TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION

Walt Disney Parks and Resorts U.S., Inc.
Walt Disney World Resort Complex
EPCOT Generator #1 and #2
Replacement of Construction Permit Nos.
AC48-105243 and AC48-106650
Orange and Osceola Counties

DEP File No. 0950111-034-AC / PSD-FL-109B

Florida Department of Environmental Protection
Division of Air Resource Management
Office of Permitting and Compliance

May 16, 2014

1. GENERAL PROJECT INFORMATION

Applicant Name and Address

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

Authorized Representative:
Mr. Lee Schmudde, Authorized Representative

Processing Schedule

02/28/14: Received application to revise construction permits.

Facility Description and Location

The Walt Disney Parks and Resorts U.S., Inc. in Orlando is comprised of two different entities under its control: The Walt Disney World Theme Parks and Resorts (WDW) and Ready Creek Energy Services (RCES). The facility is a complex of hotels, theme parks, support facilities, and a utility. The various air pollution sources are hot water boilers, a combined cycle combustion turbine with a natural gas-fired heat recovery steam generator, emergency reciprocating internal combustion engines (RICE), paint spray booths and associated operations, dry cleaning operations, an animal crematory, general workshop 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 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 Source 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 exceeds 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 replaces the majority of the conditions established in the original air construction permits for two large generators (such as the generator pictured below) that are located near the Disney EPCOT theme park, in order to reclassify the diesel generators from the current status of at-will operation as non-emergency RICE regulated under 40 CFR 63 Subpart ZZZZ to the status of emergency RICE as defined in Subpart ZZZZ. The engines will be made available for emergency demand response to the grid under the limited circumstances and hours as outlined in 40 CFR 63.6640(f)(2)(ii) for periods when the North American Electric Reliability Corporation (NERC) has declared an Energy Emergency Alert Level 2. These engines will not be operated for purposes of non-emergency demand response or peak shaving.

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 Florida Administrative Code (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 (Air Pollution Control – General Provisions, 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); and, 62-297 (Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures).

Federal Rules

These engines are subject to regulation pursuant to 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. Although these engines are classified as existing emergency engines greater than 500 horsepower located at a major source of HAP emissions, they are not eligible for the potential exemption from the operational and maintenance requirements of Subpart ZZZZ available in 40 CFR 63.6590(b)(3)(iii) due to the fact that they are contractually obligated to participate in the North American Electric Reliability Corporation (NERC) emergency demand response program for more than 15 hours per calendar year.

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.

Along with the application for a Title V permit renewal (submitted May 9. 2012), the applicant asked for additional revisions to the original construction permits for these units. The original permits were AC48-105243 (Diesel Generator-1) and AC48-106650(Diesel Generator-2), both included in (PSD-FL-109). 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 contained 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. Permit No. 0950111-033-AC, which was effective on December 18, 2012, removed all but the NO_X emission limits from the two construction permits for these engines.

Due to company policies related to operational requirements at the time of the Title V air operation permit renewal, the intended method of operation of these engines placed them into the non-emergency classification pursuant to NESHAP Subpart ZZZZ. The requirements for non-emergency RICE operation were listed in the facility's renewed Title V Air Operation Permit No. 0950111-032-AV and each of the engines were upgraded

with the addition of oxidation catalysts prior to the initial compliance date of May 3, 2013, in order to comply with the RICE requirements for non-emergency operation.

4. PROJECT REVIEW

Subsequent to the issuance of the last Title V air operation permit renewal, the company changed their operational policies related to these engines and now wishes to only operate them under the limited provisions for emergency operation pursuant to NESHAP Subpart ZZZZ. The original PSD permit restricted operation of each engine to 1,900 hours in order to assure that that NO_X emissions did not exceed the 239 tons allowed for that project. By voluntarily reducing the potential annual non-emergency operating hours from the original 1,900 down to the 100 hours allowed for emergency engines in NESHAP Subpart ZZZZ, the Department has sufficient reasonable assurance of compliance with the 239 ton per year limit that maintaining a NO_X emissions limit and requiring periodic compliance testing is no longer needed. However, since Subpart ZZZZ does not limit the hours of operation during emergency events, in order to maintain the intent of the original PSD-established annual NO_X cap for these units, the 1,900 hour per year limit (per engine) will be retained as an enforceable condition for extended periods of operation in response to an emergency event. This annual limit applies to both emergency and non-emergency operation. Compliance with this hourly limit can be demonstrated using the hour meter that was previously installed pursuant to Subpart ZZZZ.

This permit completely replaces the original permits for these engines (Permit Nos. AC48-105243, AC48-106650 and PSD-FL-109), including all subsequent revisions. From this point forward, these engine-driven emergency generators will only supply electrical power to the EPCOT theme park in the event grid power is lost or as a backup power source. The NO_X emissions limit and compliance test requirements that currently exist for these engines pursuant to permit No. 0950111-033-AC are replaced by the operational requirements and limitations imposed by 40 CFR 63, Subpart ZZZZ for emergency engines.

5. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. No air quality modeling analysis is required because the project does not result in a significant increase in emissions. Jon Holtom, P.E., is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Office of Permitting and Compliance at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.