



September 28, 2006

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BUREAU OF AIR REGULATION

Mr. A. A. Linero  
Program Administrator  
Permitting South Section  
Division of Air Resources Management  
Florida Department of Environmental Protection  
Twin Towers Office Building  
MS 5500  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

SUBJECT: Response to Request for Additional Information  
Reedy Creek Improvement District  
Project No. 095011-027-AV

Dear Mr. Linero:

Your letter of September 13, 2006 requested additional information regarding the Carbon Monoxide Continuous Assurance Monitoring (CAM) Plan for the purpose of completing our Title V Permit revision. Please find enclosed three (3) originals of:

1. The revised CAM Plan composed of four pages. The only changes made to this plan are modifications to the carbon monoxide emission limits that reflect those in the air construction permit.
2. The original signed and sealed professional engineer's certification.
3. The original signature sheet "Application Responsible Official Certification"

Please do not hesitate to call me if you have any questions or concerns.

Sincerely,

Edward Godwin, P.E.  
Chief Mechanical Engineer  
Reedy Creek Energy Services

cc: Mr. Leonard Kozlov  
Program Administrator  
Air Resources Management  
Florida Department of Environmental Protection  
3319 Maguire Boulevard, Suite 232  
Orlando, Florida 32803-3767

Post Office Box 10000 / Lake Buena Vista, Florida 32830-1000

## MONITORING APPROACH SUBMITTAL

### I. Background

#### A. Emissions Unit

Description: Combined Cycle Combustion Turbine  
(Type of emissions point) with a Natural Gas-Fired Duct Burner-  
Heat Recovery Steam Generator

Identification: 088  
(Emissions point number)

Facility: Walt Disney World Resort Complex -  
(Location) Facility ID 0950111

#### B. Applicable Regulation, Emission Limits, and Monitoring Requirements

Regulation No.: 40 CFR 60 Subpart GG  
Air Permit No. 0950111-025-AC

Pollutant: Carbon Monoxide 12.6 lbs/hr or 55.2 tpy burning natural gas  
(Emissions limit)

Pollutant: Carbon Monoxide 2.4 lbs/hr or 0.6 tpy burning fuel oil  
(Emissions limit)

#### C. Control Technology

Carbon Monoxide (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 is greater than 80% efficient at 392° F (200° C) within minutes of gas turbine startup, before power generation begins. The catalyst normally operates at a temperature around 800° F (427° C) with corresponding CO removal efficiencies above 90%. The carbon monoxide removal efficiency increases as temperature increases up to the maximum operating limit of 1250° F (677° C). (Refer to the attached graph in Figure 1, which illustrates the carbon monoxide conversion efficiency at varying temperatures up to 500° C (932° F). 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 in place to alert the operator if the catalyst inlet temperature exceeds 1250° F (677° C) to protect the bed from thermal damage, and a high-pressure alarm sounds if the pressure drop across the catalyst bed exceeds 3" of water column. 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.

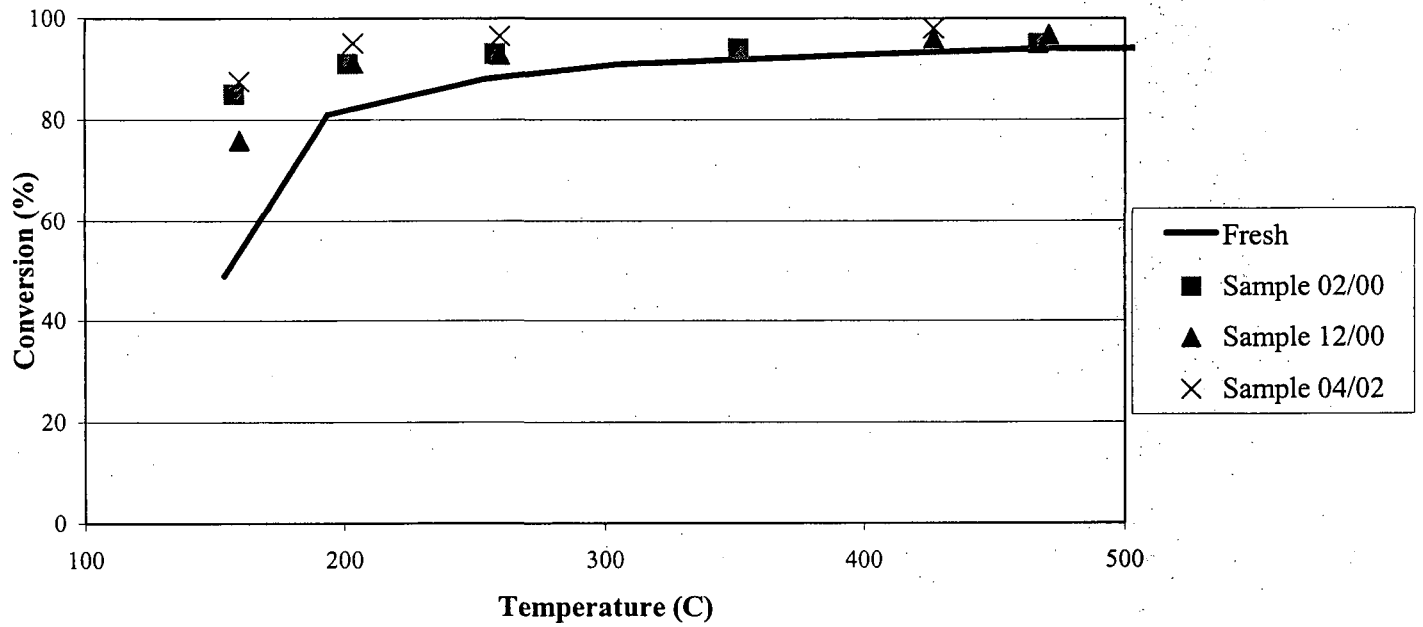
## II. Monitoring Approach

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 manufacturer to certify the condition of the catalyst.

TABLE 1: MONITORING APPROACH

	Indicator No. 1	Indicator No. 2
I. Indicator	Catalyst inlet temperature and pressure differential	Annual Test plug analysis
Measurement Approach	Thermocouples Pressure sensors	A test plug of the catalytic material is removed for the manufacturer's laboratory analysis.
II. Indicator Range	Minimum Temp. : 392° F (200° C) Maximum Temp. : 1250° F (677° C) Maximum pressure diff. = 3" of water column (w.c.)	Manufacturer certifies whether or not the catalyst is within operating specifications.
QIP Threshold (optional)	An excursion is defined as falling below 392° F (200° C), or rising above 1250° F (677° C), or rising above 3" w.c., during normal operation.	
III. Performance Criteria		
A. Data Representativeness	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.
B. Verification of Operational Status	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.
C. QA/QC Practices and Criteria	Annual testing/calibration of the temperature and pressure sensor transmitters	NA
D. Monitoring Frequency	Daily	Annual
Data Collection Procedures	Temperature and pressure readings are recorded daily.	Test plugs are removed when the plant is shut down for annual maintenance.
Averaging Procedures	NA (monitoring data does not correspond to actual emissions rate.)	NA

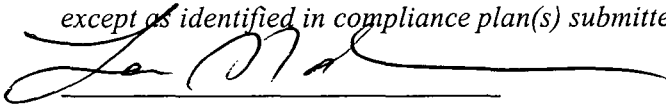
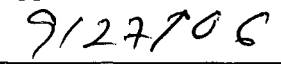
# Figure 1: Reedy Creek Cogeneration Plant CO Conversion



**APPLICATION INFORMATION**

**Application Responsible Official Certification**

**Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."**

1. Application Responsible Official Name: <b>Lee Schmudde, Vice President</b>
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" type="checkbox"/> 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. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.
3. Application Responsible Official Mailing Address... Organization/Firm: <b>Walt Disney World Company</b> Street Address: <b>P.O. Box 10000</b> City: <b>Lake Buena Vista</b> State: <b>Florida</b> Zip Code: <b>32830-1000</b>
4. Application Responsible Official Telephone Numbers... Telephone: <b>(407) 828 - 1723</b> ext. Fax: <b>(407) 828 - 4311</b>
5. Application Responsible Official Email Address: <b>lee.schmudde@disney.com</b>
6. Application Responsible Official Certification: <i>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 plan(s) submitted with this application.</i>  Signature  Date

WALT DISNEY WORLD COMPANY  
WALT DISNEY WORLD RESORT COMPLEX

TITLE V PERMIT REVISION APPLICATION  
PROJECT NO. 0950111-027-AV  
LM600 REPOWERING PROJECT  
REVISED COMPLIANCE ASSURANCE MONITORING PLAN

Professional Engineer Certification

Professional Engineer Statement:

*I, the undersigned, hereby certify, except as particularly noted herein\*, that:*

*(1) To the best of my knowledge, the information presented in the response by Reedy Creek Energy Services (RCES) to the Department's September 13, 2006 request for revisions to the Compliance Assurance Monitoring (CAM) Plan of Title V Permit No. 0950111-024-AV is true, accurate, and complete based on my review of material provided by RCES engineering and environmental staff; and*

*(2) To the best of my knowledge, any emission estimates reported or relied on in this submittal are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of air pollutants not regulated for an emissions unit, based solely upon the materials, information and calculations provided with this certification.*

Thomas W. Davis, P.E.  
Principal Engineer

Signature

Date

9/26/06

\* Certification is applicable to the RCES response to the Department's September 13, 2006 request for a revised Title V Permit No. 0950111-024-AV CAM Plan for the LM6000 Repowering Project.