TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION

Walt Disney Parks and Resorts U.S., Inc.

Walt Disney World Resort Complex

EPCOT Generator #1 and #2 Minor Permit Revisions

Construction Permits:

AC48-105243 and AC48-106650

Orange and Osceola Counties

DEP File No. 0950111-033-AC

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation
Permitting South Section

November 8, 2012

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

1. GENERAL PROJECT INFORMATION

Applicant Name and Address

Walt Disney Parks and Resorts, Inc.
P.O. Box 10,000
Lake Buena Vista, Florida 32830-1000

Authorized Representative:
Mr. Lee Schmudde, Authorized Representative

Processing Schedule

05/09/12: Received application to construct.

11/8/12: Distributed Intent to Issue Permit.

Facility Description and Location

This Walt Disney resort is a complex of hotels, theme parks and support facilities, and a utility. The various air pollution sources are boilers, a combined cycle combustion turbine with a natural gas-fired heat recovery steam generator, paint spray booths and associated operations, external combustion oil heaters and hot water heaters. This facility is located at 1375 Buena Vista Drive, Orange and Osceola Counties; UTM Coordinates: Zone 17, 449.70 km East and 3138.00 km North; Latitude: 28° 22' 24" North and Longitude: 81° 32' 46" West.

Figure 1. Map of Site Location and Photograph from the Walt Disney Resort Complex.

Major Regulatory Categories

The key regulatory provisions applicable to the facility are:

Title I, Part C, Clean Air Act (CAA): The facility is located in an area that is designated as "attainment", "maintenance", or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard (NAAQS). Potential emissions of at least one regulated pollutant exceed 100 tons per year; therefore the facility is classified as a "major stationary source" of air pollution with respect to Rule 62-212.400, Florida Administrative Code (F.A.C.), Prevention of Significant Deterioration of Air Quality.

Title I, Section 111, CAA: The combined cycle combustion turbine with a natural gas-fired heat recovery steam generator is regulated under NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, and Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units**,** adopted and incorporated by reference in Rules 62-204.800(7)(b)38. & 62-204.800(7)(b)3., F.A.C., respectively; PSD-FL-014/014(A)/123, Prevention of Significant Deterioration (PSD), in Rule 62-212.400, F.A.C.

Title I, Section 112, CAA: The facility is a "Major Source" of hazardous air pollutants (HAPs). The new dry cleaning machine is regulated under NESHAP – 40 CFR 63, Subpart M, National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities.

Title V, CAA: The facility is a Title V or "Major Source of Air Pollution" in accordance with Chapter 62-213, F.A.C., because the potential emissions of at least one regulated pollutant exceed 100 tons per year. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC). The facility's current Title V Air Operation Permit is 0950111-029-AV.

CAIR: The facility is subject to the Federal Clean Air Interstate Rule (CAIR) in accordance with the Final Department Rules issued pursuant to CAIR as implemented by FDEP in Rule 62-296.470, Florida Administrative Code (FAC).

Proposed Project

The project revises conditions in the original construction permits for two large generators (such as the generator pictured below) that are located near the Disney EPCOT theme park.

Figure 2. Photograph of installation of a typical Stewart Stevenson Emergency Generator (from http://www.stewartandstevenson.com/equipment/category/generators)

2. REGULATIONS THAT APPLY TO THE PROJECT

State Rules

This project is subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The Florida Statutes authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the F.A.C. This project is subject to the applicable rules and regulations defined in the following Chapters of the Florida Administrative Code. These include: 62-4 (Permitting Requirements); 62-204 (Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference); 62-210 (Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms); 62-212 (Preconstruction Review, PSD Review and BACT); 62-213 (Title V Air Operation Permits for Major Sources of Air Pollution); 62-296 (Emission Limiting Standards); 62-204 (Air Pollution Control –General Provisions) and 62-297 (Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures). When the pair of 2.5 MW engines were installed in 1985, the project triggered PSD for NO_X and a BACT determination was done for this pollutant.

Federal Rules

Each of the two engines are regulated under the National Emission Standards for Hazardous Air Pollutants (NESHAP) found in the Code of Federal Regulations, Chapter 40, Part 63, Subpart ZZZZ– as existing stationary RICE. These two diesel engines will be fit with oxidation catalysts within the next few months to meet a compliance date of May 3, 2013.

3. PERMIT HISTORY AND AC PERMIT REVISIONS

In 1985, the applicant applied to the state for a construction permit to install two new diesel generators consisting of two diesel engines, Stewart Stevenson turbo charged, 3,600 hp and 20 cylinders for each engine. These large bore engines have a cylinder displacement of 10.6 liters per cylinder and have a rated fuel consumption of approximately 200 gal/hr at full load. Each generator is rated at 2.5 MW. Based on a maximum operation of 1,900 hrs/yr for each engine/generator pair the annual emissions of NO_X for the project (both engines) was calculated at 239 tpy (based on test results from a similar uncontrolled engine) which exceeded the PSD Significance level for this construction project at a major source. Therefore, a BACT analysis was done for NO_X. The BACT limit was set at 126 lbs/hr of NO_X for each engine. This emission level was apparently based on the emission test data from similar size diesel engine testing which was submitted with the application. The BACT also included a VE limit of 5% opacity although this limit was revised in a subsequent AC permit (No. 0950111-016-AC) to 20% opacity.

In the application for a Title V permit renewal, the applicant asked for a revision of the original construction permits for these two large diesel-powered generators near the EPCOT theme park. The applicant had indicated that emissions of CO from these engines could exceed the limits in the construction permits for each engine and asked to remove the CO limit and replace it with the NESHAP requirement to reduce measured CO emissions by 70%. Upon review of the file, it was determined that limits for other pollutants besides NO_X (i.e. CO, PM, SO_2 and VOC) were apparently placed in the original construction permits based on information in the application. At that time, the emission limits for these pollutants were not based on a state or federal rule that limits these pollutants from the two diesel engines. These pollutants also did not trigger a PSD review, so these pollutants were inappropriately limited through the original construction permit. The proposed revisions are to remove all but the NO_X emission limits from the two construction permits which are revised in this project.

4. OTHER CONSIDERATIONS

The requirements already listed in the facility's existing Title V Air Operation Permit No. 0950111-029-AV are applied in the renewed Title V operating permit and will include the emission limiting standards from the RICE NESHAP that apply to these two existing non-emergency diesel engines. The compliance date for these new controls and emission limits is May 3, 2013. The Title V permit will include testing and recordkeeping conditions demonstrating that the project complies with the specified emissions standards of NESHAP – 40 CFR 63, Subpart

ZZZZ as they apply to each stationary RICE and to the two EPCOT generator engines in particular. Emissions of both hazardous air pollutants and other pollutants that result from incomplete combustion of the diesel fuel, such as CO or VOCs, will be reduced by at least 70% of the uncontrolled levels.

5. CONCLUSION

This minor permit revision removes emission limits for pollutants that never triggered PSD when the two large diesel-powered generators were installed. These engines supply electrical power to the EPCOT theme park in the event grid power is lost or as a backup power source. The affected pollutants in these two original construction permits, CO, VOC, particulate matter and SO_2, were based on test results of a similar engine, and the permits had never required testing of these pollutants. The permit limits diesel sulfur content to 0.5% so the emissions of SO_2 are limited by this fuel parameter. In practice, these engines will be fueled by ultra low sulfur diesel (0.0015% Sulfur) since this is the fuel used in other engines onsite and is required by 40 CFR 63 Subpart ZZZZ. Because these two engines are regulated under the NESHAP for RICE, these engines will each be fit with diesel oxidation catalyst and have to demonstrate through testing that CO emissions are reduced 70% or more across the control device. That means that emissions from these existing engines will be reduced and this minor permit revision will not result in any emissions increases.