

# Department of Environmental Protection

# RECEIVED

JUN 02 2006

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

BUREAU OF AIR REGULATION

### I. APPLICATION INFORMATION

- Air Construction Permit** – Use this form to apply for an air construction permit for a proposed project:
- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
  - where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
  - at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.
- Air Operation Permit** – Use this form to apply for:
- an initial federally enforceable state air operation permit (FESOP); or
  - an initial/revised/renewal Title V air operation permit.
- Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option)** – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

#### Identification of Facility

1. Facility Owner/Company Name: <b>Walt Disney World Company</b>	
2. Site Name: <b>Walt Disney World Resort Complex, Reedy Creek Improvement District</b>	
3. Facility Identification Number: <b>0950111</b>	
4. Facility Location Street Address or Other Locator: <b>1375 Buena Vista Drive</b> City: <b>Lake Buena Vista</b> County: <b>Orange and Osceola</b> Zip Code: <b>33830-8402</b>	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

#### Application Contact

1. Application Contact Name: <b>Edward Godwin, P.E.</b>
2. Application Contact Mailing Address... Organization/Firm: <b>Reedy Creek Energy Services</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>
3. Application Contact Telephone Numbers... Telephone: <b>(407) 824-4943</b> ext. Fax: <b>(407) 824-4529</b>
4. Application Contact Email Address: <b>ed.godwin@disney.com</b>

#### Application Processing Information (DEP Use)

1. Date of Receipt of Application:	<b>6-2-06</b>
2. Project Number(s):	<b>0950111-026-AC</b>
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

## APPLICATION INFORMATION

### Purpose of Application

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

#### **Air Construction Permit**

Air construction permit. (Revision Request)

#### **Air Operation Permit**

- Initial Title V air operation permit.  
 Title V air operation permit revision.  
 Title V air operation permit renewal.  
 Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.  
 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)**

- Air construction permit and Title V permit revision, incorporating the proposed project.  
 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:**

- 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

The Department issued Air Construction Permit No. 0950111-025-AC dated June 13, 2005 to the Walt Disney World Company, Reedy Creek Improvement District (RCID) authorizing the installation and initial operation of a replacement LM6000 PC gas turbine. The purpose of this application is to: (a) request a revision to Air Construction Permit No. 0950111-025-AC to allow for an increase in permitted heat input capacity, and (b) and to clarify the calculation and recording of excess emissions due to startup/shutdown/malfunction.

Section 3., Condition No. 6 of Air Construction Permit No. 0950111-025-AC limits the LM6000 gas turbine maximum heat input to 480 million British thermal units per hour on a higher heating value basis (mmBtu/hr, HHV) at a compressor inlet temperature of 30°F and full load operation. Initial operation of the LM6000 gas turbine indicates that this maximum heat input, which was based on gas turbine vendor projections, under estimates the actual performance of the LM6000 unit by approximately five percent. Accordingly, RCID requests that Condition No. 6 be revised to show a maximum heat input of 505 mmBtu/hr, HHV at 30°F and full load operation.


Section 3, Condition No. 20 and No. 20(e) of Air Construction Permit No. 0950111-025-AC defines the calculation and recording of emissions averages and excess emissions. RCID requests clarification of these monitoring requirements per the attached "Proposed Section 3, Condition 20(e) – Emissions Averages" protocol.



**APPLICATION INFORMATION**

**Owner/Authorized Representative Statement**

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

1. Owner/Authorized Representative Name : <b>Lee Schmutde, Vice President</b>
2. Owner/Authorized Representative 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>
3. Owner/Authorized Representative Telephone Numbers... Telephone: <b>(407) 828 - 1723</b> ext. Fax: <b>(407) 828 - 4311</b>
4. Owner/Authorized Representative Email Address: <b>lee.schmutde@disney.com</b>
5. Owner/Authorized Representative Statement:  <i>I, the undersigned, am the owner or authorized representative of the facility 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 requirements identified in this application to which the facility 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.</i>   Signature  <u>5/31/08</u> Date

APPLICATION INFORMATION

N/A

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:			
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):			
<input 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:			
Street Address:			
City:	State:	Zip Code:	
4. Application Responsible Official Telephone Numbers...			
Telephone:	( ) -	ext.	Fax: ( ) -
5. Application Responsible Official Email Address:			
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	

**APPLICATION INFORMATION**

**Professional Engineer Certification**

1. Professional Engineer Name: <b>Thomas W. Davis</b> Registration Number: <b>36777</b>
2. Professional Engineer Mailing Address... Organization/Firm: <b>Environmental Consulting &amp; Technology, Inc.</b> Street Address: <b>3701 Northwest 98<sup>th</sup> Street</b> City: <b>Gainesville</b> State: <b>Florida</b> Zip Code: <b>32606-5004</b>
3. Professional Engineer Telephone Numbers... Telephone: <b>(352) 332 - 0444</b> ext. Fax: <b>(352) 332 - 6722</b>
4. Professional Engineer Email Address: <b>tdavis@ectinc.com</b>
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>), if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been <del>designed</del> or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i>  <i>Thomas W. Davis</i> _____ Signature  5/30/06 _____ Date  (seal)

**EMISSIONS UNIT INFORMATION**

Section [ 1 ] of [ 1 ]

**B. EMISSIONS UNIT CAPACITY INFORMATION**

(Optional for unregulated emissions units.)

**Emissions Unit Operating Capacity and Schedule**

1. Maximum Process or Throughput Rate: N/A
2. Maximum Production Rate: N/A
3. Maximum Heat Input Rate: 505 million Btu/hr (HHV) – CT 198 million Btu/hr (HHV) – HRSG DB
4. Maximum Incineration Rate: pounds/hr N/A tons/day
5. Requested Maximum Operating Schedule: 24 hours/day 7 days/week 52 weeks/year 8,760 hours/year
6. Operating Capacity/Schedule Comment:  <b>Maximum CT heat input at a compressor inlet air temperature of 30°F, fuel higher heating value, and 100% load. CT heat input rates will vary depending upon CT characteristics, ambient conditions, fuel type, and CT compressor inlet air conditioning.</b>  <b>The HRSG DB will operate only in fresh-air mode (i.e., the duct burner will not operate concurrently with the GE LM 6000 CT) for up to 1,000 hours per year.</b>

**EMISSIONS UNIT INFORMATION**

Section [ 1 ] of [ 1 ]

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate: Segment 1 of 3**

1. Segment Description (Process/Fuel Type):  <b>Combustion turbine fired with pipeline-quality natural gas.</b>		
2. Source Classification Code (SCC): <b>2-01-002-01</b>		3. SCC Units: <b>Million cubic feet burned</b>
4. Maximum Hourly Rate: <b>0.500</b>	5. Maximum Annual Rate: <b>4,380</b>	6. Estimated Annual Activity Factor: <b>N/A</b>
7. Maximum % Sulfur: <b>N/A</b>	8. Maximum % Ash: <b>N/A</b>	9. Million Btu per SCC Unit: <b>1,040 (HHV)</b>
10. Segment Comment: <b>Fields 4 and 5 based on 100% load, CT inlet air temperature of 48°F, and 8,760 hr/yr.</b>		

**Segment Description and Rate: Segment 2 of 3**

1. Segment Description (Process/Fuel Type):  <b>Combustion turbine fired with distillate fuel oil.</b>		
2. Source Classification Code (SCC): <b>2-01-001-01</b>		3. SCC Units: <b>Thousand gallons burned</b>
4. Maximum Hourly Rate: <b>3.666</b>	5. Maximum Annual Rate: <b>1,741.4</b>	6. Estimated Annual Activity Factor: <b>N/A</b>
7. Maximum % Sulfur: <b>0.1</b>	8. Maximum % Ash: <b>0.1</b>	9. Million Btu per SCC Unit: <b>137,760 (HHV)</b>
10. Segment Comment:  <b>Fields 4 and 5 based on 100% load, CT inlet air temperature of 30°F, and 475 hr/yr.</b>		



**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: <b>SO<sub>2</sub></b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>51.7 lb/hour                      23.8 tons/year</b>	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year <b>N/A</b>	
6. Emission Factor: <b>N/A</b> Reference: <b>Vendor Data</b>	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions: <b>Potential Hourly Emissions:</b> 100% load, 30°F CT inlet, oil-firing  <b>Potential Annual Emissions:</b> 100% load, 30°F CT inlet, oil-firing (475 hr/yr) 100% load, 48°F CT inlet, gas-firing (8,285 hr/yr)  $51.7 \frac{lb}{hr} \times 475 \frac{hr}{yr} \times \frac{ton}{2,000 lb} + 2.8 \frac{lb}{hr} \times 8,285 \frac{hr}{yr} \times \frac{ton}{2,000 lb} = 12.3 + 11.5 = 23.8 \frac{ton}{yr}$	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -  
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: <b>ESCPSD</b>	2. Future Effective Date of Allowable Emissions:  N/A
3. Allowable Emissions and Units: <b>2.0 grains S / 100 ft<sup>3</sup> natural gas</b>	4. Equivalent Allowable Emissions: <b>2.8 lb/hour      12.2 tons/year</b>
5. Method of Compliance: <b>Fuel analysis per 40 CFR Part 75, Appendix D.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Limits applicable to CT while firing natural gas. Field 4 annual emissions based on maximum of 8,760 hr/yr.</b>	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: <b>ESCPSD</b>	2. Future Effective Date of Allowable Emissions:  N/A
3. Allowable Emissions and Units: <b>0.1 weight % S distillate fuel oil</b>	4. Equivalent Allowable Emissions: <b>51.7 lb/hour      12.3 tons/year</b>
5. Method of Compliance: <b>Fuel analysis per 40 CFR Part 75, Appendix D.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Limits applicable to CT while firing No. 2 fuel oil. Field 4 annual emissions based on maximum of 475 hr/yr.</b>	

Allowable Emissions Allowable Emissions    of   

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour      tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: <b>PM/PM<sub>10</sub></b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>15.5 lb/hour                      16.1 tons/year</b>	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year <b>N/A</b>	
6. Emission Factor: <b>N/A</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions: <b>Potential Hourly Emissions:</b> 100% load, 30°F CT inlet, oil-firing  <b>Potential Annual Emissions:</b> 100% load, 30°F CT inlet, oil-firing (475 hr/yr) 100% load, 48°F CT inlet, gas-firing (8,285 hr/yr)  $15.5 \frac{lb}{hr} \times 475 \frac{hr}{yr} \times \frac{ton}{2,000 lb} + 3.0 \frac{lb}{hr} \times 8,285 \frac{hr}{yr} \times \frac{ton}{2,000 lb} = 3.7 + 12.4 = 16.1 \frac{ton}{yr}$	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -  
 ALLOWABLE EMISSIONS**

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

**Allowable Emissions** Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: <b>ESCPSD</b>	2. Future Effective Date of Allowable Emissions:  <b>N/A</b>
3. Allowable Emissions and Units: <b>N/A</b>	4. Equivalent Allowable Emissions: <b>3.0 lb/hour 13.1 tons/year</b>
5. Method of Compliance: <b>EPA Reference Method 9 (opacity used as a surrogate for PM/PM<sub>10</sub>).</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Limits applicable to CT while firing natural gas. Field 4 annual emissions based on maximum of 8,760 hr/yr.</b>	

**Allowable Emissions** Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: <b>ESCPSD</b>	2. Future Effective Date of Allowable Emissions:  <b>N/A</b>
3. Allowable Emissions and Units: <b>N/A</b>	4. Equivalent Allowable Emissions: <b>15.5 lb/hour 3.7 tons/year</b>
5. Method of Compliance: <b>EPA Reference Method 9 (opacity used as a surrogate for PM/PM<sub>10</sub>).</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Limits applicable to CT while firing No. 2 fuel oil. Field 4 annual emissions based on maximum of 475 hr/yr.</b>	

**Allowable Emissions** Allowable Emissions    of   

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: <b>lb/hour tons/year</b>
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	