & 21.68 & 0.0798 & 13.31 & 7699 & 48.19 & 17.68 & 42.30 & 48.4 \\
\hline \(881717: 56\) & 27.86 & 21.63 & 0.0797 & 13.30 & 7700 & 48.27 & 17.88 & 42.29 & 48.4 \\
\hline 8/17 17:57 & 27.87 & 21.66 & 0.0798 & 13.31 & 7702 & 48.31 & 17.76 & 42.10 & 48.4 \\
\hline 8/17 17:58 & 27.81 & 21.59 & 0.0795 & 13.30 & 7700 & 48.31 & 17.87 & 42.21 & 48.4 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestarnp & \[
\begin{aligned}
& \text { (Turbine 2) } \\
& \text { 75-Nox ppm } \\
& \text { 1-Min }
\end{aligned}
\] & \begin{tabular}{l}
(Turbine 2) NOx ppm \\
(15\% 02 1-Min
\end{tabular} & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOx } \\
\text { Ib/minBtu 1-Min }
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 76-02\% 1-Min }
\end{gathered}
\] & \begin{tabular}{l}
(Turbine 2) CT \\
- Gas Fiow scifmin 1-Min
\end{tabular} & (Turbine 2) DB Ges Row kecthr 1-Min & (Turbina 2) Sprint Flow \(\mathrm{gal} / \mathrm{m} / \mathrm{n} 1-\mathrm{Aln}\) & (Turbine 2) Water Injection - 1-Min gal/min & (Turbine 2) CT Megawatis 1-Mn \\
\hline Avarage (all) & 27.83 & 21.80 & 0.0796 & 13.30 & 7701 & 48.45 & 17.78 & 42.18 & 48.4 \\
\hline Total (all) & - & - & - & - & - & - & - & \(\cdots\) & - \\
\hline Minimum (ail) & 27.51 & 21.38 & 0.0787 & 13.28 & 7684 & 48.11 & 17.52 & 41.60 & 48.2 \\
\hline Maximum (all) & 28.23 & 21.66 & 0.0805 & 13.32 & 7715 & 48.47 & 17.89 & 42.81 & 48.5 \\
\hline Average (valld values only) & 27.83 & 21.60 & 0.0798 & 13.30 & 7701 & 48.45 & 17.76 & 42.18 & 48.4 \\
\hline Totel (valid values only) & - & - & - & - & -- & - & - & -- & - \\
\hline Count (valid values only) & 61 & 61 & 61 & 61 & 81 & 61 & 61 & 81 & 61 \\
\hline
\end{tabular}

CeDAR 1-Minute Data
LAKE CQGEN
Data for 8/17/2010 6:16 PM thru 8/17/2010 7:16 PM
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Timestamp & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-NOX OPm } \\
\text { 1-Min }
\end{gathered}
\] & (Turbine 2) NOX ppm \$15\% 02 1 - Min & (Turbine 2) 75-NOX \(\mathrm{lb} / \mathrm{mmBta}\) 1-Min & \[
\begin{gathered}
\text { (Turbine 2) } \\
\text { 75-02\% 1-Min }
\end{gathered}
\] & (Turbine 2) CT Gas Flow scf/hmin t-Min & (Turbine 2) DB Gas Flow kscl/hr 1-Min & (Turbine 2) Sprint Flow gal/min 1-Mm & (Turbine 2) Water Injection - 1-Min gal/min & \[
\begin{gathered}
\text { (Turbine 2) Cr } \\
\text { Megawatts } \\
\text { 1Min } \\
\hline
\end{gathered}
\] \\
\hline 8/47 16:16 & 27.32 & 21.15 & 0.0779 & 13.28 & 7673 & 48.23 & 17.70 & 42.46 & 48.2 \\
\hline 8/17 18:17 & 27.39 & 21.21 & 0.0781 & 13.28 & 7874 & 49.02 & 17.73 & 42.17 & 48.2 \\
\hline 8/17 18:18 & 27.60 & 21.32 & 0.0785 & 13.20 & 7668 & 48.83 & 17.73 & 42.30 & 48.2 \\
\hline 8/17 18:19 & 27.33 & 21.19 & 0.0781 & 13.29 & 7672 & 48.82 & 17.79 & 42.34 & 48.2 \\
\hline 8/17 18:20 & 27.30 & 21.17 & 0.0780 & 13.29 & 7673 & 48.85 & 17.74 & 42.38 & 48.2 \\
\hline 8/17 18:21 & 27.36 & 21.21 & 0.0781 & 13.29 & 7677 & 48.88 & 17.84 & 42.33 & 48.3 \\
\hline 8177 18:22 & 27.38 & 21.23 & 0.0782 & 13.29 & 7881 & 49.10 & 17.79 & 42.43 & 48.3 \\
\hline 8/17 18:23 & 27.52 & 21.31 & 0.0785 & 13.28 & 7679 & 49.22 & 17.73 & 42.20 & 48.3 \\
\hline ar17 18:24 & 27.58 & 21.35 & 0.0787 & 13.28 & 7679 & 49.18 & 17.83 & 42.38 & 48.3 \\
\hline 8/17 18:25 & 27.51 & 21.30 & 0.0785 & 13.28 & 7679 & 49.25 & 17.73 & 42.47 & 48.3 \\
\hline 8/17 18:26 & 27.39 & 21.18 & 0.0780 & 13.27 & 7880 & 49.54 & 17.76 & 42.33 & 48.3 \\
\hline 8/17 18:27 & 27.63 & 21.30 & 0.0788 & 13.28 & 7685 & 49.75 & 17.71 & 42.57 & 48.3 \\
\hline 8/17 18:28 & 27.35 & 21.15 & 0.0779 & 13.27 & 7684 & 49.79 & 17.69 & 42.33 & 48.3 \\
\hline \(811718: 29\) & 27.38 & 21.17 & 0.0780 & 13.27 & 7686 & 49,78 & 17.98 & 42.35 & 48. \\
\hline 8/17 18:30 & 27.49 & 21.28 & 0.0784 & 13.28 & 7887 & 48.81 & 17.94 & 42.46 & 48.4 \\
\hline 8/47 18:31 & 27.48 & 21.25 & 0.0783 & 13.27 & 7880 & 48.80 & 17.78 & 42.45 & 48.3 \\
\hline 8/17 18:32 & 27.70 & 21.42 & 0.0789 & 13.27 & 7677 & 49.91 & 17.66 & 42.28 & 48.3 \\
\hline 8/17 18:33 & 27.54 & 21.30 & 0.0785 & 13.27 & 7674 & 50.15 & 17.70 & 42.22 & 48.3 \\
\hline 8/17 18:34 & 27.51 & 21.30 & 0.0785 & 13.28 & 7676 & 50.09 & 17.71 & 42.23 & 48.3 \\
\hline 8177 18:35 & 27.57. & 21.32 & 0.0785 & 13.27 & 7678 & 50.28 & 17.70 & 42.46 & 48.3 \\
\hline 8817 18:38 & 27.34 & 21.19 & 0.0778 & 13.26 & 7678 & 50.31 & 17.82 & 42.35 & 48.3 \\
\hline 8/17 18:37 & 27.41 & 21.20 & 0.0781 & 13.27 & 7677 & 50.40 & 17.88 & 42.40 & 48.3 \\
\hline 8417 18:38 & 27.48 & 21.23 & 0.0782 & 13.27 & 7677 & 50.50 & 17.86 & 42.41 & 48.3 \\
\hline 8/7718:39 & 27.64 & 21.37 & 0.0787 & 13.27 & 7678 & 50.66 & 17.81 & 42.34 & 48.3 \\
\hline 8/17 18:40 & 27.86 & 21.39 & 0.0788 & 13.27 & 7673 & 50.76 & 17.82 & 42.23 & 48.3 \\
\hline 8/17 18:41 & 27.81 & 21.32 & 0.0785 & 13.26 & 7674 & 50.67 & 17.88 & 42.47 & 48.3 \\
\hline 8/17 18:42 & 27.48 & 21.23 & 0.0782 & 13.27 ' & 7874 & 50.70 & 17.70 & 42.41 & 48.3 \\
\hline 8/17 18:43 & 27.48 & 21,23 & 0.0782 & 13.27 & 7670 & 50.77 & 17.77 & 42.16 & 48.3 \\
\hline 8/17 18:44 & 27.69 & 21.41 & 0.0789 & 13.27 & 7665 & 50.83 & 17.73 & 42.18 & 48.3 \\
\hline 8/17 18:45 & 27.68 & 21.38 & 0.0788 & 13.27 & 7885 & 50.87 & 17.87 & 42.26 & 48.3 \\
\hline 8/17 18:48 & 27.71 & 21.40 & 0.0788 & 13.28 & 7886 & 50.99 & 17.72 & 42.36 & 48.3 \\
\hline
\end{tabular}

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline T.mestamp & \[
\begin{aligned}
& \text { (Tublne 2) } \\
& \text { 75-NOX pDm } \\
& \text { 1-Min }
\end{aligned}
\] & \begin{tabular}{l}
(Turbine 2) NOX ppm \\
@ \(15 \%\) O2 \\
1-Min
\end{tabular} & \begin{tabular}{l}
(Turbine 2) \\
-76-NOX \\
ib/mmBtu 1-Min
\end{tabular} & \[
\begin{gathered}
\text { (Turtine 2) } \\
75-02 \% ~ 1-\mathrm{Mln} \\
\hline
\end{gathered}
\] & \[
\begin{gathered}
\text { (Turblne 2) CT } \\
\text { Gas Fiow } \\
\text { scl/min 1Alin }
\end{gathered}
\] & (Turbine 2) DB Gas How kscifly 1-Min & (Turbine 2) Sprint Flow gal/min 1-Mirn & (Turbine 2) Waber Injection -1-Min gal/min & (Turbine 2) CT Megawatts 1-Min \\
\hline 8/17 18:47 & 27.65 & 21.41 & 0.0789 & 13.28 & 7667 & 47.09 & 17.70 & 41.98 & 48.3 \\
\hline 8817 18:48 & 26.28 & 22.23 & 0.0819 & 13.39 & 7647 & 44.49 & 17.79 & 40.48 & 48.2 \\
\hline 8/17 18:49 & 29.28 & 23.22 & 0.0855 & 13.46 & 7634 & 38.52 & 17.79 & 40.45 & 48.1 \\
\hline 8/17 18:50 & 29.08 & 23.28 & 0.0858 & 13.63 & 7636 & 34.27 & 17.82 & 40.64 & 48.2 \\
\hline 8/17 18:61 & 28.62 & 23.10 & 0.0851 & 13.58 & 7639 & 30.70 & 17.83 & 40.85 & 48.2 \\
\hline 8/17 18:52 & 28.57 & 23.09 & 0.0851 & 13.60 & 7838 & 28.41 & 17.75 & 40.36 & 48.1 \\
\hline 8/17 18:53 & 29.12 & 23.83 & 0.0878 & 13.60 & 7532 & 20.80 & 17.80 & 40.49 & 48.2 \\
\hline 8/17 18:64 & 26.64 & 24.63 & 0.0907 & 14.04 & 7637 & 0.00 < \(13>\) & 17.82 & 40.97 & 48.2 \\
\hline 8/17718:55 & 27.47 & 23.76 & 0.0875 & 14.08 & 7860 & \(0.00<13>\) & 17.73 & 41.98 & 48.3 \\
\hline 8/17 18:56 & 27.08 & 23.43 & 0.0863 & 14.08 & 7684 & 0.00 <13> & 17.79 & 41.63 & 48.3 \\
\hline 8/17 18:57 & 27.28 & 23.60 & 0.0889 & 14.08 & 7664 & \(0.00<13>\) & 17.61 & 41.80 & 48.3 \\
\hline 8/17 18:58 & 27.24 & 23.57 & 0.0888 & 14.08 & 7884 & 0.00 <13> & 17.76 & 41.63 & 48.3 \\
\hline 8/17 18:59 & 27.17 & 23.50 & 0.0866 & 14.08 & 7664 & 0.00 <13> & 17.83 & 41.97 & 48.4 \\
\hline 8/17 19:00 & 27.33 & 23.84 & 0.0871 & 14.08 & 7661 & 0.00 <13> & 17.76 & 41.80 & 48.3 \\
\hline 8/17 19:01 & 27.21 & 23.50 & 0.0886 & . 14.07 & 7869 & \(0.00<13>\) & 17.83 & 42.08 & 48.4 \\
\hline 8177 19:02 & 27.16 & 23.50 & 0.0866 & 14.08 & 7666 & 0.00 <13> & 17.84 & 41.79 & 48.4 \\
\hline 8/17 19:03 & 27.09 & 23.44 & 0.0863 & 14.08 & 7668 & \(0.00<13>\) & 17.82 & 42.07 & 48.4
48.4 \\
\hline 8/17 19:04 & 27.11 & 23.49 & 0.0865 & 14.09 & 7870 & \(0.00<13>\) & 17.76 & 41.78 & 48.4 \\
\hline 8/17 19:05 & 27.26 & 23.58 & 0.0869 & 14.08 & 7869 & \(0.00<13>\) & 17.78 & 42.28 & 48.4 \\
\hline 817 19:06 & 26.85 & 23.23 & 0.0858 & 14.08 & 7672 & \(0.00<13>\) & 17.80 & 42.12 & 48.4 \\
\hline 8/47 19:07 & 27.30 & 23.65 & 0.0871 & 14.09 & 7870 & \(0.00<13>\) & 17.78 & 42.12 & 48.4 \\
\hline 8/17 19:08 & 27.22 & 23.55 & 0.0858 & 14.08 & 7667 & \(0.00<13>\) & 17.77 & 41.73 & 48.4 \\
\hline 8817 19:09 & 27.47 & 23.76 & 0.0875 & 14.08 & 7688 & \(0.00<13>\) & 17.75 & 42.09 & 48.5 \\
\hline 8/17 18:10 & 26.83 & 23.18 & 0.0854 & 14.07 & 7676 & \(0.00<13>\)
\(0.00<13>\) & 17.76 & 41.74 & 48.4 \\
\hline 8/17 19:11 & 26.77 & 23.12 & 0.0852 & 14.07 & 7671 & 0.00<<13> & 17.86 & 41.81 & 48.4 \\
\hline 8/17 19:12 & 27.45 & 23.79 & 0.0876 & 14.09 & 7871 & \(0.00<13\) > & 17.93 & 42.05 & 48.5 \\
\hline 8/17 19:13 & 27.04 & 23.38 & 0.0862 & 14.08 & 7871 & \(0.00<13>\) & 17.88 & 41.68 & 48.4 \\
\hline 8/17 19:14 & 27.12 & 23.48 & 0.0854 & 14.08 & 7668 & \(0.00<13\) > & 1785 & 41.87 & 48.4 \\
\hline 8/17 19:15 & 27.51 & 23.80 & 0.0877 & 14.08 & 7669 & \(0.00<13>\) & & -<18> & - <18> \\
\hline 8/17 19:16 & - <18> & - <18> & - <18> & <18> & - <18> & - <18> & - 18 & - & \\
\hline
\end{tabular}

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline Ds & BTU & c02 & N2 & Grav & Methan & Ethane & Propan & Ibutan & Nbutan & Ipenta & Npenta & C6 & C7 & C8 \\
\hline 09/12/2010 & 1020 & 1.263 & 0.487 & 0.584 & 95.856 & 1.987 & 0.254 & 0.044 & 0.048 & 0.018 & 0.012 & 0.030 & 0.000 & 0.000 \\
\hline 09/11/2010 & 1021 & 1.246 & 0.463 & 0.58 & 95.830 & 2.027 & 0.280 & 0.04 & 0.052 & 0.018 & 0.012 & 0.028 & 0.000 & 0.000 \\
\hline 09/10/2010 & 1019 & 1.212 & 0.438 & 0.58 & 96.16 & 1.824 & 0.23 & 0.04 & 0.0 & 0.0 & 0.01 & 0.0 & 0.000 & 0.00 \\
\hline 09/09/2010 & 1020 & 1.223 & 0.454 & 0.583 & 96.040 & 1.899 & 0.239 & 0.042 & 0.047 & 0.017 & 0.011 & 0.027 & 0.000 & 0.000 \\
\hline 09/08/2010 & 1020 & 1.209 & 0.464 & 0.583 & 96.026 & 1.907 & 0.246 & 0.044 & 0.048 & 0.018 & 0.012 & 0.028 & 0.000 & 0.000 \\
\hline 09/07/2010 & 1020 & 1.217 & 0.480 & 0.583 & 95.980 & 1.932 & 0.243 & 0.043 & 0.048 & 0.018 & 0.012 & 0.028 & 0.000 & 0.000 \\
\hline 09/06/2010 & 1020 & 1.210 & 0.471 & 0.583 & 95.984 & 1.922 & 0.258 & 0.045 & 0.051 & 0.018 & 0.012 & 0.029 & 0.000 & 0.000 \\
\hline 09/05/2010 & 1022 & 1.201 & 0.461 & 0.584 & 95.862 & 2.003 & 0.292 & 0.053 & 0.058 & 0.022 & 0.014 & 0.034 & 0.000 & 0.000 \\
\hline 09/04/2010 & 1022 & 1.190 & 0.466 & 0.58 & 95.857 & 2.021 & 0.290 & 0.051 & 0.0 & 0.021 & 0.01 & 0.03 & 0.000 & 0.000 \\
\hline 09/03/2010 & 1020 & 1.183 & 0.474 & 0.583 & 96.015 & 1.931 & 0.247 & 0.043 & 0.049 & 0.018 & 0.012 & 0.02 & 0.000 & 0.000 \\
\hline 09/02/2010 & 1019 & 1.180 & 0.466 & 0.582 & 96.119 & 1.894 & 0.206 & 0.038 & 0.040 & 0.017 & 0.011 & 0.028 & 0.000 & 0.000 \\
\hline 09/01/2010 & 1019 & 1.188 & 0.465 & 0.582 & 96.165 & 1.855 & 0.195 & 0.037 & \({ }^{0.038}\) & 0.017 & 0.011 & 0.029 & 0.000 & 0.000 \\
\hline 08/31/2010 & 1019 & 1.176 & 0.469 & 0.582 & 96.162 & 1.855 & 0.202 & 0.039 & 0.040 & 0.017 & 0.011 & 0.030 & 0.000 & 0.000 \\
\hline 08/30/2010 & 1019 & 1.185 & 0.487 & 0.582 & 96.053 & 1.936 & 0.203 & 0.038 & 0.039 & 0.017 & 0.011 & 0.030 & 0.000 & 0.000 \\
\hline 08/29/2010 & 1020 & 1.186 & 0.473 & 0.582 & 96.047 & 1.950 & 0.209 & 0.038 & 0.040 & 0.017 & 0.011 & 0.030 & 0.000 & 0.000 \\
\hline 08/28/2010 & 1020 & 1.207 & 0.471 & 0.583 & 95.936 & 2.011 & 0.230 & 0.041 & 0.042 & 0.018 & 0.012 & 0.032 & 0.000 & 0.000 \\
\hline 08/27/2010 & 1021 & 1.219 & 0.485 & 0.584 & 95.861 & . 045 & 0.236 & 0.043 & 0.047 & 0.019 & 0.013 & 0.03 & 0.000 & 0.000 \\
\hline 08/26/2010 & 1019 & 1.276 & 0.484 & 0.584 & 95.872 & 2.000 & 0.219 & 0.043 & 0.045 & 0.018 & 0.012 & 0.031 & 0.000 & 0.000 \\
\hline 08\%25/2010 & 1019 & 1.232 & 0.479 & 0.583 & 95.965 & 1.967 & 0.217 & 0.042 & 0.041 & 0.017 & 0.011 & 0.030 & 0.000 & 0.000 \\
\hline 08/24/2010 & 1020 & 1.240 & 0.485 & 0.584 & 95.862 & 2.022 & 0.236 & 0.048 & 0.045 & 0.019 & 0.011 & 0.032 & 0.000 & 0.000 \\
\hline 08/23/2010 & 1020 & 1.227 & 0.507 & 0.583 & 95.879 & 2.014 & 0.224 & 0.043 & 0.043 & 0.018 & 0.012 & 0.03 & 0.000 & 0.000 \\
\hline 08/22/2010 & 1020 & 1.210 & 0.483 & 0.583 & 96,004 & 942 & 0.214 & 0.041 & 0.042 & 0.018 & 0.012 & 0.03 & 0.000 & 0.000 \\
\hline 08/21/2010 & 1020 & 1.251 & 0.495 & 0.584 & 95.887 & 988 & 0.225 & 0.044 & 0.044 & 0.019 & 0.012 & 0.03 & 0.00 & 0.000 \\
\hline 08/20/2010 & 1020 & 1.226 & 0.486 & 0.584 & 95.881 & 2.009 & 0.241 & 0.047 & 0.046 & 0.019 & 0.012 & 0.032 & 0.000 & 0.000 \\
\hline 08/19/2010 & 1020 & 1.226 & 0.485 & 0.584 & 95.881 & 2.009 & 0.241 & 0.047 & 0.096 & 0.019 & 0.012 & 0.032 & 0.000 & 0.000 \\
\hline 08/18/2010 & 1020 & 1.174 & 0.477 & 0.583 & 96.016 & 1.956 & 0.229 & 0.044 & 0.044 & 0.018 & 0.011 & 0.032 & 0.000 & 0.000 \\
\hline 0817/2010 & 1023 & 1.177 & 0.480 & 0.584 & 95.805 & 2.069 & 0.286 & 0.061 & 0.055 & 0.021 & 0.012 & 0.034 & 0.000 & 0.000 \\
\hline 08/16/2010 & 1021 & 1.178 & 0.493 & 0.583 & 95.918 & 1.997 & 0.249 & 0.052 & 0.0 & 0.02 & 0.01 & 0.03 & 0.00 & 0.00 \\
\hline 08/15/2010 & 1020 & 1.21 & 0.478 & 0.583 & 95.976 & 950 & 232 & 0.046 & 045 & . 018 & . 01 & 0.031 & 0.00 & 0.00 \\
\hline 08/14/201 & 1020 & 1.263 & 0.498 & 0.584 & 5.845 & 992 & 0.244 & 0.048 & 0.047 & 0.019 & 0.01 & 0.03 & 0.00 & 0.00 \\
\hline 08/13/201 & 1020 & 1.264 & 0.500 & 0.584 & 95.789 & 943 & 0.243 & 0.049 & 0.048 & 0.020 & 0.01 & 0.03 & 0.00 & 0.000 \\
\hline 08/12/201 & 1021 & 1.252 & 0.498 & 0.585 & 95.750 & 2.075 & 0.253 & 0.053 & 0.051 & 0.021 & 0.013 & 0.035 & 0.000 & 0.000 \\
\hline 08/11/2010 & 1021 & 1.262 & 0.511 & 0.585 & 95.698 & 2.034 & 0.266 & 0.057 & 0.053 & 0.022 & 0.013 & 0.035 & 0.000 & 0.000 \\
\hline 08/10/2010 & 1023 & 1.257 & 0.528 & 0.586 & 95.571 & 2.155 & 0.295 & 0.063 & 0.059 & 0.023 & 0.014 & 0.035 & 0.000 & 0.000 \\
\hline 08/09/2010 & 1022 & 1.249 & 0.537 & 0.586 & 95.580 & 2.152 & 0.289 & 0.062 & 0.058 & 0.023 & 0.01 & 0.035 & 0.000 & 0.000 \\
\hline 08/08/2010 & 1022 & 1.218 & 0.530 & 0.585 & 95.740 & 2.057 & 0.274 & 0.058 & 0.055 & 0.022 & 0.013 & 0.03 & 0.000 & 0.000 \\
\hline 08/07/2010 & 1022 & 1.201 & 0.524 & 0.585 & 95.731 & 097 & 0.271 & 0.055 & 0.053 & 0.021 & 0.01 & 0.03 & 0.000 & 0.000 \\
\hline 08/06/2010 & 1021 & 1.165 & 0.503 & 0.583 & 95.929 & 2002 & 0.239 & 0.048 & 0.047 & 0.020 & 0.012 & 0.033 & 0.00 & 0.000 \\
\hline 08/05/2010 & 1020 & 1.172 & 0.504 & 0.583 & 95.942 & 2.003 & 0.227 & 0.045 & 0.045 & 0.019 & 0.012 & 0.032 & 0.00 & 0.000 \\
\hline 08/04/2010 & 1021 & 1.166 & 0.490 & 0.583 & 95.934 & 2.019 & 0.235 & 0.047 & 0.046 & 0.019 & 0.012 & 0.033 & 0.000 & 0.000 \\
\hline 08/03/2010 & 1021 & 1.206 & 0.502 & 0.584 & 95.853 & 2.000 & 0.260 & 0.055 & 0.053 & 0.022 & 0.013 & 0.035 & 0.000 & 0.000 \\
\hline 08/02/2010 & 1022 & 1.203 & 0.510 & 0.585 & 95.735 & 2.101 & 0.273 & 0.055 & 0.054 & 0.021 & 0.013 & 0.035 & 0.000 & 0.000 \\
\hline 08/01/2010 & 1023 & 1.173 & 0.513 & 0.585 & 95.704 & 2.145 & 0.280 & 0.059 & 0.056 & 0.022 & 0.013 & 0.034 & 0.000 & 0.000 \\
\hline 07/31/2010 & 1023 & 1.193 & 0.512 & 0.585 & 95.661 & 2.162 & 0.285 & 0.059 & 0.057 & 0.022 & 0.014 & 0.035 & 0.000 & 0.000 \\
\hline 07/30/2010 & 1023 & 1.129 & 0.530 & 0.585 & 95.620 & 2.189 & 0.281 & 0.057 & 0.055 & 0.021 & 0.013 & 0.034 & 0.000 & . \\
\hline 07/29/2010 & 1022 & 1.280 & 0.519 & 0.586 & 95.589 & 2.134 & 0.289 & 0.062 & 0.058 & 0.023 & 0.013 & 0.034 & 0.000 & 0.000 \\
\hline 07/28/2010 & 1022 & 1.280 & 0.519 & 0.586 & 95.589 & 2.134 & 0.289 & 0.062 & 0.058 & 0.023 & 0.013 & 0.034 & 0.000 & 0.000 \\
\hline 07/27/2010 & 1022 & 1.298 & 0.502 & 0.586 & 95.616 & 2.122 & 0.282 & 0.060 & 0.055 & 0.021 & 0.012 & 0.031 & 0.000 & 0.000 \\
\hline 07/26/2010 & 1019 & 1.353 & 0.492 & 0.585 & 95.715 & 2.049 & 0.237 & 0.047 & 0.046 & 0.019 & 0.012 & 0.030 & 0.000 & 0.000 \\
\hline 07/25/2010 & 1019 & 1.307 & 0.486 & 0.584 & 95.808 & 2.014 & 0.233 & 0.045 & 0.046 & 0.019 & 0.012 & 0.030 & 0.000 & 0.000 \\
\hline 07/24/2010 & 1020 & 1.281 & 0.477 & 0.584 & 95.847 & 1.989 & 0.242 & 0.049 & 0.049 & 0.020 & 0.013 & 0.033 & 0.000 & 0.000 \\
\hline 07/23/2010 & 1021 & 1.181 & 0.485 & 0.583 & 95.949 & 2.006 & 0.229 & 0.045 & 0.045 & 0.018 & 0.011 & 0.030 & 0.000 & 0.000 \\
\hline 07/22/2010 & 1020 & 1.162 & 0.494 & 0.583 & 96.002 & 1.959 & 0.229 & 0.047 & 0.046 & 0.019 & 0.011 & 0.031 & 0.000 & 0.000 \\
\hline 07/21/2010 & 1022 & 1.162 & 0.500 & 0.583 & 95.913 & 1.991 & 0.257 & 0.057 & 0.053 & 0.021 & 0.013 & 0.033 & 0.000 & 0.000 \\
\hline 07/20/2010 & 1020 & 1.220 & 0.512 & 0.583 & 95.910 & 1.972 & 0.227 & 0.048 & 0.047 & 0.019 & 0.012 & 0.032 & 0.000 & 0.000 \\
\hline 07/19/2010 & 1019 & 1.229 & 0.499 & 0.583 & 96.002 & 1.897 & 0.220 & 0.045 & 0.045 & 0.019 & 0.012 & 0.032 & 0.000 & 0.000 \\
\hline 07/18/2010 & 1021 & 1.182 & 0.502 & 583 & 95.939 & 1.969 & 247 & . 051 & 0.048 & 0.019 & 0.012 & 0.031 & 0.000 & 0.000 \\
\hline
\end{tabular}
C.E.M. Solutions, Inc.
Natural Gas Calculations
Company: Cathnoss
Facility Lake CoGen
Unit Uni! 1 and 2
Date \(\frac{8 / 17 / 2010}{427}\)

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Components & & Mole & \[
\underset{c}{\text { grams }}
\] & grams He &  & \[
\underset{\mathrm{N}}{\substack{\text { grams }}}
\] & \[
\underset{0}{\substack{\text { grams }}}
\] & \(\underset{s}{\substack{\text { grams } \\ s}}\) & \[
\operatorname{srams}_{\mathrm{Ar}}
\] \\
\hline Methane & \(\mathrm{CHH}_{4}\) & 95.805 & 1150.7 & & 386.3 & & & & \\
\hline Ethane & \(\mathrm{CH}_{2} \mathrm{H}_{3}\) & 2009 & 49.702 & & 12.51 & & & & \\
\hline Fropane & \(\mathrm{CH}_{\mathrm{H}} \mathrm{H}\) & 0286 & 10.305 & & 2.306 & & & & \\
\hline 1 -Eutane & \(\mathrm{CH}_{4} \mathrm{H}_{4}\) & 061 & 2.9307 & & 0.615 & & & & \\
\hline N-Butane & C.4 \(\mathrm{Cl}_{0}\) & 0.055 & 2.6424 & & 0.554 & & & & \\
\hline Neo-Pentane & C. \(\mathrm{H}_{1} \mathrm{C}\) & & 0 & & 0 & & & & \\
\hline 1.Pentane & \(\mathrm{CHO}_{41}\) & 0.021 & T.2512 & & 0254 & & & & \\
\hline N-Pentane & C, \(\mathrm{H}_{12}\) & 0.012 & 0.7207 & & 0.145 & & & & \\
\hline N-Hexane & c.4.4 & 0034 & 2.4502 & & 0.48 & & & & \\
\hline N-Hoptanes & C. \(\mathrm{Han}^{0}\) & & 0 & & - & & & & \\
\hline N-Octanes & \(\mathrm{CH}_{\mathrm{CH}} \mathrm{H}\) & & 0 & & 0 & & & & \\
\hline N-Nomanes & C., \(\mathrm{Hm}_{8}\) & & 0 & & 0 & & & & \\
\hline N-Decanes & \(\mathrm{Cr}_{2} \mathrm{H}_{2}\) & & 0 & & 0 & & & & \\
\hline Hendecanes & \(\mathrm{C}_{4,1 \mathrm{H}_{3}}\) & & 0 & & 0 & & & & \\
\hline Dodecanes & \(\mathrm{C}_{12} \mathrm{H}_{30}\) & & 0 & & 0 & & & & \\
\hline Tridecanes & \(\mathrm{CO}_{2} \mathrm{H}_{3}\) & & 0.000 & & 0.000 & & & & \\
\hline Terradecanes & \(\mathrm{C}_{1}, \mathrm{H}_{30}\) & & 0000 & & 0.000 & & & & \\
\hline Hydrogen & \(\mathrm{H}_{2}\) & & & & 0.000 & & & & \\
\hline Nitrogon & \(\mathrm{N}_{2}\) & 0.480 & & & & 13146 & & & \\
\hline Oxygen & \(\mathrm{O}_{2}\) & & & & & & 0.000 & & \\
\hline Argon, & Ar & & & & & & & & 0.000 \\
\hline Carbon Dioxide & \(\mathrm{CO}_{2}\) & 1.177 & 14137 & & & & \({ }^{37.663}\) & & \\
\hline Carbon Monoxite & co & & 0.000 & & & & 0.000 & & \\
\hline Methanol & \(\mathrm{CH}_{3} \mathrm{O}\) & & 0.000 & & 0.000 & & 0.000 & & \\
\hline Helium & \(\mathrm{He}^{\text {e }}\) & & & 0.000 & & & & & \\
\hline Water & \(\mathrm{H}_{2} \mathrm{O}\) & & & & 0.000 & & cosat & & \\
\hline Hydrogen Suillie. & \(\mathrm{H}_{2} \mathrm{~S}\) & & & & 0.000 & & & 0000 & \\
\hline Total Sulur & \(S_{8}\) & & & & & & & 0.000 & \\
\hline Total & & 100.000 & 12349 & 0 & 403.1 & 13446 & 3766 & 0 & S \\
\hline
\end{tabular}
\begin{tabular}{|cccccccc|}
\hline \(\mathrm{H}_{2} \mathrm{O}\) & C & He & H & N & O & S & Ar \\
\hline 0.000 & 73.108 & 0.000 & 23.867 & 0.796 & 2.230 & 0.000 & 0.000 \\
\hline
\end{tabular}

Molocular Woight of Gets: 18.08

\section*{Relative Accuracy Calculations}

\section*{Average}

The average is referred to in 40 CFR 60 . Subpart A. Sect 60.8 , subsection \(f\) as the arithmetic mean of the results of the runs. The algebraic expression used to return this result is found in 40 CFR 60, App B, Spec 2, Section 8.1 and is represented below.
\[
\begin{equation*}
\bar{d}=\frac{1}{n} \sum_{i=1}^{n} d_{i} \tag{Eq.2-1}
\end{equation*}
\]

Where:
\(\bar{d}=\) The arithmetic mean
\(n \quad=\) The number of data points
\(\sum_{i=1}^{n} d_{1}=\) The algebraic sum of the individual differences di.

\section*{Standard Deviation}

As given in 40 CFR 60, performance specification 2, section 8.2, the standard deviation is calculated as follows:
\[
S_{d}=\left[\frac{\sum_{i=1}^{n} d_{i}{ }^{2}-\frac{\left(\sum_{i=1}^{n} d_{i}\right)^{2}}{n}}{n-1}\right]
\]

Where
\(d_{i} \quad=\) The individual differences
\(n \quad=\) The number of data points
\(\sum_{i=1}^{n} d_{i}=\) The algebraic sum of the individual differences di.

\section*{Relative Accuracy Calculations, continued}

\section*{Confidence Coefficien}

As given in 40CFR 60, Performance Specification 2, Section 8.3, the Confidence Coefficient is calculated as follows:
\[
\mathrm{CC}=\mathrm{t}_{0.975} \frac{\mathrm{~S}_{\mathrm{d}}}{\sqrt{\mathrm{n}}}
\]

Where
\(t_{0.875}=\mathrm{t}\)-value (see Table 2-1)
Table 2-1 (t-values)
\begin{tabular}{c|c|c|c|c|c}
\hline \(\mathrm{n}^{\mathbf{a}}\) & \(\mathrm{t}_{0.975}\) & \(\mathrm{n}^{\mathbf{a}}\) & \(\mathrm{t}_{0.875}\) & \(\mathrm{n}^{\mathbf{a}}\) & \(\mathrm{t}_{0.975}\) \\
\hline 2 & 12.706 & 7 & 2.447 & 12 & 2.201 \\
3 & 4.303 & 8 & 2.365 & 13 & 2.179 \\
4 & 3.182 & 9 & 2.306 & 14 & 2.160 \\
5 & 2.776 & 10 & 2.262 & 15 & 2.145 \\
6 & 2.571 & 11 & 2.228 & 16 & 2.131 \\
\hline
\end{tabular} number of individual values.

\section*{Relative Accuracy}

As given in 40CFR 60, Performance Specification 2, Section 8.4, the Relative Accuracy is calculated as follows:
\[
R A=\frac{|\bar{d}|+|C C|}{\overline{R M}} \times 100
\]

Where
\(|\bar{d}|=\) Absolute Value of the mean differences
\(|C C|=\) Absolute value of the confidence coefficient
\(\overline{R M}=\) Average RM value or applicable standard

\section*{Relative Accuracy Calculations, continued}

\section*{Bias Test}

If the mean difference, \(|\vec{d}|\), is less than or equal to the absolute value of the confidence coefficient, \(|C C|\), the monitor or monitoring system has passed the bias test.

When the monitor or monitoring system has failed the bias test, then the bias adjustment factor (BAF) is determined utilizing equation A-12 of 40CFR75. Appendix A:
\[
B A F=1+\frac{|\bar{d}|}{C E M_{a \times x}} \quad \text { Eq. A-12 }
\]
\begin{tabular}{ll} 
Where: & \(=\) Bias adjustment factor, rounded to the nearest thousandth \\
BAF & \(=\) Absolute Value of the mean differences \\
\(|\bar{d}|\) & \(=\) Mean of the data values provided by the monitor during the failed \\
\(C E M_{a: 3}\) & test \\
bias &
\end{tabular}

\section*{Calibrations}

Analyzer Calibration Error
The analyzer calibration error (ACE) is calculated in accordance with 40 CFR 60 , App. B, Meth. 7E, Sect 12.2. The algebraic expression used to return this result is:
\[
A C E=\frac{C_{D r r}-C_{v}}{C S} \times 100 \quad \text { Eq. } 7 \mathrm{E}-1
\]

Where:
ACE \(=\) Analyzer Calibration Error, percent of calibration span
\(\mathrm{C}_{\text {Dir }}=\) Measured concentration of a calibration gas (low, mid, or high)
when
\(\mathrm{C}_{\mathrm{v}}=\quad\) Manufacturer certified concentration of a calibration gas (low, mid, or high),ppmv
\(\mathrm{CS}=\) Calibration span, ppmv

\section*{System Bias}

The System Bias is calculated in accordance with 40 CFR 60, App. B, Meth. 7E Sect 12. The algebraic expression used to return this result is:
\[
S B=\frac{C_{S}-C_{D i v}}{C S} \times 100 \quad \text { Eq. } 7 \mathrm{E}-2
\]

Where:
SB \(=\) System bias, percent of calibration span
\(\mathrm{C}_{S}=\) Measured concentration of a calibration gas (low, mid, or high)
when
\(\mathrm{C}_{\text {Dir }}\)
when
CS
introduced in system calibration mode, ppmv
Measured concentration of a calibration gas (low, mid, or high)
introduced in direct calibration mode, ppmv Calibration span, ppmv

\section*{Drift Assessment}

The low level and upscale drift over each test run is calculated in accordance with 40 CFR 60, App. B, Meth. 7E, Sect 12.5. The algebraic expression used to return this result is:
\[
D=\left|S B_{f \text { fnat }}-S B_{i}\right| \quad \text { Eq. 7E-4 }
\]

\footnotetext{
Where:
D =
\(\mathrm{SB}_{\mathrm{i}}=\quad\) Pre-run system bias, percent of calibration span
}

\section*{Effluent Gas Concentration}

The average calibration results are calculated in accordance with 40 CFR 60, App. B, Meth. 7E, Sect 12.6. The algebraic expression used to return this result is:
\[
C_{\text {Gax }}=\left(C_{\text {mix }}-C_{o}\right) \frac{C_{M d d}}{C_{M}-C_{0}} \quad \text { Eq. } 7 \mathrm{E}-5
\]

\footnotetext{
Where:
C
\(\mathrm{C}_{\text {Gas }}=\quad\) Average effluent gas concentration adjusted for bias, ppmv
\(\mathrm{C}_{\text {Awg }}=\quad\) Average unadjusted gas concentration indicated by data recorder
for the
Co \(=\)
system
calibration
Average of the initial and final system calibration bias (or 2-point
calibration error) check responses from the low-level (or zero)

\section*{gas, ppmv}
\(\mathrm{C}_{\text {MA }}=\) Actual concentration of the upscale calibration gas, ppmv
\(C_{M}=\) Average of initial and final system calibration bias (or 2-point
system
ppmv
}

\section*{Emissions Rates in lbs/mmBtu}

When reference method readings for pollutant and oxygen are on a dry basis, equation 19-1 of Method 19 is utilized.
\[
E=C_{d} * F_{d}^{*} \frac{20.9}{\left(20.9-\% O_{2 d}\right)} \quad \text { Eq. } 19-1
\]

Where:
\(\mathrm{C}_{\mathrm{d}} \quad=\) Pollutant concentration, dry basis, in lb/scf (to convert ppm to \(\mathrm{lb} / \mathrm{scf}\) refer to Table 19-1).
\(F_{d}=\) Volume of combustion components per unit of heat input, dry basis, dscf/mmBtu.(from Method 19, Table 19-2)
\(\% \mathrm{O}_{2 \mathrm{~d}}=\) Oxygen, dry basis, percent

Table 19-1: Conversion Factors For Concentrations.
\begin{tabular}{|l|l|l|}
\hline From & To & Multiply by \\
\hline ppm SO \\
2 & & \(1.660 \times 10^{-7}\) \\
\hline ppm NO & \(\mathrm{lb} / \mathrm{scf}\) & \(1.194 \times 10^{-1}\) \\
\hline ppm CO & \(\mathrm{lb} / \mathrm{scf}\) & \(2.5955 \times 10^{-9} \times 28.01\) \\
\hline \(\mathrm{~g} / \mathrm{scm}\) & \(\mathrm{lb} / \mathrm{scf}\) & \(10^{9}\) \\
\hline \(\mathrm{mg} / \mathrm{scm}\) & \(\mathrm{ng} / \mathrm{scm}\) & \(10^{6}\) \\
\hline \(\mathrm{lb} / \mathrm{scf}\) & \(\mathrm{ng} / \mathrm{scm}\) & \(1.602 \times 10^{13}\) \\
\hline
\end{tabular}

\section*{Emissions Rates in lbs/hr}

When reference method readings for \(\mathrm{NO}_{x}, \mathrm{SO}_{2}\), and CO pollutant rate emissions are expressed in lbs/hr using Heat Input, Equation F-23 of 40CFR75, Appendix F is utilized.
\[
E_{h}=(E R) *(H I) \quad \text { Eq. F-23 }
\]

Where:

\section*{\(\mathrm{E}_{\mathrm{h}} \quad=\) pollutant mass emissions in lbs for the hour}

ER \(\quad=\) Hourly average pollutant emission rate, \(\mathrm{lb} / \mathrm{mmBtu}\)
HI
=Hourly average heat input for the hour, mmBtu/hr

\section*{Emissions Rates in ppm @ \(15 \% \mathrm{O}_{2}\)}

When reference method readings are corrected to \(15 \% \mathrm{O}_{2}\), equation 20-4 of Method 20 is utilized.
\[
C_{a t j}=C_{d} *\left(\frac{20.9-15.0}{20.9-\% O_{2}}\right) \quad \text { Eq. } 20-4
\]

Where
\(\mathrm{C}_{\text {adj }}=\) Pollutant concentration corrected to 15 percent \(\mathrm{O}_{2}, \mathrm{ppm}\)
\(\mathrm{C}_{\mathrm{d}} \quad=\) Pollutant concentration, dry basis, ppm
\(\% \mathrm{O}_{2}=\) Measured \(\mathrm{O}_{2}\) concentration, dry basis, percent
Appendix C: Reference Method Calibration Gas
Certificates of Analysis

\section*{Airgas}
\begin{tabular}{|c|c|c|c|c|}
\hline \multicolumn{4}{|c|}{NITROGEN - CEM-CAL ZERO} & Adraza 8outh 1620 Tamps Est BiNd T3mpa FL 38818 \\
\hline Part Number. & NI CZ15A & Reference Number: & 21-110727382-1 & \\
\hline Cylinder Analyzed: & CC318874 & Cylinder Volume: & 142 Cublc Feet & \\
\hline Laboratory: & ASO - Tampa Plant - FL & Cylinder Pressure: & 2000 PSIG & \\
\hline Analysis Date: & Jun 15, 2009 & Valve Outlet: & 580 & \\
\hline Lot\#. & 21-110727382-1 & & & \\
\hline \multicolumn{5}{|c|}{ANALYTICAL RESULTS} \\
\hline Component & & \begin{tabular}{l}
Requasted \\
Purity
\end{tabular} & & \begin{tabular}{l}
Certified \\
Concentration
\end{tabular} \\
\hline NitrogenCEM & & 99.9995\% & & 99.9995\% \\
\hline CARBON DIOXIDE & & 1 PPM & <LDL 1 & 1 PPM \\
\hline Molsture & & 1 PPM & & 0.05 PPM \\
\hline NOX & & 0.1 PPM & <LDL 0 & 0.1 PPM \\
\hline SO2 & & 0.1 PPM & <LDL 0.1 & 0.1 PPM \\
\hline THC & & 0.1 PPM & <LDL 0 & 0.1 PPM \\
\hline CARBON MONOXI & & 0.5 PPM & <LDL 0 & 0.5 PPM \\
\hline Oxygen & & 0.5 PPM & & 0.36 PPM \\
\hline
\end{tabular}

\section*{Cyllnders in Batch:}

CC318738, CC318739, CC318741, CC318821, CC318822, CC318823, CC318824, CC318826, CC318827, CC318828, CC318829, СС318830, СС318831, СС318835, СС318836, СС318837, СС318838, СС318870, СС318873, CC318874, C 318880, CC319271

Notes:
Meets Federal Register specifications Title 40 C.F.R. 72.2


\section*{Airyas.}
\begin{tabular}{|c|c|c|c|c|}
\hline \multicolumn{4}{|r|}{CERTIFICATE OF ANALYSIS Grade of Product: EPA Protocol} & \begin{tabular}{l}
Alrpas Spactally Gueas 630 Unimodim Dumman. ncezris Pmone (919) 4 4.3ाT \\

\end{tabular} \\
\hline Part Number: & E03Ni98E15A4156 & Reference Number: & 122-124219923-1 & \\
\hline Cylinder Number. & CC32877 & Cylinder Volume: & \(144 \mathrm{Cu} . \mathrm{FL}\). & \\
\hline taborator: & ASG - Durham - NC & Cylinder Pressure: & 2015 PSIG & \\
\hline Analysis Date: & May 27, 2010 & Valva Outiet: & 860 & \\
\hline \multicolumn{5}{|c|}{Expiration Date: Nov 27, 2010} \\
\hline \multicolumn{5}{|l|}{\begin{tabular}{l}
 \\
 \\
 On Not IIre Thin Cyindar below 150 pulgite, it Mage Pakral
\end{tabular}} \\
\hline \multicolumn{5}{|l|}{W,} \\
\hline \multicolumn{5}{|l|}{} \\
\hline \multicolumn{5}{|l|}{\begin{tabular}{cccccc} 
\\
Type & Lot to & \(\therefore\) cylinder No. & CALIBRATION STANDARDS & Concentratión. \(\quad \therefore\) & Explration Date \\
\hline
\end{tabular}} \\
\hline \multicolumn{5}{|l|}{\multirow[t]{4}{*}{}} \\
\hline & & & & \\
\hline & & & & \\
\hline & & & & \\
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Carforma Instuments NH H. Nox ( \(0-100\) ) Hawiba MPA-5t0 O2 (0-25\%)}} & Chemiluminescarce & & \\
\hline & & Paramagnetic & & \\
\hline \multicolumn{5}{|l|}{Triad Data Avaliable Upon Request} \\
\hline \multicolumn{5}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{l}
Notes:
\(\qquad\) \\
Approved for Release
\end{tabular}}} \\
\hline & & & & \\
\hline
\end{tabular}

Allean Envectaly Ozesos
 por Nitan 4 more \({ }^{255} 50.0000\) FAR: 25.538 cms
CERTIFICATE OF ANALYSIS Grade of Product: EPA Protocol


Tried Data Avallablo Upon Request
Notes: Shen thardin
Approved for Release

\section*{Airgas}


Thad Data Avallable Upon Regyest


\section*{Airgas.}

\section*{CERTIFICATE OF ANALYSIS} Grade of Product: EPA Protocol

Aitues Spotaly Gerves
 suntum. ис \(2 \pi \mathrm{~m}\) nore (1915 \(54-37 \mathrm{~s}\)


Part Number: Cylinder Numbe
Laboratory:
Analysis Date:

EO2N199E15AC1E5 CC327663 ASG - Durham - NC Mar 17, 2010

Roference Number: Cylinder Volume: Cylinder Pressure: Valve Outtat: 122-12421 658
\[
\text { Expiration Date: Mar 17, } 2012
\]


Triad Data Avalable Unon Request
Notes: Ambn dlaín
Approved for Release

\section*{Airgas}


Thlad Data Avallible Upon Request
Notes:
C. CerabuOO \(\qquad\)
QA Approval

\section*{Airgas}

\section*{Atryas Bpecialty \(\theta\) aties}

CERTIFICATE OF ANALYSIS 1075 chremanane
passatm Lato
Grade of Product: EPA Protocol

Part Number: Cylinder Number. Laboratory: Analysls Date:

E02NII9E15A0094 CC208708 ASG - Port Allen - LA Aug 10, 2009

Reference Number. 83-124186367-1 cylinder Volume: 144 Cu.F. Cylinder Pressure: 2015 PSIG Valve Outlet:
Explration Date: Aug 10, 2012


\begin{tabular}{|c|c|c|c|c|c|}
\hline \multicolumn{6}{|c|}{ANALYTICALRESUITS} \\
\hline Component & & Requested Concentration & \begin{tabular}{l}
Actual \\
Concentration
\end{tabular} & Protocol Phethod & Total Relative Uncertatinty \\
\hline CARBON MONOXIDE NTROGEN & & \begin{tabular}{l}
20.00 PPM \\
Balance
\end{tabular} & 19.81 PPM & 61 & *-1\% N NIST Traceable \\
\hline Type Lot ID & \multicolumn{4}{|l|}{CALIBRATION STANDARDS} & Explraton Date \\
\hline \begin{tabular}{l}
NTRM 06060207 \\
InsirumentlitakenModel
\end{tabular} & \multicolumn{4}{|r|}{\begin{tabular}{l}
ANALYTICAL EQUIPMENT \\
Analytical Princlple
\end{tabular}} & Jen 16, 2012
Lest Multupoint Callibration \\
\hline FIIRaMCO & \multicolumn{4}{|c|}{FTR} & Aug 05, 2008 \\
\hline
\end{tabular}

Triad Data Avallable Upon Requeer
Notes:
Nullacanof
QA Approval

\section*{Alryas.}

\section*{CERTIFICATE OF ANALYSIS Grade of Product: EPA Protocol \\ \begin{tabular}{|c|c|c|c|}
\hline Part Number: & E02NI99E15AC1N1 & Reference Number. & 122-124211847 \\
\hline Cylinder Number: & CC330268 & Cylinder Volume: & \(144 \mathrm{Cu} . \mathrm{Ft}\). \\
\hline Laboratory: & ASG - Durham - NC & Cylinder Pressure: & 2015 PSIG \\
\hline Analysis Date: & Mar 24, 2010 & Valve Outlet. & 350 \\
\hline
\end{tabular}

Alrgas 8pectilly


 Su(T19) 6 monsimomism

Expliration Data: Mar 24, 2013




Thad Data Avallablo Upon Requeat
Notes:
\[
0,7=2
\]

Approvedior Release

\section*{Appendix D: Sample Location Diagram and Traverse} Points

CEM Solutions, Inc
\begin{tabular}{|l|l|l|l|}
\hline METHOD 1: Determining Number of Particulate and Velocity Traverse Points \\
for a Stack or Duct
\end{tabular}





\section*{Appendix E: Reference Method Quality} Assurance/Quality Control Checks

Calibration Error Tests
Bias and Drift Tests
NO2 to NO Converter Efficiency Test Instrument Analyzer Response Time Tests Pt. 75 Stratification Test

\section*{Analyzer Calibration Error}
\begin{tabular}{|c|c|c|c|c|}
\hline \multicolumn{3}{|l|}{\multirow[t]{2}{*}{Test Performed For: Caithness}} & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Test Performed By: C.E.M. Solutions, Inc.}} \\
\hline & & & & \\
\hline \multicolumn{3}{|l|}{Lake Cogen} & \multicolumn{2}{|l|}{} \\
\hline \multicolumn{3}{|l|}{Unit 1} & \multicolumn{2}{|l|}{Hernando. FL 34442} \\
\hline \multicolumn{3}{|l|}{RATA and Compliance} & \multicolumn{2}{|l|}{Ph: 352-489-4337} \\
\hline Date:817/10 & & & Run 1 & \\
\hline \multicolumn{3}{|l|}{Oxygen Monitor} & \multicolumn{2}{|l|}{Method 3A} \\
\hline Fuil Scale: & 25.00\% & & Serial Number & 14200/3379 \\
\hline Cylinder & Reference Gas & Analyzer & Difference & Calibration \\
\hline Number & Concentration & Response & & Error (\%) \\
\hline CC318824/cg 1 & 0.00\% & 0.00\% & 0.00\% & 0.00\% \\
\hline CC39429/cg2 & 10.34\% & 10.34 \% & 0.00\% & 0.00\% \\
\hline XC012229B/cg 3 & 20.44\% & 20.35\% & -0.09\% & -0.44 \% \\
\hline Nitrogen Oxid & S Monitor & & Method 7E & \\
\hline Full Scale: & 50.0 ppm & & Serial Number & 2CHL-59277-322 \\
\hline Cylinder & Reference Gas & Analyzer & Difference & Calibration \\
\hline Number & Concentration & Response & & Error (\%) \\
\hline CC318824/gg 1 & 0.0 ppm & 0.0 ppm & 0.0 ppm & \(0.00 \%\) \\
\hline CC327663/g94 & 19.82 ppm & 19.6 ppm & -0.2 ppm & -0.48\% \\
\hline CC265529/cg5 & 45.64 ppm & 45.5 ppm & -0.1 ppm & -0.31\% \\
\hline Carbon Mono & de Monitor & & Method 10 & \\
\hline Full Scale: & 50.0 ppm & & Serial Number & 8C-74094-375 \\
\hline Cylinder & Reference Gas & Analyzer & Difference & Calibration \\
\hline Number & Concentration & Response & & Error (\%) \\
\hline CC318824/cg1 & 0.0 ppm & 0.0 ppm & 0.0 ppm & 0.00\% \\
\hline CC208706/cg6 & 19.81 ppm & 20.0 ppm & 0.2 ppm & 0.42\% \\
\hline CC330268/cg7 & 45.55 ppm & 45.4 ppm & -0.1 ppm & -0.33\% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multicolumn{2}{|l|}{\begin{tabular}{l}
Test Performed For: \\
Caithness \\
Lake Cogen \\
Unit 1 \\
RATA and Compliance \\
Date:8/17/10
\end{tabular}} & & & \multicolumn{2}{|l|}{Test Performed By: C.E.M. Solutions, Inc. 1183 E. Overdrive Circle Hemando, FL 34442 Ph: 352-489-4337 Run 1} & \\
\hline Monitor Type & Analyzer Cal Response & Initial Cal Value & Pre Run Bias (\%) & Final Cal Value & Post Run Bias (\%) & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & \(0.00 \%\) & -0.02\% & -0.10\% & 0.00\% & 0.00\% & 0.10\% \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & 10.25\% & -0.44\% & 10.26 \% & -0.39\% & \(0.05 \%\) \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.9 ppm & 1.97 \% & 0.5 ppm & 1.10\% & -0.88\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 19.6 ppm & 19.9 ppm & \(0.66 \%\) & 20.0 ppm & 0.88\% & 0.22 \% \\
\hline \[
\begin{aligned}
& \mathrm{CO} \\
& \mathrm{co}
\end{aligned}
\] & \begin{tabular}{l}
0.0 ppm \\
20.0 ppm
\end{tabular} & \[
\begin{gathered}
0.0 \mathrm{ppm} \\
19.9 \mathrm{ppm}
\end{gathered}
\] & \[
\begin{gathered}
0.00 \% \\
-0.22 \%
\end{gathered}
\] & 0.0 ppm 19.9 ppm & \[
\begin{gathered}
0.00 \% \\
-0.22 \%
\end{gathered}
\] & \[
\begin{aligned}
& 0.00 \% \\
& 0.00 \%
\end{aligned}
\] \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \begin{tabular}{l}
Test Perform Caithness \\
Lake Cogen Unit 1 \\
RATA and Date:8/17/10
\end{tabular} & For: & & & est Perform .E.M. Solutio 183 E. Ove emando. F a: 352-489 un 2 & \begin{tabular}{l}
By: \\
Inc. \\
Circle \\
442 \\
7
\end{tabular} & \\
\hline Monitor Type & Analyzer Cal Response & Initial Cal Value & Pre Run Bias (\%) & Final Cal Value & Post Run Bias (\%) & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & \(0.00 \%\) & 0.00\% & \(0.00 \%\) & 0.00\% & \(0.00 \%\) & 0.00\% \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & 10.26 \% & -0.39\% & 10.22 \% & -0.59 \% & -0.20\% \\
\hline \(\mathrm{NO}_{x}\) & 0.0 ppm & 0.5 ppm & 1.10\% & 0.7 ppm & \(1.53 \%\) & 0.44 \% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 19.6 ppm & 20.0 ppm & 0.88\% & 20.3 ppm & 1.53 \% & 0.66 \% \\
\hline CO & 0.0 ppm & 0.0 ppm & \(0.00 \%\) & 0.0 ppm & \(0.00 \%\) & \(0.00 \%\) \\
\hline co & 20.0 ppm & 19.9 ppm & -0.22\% & 19.9 ppm & -0.22 \% & 0.00\% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multicolumn{4}{|l|}{Test Performed For:} & \multicolumn{3}{|l|}{Test Performed By:} \\
\hline \multicolumn{4}{|l|}{Caithness} & \multicolumn{3}{|l|}{C.E.M. Solutions, Inc.} \\
\hline \multicolumn{4}{|l|}{Lake Cogen} & \multicolumn{3}{|l|}{1183 E. Overdnive Circle} \\
\hline \multicolumn{4}{|l|}{Unit 1} & \multicolumn{3}{|l|}{Hemando, FL 34442} \\
\hline \multicolumn{4}{|l|}{RATA and Compliance} & \multicolumn{3}{|l|}{Pn: 352-489-4337} \\
\hline Date:8/17/10 & & & & \(n 4\) & & \\
\hline Monitor & Analyzer Cal & Initial Cal & Pre Run & Final Cal & Post Run & Total Run \\
\hline Type & Response & Value & Bias (\%) & Value & Bias (\%) & Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & \(0.00 \%\) & \(0.00 \%\) & \(0.00 \%\) & -0.02\% & -0.10\% & -0.10\% \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & 10.23\% & -0.54\% & 10.21 \% & -0.64\% & -0.10\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.6 ppm & 1.31 \% & 0.6 ppm & 1.31 \% & 0.00\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 19.6 ppm & 20.2 ppm & \(1.31 \%\) & 20.1 ppm & \(1.10 \%\) & -0.22 \% \\
\hline co & 0.0 ppm & 0.0 ppm & 0.00\% & 0.0 ppm & \(0.00 \%\) & 0.00\% \\
\hline CO & 20.0 ppm & 19.9 ppm & -0.22 \% & 19.8 ppm & -0.44\% & -0.22 \% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
Test Performed For:
Caithness
Lake Cogen
Unit 1
RATA and Compliance
Date:8/17/10
Monitor
Type
Analyzer Cal
Response
\(\mathrm{O}_{2}\)

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline Test Perform Caithness Lake Cogen Unit 1 RATA and C Date:8/17/10 & For: & & & st Perform E.M. Soluti 83 E. Over mando, \(F\) : 352-489in 6 & \begin{tabular}{l}
Inc. \\
Circle \\
442
\end{tabular} & \\
\hline Monitor Type & Analyzer Cal Response & Initial Cal Value & Pre Run Bias (\%) & Final Cal Value & Post Run Bias (\%) & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & \(0.00 \%\) & -0.02\% & -0.10\% & -0.02\% & -0.10\% & 0.00\% \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & 10.20 \% & -0.68\% & 10.20\% & -0.68\% & 0.00\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.5 ppm & 1.10\% & 0.5 ppm & \(1.10 \%\) & 0.00\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 19.6 ppm & 20.1 ppm & 1.10\% & 20.0 ppm & 0.88\% & -0.22\% \\
\hline CO & 0.0 ppm & -0.1 ppm & -0.22\% & -0.1 ppm & -0.22\% & \(0.00 \%\) \\
\hline CO & 20.0 ppm & 19.7 ppm & -0.66\% & 19.7 ppm & -0.66\% & 0.00\% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multicolumn{2}{|l|}{\begin{tabular}{l}
Test Performed For: \\
Caithness \\
Lake Cogen \\
Unit 1 \\
RATA and Compliance \\
Date:8/17/10
\end{tabular}} & & & \multicolumn{2}{|l|}{Test Performed By: C.E.M. Solutions, Inc. 1183 E. Overdrive Circle Hemando. FL 34442 Ph: 352-489-4337 Run 7} & \\
\hline Monitor Type & Analyzer Cal Response & Initial Cal Value & Pre Run Bias (\%) & Final Cal Value & Post Run Bias (\%) & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & 0.00\% & -0.02\% & -0.10\% & -0.01\% & -0.05\% & 0.05\% \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & 10.20 \% & -0.68\% & 10.21\% & -0.64\% & 0.05\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.5 ppm & 1.10\% & 0.4 ppm & \(0.88 \%\) & -0.22\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 19.6 ppm & 20.0 ppm & 0.88\% & 20.0 ppm & \(0.88 \%\) & 0.00\% \\
\hline CO & 0.0 ppm & -0.1 ppm & -0.22\% & -0.1 ppm & -0.22\% & 0.00\% \\
\hline CO & 20.0 ppm & 19.7 ppm & -0.66\% & 19.7 ppm & -0.66\% & 0.00\% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multicolumn{4}{|l|}{Test Performed For:} & \multicolumn{3}{|l|}{Test Performed By:} \\
\hline \multicolumn{4}{|l|}{Caithness} & \multicolumn{3}{|l|}{C.E.M. Solutions, Inc.} \\
\hline \multicolumn{4}{|l|}{Lake Cogen} & \multicolumn{3}{|l|}{1183 E. Overdrive Circle} \\
\hline \multicolumn{4}{|l|}{Unit 1} & \multicolumn{3}{|l|}{Hemando, FL 34442} \\
\hline \multicolumn{4}{|l|}{RATA and Compliance} & \multicolumn{3}{|l|}{Ph: 352-489-4337} \\
\hline Date:8/17/10 & & & & , 8 & & \\
\hline Monitor & Analyzer Cal & Initial Cal & Pre Run & Final Cal & Post Run & Total Run \\
\hline Type & Response & Value & Bias (\%) & Value & Bias (\%) & Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & \(0.00 \%\) & -0.01 \% & -0.05\% & -0.03 \% & -0.15\% & -0.10\% \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & 10.21 \% & -0.64\% & 10.21 \% & -0.64\% & 0.00\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.4 ppm & 0.88 \% & 0.3 ppm & \(0.66 \%\) & -0.22 \% \\
\hline NOX & 19.6 ppm & 20.0 ppm & 0.88\% & 20.0 ppm & 0.88\% & \(0.00 \%\) \\
\hline co & 0.0 ppm & -0.1 ppm & -0.22\% & -0.1 ppm & -0.22\% & 0.00\% \\
\hline CO & 20.0 ppm & 19.7 ppm & -0.66\% & 19.6 ppm & -0.88\% & -0.22 \% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \begin{tabular}{l}
Test Perform Caithness Lake Cogen Unit 1 \\
RATA and C Date:8/17/10
\end{tabular} & \begin{tabular}{l}
For: \\
liance
\end{tabular} & & & \multicolumn{2}{|l|}{Test Performed By: C.E.M. Solutions. Inc. 1183 E. Overdrive Circle Hemando, FL 34442 Ph: 352-489-4337 Run 9} & \\
\hline Monitor Type & Analyzer Ca Response & Initial Cal Value & Pre Run Bias (\%) & Final Cal Value & Post Run Bias (\%) & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & \(0.00 \%\) & -0.03\% & -0.15\% & -0.03\% & -0.15\% & \(0.00 \%\) \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & 10.21 \% & -0.64\% & 10.20 \% & -0.68\% & -0.05\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.3 ppm & 0.66\% & 0.2 ppm & 0.44 \% & -0.22\% \\
\hline \(\mathrm{NO}_{\times}\) & 19.6 ppm & 20.0 ppm & 0.88\% & 19.8 ppm & 0.44 \% & -0.44\% \\
\hline CO & 0.0 ppm & -0.1 ppm & -0.22 \% & -0.2 ppm & -0.44\% & -0.22\% \\
\hline CO & 20.0 ppm & 19.6 ppm & -0.88\% & 19.6 ppm & -0.88\% & 0.00 \% \\
\hline
\end{tabular}

\section*{Analyzer Calibration Error}
\begin{tabular}{|c|c|c|c|c|}
\hline \multicolumn{3}{|l|}{Test Performed For: Caithness} & \multicolumn{2}{|l|}{Test Pefformed By: C.E.M. Solutions, Inc.} \\
\hline \multicolumn{3}{|l|}{Lake Cogen} & \multicolumn{2}{|l|}{1183 E . Overdrive Circle} \\
\hline Unit 1 & & & \multicolumn{2}{|l|}{Hernando, FL 34442} \\
\hline \multicolumn{3}{|l|}{Compliance} & \multicolumn{2}{|l|}{Ph: 352-489-4337} \\
\hline \multicolumn{3}{|l|}{Date:8/17/10} & \multicolumn{2}{|l|}{Run 1} \\
\hline \multicolumn{3}{|l|}{Oxygen Monitor} & \multicolumn{2}{|l|}{Method 3A} \\
\hline Full Scale: & 25.00\% & & \multicolumn{2}{|l|}{Serial Number: 01420D/3379} \\
\hline Cylinder & Reference Gas & Analyzer & Difference & Calibration \\
\hline Number & Concentration & Response & & Error (\%) \\
\hline CC318824/cg1 & 0.00 \% & \(0.00 \%\) & \(0.00 \%\) & \(0.00 \%\) \\
\hline CC39429/cg2 & 10.34\% & 10.34\% & 0.00\% & 0.00\% \\
\hline XC012229B/eg 3 & 20.44 \% & 20.35\% & -0.09\% & -0.44\% \\
\hline \multicolumn{3}{|l|}{Nitrogen Oxides Monitor} & \multicolumn{2}{|l|}{Method 7E} \\
\hline Full Scale: & 50.0 ppm & & Serial Number & 2CHL-59277-322 \\
\hline Cylinder & Reference Gas & Analyzer & Difference & Calibration \\
\hline Number & Concentration & Response & & Error (\%) \\
\hline CC318824/cg1 & 0.0 ppm & 0.0 ppm & 0.0 ppm & \(0.00 \%\) \\
\hline CC327663/cg 4 & 19.82 ppm & 19.6 ppm & -0.2 ppm & -0.48\% \\
\hline CC265529/cg 5 & 45.64 ppm & 45.5 ppm & -0.1 ppm & -0.31\% \\
\hline Carbon Mono & de Monitor & & Method 10 & \\
\hline Full Scale: & 50.0 ppm & & Serial Number & 8C-74094-375 \\
\hline Cylinder & Reference Gas & Analyzer & Difference & Calibration \\
\hline Number & Concentration & Response & & Error (\%) \\
\hline CC318824/gg1 & 0.0 ppm & 0.0 ppm & 0.0 ppm & \(0.00 \%\) \\
\hline CC208706/cg6 & 19.81 ppm & 20.0 ppm & 0.2 ppm & 0.42 \% \\
\hline CC330268/cg 7 & 45.55 ppm & 45.4 ppm & -0.1 ppm & -0.33\% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multicolumn{4}{|l|}{Test Performed For:} & \multicolumn{3}{|l|}{} \\
\hline \multicolumn{4}{|l|}{Caithness} & \multicolumn{3}{|l|}{C.E.M. Solutions, Inc.} \\
\hline \multicolumn{4}{|l|}{Lake Cogen} & \multicolumn{3}{|l|}{1183 E. Overdrive Circle} \\
\hline \multicolumn{4}{|l|}{Unit 1} & \multicolumn{3}{|l|}{\multirow[t]{2}{*}{Hemando, FL 34442 Ph: 352-489-4337}} \\
\hline \multicolumn{4}{|l|}{Compliance} & & & \\
\hline Date:8/17/10 & & & & \multicolumn{3}{|l|}{Run 1} \\
\hline Monitor Type & Analyzer Cal Response & Initial Ca Value & Pre Run Bias (\%) & Final Cal Value & Post Run Bias (\%) & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & \(0.00 \%\) & -0.04\% & -0.20\% & -0.05\% & -0.24\% & -0.05\% \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & 10.18\% & -0.78\% & 10.16 \% & -0.88\% & -0.10\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.1 ppm & 0.22 \% & 0.2 ppm & 0.44 \% & 0.22 \% \\
\hline \(\mathrm{NO}_{\times}\) & 19.6 ppm & 19.9 ppm & \(0.66 \%\) & 19.9 ppm & \(0.66 \%\) & 0.00\% \\
\hline CO & 0.0 ppm & -0.2 ppm & -0.44 \% & -0.2 ppm & -0.44\% & \(0.00 \%\) \\
\hline CO & 20.0 ppm & 19.4 ppm & -1.32 \% & 19.4 ppm & -1.32 \% & 0.00\% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multicolumn{4}{|l|}{Test Performed For:} & \multicolumn{3}{|l|}{Test Performed By:} \\
\hline \multicolumn{4}{|l|}{Cailhness} & \multicolumn{3}{|l|}{C.E.M. Solutions, Inc.} \\
\hline \multicolumn{4}{|l|}{Lake Cogen} & \multicolumn{3}{|l|}{1183 E. Overdrive Circle} \\
\hline \multicolumn{4}{|l|}{Unit 1} & \multicolumn{3}{|l|}{Hemando, FL 34442} \\
\hline \multicolumn{4}{|l|}{Compliance} & \multicolumn{3}{|l|}{Ph: 352-489-4337} \\
\hline Date:8/17/10 & & & & n 2 & & \\
\hline Monitor & Analyzer Cal & Initial Cal & Pre Run & Final Cal & Post Run & Total Run \\
\hline Type & Response & Value & Bias (\%) & Vaive & Bias (\%) & Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & \(0.00 \%\) & -0.05\% & -0.24\% & -0.04\% & -0.20\% & 0.05\% \\
\hline \(\mathrm{O}_{2}\) & 10.34\% & \(10.16 \%\) & -0.88\% & 10.16\% & -0.88\% & \(0.00 \%\) \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.2 ppm & 0.44 \% & 0.3 ppm & \(0.66 \%\) & 0.22 \% \\
\hline \(\mathrm{NO}_{\mathbf{x}}\) & 19.6 ppm & 19.9 ppm & \(0.66 \%\) & 20.0 ppm & 0.88 \% & 0.22\% \\
\hline CO & 0.0 ppm & -0.2 ppm & -0.44\% & -0.2 ppm & -0.44\% & \(0.00 \%\) \\
\hline CO & 20.0 ppm & 19.4 ppm & -1.32 \% & 19.4 ppm & -1.32 \% & \(0.00 \%\) \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline Test Perform Caithness Lake Cogen Unit 1 Compliance Date:8/17/10 & & & & \multicolumn{2}{|l|}{\begin{tabular}{l}
Test Performed By: C.E.M. Solutions, Inc. 1183 E. Overdrive Circle Hemando. FL 34442 \\
Ph: 352-489-4337 \\
Run 3
\end{tabular}} & \\
\hline Monitor Type & Analyzer Cal Response & Initial Cal Value & Pre Run Bias (\%) & Final Cal Value & Post Run Bias (\%) & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & 0.00\% & -0.04\% & -0.20\% & 0.06\% & \(0.29 \%\) & \(0.49 \%\) \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & 10.16\% & -0.88\% & 10.15\% & -0.93\% & -0.05\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.3 ppm & 0.66 \% & 0.8 ppm & 1.75\% & 1.10\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 19.6 ppm & 20.0 ppm & 0.88\% & 20.1 ppm & \(1.10 \%\) & 0.22 \% \\
\hline CO & 0.0 ppm & -0.2 ppm & -0.44\% & -0.3 ppm & -0.66\% & -0.22 \% \\
\hline CO & 20.0 ppm & 19.4 ppm & -1.32 \% & 19.4 ppm & -1.32 \% & \(0.00 \%\) \\
\hline
\end{tabular}

\section*{Analyzer Calibration Error}
\begin{tabular}{|c|c|c|c|c|}
\hline \multicolumn{3}{|l|}{\multirow[t]{2}{*}{Test Performed For:}} & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Test Performed By: C.E.M. Solutions, Inc.}} \\
\hline & & & & \\
\hline \multicolumn{3}{|l|}{Caithness} & \multicolumn{2}{|l|}{1183 E. Overdrive Circle} \\
\hline \multicolumn{3}{|l|}{Unit 2} & \multicolumn{2}{|l|}{Hernando. FL 34442} \\
\hline \multicolumn{3}{|l|}{RATA and Compliance} & \multicolumn{2}{|l|}{Ph: 352-489-4337} \\
\hline \multicolumn{3}{|l|}{Date:8/17110} & \multicolumn{2}{|l|}{Run 1} \\
\hline \multicolumn{3}{|l|}{Oxygen Monitor} & \multicolumn{2}{|l|}{Method 3A} \\
\hline Full Scale: & 25.00\% & & Serial Number & 1420C/2784 \\
\hline Cylinder & Reference Gas & Analyzer & Difference & Calibration \\
\hline Number & Concentration & Response & & Error (\%) \\
\hline CC318824/cg1 & \(0.00 \%\) & 0.01 \% & \(0.01 \%\) & 0.05\% \\
\hline CC39429/cg 2 & 10.34 \% & 10.34 \% & 0.00\% & \(0.00 \%\) \\
\hline XC012229B/cg3 & 20.44 \% & 20.40 \% & -0.04\% & -0.20\% \\
\hline \multicolumn{3}{|l|}{Nitrogen Oxides Monitor} & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{l}
Method 7E \\
Serial Number: 42CHL-74122-375
\end{tabular}}} \\
\hline Full Scale: & 50.0 ppm & & & \\
\hline Cylinder & Reference Gas & Analyzer & Difference & Calibration \\
\hline Number & Concentration & Response & & Etror (\%) \\
\hline CC318824/cg1 & 0.0 ppm & 0.0 ppm & 0.0 ppm & \(0.00 \%\) \\
\hline CC327663/cg4 & 19.82 ppm & 19.2 ppm & -0.6 ppm & -1.36\% \\
\hline CC265529/cg5 & 45.64 ppm & 45.8 ppm & 0.2 ppm & \(0.35 \%\) \\
\hline \multicolumn{3}{|l|}{Carbon Monoxide Monitor} & \multicolumn{2}{|l|}{Method to} \\
\hline Full Scale: & 50.0 ppm & & Serial Number & 48C-68844-361 \\
\hline Cylinder & Reference Gas & Analyzer & Difference & Calibration \\
\hline Number & Concentration & Response & & Error (\%) \\
\hline CC318824/cg1 & 0.0 ppm & 0.0 ppm & 0.0 ppm & 0.00\% \\
\hline CC208706/cg6 & 19.81 ppm & 20.0 ppm & 0.2 ppm & \(0.42 \%\) \\
\hline CC330268/cg7 & 45.55 ppm & 45.5 ppm & 0.0 ppm & -0.11\% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multicolumn{2}{|l|}{\begin{tabular}{l}
Test Performed For: \\
Caithness \\
Lake Cogen \\
Unit 2 \\
RATA and Compliance \\
Date:8/17/10
\end{tabular}} & & & \multicolumn{2}{|l|}{Test Performed By: C.E.M. Solutions, Inc. 1183 E. Overdrive Circle Hemando. FL 34442 Ph: 352-489-4337 Run 1} & \\
\hline Monitor Type & Analyzer Cal Response & Initial Cal Value & Pre Run Bias (\%) & Final Cal Value & Post Run Bias (\%) & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & 0.01 \% & 0.00 \% & -0.05\% & 0.08 \% & 0.34 \% & \(0.39 \%\) \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & \(10.30 \%\) & -0.20\% & 10.32\% & -0.10\% & 0.10\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.7 ppm & 1.53\% & 0.5 ppm & 1.10\% & -0.44\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 19.2 ppm & 19.2 ppm & 0.00\% & 19.8 ppm & 1.31 \% & 1.31 \% \\
\hline CO & 0.0 ppm & -0.1 ppm & -0.22 \% & -0.2 pprn & -0.44\% & -0.22 \% \\
\hline CO & 20.0 ppm & 20.2 ppm & 0.44\% & 20.2 ppm & 0.44 \% & \(0.00 \%\) \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline Test Perform Caithness Lake Cogen Unit 2 RATA and C Date:8/17/10 & or: & & & st Perform E.M. Solutio 83 E. Over mando, FL : 352-489n 2 & y: Inc. Circle 442 & \\
\hline Monitor Type & Analyzer Cal Response & Initial Cal Value & \begin{tabular}{l}
Pre Run \\
Bias (\%)
\end{tabular} & Final Cal Value & Post Run Bias (\%) & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & 0.01 \% & 0.08 \% & 0.34 \% & 0.14 \% & 0.64 \% & 0.29 \% \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & 10.32 \% & -0.10\% & 10.26\% & -0.39\% & -0.29\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.5 ppm & 1.10\% & 0.5 ppm & 1.10\% & 0.00 \% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 19.2 ppm & 19.8 ppm & 1.31\% & 19.7 ppm & \(1.10 \%\) & -0.22\% \\
\hline CO & 0.0 ppm & -0.2 ppm & -0.44\% & -0.4 ppm & -0.88\% & -0.44\% \\
\hline CO & 20.0 ppm & 20.2 ppm & 0.44 \% & 20.2 ppm & 0.44 \% & 0.00 \% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}

Test Performed For:
Caithness
Lake Cogen
Unit 2
RATA and Compliance
Date:8/17/10
\begin{tabular}{ccccccc}
\begin{tabular}{c} 
Monitor \\
Type
\end{tabular} & \begin{tabular}{c} 
Analyzer Cal \\
Response
\end{tabular} & \begin{tabular}{c} 
Initial Cal \\
Value
\end{tabular} & \begin{tabular}{c} 
Pre Run \\
Bias (\%)
\end{tabular} & \begin{tabular}{c} 
Final Cal \\
Value
\end{tabular} & \begin{tabular}{c} 
Post Run \\
Bias (\%)
\end{tabular} & \begin{tabular}{c} 
Total Run \\
Drift (\%)
\end{tabular} \\
\(\mathrm{O}_{2}\) & \(0.01 \%\) & \(0.14 \%\) & \(0.64 \%\) & \(0.06 \%\) & \(0.24 \%\) & \(-0.39 \%\) \\
\(\mathrm{O}_{2}\) & \(10.34 \%\) & \(10.26 \%\) & \(-0.39 \%\) & \(10.28 \%\) & \(-0.29 \%\) & \(0.10 \%\) \\
& & & & & & \\
\(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.5 ppm & \(1.10 \%\) & 0.5 ppm & \(1.10 \%\) & \(0.00 \%\) \\
\(\mathrm{NO}_{\mathrm{x}}\) & 19.2 ppm & 19.7 ppm & \(1.10 \%\) & 19.5 ppm & \(0.66 \%\) & \(-0.44 \%\) \\
& & & & & & \\
CO & 0.0 ppm & -0.4 ppm & \(-0.88 \%\) & -0.3 ppm & \(-0.66 \%\) & \(0.22 \%\) \\
CO & 20.0 ppm & 20.2 ppm & \(0.44 \%\) & 20.3 ppm & \(0.66 \%\) & \(0.22 \%\)
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multicolumn{2}{|l|}{\begin{tabular}{l}
Test Performed For: \\
Caithness \\
Lake Cogen \\
Unit 2 \\
RATA and Compliance \\
Date:8/17/10
\end{tabular}} & & & \multicolumn{2}{|l|}{Test Performed By: C.E.M. Solutions, Inc. 1183 E. Overdrive Circle Hemando, FL 34442 Ph: 352-489-4337 Run 4} & \\
\hline Monitor Type & Analyzer Cal Response & Initial Cal Value & Pre Run Bias (\%) & Final Cal Value & Post Run Bias (\%) & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & 0.01 \% & 0.06 \% & 0.24 \% & 0.06 \% & 0.24 \% & \(0.00 \%\) \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & 10.28 \% & -0.29\% & 10.27\% & -0.34 \% & -0.05\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.5 ppm & 1.10\% & 0.5 ppm & \(1.10 \%\) & \(0.00 \%\) \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 19.2 ppm & 19.5 ppm & \(0.66 \%\) & 19.4 ppm & 0.44 \% & -0.22\% \\
\hline CO & 0.0 ppm & -0.3 ppm & -0.66\% & -0.6 ppm & -1.32 \% & -0.66\% \\
\hline CO & 20.0 ppm & 20.3 ppm & 0.66\% & 19.8 ppm & -0.44\% & -1.10\% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multicolumn{2}{|l|}{\begin{tabular}{l}
Test Performed For: \\
Caithness \\
Lake Cogen \\
Unit 2 \\
RATA and Compliance \\
Date:8/17/10
\end{tabular}} & & & \multicolumn{2}{|l|}{Test Performed By: C.E.M. Solutions, Inc. 1183 E. Overdrive Circle Hemando, FL 34442 Ph: 352-489-4337 Run 5} & \\
\hline Monitor Type & Analyzer Cal Response & Initial Cal Value & Pre Run Bias (\%) & Final Cal Value & Post Run Bias (\%) & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & 0.01 \% & 0.06 \% & 0.24 \% & 0.02 \% & 0.05 \% & -0.20 \% \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & 10.27\% & -0.34\% & 10.27\% & -0.34\% & 0.00\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.5 ppm & 1.10\% & 0.4 ppm & 0.88\% & -0.22\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 19.2 ppm & 19.4 ppm & 0.44 \% & 19.4 ppm & 0.44 \% & \(0.00 \%\) \\
\hline CO & 0.0 ppm & -0.6 ppm & -1.32 \% & -0.2 ppm & -0.50\% & 0.82 \% \\
\hline CO & 20.0 ppm & 19.8 ppm & -0.44\% & 20.1 ppm & 0.23\% & 0.67\% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \begin{tabular}{l}
Test Perform \\
Caithness \\
Lake Cogen Unit 2 \\
RATA and C \\
Date:8/17/10
\end{tabular} & plance & & & \multicolumn{2}{|l|}{Test Performed By: C.E.M. Solutions, Inc 1183 E. Overdrive Circle Hemando, FL 34442 Ph: 352-489-4337 Run 6} & \\
\hline Monitor Type & Analyzer Cal Response & Initial Cal Value & Pre Run Blas (\%) & Final Cal Value & Post Run Bias (\%) & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & 0.01 \% & 0.02 \% & \(0.05 \%\) & 0.02 \% & \(0.05 \%\) & 0.00\% \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & 10.27 \% & -0.34\% & 10.27 \% & -0.34\% & \(0.00 \%\) \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.4 ppm & \(0.88 \%\) & 0.4 ppm & \(0.88 \%\) & 0.00\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 19.2 ppm & 19.4 ppm & 0.44 \% & 19.3 ppm & 0.22 \% & -0.22\% \\
\hline CO & 0.0 ppm & -0.2 ppm & -0.44\% & -0.3 ppm & -0.66\% & -0.22\% \\
\hline CO & 20.0 ppm & 20.1 ppm & 0.22 \% & 20.2 ppm & 0.44 \% & 0.22 \% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}


Test Periormed By: C.E.M. Solutions, Inc. 1183 E. Overdrive Circle Hemando, FL 34442
\begin{tabular}{c} 
Pre Run \\
Bias (\%)
\end{tabular}
\(0.05 \%\)
\(-0.34 \%\)
0.88
\(0.22 \%\)
-0.66

Ph : 352-489-4337
Run 7
Ph: 357
\begin{tabular}{ccc}
\begin{tabular}{c} 
Final Cal \\
Value
\end{tabular} & \begin{tabular}{c} 
Post Run \\
Bias (\%)
\end{tabular} & \begin{tabular}{c} 
Total Run \\
Drift (\%)
\end{tabular} \\
\(0.03 \%\) & \(0.10 \%\) & \(0.05 \%\) \\
\(10.28 \%\) & \(-0.29 \%\) & \(0.05 \%\) \\
& & \\
0.5 ppm & \(1.10 \%\) & \(0.22 \%\) \\
19.3 ppm & \(0.22 \%\) & \(0.00 \%\) \\
& & \\
-0.2 ppm & \(-0.44 \%\) & \(0.22 \%\) \\
20.2 ppm & \(0.44 \%\) & \(0.00 \%\)
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \begin{tabular}{l}
Test Perform Caithness Lake Cogen Unit 2 \\
RATA and C Date:8/17/10
\end{tabular} & or: & & & \multicolumn{2}{|l|}{\begin{tabular}{l}
Test Performed By: C.E.M. Solutions, Inc. 1183 E. Overdrive Circle Hemando. FL 34442 \\
Ph: 352-489-4337 \\
Run 8
\end{tabular}} & \\
\hline Monitor Type & Analyzer Cal Response & Initial Cal Value & Pre Run Bias (\%) & Final Cal Value & Post Run Bias (\%) & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & 0.01 \% & \(0.03 \%\) & 0.10\% & 0.03\% & \(0.10 \%\) & \(0.00 \%\) \\
\hline \(\mathrm{O}_{2}\) & 10.34\% & 10.28 \% & -0.29\% & 10.28 \% & -0.29\% & 0.00\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.5 ppm & 1.10\% & 0.6 ppm & 1.31 \% & 0.22 \% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 19.2 ppm & 19.3 ppm & 0.22 \% & 19.4 ppm & 0.44 \% & 0.22 \% \\
\hline CO & 0.0 ppm & -0.2 ppm & -0.44\% & -0.2 ppm & -0.44\% & 0.00 \% \\
\hline CO & 20.0 ppm & 20.2 ppm & 0.44 \% & 20.3 ppm & 0.66 \% & 0.22 \% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \begin{tabular}{l}
Test Performe Caithness Lake Cogen Unit 2 \\
RATA and Co Date:8/17/10
\end{tabular} & for: & & & \multicolumn{2}{|l|}{Test Performed By: C.E.M. Solutions, Inc. 1183 E. Overdrive Circle Hernando, FL 34442 Ph: 352-489-4337 Run 9} & \\
\hline Monitor Type & Analyzer Cal Response & Initial Cal Value & Pre Run Bias (\%) & Final Cal Value & Post Run Bias (\%) & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & \(0.01 \%\) & \(0.03 \%\) & 0.10\% & 0.04 \% & 0.15\% & \(0.05 \%\) \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & 10.28 \% & -0.29\% & 10.29\% & -0.24\% & \(0.05 \%\) \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.6 ppm & 1.31\% & 0.5 ppm & \(1.10 \%\) & -0.22 \% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 19.2 ppm & 19.4 ppm & 0.44 \% & 19.4 ppm & 0.44\% & 0.00 \% \\
\hline co & 0.0 ppm & -0.2 ppm & -0.44\% & -0.3 ppm & -0.66\% & -0.22\% \\
\hline CO & 20.0 ppm & 20.3 ppm & 0.66 \% & 20.0 ppm & 0.00\% & -0.66\% \\
\hline
\end{tabular}

\title{
Analyzer Calibration Error
}
\begin{tabular}{|c|c|c|c|c|}
\hline \multicolumn{3}{|l|}{Test Performed For:} & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Test Performed By: C.E.M. Solutions, Inc.}} \\
\hline Caithness & & & & \\
\hline \multicolumn{3}{|l|}{Lake Cogen} & \multicolumn{2}{|l|}{1183 E. Overdrive Circle} \\
\hline \multicolumn{3}{|l|}{Unit 2} & \multicolumn{2}{|l|}{Hernando, FL 34442} \\
\hline \multicolumn{3}{|l|}{Compliance} & \multicolumn{2}{|l|}{Ph: 352-489-4337} \\
\hline \multicolumn{3}{|l|}{Date:8/17/10} & \multicolumn{2}{|l|}{Run 1} \\
\hline \multicolumn{3}{|l|}{Oxygen Monitor} & \multicolumn{2}{|l|}{Method 3A} \\
\hline Full Scale: & 25.00\% & & Serial Number & 420C/2784 \\
\hline Cylinder & Reference Gas & Analyzer & Difference & Calibration \\
\hline Number & Conceniration & Response & & Error (\%) \\
\hline CC318824/cg1 & 0.00 \% & 0.01 \% & 0.01 \% & \(0.05 \%\) \\
\hline CC39429/cg 2 & 10.34 \% & 10.34\% & 0.00\% & 0.00 \% \\
\hline XC012229B/cg3 & 20.44 \% & 20.40 \% & -0.04\% & -0.20\% \\
\hline \multicolumn{3}{|l|}{Nitrogen Oxides Monitor} & \multicolumn{2}{|l|}{Method 7E} \\
\hline Full Scale: & 50.0 ppm & & Serial Numbe & 2CHL-74122-375 \\
\hline Cylinder & Reference Gas & Analyzer & Difference & Calibration \\
\hline Number & Concentration & Response & & Error (\%) \\
\hline CC318824/gg 1 & 0.0 ppm & 0.0 ppm & 0.0 ppm & 0.00\% \\
\hline CC327663/cg 4 & 19.82 ppm & 19.2 ppm & -0.6 ppm & -1.36\% \\
\hline CC265529/cg5 & 45.64 ppm & 45.8 ppm & 0.2 ppm & 0.35\% \\
\hline \multicolumn{3}{|l|}{Carbon Monoxide Monitor} & \multicolumn{2}{|l|}{Method 10} \\
\hline Full Scale: & 50.0 ppm & & Serial Number & 8C-68844-361 \\
\hline Cylinder & Reference Gas & Analyzer & Difference & Calibration \\
\hline Number & Concentration & Response & & Error (\%) \\
\hline CC318824/cg1 & 0.0 ppm & 0.0 ppm & 0.0 ppm & 0.00\% \\
\hline CC208706/cg6 & 19.81 ppm & 20.0 ppm & 0.2 ppm & 0.42 \% \\
\hline CC330268/cg 7 & 45.55 ppm & 45.5 ppm & 0.0 ppm & -0.11\% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline Test Perform Caithness Lake Cogen Unit 2 Compliance Date:8/17/10 & & & & \multicolumn{2}{|l|}{Test Performed By: C.E.M. Solutions, Inc. 1183 E. Overdrive Circle Hemando, FL 34442 Ph: 352-489-4337 Run 1} & \\
\hline Monitor Type & Analyzer Cal Response & Initial Cal Value & Pre Run Bias (\%) & Final Cal Value & Post Run Bias (\%) & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & 0.01 \% & 0.04\% & 0.15\% & \(0.02 \%\) & \(0.05 \%\) & -0.10\% \\
\hline \(\mathrm{O}_{2}\) & 10.34\% & 10.29\% & -0.24\% & 10.29 \% & -0.24\% & 0.00\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.5 ppm & 1.10\% & 0.3 ppm & \(0.66 \%\) & -0.44\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 19.2 ppm & 19.4 ppm & 0.44\% & 19.2 ppm & \(0.00 \%\) & -0.44\% \\
\hline co & 0.0 ppm & -0.3 ppm & -0.66\% & -0.2 ppm & -0.44\% & 0.22 \% \\
\hline CO & 20.0 ppm & 20.0 ppm & 0.00\% & 20.1 ppm & 0.22 \% & 0.22 \% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \begin{tabular}{l}
Test Perform Caithness Lake Cogen Unit 2 \\
Compliance Date: \(8 / 17 / 10\)
\end{tabular} & & & & \multicolumn{2}{|l|}{Test Performed By: C.E.M. Solutions, Inc. 1183 E. Overdrive Circle Hemando, FL 34442 Ph: 352-489-4337 Run 2} & \\
\hline Monitor Type & Analyzer Cal Response & Initial Cal Value & Pre Run Bias (\%) & Final Cal Value & \begin{tabular}{l}
Post Run \\
Bias (\%)
\end{tabular} & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & 0.01 \% & 0.02 \% & 0.05 \% & 0.01 \% & \(0.00 \%\) & -0.05\% \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & 10.29 \% & -0.24 \% & 10.26 \% & -0.39\% & -0.15\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.3 ppm & \(0.66 \%\) & 0.4 ppm & \(0.88 \%\) & 0.22 \% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 19.2 ppm & 19.2 ppm & 0.00\% & 19.2 ppm & 0.00\% & 0.00\% \\
\hline CO & 0.0 ppm & -0.2 ppm & -0.44 \% & -0.2 ppm & -0.44\% & \(0.00 \%\) \\
\hline CO & 20.0 ppm & 20.1 ppm & 0.22 \% & 19.7 ppm & -0.66\% & -0.88\% \\
\hline
\end{tabular}

\section*{Sampling System Bias and Drift}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \begin{tabular}{l}
Test Perform \\
Caithness \\
Lake Cogen \\
Unit 2 \\
Compliance \\
Date: \(8 / 17 / 10\)
\end{tabular} & & & & \multicolumn{2}{|l|}{Test Performed By: C.E.M. Solutions, inc. 1183 E. Overdrive Circle Hemando, FL 34442 Ph: 352-489-4337 Run 3} & \\
\hline Monitor Type & Analyzer Cal Response & Initial Cal Value & Pre Run Bias (\%) & Final Cal Value & Post Run Bias (\%) & Total Run Drift (\%) \\
\hline \(\mathrm{O}_{2}\) & 0.01 \% & 0.01 \% & 0.00\% & 0.02 \% & \(0.05 \%\) & \(0.05 \%\) \\
\hline \(\mathrm{O}_{2}\) & 10.34 \% & 10.26 \% & -0.39\% & 10.27 \% & -0.34\% & \(0.05 \%\) \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 0.0 ppm & 0.4 ppm & 0.88\% & 0.4 ppm & 0.88\% & 0.00\% \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) & 19.2 ppm & 19.2 pom & 0.00\% & 19.1 ppm & -0.22\% & -0.22\% \\
\hline CO & 0.0 ppm & -0.2 ppm & -0.44\% & -0.4 ppm & -0.88\% & -0.44\% \\
\hline CO & 20.0 ppm & 19.7 pom & -0.66\% & 19.9 ppm & -0.22\% & 0.44\% \\
\hline
\end{tabular}
C.E.M. Solutions, Inc. \(\mathrm{NO}_{2}\) to NO Converter Efficiency Test
1. Calibrate the analyzer to a concentration of NO greater than or equal to 50 ppm . 2. Introduce \(\mathrm{NO}_{2}(40-60 \mathrm{ppm})\) into the analyzer.
3. Record the following data:


Date: \(\quad 8 / 17 / 2010\)
Technician: \(\frac{\text { R.Douglas }}{42 \mathrm{CHL}-59277-322}\) \(\begin{array}{ll}\text { Analyzer } \mathrm{S} / \mathrm{N}: \\ \mathrm{NO}_{2} \mathrm{Cylinder} \mathrm{S} / \mathrm{N}: ~ & \frac{42 \mathrm{CHL}}{\mathrm{CC} 3267927}\end{array}\)
\(\mathrm{NO}_{2}\) Cylinder Expiration Date: \(\quad \frac{\mathrm{NO}_{2}}{11 / 27 / 2010}\)
\(\mathrm{NO}_{2}\) to NO Converter Efficiency must be greater than or equal to \(90 \%\)
C.E.M. Solutions, Inc. \(\mathrm{NO}_{2}\) to NO Converter Efficiency Tes
1. Calibrate the analyzer to a concentration of NO greater than or equal to 50 ppm 2. Introduce \(\mathrm{NO}_{2}(40-60 \mathrm{ppm})\) into the analyzer.
3. Record the following data:

\(\begin{aligned} & \text { Date: } 8 / 17 / 2010 \\ & \text { R.Douolas }\end{aligned}\)
Technician: R.Douglas
\[
\begin{aligned}
& \text { Cyinder Expindior Sin. }
\end{aligned}
\]
\(\mathrm{NO}_{2}\) to NO Converter Efficiency must be greater thart or equal to \(90 \%\)

\title{
C.E.M. Solutions, Inc.
} Analyzer Response Time Test

C.E.M. Solutions, Inc. Analyzer Response Time Test

C.E.M. Solutions, Inc. Analyzer Response Time Test

C.E.M. Solutions, Inc. Analyzer Response Time Test
C.E.M. Solutions, Inc. Analyzer Response Time Test



Upscale:
\(\qquad\)
Downscale: 120 Seconds

C.E.M. Solutions, Inc.

Analyzer Response Time Test


\footnotetext{
Pt. 75 Stratification Test
}
C.E.M. Solutions, Inc.

40CFR75 Appendix A Gaseous Stratification Test


\section*{C.E.M. Solutions, Inc.}

40CFR75 Appendix A Gaseous Stratification Test

Standard Test
\begin{tabular}{|c|c|c|c|c|}
\hline & & \multicolumn{3}{|c|}{Standard Test
Results} \\
\hline  &  &  & \[
8 \mathrm{mog}
\] &  \\
\hline P1 & 1 & 1.0\% & 2.2\% & 0.0\% \\
\hline \(P^{1}\) & 2 & 0.6\% & 2.7\% & 0.0\% \\
\hline \({ }^{\text {P1 }}\) & 3 & 0.2\% & 2.7\% & 0.0\% \\
\hline \(\mathrm{P}_{2}\) & 1 & 1.8\% & 2.7\% & 0.0\% \\
\hline \(\mathrm{P}_{2}\) & 2 & 1.4\% & 2.2\% & 0.0\% \\
\hline \({ }^{\text {P2 }}\) & 3 & 0.6\% & 0.5\% & 0.0\% \\
\hline \({ }^{\text {P }}\) & 1 & 0.2\% & 2.2\% & 0.0\% \\
\hline P3 & 2 & 0.2\% & 1.1\% & 0.0\% \\
\hline P3 & 3 & 1.3\% & 1.1\% & 0.0\% \\
\hline \({ }^{\text {P4 }}\) & 1 & 2.5\% & 0.5\% & 0.0\% \\
\hline P4 & 2 & 0.2\% & 3.8\% & 00\% \\
\hline \({ }^{\text {P4 }}\) & 3 & 0.6\% & 1.1\% & 0.0\% \\
\hline
\end{tabular}
Alternative Specification
\begin{tabular}{|c|c|c|}
\hline \multicolumn{3}{|c|}{Results} \\
\hline  &  &  \\
\hline 0.3 & 0.1 & 0.0 \\
\hline 0.2 & 0.2 & 0.0 \\
\hline 0.1 & 0.2 & 0.0 \\
\hline 0.5 & 0.2 & 0.0 \\
\hline 0.4 & 0.1 & 0.0 \\
\hline 0.1 & 0.0 & 0.0 \\
\hline 0.0 & 0.1 & 0.0 \\
\hline 0.0 & 0.1 & 0.0 \\
\hline 0.3 & 0.1 & 0.0 \\
\hline 0.8 & 0.0 & 0.0 \\
\hline 0.1 & 0.2 & 0.0 \\
\hline 0.1 & 0.1 & 0.0 \\
\hline
\end{tabular}

\section*{Acceptable Test Results}

For short masurament lina (16.7\%, 50\% and 83.3\% of ing measurament inin), eqch gas concentration of intiress at aech everse poims sharl differ no more than \(\pm 10.0 \%\) of the everage 0 OR daviate fom the average by more than \(\pm 1\) ppm or \(\pm 0.5 \%\)

For single point (whichevar most dosety matchas the mean), each gas concentration of interest at each traversa, point sha


Test Results

\title{
C.E.M. Solutions, Inc.
} 40CFR75, Appendix A Gaseous Stratification Test

> \begin{tabular}{l}  Company: \begin{tabular}{l}  Caithness \\ Facility \\ Unit \\ Lake \\ \hline Cogen \\ Response Time: \\ Point Duration: \\ \hline 120 \\ \hline \end{tabular} Seconds \\ Peconds \\ \hline \end{tabular}

Date: \(\frac{817 / 2010}{4237}\) Project Number: \(\frac{4237}{\text { Test Personnel: }}\)

Test Data
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline  & Triverse & [istart] & REndigi & Hino \({ }^{\text {Nosidem }}\) & Pco & \[
7
\] \\
\hline P1 & 1 & 6:13 & 6:15 & 25.6 & 6.2 & 13.9 \\
\hline P1 & 2 & 6:15 & 6:17 & 25.5 & 5.9 & 13.9 \\
\hline P1 & 3 & 6:17 & 6:19 & 25.4 & 5.9 & 13.9 \\
\hline P2 & 1 & 6:24 & 6:26 & 25.8 & 5.9 & 13.9 \\
\hline P2 & 2 & 6:26 & 6:28 & 25.7 & 6.2 & 13.9 \\
\hline P2 & 3 & 6:28 & 6:30 & 25.2 & 6.1 & 13.9 \\
\hline P3 & 1 & 6:34 & 6:36 & 25.3 & 6.2 & 13.9 \\
\hline P3 & 2 & 6:36 & 6:38 & 25.3 & 6 & 13.9 \\
\hline P3 & 3 & 6:38 & 6:40 & 25 & 6 & 13.9 \\
\hline P4 & 1 & 6:44 & 6:46 & 24.7 & 6.1 & 13.9 \\
\hline P4 & 2 & 6:46 & 6:48 & 25.4 & 6.3 & 13.9 \\
\hline P4 & 3 & 6:48 & 6:50 & 25.2 & 6 & 13.9 \\
\hline & Averages: & & & 25.34 & 6.07 & 13.90 \\
\hline
\end{tabular}

\section*{Appendix F: Reference Method Data}
\(\mathrm{NO}_{x} . \mathrm{CO}\) and \(\mathrm{O}_{2}\) Calculations of Average Emissions of Raw Data and Summaries Used During RATA Test

Method 9 VE Field Data and Observer's VE Certificate

NO \(\mathrm{O}_{\mathrm{x}}, \mathrm{CO}\) and \(\mathrm{O}_{2}\) Calculations of Average Emissions of Raw Data and Summaries Used During RATA Test

\section*{Calculation of Average Emissions}
\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Test Performed For:
Caithness}} & \multicolumn{2}{|l|}{Test Performed By:} \\
\hline & & C.E.M. Solutions, & \\
\hline \multicolumn{4}{|l|}{Lake Cogen 1183 E . Overdive Circle} \\
\hline \multicolumn{4}{|l|}{Unit 1 Hemando, FL 3444} \\
\hline \multicolumn{4}{|l|}{RATA and Compliance Ph: 352-489-4337} \\
\hline \multicolumn{4}{|l|}{Date:8117110 Run 1} \\
\hline Calibration Gas Value 0.00 percent \(\mathrm{O}_{2}\) & Initial Calibration \(-0.02 \%\) & \[
\begin{aligned}
& \text { Final Calibration } \\
& 0.00 \%
\end{aligned}
\] & Average -0.01 \\
\hline 10.34 percent \(\mathrm{O}_{2}\) & 10.25\% & 10.26 \% & 10.25 \\
\hline 0.0 ppm NO \({ }_{\text {x }}\) & 0.9 ppm & 0.5 ppm & 0.75 \\
\hline \(19.8 \mathrm{ppm} \mathrm{NO}{ }_{\text {x }}\) & 19.9 ppm & 20.0 ppm & 19.98 \\
\hline 0.0 ppm CO & 0.0 ppm & 0.0 ppm & 0.02 \\
\hline 19.8 ppm CO & 19.9 ppm & 19.9 ppm & 19.88 \\
\hline Mean Reference Values: 14.03 percent \(\mathrm{O}_{2}\) & Corrected 14.10 & Results: percent \(\mathrm{O}_{2}\) & Basis: DRY \\
\hline 25.1 ppm NO \({ }_{\text {x }}\) & & ppm \(\mathrm{NO}_{\mathrm{x}}\) & ORY \\
\hline 19.7 ppm CO & 19.7 & ppm CO & DRY \\
\hline \multicolumn{4}{|l|}{\begin{tabular}{ll} 
Emission Calculatlons: \\
\begin{tabular}{l}
\(0.0800 \mathrm{NO}_{\times}\) \\
\(0.0380 \mathrm{CO} /\) Losmmetuf from \(\mathrm{O}_{2}\)
\end{tabular} & \(21.8 \mathrm{NOx} @ 15 \% \mathrm{O}\) from O 2
\end{tabular}} \\
\hline & & 8710 & sct/mmBtu \\
\hline
\end{tabular}

\section*{Calculation of Average Emissions}
\begin{tabular}{|c|c|c|c|}
\hline Test Performed For. & \multicolumn{3}{|c|}{\multirow[t]{2}{*}{\begin{tabular}{l}
Test Performed By: \\
C.E.M. Solutions, Inc.
\end{tabular}}} \\
\hline Caithness & & & \\
\hline Lake Cogen & \multicolumn{3}{|r|}{1183 E . Overdrive Circle} \\
\hline Unit 1 & \multicolumn{3}{|c|}{Hemando. FL 34442} \\
\hline RATA and Compliance & \multicolumn{3}{|c|}{Ph: 352-489-4337} \\
\hline Date:8/17/10 & & Run 2 & \\
\hline Calibration Gas Value 0.00 percent \(\mathrm{O}_{2}\) & Initial Calibration \(0.00 \%\) & Final Calibration \(0.00 \%\) & Average 0.00 \\
\hline 10.34 percent \(\mathrm{O}_{2}\) & 10.26\% & 10.22 \% & 10.24 \\
\hline \(0.0 \mathrm{ppm} \mathrm{NO}{ }_{\text {x }}\) & 0.5 ppm & 0.7 ppm & 0.62 \\
\hline \(19.8 \mathrm{ppm} \mathrm{NO}{ }_{\text {x }}\) & 20.0 ppm & 20.3 ppm & 20.16 \\
\hline 0.0 ppm CO & 0.0 ppm & 0.0 ppm & 0.01 \\
\hline 19.8 ppm CO & 19.9 ppm & 19.9 ppm & 19.87 \\
\hline Mean Reference Values: 14.06 percent \(\mathrm{O}_{2}\) & \begin{tabular}{l}
Corrected \\
14.20
\end{tabular} & Results: percent \(\mathrm{O}_{2}\) & Basis: DRY \\
\hline 26.1 ppm NO & & ppm \(\mathrm{NO}_{\mathrm{x}}\) & DRY \\
\hline 18.1 ppm CO & 18.0 & ppm CO & DRY \\
\hline \multicolumn{4}{|l|}{Emission Calculations:} \\
\hline \begin{tabular}{l}
\(0.0840 \mathrm{NO}_{\mathrm{x}}\) Lbs \(/ \mathrm{mmBtu}\) from \(\mathrm{O}_{2}\) \\
0.0360 CO Lbs/mmBtu from \(\mathrm{O}_{2}\)
\end{tabular} & \multicolumn{3}{|r|}{22.7 NOx @ 15\% O2 from O2} \\
\hline \multicolumn{4}{|r|}{8710 dsct/mmBtu} \\
\hline
\end{tabular}

Test Performed By: 1183 E. Overdrive Circle Hemando. FL 34442 Ph: 352-489-4337
\(0.00 \%\)
\(10.22 \%\) 0.00
\(\begin{array}{lll}10.26 \% & 10.22 \% & 10.24\end{array}\)
\(\begin{array}{lll}0.5 \mathrm{ppm} & 0.7 \mathrm{ppm} & \\ 20.0 \mathrm{ppm} & 20.3 \mathrm{ppm} & 20.1\end{array}\)
\(0.0 \mathrm{ppm} \quad 0.0 \mathrm{p}\)
\(9.9 \mathrm{ppm} \quad 19.8\) 14.20 percent \(\mathrm{O}_{2}\) 18.0 pom co
22.7 NOX @ 15\% O2 from O2

\section*{Calculation of Average Emissions}
\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{4}{|l|}{} \\
\hline \multicolumn{4}{|l|}{\multirow[t]{4}{*}{\begin{tabular}{l}
Caithness \\
Lake Cogen \\
Unit 1 \\
RATA and Compliance
\end{tabular}}} \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline \multicolumn{4}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{l}
Calibration Gas Value \\
0.00 percent \(\mathrm{O}_{2}\) \\
10.34 percent \(\mathrm{O}_{2}\)
\end{tabular}}} \\
\hline & & & \\
\hline \multicolumn{4}{|l|}{\multirow[t]{2}{*}{\(0.0 \mathrm{ppm} \mathrm{NO} \mathrm{X}_{\mathrm{x}}\)
\[
19.8 \mathrm{ppm} \mathrm{NO}
\]}} \\
\hline & & & \\
\hline \multicolumn{4}{|l|}{\multirow[t]{2}{*}{\[
\begin{array}{r}
0.0 \mathrm{ppm} \mathrm{CO} \\
19.8 \mathrm{ppm} \mathrm{CO}
\end{array}
\]}} \\
\hline & & & \\
\hline \multicolumn{4}{|l|}{\multirow[t]{3}{*}{Mean Reference Values 14.05 percent \(\mathrm{O}_{2}\) \(25.6 \mathrm{ppm} \mathrm{NO} \mathrm{X}_{\mathrm{x}}\) 18.2 ppm CO}} \\
\hline & & & \\
\hline & & & \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|}
\hline & \multicolumn{2}{|l|}{Test Performed By: C.E.M. Solutions, Inc. 1183 E. Overdrive Circle Hernando, FL 34442 Ph: 352-489-4337 Run 3} \\
\hline \[
\begin{aligned}
& \text { Initial Calibration } \\
& 0.00 \% \\
& 10.22 \%
\end{aligned}
\] & \[
\begin{gathered}
\text { Final Calibration } \\
0.00 \% \\
10.23 \%
\end{gathered}
\] & \begin{tabular}{l}
Average \\
0.00 \\
10.22
\end{tabular} \\
\hline 0.7 ppm & 0.6 ppm & 0.67 \\
\hline 20.3 ppm & 20.2 ppm & 20.24 \\
\hline 0.0 ppm & 0.0 ppm & 0.02 \\
\hline 19.9 ppm & 19.9 ppm & 19.87 \\
\hline \multicolumn{2}{|l|}{\multirow[t]{3}{*}{Corrected Results: 14.20 percent \(\mathrm{O}_{2}\) \(25.3 \mathrm{ppm} \mathrm{NO} \mathrm{N}_{\mathrm{x}}\) 18.1 ppm CO}} & Basis: DRY \\
\hline & & DRY \\
\hline & & DRY \\
\hline \multicolumn{3}{|r|}{22.3 NOX @ 15\% O2 from O2} \\
\hline
\end{tabular}

Calculation of Average Emissions
\begin{tabular}{lccc} 
Test Performed For: & & Test Performed By: \\
Caithness & & C.E.M. Solutions, Inc. \\
Lake Cogen & & 183 E. Overdive Circle
\end{tabular}

\section*{Calculation of Average Emissions}
\begin{tabular}{|c|c|c|c|}
\hline Performed & \multicolumn{3}{|c|}{Test Performed By:} \\
\hline Caithness & \multicolumn{3}{|c|}{\multirow[t]{2}{*}{C.E.M. Solutions, Inc.}} \\
\hline Lake Cogen & \multicolumn{3}{|c|}{\multirow[t]{2}{*}{1183 E. Overdrive Circle}} \\
\hline Unit 1 & & & \\
\hline RATA and Compliance & \multicolumn{3}{|c|}{Ph: 352-489-4337} \\
\hline Date:8/17/10 & \multicolumn{3}{|c|}{Run 5} \\
\hline Calibration Gas Value & Initial Calibration & Final Calibration & Average \\
\hline 0.00 percent \(\mathrm{O}_{2}\) & -0.02\% & -0.02\% & -0.02 \\
\hline 10.34 percent \(\mathrm{O}_{2}\) & 10.21 \% & 10.20 \% & 10.21 \\
\hline \(0.0 \mathrm{ppm} \mathrm{NO} \mathrm{X}_{\mathrm{x}}\) & 0.6 ppm & 0.5 ppm & 0.56 \\
\hline \(19.8 \mathrm{ppm} \mathrm{NO}{ }_{\text {x }}\) & 20.1 ppm & 20.1 ppm & 20.08 \\
\hline 0.0 ppm CO & 0.0 ppm & -0.1 ppm & -0.03 \\
\hline 19.8 ppm CO & 19.8 ppm & 19.7 ppm & 19.76 \\
\hline Mean Reference Values: 14.03 percent \(\mathrm{O}_{2}\) & Corrected & Results: percent \(\mathrm{O}_{2}\) & Basts: \\
\hline 25.4 ppm NO & & ppm NO \({ }_{\text {x }}\) & DRY \\
\hline 18.4 ppm CO & 18.4 & ppm CO & DRY \\
\hline \multicolumn{4}{|l|}{\begin{tabular}{l}
Emission Calculations: \\
\(0.0820 \mathrm{NO}_{\mathrm{x}} \mathrm{Lbs} / \mathrm{mmB}\) tu from \(\mathrm{O}_{2}\) \\
22.3 NOx @ 15\% O2 trom O2 \\
\(0.0360 \mathrm{CO} \mathrm{Lbs} / \mathrm{mmBtu}\) from \(\mathrm{O}_{2}\)
\end{tabular}} \\
\hline \multicolumn{4}{|r|}{8710 dscfimmBtu} \\
\hline
\end{tabular}
\(8710 \mathrm{dscf} / \mathrm{mmBtu}\)

\section*{Calculation of Average Emissions}


\section*{Calculation of Average Emissions}
\begin{tabular}{|c|c|c|c|}
\hline Test Pefformed For: & \multicolumn{3}{|c|}{\multirow[t]{2}{*}{Test Performed By: C.E.M. Solutions, Inc.}} \\
\hline Caithness & & & \\
\hline Lake Cogen & \multicolumn{3}{|r|}{1183 E . Overdrive Circle} \\
\hline Unit 1 & \multicolumn{3}{|c|}{Hemando, FL 34442} \\
\hline RATA and Compliance & \multicolumn{3}{|c|}{Ph: 352-489-4337} \\
\hline Date:8/17/10 & & Run 7 & \\
\hline Calibration Gas Value 0.00 percent & Initial Calibration - 0.02 \% & Final Calibration -0.01\% & Average
\[
-0.02
\] \\
\hline 10.34 percent \(\mathrm{O}_{2}\) & 10.20\% & 10.21\% & 10.20 \\
\hline 0.0 ppm No \({ }_{\text {x }}\) & 0.5 ppm & 0.4 ppm & 0.46 \\
\hline \(19.8 \mathrm{ppm} \mathrm{NO} \mathrm{O}_{\mathrm{x}}\) & 20.0 ppm & 20.0 ppm & 19.99 \\
\hline 0.0 ppm co & -0.1 ppm & -0.1 ppm & -0.11 \\
\hline 19.8 ppm CO & 19.7 ppm & 19.7 ppm & 19.68 \\
\hline Mean Reference Values 14.03 percent \(\mathrm{O}_{2}\) & \begin{tabular}{l}
Corrected \\
14.20
\end{tabular} & Results: percent \(\mathrm{O}_{2}\) & Basis: DRY \\
\hline 25.2 ppm NO & & \(\mathrm{ppm} \mathrm{NO}{ }_{x}\) & DRY \\
\hline 18.6 ppm CO & 18.8 & ppm CO & DRY \\
\hline Emission Calculations: \(0.0810 \mathrm{NO}_{\mathrm{x}} \mathrm{Lbs} / \mathrm{mmBtu}\) from \(\mathrm{O}_{2}\) \(0.0370 \mathrm{CO} \mathrm{Lbs} / \mathrm{mmBtu}\) from \(\mathrm{O}_{2}\) & & NOx @ 15\% O2 fr & O2 \\
\hline
\end{tabular}

\section*{Calculation of Average Emissions}


Test Periormed By: 1183 E. Overdrive Circl Hemando. FL 34442 h: 352-489-4337





Unin 108 off








\footnotetext{








}








\footnotetext{


\section*{}

}




\section*{Calculation of Average Emissions}


\section*{Calculation of Average Emissions}









 -



\section*{}





\footnotetext{

}






\section*{Calculation of Average Emissions}
\begin{tabular}{|c|c|c|c|}
\hline Test Performed For:
Caithness & \multicolumn{3}{|c|}{\multirow[t]{2}{*}{Test Performed By: C.E.M. Solutions, Inc.}} \\
\hline Caithness & & & \\
\hline Lake Cogen & \multicolumn{3}{|r|}{1183 E. Overdrive Circle} \\
\hline Unit 2 & & Hernando, FL 344 & \\
\hline RATA and Compliance & \multicolumn{3}{|c|}{Ph: 352-489-4337} \\
\hline Date:8/17/10 & \multicolumn{3}{|c|}{Run 1} \\
\hline Calibration Gas Value 0.00 percent \(\mathrm{O}_{2}\) & Initial Calibration 0.00 \% & Final Calibration 0.08 \% & Average \\
\hline 10.34 percent \(\mathrm{O}_{2}\) & 10.30 \% & 10.32\% & 10.31 \\
\hline 0.0 ppm NOX & 0.7 ppm & 0.5 ppm & 0.60 \\
\hline \(19.8 \mathrm{ppm} \mathrm{NO}{ }_{\text {x }}\) & 19.2 ppm & 19.8 ppm & 19.47 \\
\hline 0.0 ppm CO & -0.1 ppm & -0.2 ppm & -0.14 \\
\hline 19.8 ppm CO & 20.2 ppm & 20.2 ppm & 20.17 \\
\hline Mean Reference Values: 13.91 percent \(\mathrm{O}_{2}\) & Corrected
14.00 14.00 & Results: percent \(\mathrm{O}_{2}\) & Basis: DRY \\
\hline \(25.4 \mathrm{ppm} \mathrm{NO}_{\text {x }}\) & & ppm \(\mathrm{NO}_{x}\) & DRY \\
\hline 6.1 ppm CO & & ppm CO & DRY \\
\hline \begin{tabular}{l}
Emission Calculations: \\
\(0.0820 \mathrm{NO}_{\mathrm{x}} \mathrm{Lbs} / \mathrm{mmBtu}\) from \(\mathrm{O}_{2}\) \\
\(0.0120 \mathrm{CO} \mathrm{Lbs} / \mathrm{mmBtu}\) from \(\mathrm{O}_{2}\)
\end{tabular} & 22.3 & NOx @ 15\% O2 fro & O 2 \\
\hline \multicolumn{4}{|r|}{8710 dscf/mmBtu} \\
\hline
\end{tabular}

Calculation of Average Emissions
\begin{tabular}{lccc} 
Test Performed For: & & Test Performed By: \\
Caithness & & C.E.M. Solutions, Inc. \\
Lake Cogen & & 1183 E . Overdrive Circte
\end{tabular}

\section*{Calculation of Average Emissions}
\begin{tabular}{|c|c|c|c|}
\hline Test Performed For: Caithness & & \multicolumn{2}{|l|}{Test Peformed By: C.E.M. Solutions, Inc.} \\
\hline Lake Cogen & & \multicolumn{2}{|l|}{1183 E. Overdnive Circle} \\
\hline Unit 2 & & \multicolumn{2}{|l|}{Hemando, FL 34442} \\
\hline RATA and Compliance & \multicolumn{3}{|c|}{\multirow[b]{2}{*}{Run 3}} \\
\hline Date:8/17/10 & & & \\
\hline Calibration Gas Value 00 percent \(\mathrm{O}_{2}\) & Initial Callbration 0.14 \% & Final Calibration \(0.06 \%\) & Average \\
\hline 10.34 percent \(\mathrm{O}_{2}\) & 10.26\% & 10.28\% & 10.27 \\
\hline 0.0 ppm NO \({ }_{\text {x }}\) & 0.5 ppm & 0.5 ppm & 0.49 \\
\hline \(19.8 \mathrm{ppm} \mathrm{NO} \mathrm{x}^{\text {x }}\) & 19.7 ppm & 19.5 ppm & 19.58 \\
\hline 0.0 ppm CO & -0.4 ppm & -0.3 ppm & -0.38 \\
\hline 19.8 ppm CO & 20.2 ppm & 20.3 ppm & 20.23 \\
\hline Mean Reference Values: 13.92 percent \(\mathrm{O}_{2}\) & Corrected
\[
14.00
\] & Results: percent \(\mathrm{O}_{2}\) & Basis: DRY \\
\hline 25.2 ppm NO\({ }_{\text {x }}\) & & ppm \(\mathrm{NO}_{\mathrm{x}}\) & DRY \\
\hline 5.7 ppm CO & & ppm CO & DRY \\
\hline \multicolumn{4}{|l|}{\begin{tabular}{l}
Emission Calculations: \\
\(0.0810 \mathrm{NO}_{\mathrm{X}} \mathrm{Lbs} / \mathrm{mmB}\) tu from \(\mathrm{O}_{2}\) \\
22.0 NOx @ 15\% O2 from O2 \\
0.0110 CO Lbs \(/ \mathrm{mmB}\) tu from \(\mathrm{O}_{2}\)
\end{tabular}} \\
\hline \multicolumn{4}{|r|}{8710 dscffimmBtu} \\
\hline
\end{tabular}

Test Performed By:
1183 E. Overdive Circle
Hemando. FL 34442
Ph: 35
Run 3

\section*{Calculation of Average Emissions}
\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{4}{|l|}{Test Perfo} \\
\hline Caithness & & C.E.M. Solutions, & \\
\hline Lake Cogen & & \multicolumn{2}{|l|}{1183 E. Overdrive Circle} \\
\hline Unit 2 & & \multicolumn{2}{|l|}{Hermando. FL 34442} \\
\hline RATA and Compliance & & \multicolumn{2}{|l|}{Ph: 352-489-4337} \\
\hline Date:8/17/10 & & Run 4 & \\
\hline Calibration Gas Value 0.00 percent \(\mathrm{O}_{2}\) & Initial Calibration \(0.06 \%\) & Final Calibration 0.06 \% & Average 0.06 \\
\hline 10.34 percent \(\mathrm{O}_{2}\) & 10.28\% & 10.27 \% & 10.28 \\
\hline \(0.0 \mathrm{ppm} \mathrm{NO} \mathrm{X}_{\text {}}\) & 0.5 ppm & 0.5 ppm & 0.46 \\
\hline 19.8 ppm NOx & 19.5 ppm & 19.4 ppm & 19.45 \\
\hline 0.0 ppm CO & -0.3 ppm & -0.6 ppm & -0.44 \\
\hline 19.8 ppm CO & 20.3 ppm & 19.8 ppm & 20.07 \\
\hline Mean Reference Values: & Corrected & Results: & Basis: \\
\hline \[
25.0 \mathrm{ppm} \mathrm{NO} \mathrm{~N}_{\mathrm{x}}
\] & & ppm \(\mathrm{NO}_{\mathrm{x}}\) & DRY \\
\hline 5.8 ppm CO & & ppm CO & DRY \\
\hline Emission Calculations: \(0.0810 \mathrm{NO}_{\mathrm{x}} \mathrm{Lbs} / \mathrm{mmBtu}\) from \(\mathrm{O}_{2}\) 0.0120 CO Los \(/ \mathrm{mmB}\) tu from \(\mathrm{O}_{2}\) & & NOx @ 15\% O2 fr & O2 \\
\hline
\end{tabular}

8710 dscf/mmBiu

\section*{Calculation of Average Emissions}
\begin{tabular}{|c|c|}
\hline \multicolumn{2}{|l|}{Test Peformed For Caithness} \\
\hline & Lake Cogen \\
\hline \multicolumn{2}{|l|}{Unit 2} \\
\hline \multicolumn{2}{|l|}{RATA and Compliance} \\
\hline \multicolumn{2}{|l|}{Date:8/17/10} \\
\hline & Calibration Gas Value 0.00 percent \(\mathrm{O}_{2}\) \\
\hline & 10.34 percent \(\mathrm{O}_{2}\) \\
\hline & 0.0 ppm NO \({ }_{\text {x }}\) \\
\hline & \(19.8 \mathrm{ppm} \mathrm{NO}{ }_{\text {x }}\) \\
\hline & 0.0 ppm CO \\
\hline & 19.8 ppm CO \\
\hline & Mean Reference Values: 13.91 percent \(\mathrm{O}_{2}\) 25.0 pom NO \({ }_{x}\) \\
\hline & 5.8 ppm co \\
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Emission Calculations:
\(0.0810 \mathrm{NO}_{x}\) LbsimmBtu from \(\mathrm{O}_{2}\)}} \\
\hline & \\
\hline & 0.0120 CO Lbs/mmBtu from \(\mathrm{O}_{2}\) \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|}
\hline & \multicolumn{2}{|l|}{Test Performed By: C.E.M. Solutions, Inc. 1183 E. Overdive Circle Hemando, FL 34442 Ph: 352-489-4337 Run 5} \\
\hline \[
\begin{aligned}
& \text { Initial Calibration } \\
& 0.06 \%
\end{aligned}
\] & Final Calibration 0.02 \% & Average 0.04 \\
\hline 10.27\% & 10.27 \% & 10.27 \\
\hline 0.5 ppm & 0.4 ppm & 0.43 \\
\hline 19.4 ppm & 19.4 ppm & 19.40 \\
\hline -0.6 ppm & -0.2 ppm & -0.40 \\
\hline 19.8 ppm & 20.1 ppm & 19.97 \\
\hline \[
\begin{array}{r}
\text { Corrected } \\
14.00
\end{array}
\] & Results: percent \(\mathrm{O}_{2}\) & Basis: DRY \\
\hline 25.7 & ppm \(\mathrm{NO}_{\mathrm{x}}\) & DRY \\
\hline & ppm CO & DRY \\
\hline \multicolumn{3}{|r|}{22.0 NOx@ 15\% O2 from 02} \\
\hline
\end{tabular}

\section*{Calculation of Average Emissions}
\begin{tabular}{|c|c|c|c|}
\hline Test Performed For: & \multicolumn{3}{|c|}{\multirow[t]{2}{*}{Test Performed By: C.E.M. Solutions, Inc}} \\
\hline Caithness & & & \\
\hline Lake Cogen & \multicolumn{3}{|c|}{1183 E. Overdrive Circle} \\
\hline Unit 2 & \multicolumn{3}{|c|}{Hemando, FL 34442} \\
\hline RATA and Compliance & \multicolumn{3}{|c|}{Ph: 352-489-4337} \\
\hline Date:8/17/10 & & Run 6 & \\
\hline Calibration Gas Value 0.00 percent \(\mathrm{O}_{2}\) & Initial Calibration 0.02 \% & Final Calibration 0.02 \% & Average 0.02 \\
\hline 10.34 percent \(\mathrm{O}_{2}\) & 10.27 \% & 10.27 \% & 10.27 \\
\hline \(0.0 \mathrm{ppm} \mathrm{No}{ }_{\text {x }}\) & 0.4 ppm & 0.4 ppm & 0.42 \\
\hline 19.8 ppm NO X & 19.4 ppm & 19.3 ppm & 19.37 \\
\hline 0.0 ppm CO & -0.2 ppm & -0.3 ppm & -0.26 \\
\hline 19.8 ppm CO & 20.1 ppm & 20.2 ppm & 20.16 \\
\hline Mean Reference Values: 13.90 percent \(\mathrm{O}_{2}\) & \[
\begin{aligned}
& \text { Corrected } \\
& 14.00
\end{aligned}
\] & Results: percent \(\mathrm{O}_{2}\) & Basis: DRY \\
\hline \(24.8 \mathrm{ppm} \mathrm{NO} \mathrm{x}^{\text {}}\) & & ppm \(\mathrm{NO}_{\mathrm{x}}\) & DRY \\
\hline 5.8 ppm CO & & ppm CO & DRY \\
\hline \begin{tabular}{l}
Emission Calculations: \\
\(0.0800 \mathrm{NO}_{\mathrm{x}} \mathrm{Lbs} / \mathrm{mmB}\) tu from \(\mathrm{O}_{2}\) 0.0110 CO LDs \(/ \mathrm{mmBtu}\) from \(\mathrm{O}_{2}\)
\end{tabular} & 21.8 & NOX @ \(15 \% 02\) fro & \\
\hline & & 8710 & cffmmBtu \\
\hline
\end{tabular}

Calculation of Average Emissions


\section*{Calculation of Average Emissions}
\begin{tabular}{lccc} 
Test Performed For: & & Test Performed By: \\
Caithness & & C.E.M. Solutions, Inc. \\
Lake Cogen & & 1183 E . Overdrive Circle
\end{tabular}

\section*{Calculation of Average Emissions}

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline & CEM Soumomilicer & & & & & & mame & & \(2{ }^{3}\) & & & & \\
\hline ， & \[
\begin{aligned}
& \text { C.E.M. Solutions, Inc. } \\
& 1183 \text { E. Overdrive Circle } \\
& \text { Hemando, FL } 34442
\end{aligned}
\] & & & & & & cheme & & \({ }^{25}\) & 50 & & & \\
\hline cemel & cose & & & & & & cinmpo & & & & & & \\
\hline lestion & Litectese & & & & & & ces &  & & & \({ }_{\text {a }}^{02}\) & － & \\
\hline & & & & & & & ces &  & －0， & &  & \({ }^{\text {a }}\) & coso \\
\hline shem & & & & & & & \({ }_{89}\) & 8172000 & 0，00 & \({ }_{8}^{09}\) & －0， 1 ccalisezele9 & \(\bigcirc\) & \％．00x oco \\
\hline cilseat & & & & so & & & egal &  & －000 & ¢88 & \({ }_{\text {a }}\) & － &  \\
\hline come & & & & & & & \({ }_{\text {cesen }} \times 1\) &  & －0， & \％\％ &  & \({ }^{\circ}\) & conem \\
\hline cest &  & & & \({ }_{\text {and }}^{0}\) & & Onox oco o & \％ozem &  & －000 & 8 &  & － & Onow oco \\
\hline  &  &  & \％ & － & － &  & mex &  & －000 & －87 & \({ }_{\text {a }}\) & \({ }^{\circ}\) & －Nox oco \\
\hline \({ }_{\substack{\text { cosi } \\ \text { des } \\ \text { des }}}\) &  &  &  & － & \(\bigcirc\) &  & cesm & Sillen & \％oo & － &  & \({ }_{\substack{1988 \\ 1982}}^{1982}\) & \(\bigcirc\) ○ \\
\hline cost &  &  & \％ & － & 20 & Nox oco & mom & 込 & \％ot & 80， &  & \({ }^{1988}\) & \(\bigcirc\) \\
\hline （eat &  & 近 & \％o & 为 &  & coser & emad &  &  & －0， &  & \(\underbrace{10,02}\) & \(\bigcirc\) \\
\hline mexemen &  & O．0， & \％ & 为 & － & ONow oco & ces &  & 年000 & 0， 0 & \({ }_{\substack{\text { a }}}^{0.0}\) & \({ }_{\text {a }}^{\substack{1902 \\ 1982}}\) & ： \\
\hline dess &  & －001 & － & － & \({ }_{458}^{458}\) & & \％es &  & －001 & － &  & \({ }^{1982}\) & － \\
\hline cess &  & －0， & － &  &  & ：\％ & \％es &  & －0， & \({ }_{\text {l }}^{\text {a }}\) &  & \({ }^{1982}\) & \％ \\
\hline cess &  & －0， & ¢989 & －0． & \({ }_{\text {lise }}^{458}\) & ：\％ & eseman &  & －0， & －190． &  &  & \(\bigcirc\) \\
\hline  &  & －0．08 & soid &  & \({ }_{\text {4 }}^{4588}\) & ：\％ & ceem &  & －001 & \(\stackrel{19.2}{19.3}\) & \({ }_{\text {cosem }}^{0.0}\) & 19，8， & － \\
\hline \({ }_{\text {cose }}^{\text {dess }}\) &  & －0．095 & ¢00 &  & \({ }_{4}^{45868}\) & ：： & \％ex &  & －0， 01 & \({ }_{19,4}^{19.4}\) &  & 198， & － \\
\hline \({ }_{\text {cose }}\) &  & \({ }_{\text {－}}^{0.055}\) & \(\underset{\substack{\text { sai } \\ \text { aia }}}{ }\) & \(\xrightarrow{.05}\) & \({ }_{45}^{4584}\) & ：： & \％ex &  & －0．02 & \({ }^{19.9}\) & －0， & ， 98.81 & \(\bigcirc\) \\
\hline  & 边 & 管．066 & cis & － & \({ }_{\text {ctisa }}^{45}\) & － & \％ex &  & ．00\％ & \({ }_{19.9}^{19.4}\) &  & 1981 & \(\bigcirc\) \\
\hline \({ }_{\text {cosem }}\) &  &  & － & － & ， & ： & \({ }_{306}\) & ， & －001 & \({ }_{\substack{19.4 \\ 150}}\) &  & ， 1981 & － \\
\hline \({ }_{\text {cose }}^{\text {cigas }}\) &  & － &  &  & cios & \(\bigcirc\) ： & \％ & 为 & －002 & \％\({ }_{0}^{4}\) & ， 18.8 & ， 19.81 & \(\bigcirc\) \\
\hline  &  & （0．00 &  &  & \({ }_{\text {cose }}^{\substack{1988 \\ 1982}}\) & \(\bigcirc\) & cex &  & － & －\({ }_{0}^{0.5}\) &  & （1021 & 10.3 \\
\hline cest &  & － & － & － & ¢ & \(\bigcirc\) & \％osp & ， & －002 & － & \({ }_{\text {cosem }}^{20}\) & \％ & \({ }_{1034}^{10.24}\) \\
\hline cisa &  &  & －\({ }_{192}^{192}\) &  & ， & ： &  & （entiol &  & \begin{tabular}{l}
0.5 \\
0.5 \\
\hline 0.
\end{tabular} &  & anden & los \\
\hline \({ }_{\text {cose }}^{\substack{\text { deg } \\ \text { des }}}\) & （entroio & 200\％ & －192， &  &  & \({ }_{20,44}^{20.44}\) & cose &  & －002 & － &  & aseme & \({ }_{\substack{1034 \\ 1034}}^{103}\) \\
\hline \({ }_{\text {cese }}^{\substack{\text { des } \\ \text { des }}}\) &  &  & \({ }_{192}^{192}\) &  & ， 18.8505 &  &  & Bilfzio & coict & － 0.4 &  &  & \({ }^{1034}\) \\
\hline \({ }_{\substack{\text { deg } \\ \text { des }}}\) &  &  & 70 &  & cises & \({ }_{\substack{2044 \\ 2044}}\) & \({ }_{\text {max }}\) & （ithrio & \({ }_{\substack{\text { a }}}^{9022}\) & －0．4 & \({ }_{\text {and }}^{38}\) & cose & \({ }^{1034}\) \\
\hline ， &  &  & 0， & －1．1． & ， 18.50502 & \({ }_{\substack{2044 \\ 2044}}^{2044}\) &  & 为 & （1020 & －4 & 边 & and & \({ }_{\substack{1034 \\ 1024}}^{103}\) \\
\hline \({ }_{\text {dem }}^{\text {deci }}\) &  & \({ }_{\substack{20.47 \\ 20,50}}\) & \％1， & \({ }^{12}\) & ， 18.950202 & \({ }_{\substack{2044 \\ 2044}}\) & cesme &  & \({ }_{\text {coin }}^{10.30}\) & －0．4 &  & \({ }_{0}^{2,8389} 02\) & \({ }^{1034}\) \\
\hline comer &  &  & \％ &  & ， 19.80802 & \({ }_{\substack{20,48 \\ 1024}}\) & ege & （ithrio & － 10.30 & 0．4 & － &  & \(\bigcirc\) \\
\hline  &  & （is．se & \％ &  & ， &  & ens &  & cois & \％ &  &  & \％ \\
\hline  &  & （1036 & 管 & 边 &  & \({ }^{\text {cose }}\) & cies &  & cos &  &  & cosy & ： \\
\hline （ayen &  & \({ }^{1034}\) & 0 & \({ }_{-12}^{12}\) & Sesse & \({ }_{\text {cosios }}^{1038}\) & \％os & 为 & \({ }^{099}\) & － 3 38\％ & 边 &  & ： \\
\hline  &  &  & \(\ldots\) &  & Stisis & ： & cos &  & \({ }_{0}^{0.91}\) &  & Cz2s520ess Nox & & \\
\hline \(\stackrel{\text { afar }}{\text { dag }}\) &  & \({ }_{\substack{3.128 \\ 0.28}}\) & 0 & \({ }_{\text {a }}\) & ciss & \％ & \(\cdots\) &  & \({ }_{\text {cosem }}^{13,298}\) &  & 8， 8 & & \\
\hline  &  & －0， & 0 &  & \({ }_{\text {asiss }}^{4}\) & ： & nmm & Sithene & \({ }_{\text {coser }}^{1390}\) & \({ }_{\substack{25,5}}^{25.5}\) & \％， & & \\
\hline cosy &  &  & 0 & \({ }_{\text {cosem }}^{\text {a }}\) & Stiss & \(\bigcirc\) & nmm &  & ， 1389 &  & \％ 6 & & \\
\hline \({ }^{\text {decm }}\) &  & －0， & 0 &  & cis & \(\therefore\) & nnn & 为 & \({ }^{\text {cosem }}\) &  & 6． & & \\
\hline comb &  & （00\％ & 0 & cosisis & Stiss & \(\bigcirc\) & nnn & 込 & 边 1390 &  & ¢， & & \\
\hline cese &  & －0， & 0 & － & 退1981 & \(\bigcirc\) & mmin & Batroin & ， 13.30 &  & － & & \\
\hline cese &  & － & \％0 &  &  & － & ， &  &  &  & － & & \\
\hline  & 为 & －0， & 80. &  & 1981 & \％ & nnm &  & 隹1390 & \(\underset{\substack{255 \\ 258 \\ 258}}{ }\) &  & & \\
\hline cemm & coill & －0， & \％oid & coin & \({ }^{1981} 0^{\text {co2 }}\) & \％co \％ & nnn & 8illiziole & 边13， & \(\substack{258 \\ 255}\) & \({ }^{6.5}\) & & \\
\hline espl &  & \(\underbrace{1205}_{\substack{1238 \\ 1235}}\) & ， 12.8 &  & Ocoz & oneor oco & nmm &  &  & \({ }_{\substack{255 \\ 254}}\) & － 0.4 & & \\
\hline ces &  & \({ }_{1392}^{1392}\) & \({ }_{2}^{248}\) &  & － 0 O22 & \％Nox oco & nmm &  & cise & \(\underset{\substack{254 \\ 254}}{\substack{\text { 25 }}}\) & ¢ 6.4 & & \\
\hline \({ }_{\text {ces }}\) &  & \({ }_{989}^{12.59}\) & \({ }^{25.9}\) &  & 旡 & \％Nox oco oco & \(\cdots\) & coly &  & ¢ & \begin{tabular}{l}
6.5 \\
\hline 6.5 \\
\hline 8
\end{tabular} & & \\
\hline － &  &  & 9， 19 & 边 5 &  & SNox coso & nmı &  &  & \(\substack { \text { 254 } \\ \begin{subarray}{c}{253 \\ 253{ \text { 254 } \\ \begin{subarray} { c } { 2 5 3 \\ 2 5 3 } } \end{subarray}\) & eis & & \\
\hline mep &  & \％ & ， 1.3 & 边 & － & SNox cos & nomil &  &  &  &  & & \\
\hline  &  & （ent & &  & &  &  &  & （inco &  & （ & & \\
\hline
\end{tabular}













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\footnotetext{


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\(\underset{\substack{\text { Uni2 } 28 \text { git } \\ \text { poge } 12011}}{ }\)

 \(1\)














\section*{Calculation of Average Emissions}
\begin{tabular}{|c|c|c|c|}
\hline Test Performed For: & \multicolumn{3}{|c|}{\multirow[t]{2}{*}{Test Performed By: C.E.M. Solutions, Inc.}} \\
\hline Caithness & & & \\
\hline Lake Cogen & \multicolumn{3}{|c|}{1183 E. Overdrive Circle} \\
\hline Unit 2 & \multicolumn{3}{|c|}{Hemando, FL 34442} \\
\hline Compliance & \multicolumn{3}{|c|}{Ph: 352-489-4337} \\
\hline Date:8/17/10 & & Run 1 & \\
\hline Calibration Gas Value & Initial Calibration & Final Calibration & Average \\
\hline 0.00 percent \(\mathrm{O}_{2}\) & 0.04\% & 0.02 \% & \\
\hline 10.34 percent \(\mathrm{O}_{2}\) & 10.29\% & 10.29\% & 10.29 \\
\hline 0.0 ppm NO \({ }_{\text {x }}\) & 0.5 ppm & 0.3 ppm & 0.40 \\
\hline \(19.8 \mathrm{ppm} \mathrm{NO}{ }_{\text {x }}\) & 19.4 ppm & 19.2 ppm & 19.28 \\
\hline 0.0 ppm CO & -0.3 ppm & -0.2 ppm & -0.23 \\
\hline 19.8 ppm CO & 20.0 ppm & 20.1 ppm & 20.05 \\
\hline Mean Reference Values: 13.13 percent \(\mathrm{O}_{2}\) & Corrected
\[
13.20
\] & Results: percent \(\mathrm{O}_{2}\) & Basis: DRY \\
\hline 25.2 ppm NO X & & ppm \(\mathrm{NO}_{4}\) & DRY \\
\hline 6.6 ppm CO & & ppm CO & DRY \\
\hline Emission Calculations: \(0.0740 \mathrm{NO}_{\mathrm{x}} \mathrm{Lbs} / \mathrm{mmB}\) tu from \(\mathrm{O}_{2}\) \(0.0120 \mathrm{CO} \mathrm{Lbs} / \mathrm{mmBtu}\) from \(\mathrm{O}_{2}\) & & NOx @ 15\% 02 tr & m 02 \\
\hline & & 8710 & cef/mmBtu \\
\hline
\end{tabular}

\section*{Calculation of Average Emissions}
\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{4}{|l|}{} \\
\hline Test Periormed For: Caithness & & C.E.M. Solutons, Inc. & \\
\hline Lake Cogen & & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{1183 E. Overdrive Circle Hernando, FL 34442}} \\
\hline Unit 2 & & & \\
\hline Compliance & & \multicolumn{2}{|l|}{Ph: 352-489-4337} \\
\hline Date:8/17/10 & & \multicolumn{2}{|l|}{Run 2} \\
\hline Calibration Gas Value 0.00 percent \(\mathrm{O}_{2}\) & Initial Calibration 0.02 \% & Final Calibration 0.01 \% & Average 0.01 \\
\hline 10.34 percent \(\mathrm{O}_{2}\) & 10.29\% & 10.26 \% & 10.28 \\
\hline 0.0 ppm No \({ }_{x}\) & 0.3 ppm & 0.4 ppm & 0.33 \\
\hline \(19.8 \mathrm{ppm} \mathrm{NO}{ }_{\text {x }}\) & 19.2 ppm & 19.2 ppm & 19.18 \\
\hline 0.0 ppm CO & -0.2 ppm & -0.2 ppm & -0.20 \\
\hline 19.8 ppm CO & 20.1 ppm & 19.7 ppm & 19.89 \\
\hline Mean Reference Values 13.10 percent \(\mathrm{O}_{2}\) & \begin{tabular}{l}
Corrected \\
13.20
\end{tabular} & Results: percent \(\mathrm{O}_{2}\) & Basis: DRY \\
\hline 25.1 ppm NO\({ }_{\text {x }}\) & & ppm \(\mathrm{NO}_{\mathrm{x}}\) & DRY \\
\hline 6.6 ppm CO & & ppm CO & DRY \\
\hline \begin{tabular}{l}
Emission Calculations: \\
\(0.0740 \mathrm{NO}_{\mathrm{x}} \mathrm{Lbs} / \mathrm{mmB}\) tu from \(\mathrm{O}_{2}\) \(0.0120 \mathrm{CO} \mathrm{Lbs} / \mathrm{mmBtu}\) from \(\mathrm{O}_{2}\)
\end{tabular} & 20.0 & NOx @ 15\% O2 fr & O2 \\
\hline
\end{tabular}

Calculation of Average Emissions
\begin{tabular}{|c|c|c|c|}
\hline \begin{tabular}{l}
Test Performed For: Caithness Lake Cogen Unit 2 \\
Compliance Date:8/17/10
\end{tabular} & & Test Performed By C.E.M. Solutions, 1183 E . Overdrive Hemando. FL 344 Ph: 352-489-4337 Run 3 & c. \\
\hline Calibration Gas Value
0.00 percent \(\mathrm{O}_{2}\) & \[
\begin{aligned}
& \text { Initial Calibration } \\
& 0.01 \%
\end{aligned}
\] & \[
\begin{gathered}
\text { Final Calibration } \\
0.02 \%
\end{gathered}
\] & \[
\begin{gathered}
\text { Average } \\
0.01
\end{gathered}
\] \\
\hline 10.34 percent \(\mathrm{O}_{2}\) & 10.26\% & 10.27\% & 10.27 \\
\hline \(0.0 \mathrm{ppm} \mathrm{No} \mathrm{X}_{\mathrm{x}}\) & 0.4 ppm & 0.4 ppm & 0.35 \\
\hline \(19.8 \mathrm{ppm} \mathrm{NO} \mathrm{N}^{\text {x }}\) & 19.2 ppm & 19.1 ppm & 19.13 \\
\hline 0.0 ppm CO & -0.2 ppm & -0.4 ppm & -0.33 \\
\hline 19.8 ppm CO & 19.7 ppm & 19.9 ppm & 19.80 \\
\hline Mean Reference Values: 13.13 percent \(\mathrm{O}_{2}\) 25.1 ppm NO \({ }_{x}\) & \[
\begin{array}{r}
\text { Corrected } \\
13.20 \\
26.1
\end{array}
\] & Results: percent \(\mathrm{O}_{2}\) \(\mathrm{ppm} \mathrm{NO}_{\mathrm{x}}\) & Basis: DRY DRY \\
\hline 6.6 ppm CO & & ppm CO & DRY \\
\hline \multicolumn{4}{|l|}{\begin{tabular}{l}
Emission Calculations: \\
\(0.0740 \mathrm{NO}_{x}\) Lbs/mmBtu from \(\mathrm{O}_{2} \quad 20.0 \mathrm{NOx}\) @ \(15 \%\) O2 from O2 \\
0.0120 CO Lbs/mmBtu from \(\mathrm{O}_{2}\)
\end{tabular}} \\
\hline \multicolumn{4}{|r|}{8710 dscf/mmBta} \\
\hline
\end{tabular}

















\footnotetext{

}











RECORD OF VISUAL DETERMINATION OF OPACITY


RECORD OF VISUAL DETERMINATION OF OPACITY




\section*{ATTACHMENT LC-EU1-I7}

US EPA EMISSION COLLECTION AND MONITORING PLAN SYSTEM (ECMPS) FEEDBACK FORMS FOR EU001 AND EU002

Re: Lake Cogeneration (54423) - EU003

Dear Certifying Official:
Thank you for submitting your Quarterly Emissions Report using the U. S. EPA's Emissions Collection and Monitoring Plan System (ECMPS) software. This ECMPS Feedback report provides you with a detailed submission receipt, a summary of the evaluations performed on your submission, and guidance on any follow-up actions needed if any errors were found. EPA has also received a copy of this Feedback Report as part of your submission.

\section*{SUBMISSION STATUS}

The EPA has received your Quarterly Emissions Report for the Facility and Monitoring Location(s) listed in Table 1 below. The Table also provides confirmation of EPA's receipt (Date, Time, etc.) of your submission. Prior to submission ECMPS evaluated your emissions report and assigned an overall "Error Status Level" to it, based on the results (see Table 1). This Feedback Report also contains Table 2, which displays EPA-Accepted Cumulative Values for emissions and other parameters.

Table 1: Submission Receipt and Error Status Level Information
\begin{tabular}{|l|l|}
\hline Report Received for Facility ID (ORIS Code): & 54423 \\
\hline Facility Name: & Lake Cogeneration \\
\hline Monitoring Locations: & EU003 \\
\hline Submission Type: & EM for 2010 QTR 4 \\
\hline Error Status Level: & No Errors \\
\hline Submission Date/Time: & \(1 / 12 / 2011\) 12:43:59 PM \\
\hline Submitter User ID: & jmiller \\
\hline Submission ID: & 449438 \\
\hline Resubmission Required: & No \\
\hline EPA Analyst: & Carlos Martinez; (202) 343-9747; martinez.carlos@epa.gov \\
\hline
\end{tabular}

\section*{EXPLANATION OF YOUR ERROR STATUS LEVEL LISTED IN TABLE 1}

The EPA has accepted your submission. ECMPS detected no errors in your data based on the checks performed.

\section*{OTHER INFORMATION AND BULLETINS FROM EPA}

The ECMPS software evaluates the daily calibration tests reported in the quarterly emissions file to ensure that these tests have been conducted according to the schedule described in Part 75. If the evaluation has discovered that a monitor used to report emissions was "out-of-control" because a daily calibration test had not been conducted or had "expired," a critical error message will be included in the Evaluation Results listed below.

Resubmissions of data should be made using ECMPS. Please contact your EPA analyst listed in Table 1 with any questions regarding your evaluation results or for guidance in determining if a resubmission is necessary. If it is determined that a resubmission is necessary, please complete the resubmission request form located at http://ecmps.camdsupport.com/help_resubmit_form.shtml.

For more information about data reporting, please see the ECMPS Reporting Instructions on EPA's website at http://www.epa.gov/airmarkets/business/ecmps/reporting-instructions.html.

Please also visit the ECMPS Technical Support website at http://ecmps.camdsupport.com for additional information, including software downloads, documentation, tutorials, FAQs, ECMPS News, and technical support.

If you have any questions regarding this correspondence, please feel free to contact your EPA analyst listed in Table 1 as soon as possible. Thank you for your attention to this matter.

Facility Name: Lake Cogeneration

Table 2: Cumulative Data Summary -- EPA-Accepted Values
Unit/Stack/Pipe ID: EU003
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline & 1st Quarter & 2nd Quarter & 3rd Quarter & 4th Quarter & Ozone Season & Year-to-Date \\
\hline \begin{tabular}{c} 
Number of \\
Operating Hours
\end{tabular} & 1,171 & 1,318 & 1,996 & 1,134 & 2,975 & 5,619 \\
\hline \begin{tabular}{c} 
Operating Time \\
(hrs)
\end{tabular} & \(1,075.28\) & \(1,241.34\) & \(1,969.16\) & \(1,019.33\) & \(2,900.60\) & \(5,305.11\) \\
\hline \begin{tabular}{c} 
SO2 Mass \\
(tons)
\end{tabular} & 0.2 & 0.2 & 0.3 & 0.1 & 0.8 \\
\hline \begin{tabular}{c} 
Heat Input \\
(mmBtu)
\end{tabular} & 482,091 & 606,689 & 991,824 & 475,406 & \(1,449,752\) & \(2,556,010\) \\
\hline \begin{tabular}{c} 
NOx Mass \\
(tons)
\end{tabular} & 21.0 & 26.3 & 42.9 & 20.6 & 62.7 & 110.8 \\
\hline
\end{tabular}

ECMPS Client Tool
United States Environmental Protection Agency (EPA)
Version 1.02010 Q4

Re: Lake Cogeneration (54423) - EU004

Dear Certifying Official:
Thank you for submitting your Quarterly Emissions Report using the U. S. EPA's Emissions Collection and Monitoring Plan System (ECMPS) software. This ECMPS Feedback report provides you with a delailed submission receipt, a summary of the evaluations performed on your submission, and guidance on any follow-up actions needed if any errors were found. EPA has also received a copy of this Feedback Report as part of your submission.

\section*{SUBMISSION STATUS}

The EPA has received your Quarterly Emissions Report for the Facility and Monitoring Location(s) listed in Table 1 below. The Table also provides confirmation of EPA's receipt (Date, Time, etc.) of your submission. Prior to submission ECMPS evaluated your emissions report and assigned an overall "Error Status Level" to it, based on the results (see Table 1). This Feedback Report also contains Table 2, which displays EPA-Accepted Cumulative Values for emissions and other parameters.

Table 1: Submission Receipt and Error Status Level Information
\begin{tabular}{|l|l|}
\hline Report Received for Facility ID (ORIS Code): & 54423 \\
\hline Facility Name: & Lake Cogeneration \\
\hline Monitoring Locations: & EU004 \\
\hline Submission Type: & EM for 2010 QTR 4 \\
\hline Error Status Level: & No Errors \\
\hline Submission Date/Time: & \(1 / 12 / 2011\) 12:44:46 PM \\
\hline Submitter User ID: & jmiller \\
\hline Submission ID: & 449441 \\
\hline Resubmission Required: & No \\
\hline EPA Analyst: & Carlos Martinez; (202) 343-9747; martinez.carlos@epa.gov \\
\hline
\end{tabular}

\section*{EXPLANATION OF YOUR ERROR STATUS LEVEL LISTED IN TABLE 1}

The EPA has accepted your submission. ECMPS detected no errors in your data based on the checks performed.

\section*{OTHER INFORMATION AND BULLETINS FROM EPA}

The ECMPS software evaluates the daily calibration tests reported in the quarterly emissions file to ensure that these tests have been conducted according to the schedule described in Part 75. If the evaluation has discovered that a monitor used to report emissions was "out-of-control" because a daily calibration test had not been conducted or had "expired," a critical error message will be included in the Evaluation Results listed below.

Resubmissions of data should be made using ECMPS. Please contact your EPA analyst listed in Table 1 with any questions regarding your evaluation results or for guidance in determining if a resubmission is necessary. If it is determined that a resubmission is necessary, please complete the resubmission request form located at http://ecmps.camdsupport.com/help_resubmit_form.shtml.

For more information about data reporting, please see the ECMPS Reporting Instructions on EPA's website at: http://www.epa.gov/airmarkets/business/ecmips/reporting-instructions.html.

Please also visit the ECMPS Technical Support website at http://ecmps.camdsupport.com for additional information, including software downloads, documentation, tutorials, FAQs, ECMPS News, and technical support.

If you have any questions regarding this correspondence, please feel free to contact your EPA analyst listed in Table 1 as soon as possible. Thank you for your attention to this matter.

Facility Name: Lake Cogeneration

Table 2: Cumulative Data Summary -- EPA-Accepted Values
Unit/Stack/Pipe ID: EU004
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \begin{tabular}{c} 
Number of \\
Operating Hours
\end{tabular} & 1st Quarter & 2nd Quarter & 3rd Quarter & 4th Quarter & Ozone Season & Year-to-Date \\
\hline \begin{tabular}{c} 
Operating Time \\
(hrs)
\end{tabular} & 1,193 & 1,325 & 2,079 & 1,101 & 3,058 & 5,698 \\
\hline \begin{tabular}{c} 
SO2 Mass \\
(tons)
\end{tabular} & 0.1 & \(1,259.01\) & \(2,065.73\) & 994.83 & \(3,002.72\) & \(5,394.41\) \\
\hline \begin{tabular}{c} 
Heat Input \\
(mmBlu)
\end{tabular} & 477,024 & 584,665 & 996,954 & 468,939 & \(1,434,985\) & \(2,527,582\) \\
\hline \begin{tabular}{c} 
NOx Mass \\
(tons)
\end{tabular} & 20.9 & 25.4 & 43.2 & 20.1 & 6.7 \\
\hline
\end{tabular}

\section*{ATTACHMENT LC-EU1-I8}

\section*{LAKE COGEN, LTD.}

January 26, 2011
Mr. Garry Kuberski
Florida Department of Environmental Protection
Southwest District
3319 Maguire Blvd., Suite 232
Orlando, FL 32803

\section*{RE: Lake Cogen Ltd., Facility ID No. 0694801, Year 2010 Annual Title V Permit Certification Submittal}

Dear Mr. Kuberski:
Attached for your review and use is the Year 2010 Title V Compliance Statement for the Lake Cogen facility. A copy of this report is also being submitted to USEPA Region IV as previously requested by the Department.

All reporting issues and operational discrepancies were brought to the Department's attention in the four quarterly facility summary and excess emission reports submitted for calendar year 2010.

The four quarterly summary and excess emission reports were submitted to the Department on April, July, and October 2010 and January, 2011. There were a number of minor emission limit exceedances. All of the minor exceedances described in these reports were attributed to startup/ shutdown situations or equipment malfunction, and were allowable and acceptable under operating conditions stipulated in the Operating Permit. All exceedances were within the recovery time allowed under the site permit.

Based upon reasonable inquiry and review of the Lake Cogen facility's performance, we believe we have provided you with a reasonable report that reflects the facility's compliance status during the year 2010. If you have any questions or require additional information with regard to this submittal please feel free to contact me. My telephone number is (917) 472-4593.

For Lake Cogen Ltd.


Direttor - Environmental, Health \& Safety
W/attachment
Cc: USEPA Region IV
Atlanta Federal Center
Attn: Air and EPCRA Enforcement Branch
61 Forsyth Street SW
Atlanta, GA 30303-3104
(404) 562-9099
J. Delgado
K. Collins
J. Miller @ Lake Cogen
G. Keevill

\section*{Division of Air Resource Management}

\section*{STATEMIENT OF COMPLIANCE - TITLE V SOURCE}

REASON FOR SUBMISSION (Check one to indicate why this statement of compliance is being submitted) \(x\) Annual Requirement \(\quad \square\) Transfer of Permit \(\quad \square\) Permanent Facility Shutdown
\begin{tabular}{|c|c|}
\hline REPORTING PERIOD* & REPORT DEADLINE** \\
\hline January 1 _through December 31_ of 2010_(year) & March 1,2010 \\
\hline
\end{tabular}
*The statement of compliance must cover all conditions that were in effect during the indicated reporting period, including any conditions that were added, deleted, or changed through permit revision.
**See Rule 62-213.440(3)(a)2., F.A.C.
Facility Owner/Company Name: Lake Cogen, Ltd.
Site Name: Lake Cogen
Facility ID No. 0694801
County: Lake

\section*{COMPLLANCE STATEMENT (Check only one of the following three options)}
A. This facility was in compliance with all terms and conditions of the Title V Air Operation Permit and, if applicable, the Acid Rain Part, and there were no reportable incidents of deviations from applicable requirements associated with any malfunction or breakdown of process, fuel burning or emission control equipment, or monitoring systems during the reporting period identified above.
B. This facility was in compliance with all terms and conditions of the Title V Air Operation Permit and, if applicable, the Acid Rain Part; however, there were one or more reportable incidents of deviations from applicable requirements associated with malfunctions or breakdowns of process, fuel buming or emission control equipment, or monitoring systems during the reporting period identified above, which were reported to the Department. For each incident of deviation, the following information is included:
1. Date of report previously submitted identifying the incident of deviation.
2. Description of the incident.
C. This facility was in compliance with all terms and conditions of the Title V Air Operation Permit and, if applicable, the Acid Rain Part, EXCEPT those identified in the pages attached to this report and any reportable incidents of deviations from applicable requirements associated with malfunctions or breakdowns of process, fuel burning or emission control equipment, or monitoring systems during the reporting period identified above, which were reported to the Department. For each item of noncompliance, the following information is included:
1. Emissions unit identification number.
2. Specific permit condition number (note whether the permit condition has been added, deleted, or changed during certification period).
3. Description of the requirement of the permit condition.
4. Basis for the determination of noncompliance (for monitored parameters, indicate whether monitoring was continuous, i.e., recorded at least every 15 minutes, or intermittent).
5. Beginning and ending dates of periods of noncompliance.
6. Identification of the probable cause of noncompliance and description of corrective action or preventative measures implemented.
7. Dates of any reports previously submitted identifying this incident of noncompliance.

For each incident of deviation, as described in paragraph B. above, the following information is included:
1. Date of report previously submitted identifying the incident of deviation.
2. Description of the incident.

\section*{STATERMENT OF COMPLIANCE - TITLE V SOURCE}

\section*{RESPONSIBLE OFFICLAL CERTIFICATION}

1, the undersigned, am a responsible official (Title V air permit application or responsible official notification form on file with the Department) of the Title V source for which this document is being submitted. With respect to all matters other than Acid Rain program requirements, I hereby certify, based on the information and belief formed after reasonable inquiry, that the statements made and data contained ing this document are true, accurate, and complete.


\section*{DESIGNATED REPRESENTATIVE CERTIFICATION (only applicable to Acid Rain source)}

I, the undersigned, am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.
(Signature of Acid Rain Source Designated Representative)
(Date)
Name: \(\qquad\) Title: \(\qquad\)

\footnotetext{
\{Note: Attachments, if required, are created by a responsible official or designated representative, as appropriate, and should consist of the information specified and any supporting records. Additional information may also be attached by a responsible official or designated representative when elaboration is required for clarity. This report is to be submitted to both the compliance authority (DEP district or local air program) and the U.S. Environmental Protection Agency(EPA) (U:S. EPA Region 4, Air and EPCRA Enforcement Branch, 61 Forsyth Street, Atlanta GA 30303).\}
}

\section*{ATTACHMENT LC-EU1-19} HEAT INPUT CURVE


\section*{ATTACHMENT LC-EU2-I1}

40 CFR 63 SUBPART ZZZZ APPLICABILITY ANALYSIS

\section*{Instructions:}
- Always answer the questions in order.
- Only orange colored cells should have an answer/choice in them. All others should be left blank.
- Follow the arrows until you have a big green arrow. When you get a big green arrow you are finished!
- The detailed results of the RICE will be on tabs ZZ7Z or IIII or JJJJ of this worksheet.
- Contact Andrew Bass (andrew.bass@dep.state.fl.us) with any Errors/Suggestions about the Program.

Input
Are you the Manufacturer or the Owner and Operator of the engine?
Is the engine a unit located at a stationary source for less than 1 year and
has been properly certified as meeting the standards that would be applicable to such engine under the appropriate non-road engine provisions of 40 CFR 1068?

Is your engine being tested at a stationary RICE test cell/stand?
Does your facility have the potential to emit 10 or more tons/year of any single hazardous air pollutant or 25 or more tons/year of any combination of hazardous air pollutants?(Area or Major Source)

What type of fuel does the engine use? (Use the primary fuel used by the engine)
What is the Brake HP (Hint: \(1 \mathrm{HP}=0.7456 \mathrm{KW}\) ) of the stationary engine?
Is the engine a new, existing, or reconstructed engine?
Does the engine meet any of the following conditions;
(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and
(2) It is technologically and economically feasible for the reconstructed source to meet the relevant standard(s) established by the Administrator (or a State) pursuant to section 112 of the Act.

When did you commence construction (date the engine is ordered by the owner or operator) or reconstruction on your stationary engine (ex. June \(12,2006=06 / 12 / 06\) )(All manufacturers use manufacture date)?

What is the date of manufacture of the engine?
What is the engine displacement (//cyl)(Hint:1 cc = 0.001 I \& V\#= \# cylinders)(If engine is not a new compression ignition engine use \(1 \mathrm{l} / \mathrm{c}\), otherwise obtain information from applicant or manufacturer)
- Does the engine use an oxidation catalyst?
- Does the engine have a CEMS (continuous emission monitoring system)? - Does the engine have NSCR (non-selective catalytic reduction)?
- Does the engine use a CPMS (continuous parameter monitoring system)?
- What are the total hours of operation per year for engine?
- How many of the total hours were during an emergency situation?
- How many of the total hours were used for maintance and testing?
- How many of the total hours were a part of the demand response program?

Was the engine used for peak shaving, to generate income for a facility to - supply power to an electrical grid, or supply power as a part of a finacial
arrangement with another entity? arrangement with another entity?
Your engine are classified as a/an Emergency Engine
Please select from the following engine categories

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline Compliance Date & Emission Limitations & Operating Limitations & \begin{tabular}{l}
Fuel \\
Requirements
\end{tabular} & Performance Test & Monitoring, Installation, Collection, Operation and Maintenance Requirements & Initial Compliance & Continuous Compliance & Notification Requirements & Recordkeeping Requirements & Reporting Requirements & General Provisions ( 40 CFR part 63) \\
\hline 5/3/2013 & \[
\begin{aligned}
& 63.6603 \\
& \text { Table 2d }
\end{aligned}
\] & No Requirements & No Requirements & No Requirements & \[
\begin{aligned}
& 63.6625(\mathrm{e}),(\mathrm{f}) \text {, } \\
& \text { (h). (i) }
\end{aligned}
\] & No Requirements & \[
\begin{aligned}
& 63.6605 \\
& 63.6640
\end{aligned}
\] & No Requirements & \[
\begin{gathered}
63.6655 \\
(\text { except } \\
63.6655(\mathrm{c}))
\end{gathered}
\] & Footnote 2 of Table 2d & \begin{tabular}{|c} 
\\
Yes, except \\
per \\
63.6645(a)( \\
5), the \\
following do \\
not apply: \\
\(63.7(\mathrm{~b})\) and \\
(c), \(63.8(\mathrm{e})\). \\
(f)(4) and \\
(f)(6), and \\
\(63.9(\mathrm{~b})-(\mathrm{e})\), \\
(g) and (h).
\end{tabular} \\
\hline
\end{tabular}


\section*{Instructions:}
- Always answer the questions in order

Only orange colored cells should have an answer/choice in them. All others should be left blank.
- Follow the arrows until you have a big green arrow. When you get a big green arrow you are finished!
- The detailed results of the RICE will be on tabs ZZ7Z or IIII or JJJJ of this worksheet.
- Contact Andrew Bass (andrew.bass@dep.state.fl.us) with any Errors/Suggestions about the Program.


\section*{Input}
- Are you the Manufacturer or the Owner and Operator of the Fire Pump?

Is the Fire Pump a temporary replacement unit and located at a stationary source for less -than 1 year and has been properly certified as meeting the standards that would be applicable to such engine under the appropriate non-road engine provisions?
- Is your Fire Pump being tested at a stationary RICE test cell/stand?

Does your facility have the potential to emit 10 or more tons/year of any single hazardous air pollutant or 25 or more tons/year of any combination of hazardous air pollutants?(Area or Major Source)
- What is the Brake HP (Hint: \(1 \mathrm{HP}=0.7456 \mathrm{KW}\) ) of the stationary Fire Pump?

A fire pump is considered to be reconstructed if it meets any of the following conditions (1) The fixed capital cost of the new (after July 11, 2005) components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and (2) It is technologically and economically feasible for the reconstructed source to meet the relevant standard(s) established by the Administrator (or a State) pursuant to section 112 of the Act.

When did you commence construction (date the Fire Pump is ordered by the owner or - operator) or reconstruction on your stationary Fire Pump (ex. June 12, \(2006=06 / 12 / 06\) )(All manufacturers use manufacture date)?
- What is the date of manufacture of the Fire Pump?

What is the Fire Pumps displacement (//cyl)(Hint:1 cc \(=0.001\) | \& V\# \(=\) \# cylinders)(If engine - is not a new compression ignition engine use \(1 \mathrm{l} / \mathrm{c}\), otherwise obtain information from applicant or manufacturer)
\begin{tabular}{l}
\(\Rightarrow\) Owner and Operator \\
\(\Rightarrow\) No \\
\(\Rightarrow\) No \\
\(\Rightarrow\) No \\
\hline 216 HP \\
\hline
\end{tabular}
\(\Rightarrow\)\begin{tabular}{|c|}
\hline \(7 / 1 / 1992\) \\
\(\Rightarrow 7 / 1 / 1992\) \\
\hline \(1.00 \mathrm{l/cyl}\) \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|}
\hline Emission Limitations & \begin{tabular}{l}
Operating \\
Limitations
\end{tabular} & Fuel Requirements & Performance Test & Monitoring, Installation, Collection, Operation and Maintenance Requirements & Initial Compliance & Continuous Compliance & Notification Requirements & Recordkeeping Requirements & Reporting Requirements & General Provisions (40 CFR part 63) \\
\hline \begin{tabular}{l}
63.6603 \\
Table 2d
\end{tabular} & No Requirements & No Requirements & No Requirements & \[
\underset{\text { (i) }}{63.6625(e),(f), ~(h), ~}
\] & No Requirements & \[
\begin{aligned}
& 63.6605 \\
& 63.6640
\end{aligned}
\] & No Requirements & \[
\begin{gathered}
63.6655 \\
\text { (except } 63.6655(\mathrm{c}) \text { ) }
\end{gathered}
\] & Footnote 1 of Table 2d & Yes, except per 63.6645(a)(5), the following do not apply: 63.7(b) and (c), 63.8(e), (f)(4) and ( \(f\) )(6), and 63.9(b)-(e), (g) and (h). \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline Emission Limitations & Operating Limitations & Fuel Requirements & Performance Tests & General Provisions ( 40 CFR part 63) & Initial Compliance & Continuous Compliance \\
\hline \begin{tabular}{l}
63.6603;Table 2d \\
a. Change oil and filter every 500 hours of operation or annually, whichever comes first; \\
b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary \\
Note: During periods of startup you must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
\end{tabular} & No Requirements & No Requirements & No Requirements & Yes, except per \(63.6645(\mathrm{a})(5)\), the following do not apply: 63.7(b) and (c), 63.8(e), \((f)(4)\) and (f)(6), and \(63.9(\mathrm{~b})-(\mathrm{e})\). (g) and (h). & No Requirements & \begin{tabular}{l}
63.6605; 63.6640 \\
63.6605 (a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times. \\
(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, \\
review of operation and maintenance records, and inspection of the source. \\
Table 6; (9) i. Operate and maintain the stationary RICE according to the manufacturer's emission related operation and maintenance instructions; or \\
ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. \\
(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures,
review of operation and maintenance records, and inspection of the source.
\end{tabular} \\
\hline \multicolumn{3}{|c|}{Recordkeeping Requirements} & \multicolumn{2}{|c|}{Reporting Requirements} & \multicolumn{2}{|r|}{Monitoring, Installation, Collection, Operation and Maintenance Requirements} \\
\hline \multicolumn{3}{|l|}{\begin{tabular}{l}
63.6655; (except 63.6655(c)) \\
(a)(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in \(\$ 63.10\) (b)(2)(xiv). \\
(2) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. \\
(3) Records of performance tests and performance evaluations as required in \(\S 63.10\) (b)(2)(viii). \\
(4) Records of all required maintenance performed on the air pollution control and monitoring equipment. \\
(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with \\
§63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. \\
(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section. \\
(1) Records described in \(\$ 63.10\) (b) (2) (vi) through (xi). \\
(2) Previous (i.e., superseded) versions of the performance evaluation plan as required in \(\$ 63.8(\mathrm{~d})(3)\). \\
(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in \(\$ 63.8(f)(6)(\mathrm{i})\), \\
if applicable. \\
(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you. \\
(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) \\
according to your own maintenance plan if you own or operate any of the following stationary RICE; \\
(1) An existing stationary CI RICE with a site rating of less than 100 brake HP located at a major source of \\
HAP emissions. \\
(2) An existing stationary emergency CI RICE. \\
(3) An existing stationary CI RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart. \\
(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) or (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, \\
including what classified the operation as emergency and how many hours are spent for non-emergency
\end{tabular}} & \multicolumn{2}{|l|}{\begin{tabular}{l}
Footnote 1 of Table 2d: \\
Sources have the option to utilize an oil analysis program as described in \(\$ 63.6625\) (i) in order to extend the specified oil change requirement in Table 2d of this subpart.
\end{tabular}} & & \\
\hline
\end{tabular}

\section*{ATTACHMENT LC-EU2-I2}

EU 005 PERFORMANCE AND EMISSION DATA
\begin{tabular}{|lc|}
\hline \multicolumn{2}{|c|}{ TABLE 1 } \\
PERFORMANCE AND EMISSION DATA FOR TWO \\
EMERGENCY GENERATORS FOR LAKE \\
COGENERATION FACILITY
\end{tabular}

\footnotetext{
\({ }^{\text {a }}\) Source:AP-42 3.3 Gasoline and Diesel Industrial Engines Table 3.3-
1, Golder, 2010.
}

ATTACHMENT LC-EU2-I3
EU 006 PERFORMANCE AND EMISSION DATA

TABLE 1
Performance and Emission Data for Fire Water Pump at Lake Cogen
\begin{tabular}{|c|c|}
\hline Parameter & Value \\
\hline \multicolumn{2}{|l|}{Performance} \\
\hline Number of Units & 1 \\
\hline Rating (kW) & 161 \\
\hline Rating (hp) & 216 \\
\hline Fuel & Diesel \\
\hline Fuel Heat content (Btulb) (HHV) & 19,300 \\
\hline Fuel density (lb/gal) & 7.1 \\
\hline Heat input (MMBtu/hr) (HHV) & 1.3 \\
\hline Fuel usage (gallons/hr) & 9.8 \\
\hline Maximum operation (hours/yr) & 250 \\
\hline Maximum fuel usage (gallons/yr) & 2,450 \\
\hline \multicolumn{2}{|l|}{Emissions} \\
\hline \(\mathrm{SO}_{2}-\quad \mathrm{Basis}(\% \mathrm{~S})\) & 0.0015\% \\
\hline Conversion of S to \(\mathrm{SO}_{2}\) & 100 \\
\hline Molecular weight \(\mathrm{SO}_{2} / \mathrm{S}(64 / 32)\) & 2 \\
\hline Emission rate ( \(\mathrm{lb} / \mathrm{hr}\) ) & 0.002 \\
\hline (TPY) & 0.000 \\
\hline \(\mathrm{NO}_{\mathrm{x}}\) - Basis AP-42 Table 3.3-1 (g/hp-hr) & 14.06 \\
\hline Emission rate ( \(\mathrm{lb} / \mathrm{hr}\) ) & 6.7 \\
\hline (TPY) & 0.84 \\
\hline CO - Basis AP-42 Table 3.3-1 (ghp-hr) & 3.0 \\
\hline Emission rate ( \(\mathbf{l} / \mathrm{hr}\) ) & 1.4 \\
\hline (TPY) & 0.18 \\
\hline VOC - Basis AP-42 Table 3.3-1 (g/hp-hr) & 1.14 \\
\hline Emission rate ( \(\mathrm{lb} / \mathrm{hr}\) ) & 0.54 \\
\hline (TPY) & 0.07 \\
\hline PM/PM \({ }_{10}\) - Basis AP-42 Table 3.3-1 (g/hp-hr) & 1.00 \\
\hline Emission rate ( \(\mathrm{lb} / \mathrm{hr}\) ) & 0.48 \\
\hline (TPY) & 0.06 \\
\hline
\end{tabular}

Source: Golder, 2011; AP-42 Table 3.3-I.

\section*{ATTACHMENT LC-EU3-I1}

FUEL OIL STORAGE CALCULATIONS WITH 40 CFR 60 SUBPART KB APPLICABILITY ANALYSIS

\section*{TABLE 1}

\section*{FUEL OIL STORAGE TANK, LAKE COGENERATION FACILITY}

Obiective: Calculate the PTE for existing fuel oil storage tank.
Approach: Use EPA's TANKS, Version 4.0.9d, program to estimate emissions of organic chemicals from storage tank. The calculations are performed according to EPA's AP-42. The equations used in TANKS are documented in AP-42 Section 7.1, Organic Liquid Storage Tanks.

\section*{Given:}

Maximum annual rate \(=2,921\) gallons/hour \(\times 240 \mathrm{hr} / \mathrm{yr} \sim 701,050\) gallons/yr/CT I
\(701,050 \mathrm{gal} / \mathrm{yr} / \mathrm{CT}\) fuel oil is the maximum process rate per CT to reflect fuel oil throughput from the oil storage tanks. The total VOC is doubled since there ar
Solution:
VOC Potential Engine Emissions
\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline Diesel/Fuel Tanks & Quantity & Tank Capacity (gal) & Height of Tank ( ft ) & Diameter of Tank
\[
(\mathrm{ft})
\] & \begin{tabular}{l}
Net \\
Throughput (gal/year)
\end{tabular} & Color/condition of tank shell & VOC Annual Emission Rate (lb/year)* & VOC Annual Emission Rate (ton/year) \\
\hline Distillate Oil (No. 2) & 1 & 170,000 & 30 & 32.5 & 753,991 & Grey/Good & 64.5 & 0.03 \\
\hline \multicolumn{9}{|l|}{} \\
\hline
\end{tabular}
Notes:
*From TANKS 4.0.9d Emission Reports - Detail Format
Assumed a Vertical Fixed roof Tank
Summary:
\begin{tabular}{|l|c|}
\hline \begin{tabular}{c} 
Tank Potential \\
Emissions
\end{tabular} & \begin{tabular}{c} 
Annual Emission \\
Rate (tons/year)
\end{tabular} \\
\hline VOC Total & 0.06 \\
\hline
\end{tabular}

Per 40 CRF 60 Subpart \(\mathrm{Kb} 60.110 \mathrm{~b}(\mathrm{~b})\), this tank does not apply to the since it has a capacity greater than \(151 \mathrm{~m}^{3}\) and has a max. true vapor pressure less than 3.5 KP .

TANKS 4.0.9d
Emissions Report - Detail Format Tank Indentification and Physical Characteristics

\author{
Identification User Identification: City: State: Company: Type of Tank Description:
}

Tank Dimensions Shell Height (fit) Diameter (ft): Avg. Liquid Height (fi): Avg. Liquid Height (f):
Volume (gallons): Volume (gal Tumovers:
Net Throughput(gal/yr) Net Throughput(gal/yr)
Is Tank Heated \((y / n)\) :

Paint Characteristics
Shell Color/Shade
Shell Condition
Roof Cosor/Shade
Roof Condition:
Good
Gray/Medium
oof Characteristics
Type:
Height (ft)
Radius (ft) (Dome Roof)

Caithness Fuel Oll Tank
Umatilla
Florida
Caithness
Vertical Fixed Roof Tank
\begin{tabular}{r}
30.00 \\
32.50 \\
27.00 \\
27.00 \\
\\
\(167,553.52\) \\
4.50 \\
\\
\hline \(753,990.85\)
\end{tabular}

N

Gray/

Good

Dome
reather Vent Settings
Vacuum Settings ( psig ) Vacuum Settings (psig): \(\quad-0.03\)
Pressure Settings (psig)

TANKS 4.0.9d
Emissions Report - Detail Format Liquid Contents of Storage Tank

Caithness Fuel Oll Tank - Vertical Fixed Roof Tank Umatilla, Florida
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[b]{2}{*}{MxtureiC ombonent} & \multirow[b]{2}{*}{Month} & \multicolumn{3}{|l|}{Darly Liquid Surf. Temperature \((\operatorname{deg} F)\)} & \multirow[t]{2}{*}{\[
\begin{gathered}
\text { Liguid } \\
\text { Sumk } \\
\text { Temp } \\
\text { (deg F) }
\end{gathered}
\]} & \multicolumn{3}{|r|}{Vapor Pressure (psia)} & \multirow[t]{2}{*}{\[
\begin{gathered}
\text { Vapor } \\
\text { Moi.t } \\
\text { Weight. }
\end{gathered}
\]} & \multirow[t]{2}{*}{\[
\begin{aligned}
& \text { Lauld } \\
& \text { Mrass } \\
& \text { Fract }
\end{aligned}
\]} & \multirow[t]{2}{*}{\[
\begin{aligned}
& \text { Vapor } \\
& \text { Mass } \\
& \text { Fract. }
\end{aligned}
\]} & \multirow[b]{2}{*}{\[
\begin{gathered}
\text { Mol. } \\
\text { Weight }
\end{gathered}
\]} & \multirow[b]{2}{*}{Basis for Vapor Pressure Cakulatons} \\
\hline & & Avg. & Min. & Max. & & Avg. & Min. & Max. & & & & & \\
\hline Disturate reel of no. 2 & All & 82.31 & 71.62 & 92.99 & 75.39 & 0.0129 & 0.0095 & 0.0178 & 130.0000 & & & 188.00 & Opben 1: VP70 \(=.009 \mathrm{VP}\) \\
\hline
\end{tabular}

TANKS 4.0.9d
Emissions Report - Detail Format Detail Calculations (AP-42)

Caithness Fuel Oll Tank - Vertical Fixed Roof Tank Umatilla, Florida
\begin{tabular}{|c|c|}
\hline \multicolumn{2}{|l|}{Annual Emission Calcaulations} \\
\hline Standing Losses (l). & 34.3396 \\
\hline vapor Space volume (eu ti). & 38.0146 \\
\hline Vapor Density (fitcal it) & 0 \\
\hline Veor Space Expansion Factor; & 0.0.0754 \\
\hline \multicolumn{2}{|l|}{\multirow[b]{2}{*}{Tank Vapor Space Volume.}} \\
\hline & \\
\hline Vapor Space volume (cu ti) & \({ }^{4.338 .0146}\) \\
\hline Vapor Space Oulage (t) & 5.2292 \\
\hline Tenk Shell Height (t): & 30.0000 \\
\hline Average Liquid Height (ti). & 27.0000 \\
\hline Rool Outage (ti): & 2.2292 \\
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Root Ourage (Dome Roof) 22392}} \\
\hline & 2.2292 \\
\hline Oome Radius (ti): & 32.5000
152500 \\
\hline Shell Radius (ti)' & 16.2500 \\
\hline \multicolumn{2}{|l|}{Vapor Denstly} \\
\hline Vapor Densisy (Ificu it). & 0.0003 \\
\hline Vapor Morecular Weight (lim-mole). & 130.0000 \\
\hline Vapor Pressure at Daily Average Lquid & \\
\hline  & \({ }^{0.0129}\) \\
\hline Dail Avg. Liquid Surlace Temp. (deg, R) & \({ }_{7}^{541.127565}\) \\
\hline \multicolumn{2}{|l|}{} \\
\hline ldeel Gas Conslam (psia cul/ (l-moldeg R). & \\
\hline \multicolumn{2}{|l|}{Liquid Bulk Temporature (deeg. R). 535.06525} \\
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{}} \\
\hline & \\
\hline \multicolumn{2}{|l|}{\begin{tabular}{l}
Daily Total Solar Insulation \\
539.1561
\end{tabular}} \\
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Vapor Space Exparsion Factor}} \\
\hline & 0.0754 \\
\hline Daily Vapor Temperature Range (deg. R). & \({ }_{\text {c }}^{42.7395}\) \\
\hline  & 0.00500 \\
\hline \multicolumn{2}{|l|}{Vepor Pressure at Daily Average Liquid} \\
\hline Surface Temperature (ssia & 0.0129 \\
\hline \multicolumn{2}{|l|}{Vapor Pressure at Dily Minimum Lquid 0.0095} \\
\hline Veport Pressure ai Oily Maximum Liquid & 0.0095 \\
\hline \multicolumn{2}{|l|}{} \\
\hline Daily Avg. Liquid Surtace Temp. (deg R) & 541.9758 \\
\hline Daily Min. UCuld Surface Temp. (deg R) & \({ }_{\text {cke }}^{531.2908}\) \\
\hline Daily Max, Liquid Surnse temp, (deg R). &  \\
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Vented Vapor saburuion Factor
Vented Vapor Sauraion Factior.}} \\
\hline & \\
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Vapor Pressure at Daily Average Liquid.}} \\
\hline & \\
\hline Vaper Space Outage (f)' & 5.2292 \\
\hline \multicolumn{2}{|l|}{Workiong Losses (1b): 30.1577} \\
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{l}
Vapor Molecular Weight ( \(1 \mathrm{~b} / \mathrm{b}\)-mole) \\
130.0000 \\
Vapor Pressure ar Daily Averege Liquid
\end{tabular}}} \\
\hline & \\
\hline \multicolumn{2}{|l|}{Annual Net Throughpul (galyri): \(753,990.8535\)} \\
\hline  & 4.5000 \\
\hline \multicolumn{2}{|l|}{Turnver Factior, \({ }_{\text {a }}\)} \\
\hline Maximum Liquid Veiume (gal): & 167,553.5230 \\
\hline \multicolumn{2}{|l|}{Maximum Liquid height (tf): \({ }^{27.00000}\)} \\
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{}} \\
\hline & \\
\hline Total Losses (lb). & 64.4976 \\
\hline
\end{tabular}

TANKS 4.0.9d
Emissions Report - Detail Format Individual Tank Emission Totals

\section*{Emissions Report for: Annual}

Caithness Fuel Oll Tank - Vertical Fixed Roof Tank Umatilla, Florida
\begin{tabular}{|c|c|c|c|}
\hline & \multicolumn{3}{|c|}{Losses(tbs)} \\
\hline Components & Working Loss & Breathing Loss & Total Emissions \\
\hline Distillate fuel oil no. 2 & 30.16 & 34.34 & 64.50 \\
\hline
\end{tabular}```

