



ENVIRONMENTAL PROTECTION DIVISION

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NARRATIVE

TO: Cynthia Dorrough
FROM: Taylor Crocker
DATE: February 26, 2024

Facility Name: **Quality Investment Properties Suwanee, LLC**
AIRS No.: 135-00235
Location: Suwanee, GA (Gwinnett County)
Application #: 29145
Date of Application: January 9, 2024

Background Information

Quality Investment Properties Suwanee, LLC (QIP Suwanee) is an electronic data center located at 300 Satellite Blvd, NW in Suwanee, Georgia. QIP Suwanee uses generators for emergency standby operation with no peaking power usage. Prior to the issuance of Permit No. 7376-135-0235-S-07-0 on December 27, 2018, the facility operated under a Title V permit. In July 2018, the NOx and VOC major source threshold for Gwinnett County was raised to 100 tpy NOx and VOC [per 391-3-1-.03(8)(c)14.(i)]. The facility operated as a synthetic minor source and Permit No. 7376-135-0235-S-07-1 was issued to increase the facility-wide NOx limit to 100 tons per year for the operation of 29 diesel-fired emergency generators.

Enterprise Services LLC (Site 5) [formerly Hewlett-Packard Data Center (Site 5)] was an electronic data center located at 120 Satellite Blvd, NW in Suwanee, Georgia. Enterprise Services that operated 16 diesel-fired emergency power generators under Permit No. 7374-135-0263-S-02-0 (and its amendments).

On November 16, 2022, QIP Suwanee purchased the Enterprise Services (Site 5) data center and merged both locations into a singular site for Title I and Title V permitting purposes under Permit No. 7376-135-0235-S-08-0 and remained a synthetic minor source operating a total of 45 diesel fired emergency generators.

Application 28926 was received June 27, 2023, to consolidate the existing QIP Suwanee data center (designated DC1) and the former Enterprise Services data center (designated DC2) into one permit, remove from the permit the four engines at DC2 that have not been installed, and construct five new 2,500 kW diesel-fired generators at DC2. The name of the consolidated facility became Quality Investment Properties Suwanee, LLC. The combination of the two data centers remained a synthetic minor source operating a total of 50 diesel fired emergency generators.

Purpose of Application

App No. 29145, dated January 9, 2024, and received by the department on January 18, 2024, is proposing the construction and operation of ten [10] 2,500 kW diesel-fired emergency power generators to be installed at 120 Satellite Blvd NW. The addition of the 10 diesel-fired emergency generators brings the total number

of generators operating at both DC1 and DC2 to 60. A public advisory expired on February 22, 2024. No comments were received.

Updated Equipment List

| Source Code | Engine Manufacturer and Model Number | Generator Rating | | Installation Date |
|------------------------|--------------------------------------|------------------|-------|-------------------|
| | | (kWe) | (hp) | |
| Data Center DC1 | | | | |
| GN01 | Mitsubishi Hitec S16R-PTA | 1,440 | 2,279 | 2000 |
| GN02 | Mitsubishi Hitec S16R-PTA | 1,440 | 2,279 | 2000 |
| GN03 | Mitsubishi Hitec S16R-PTA | 1,440 | 2,279 | 2000 |
| GN04 | Mitsubishi Hitec S16R-PTA | 1,440 | 2,279 | 2000 |
| GN05 | Mitsubishi Hitec S16R-PTA | 1,440 | 2,279 | 2000 |
| GN06 | Mitsubishi Hitec S16R-PTA | 1,440 | 2,279 | 2000 |
| GN07 | Caterpillar Cat 3516BDITA | 2,000 | 2,836 | 2001 |
| GN08 | Caterpillar Cat 3516BDITA | 2,000 | 2,836 | 2001 |
| GN09 | Caterpillar Cat 3516BDITA | 2,000 | 2,836 | 2001 |
| GN10 | Caterpillar Cat 3516BDITA | 2,000 | 2,836 | 2001 |
| GN11 | Caterpillar Cat 3516BDITA | 2,000 | 2,836 | 2001 |
| GN12 | Caterpillar Cat 3516BDITA | 2,000 | 2,836 | 2001 |
| GN13 | Caterpillar AP Cat 3516BDITA | 2,250 | 3,196 | 2006 |
| GN14 | Caterpillar AP Cat 3516BDITA | 2,250 | 3,196 | 2006 |
| GN15 | Caterpillar AP Cat 3516BDITA | 2,250 | 3,196 | 2006 |
| GN16 | Caterpillar AP Cat 3516BDITA | 2,250 | 3,196 | 2006 |
| GN17 | Caterpillar AP Cat 3516BDITA | 2,250 | 3,196 | 2006 |
| GN18 | Caterpillar AP Cat 3516BDITA | 2,250 | 3,196 | 2006 |
| GN19 | Kohler 2800 REOZD | 2,800 | 4,035 | 2007 |
| GN20 | Kohler 2800 REOZD | 2,800 | 4,035 | 2007 |
| GN21 | Kohler 2800 REOZD | 2,800 | 4,035 | 2007 |
| GN22 | Kohler 2800 REOZD | 2,800 | 4,035 | 2007 |
| GN23 | Kohler 2800 REOZD | 2,800 | 4,035 | 2007 |
| GN24 | Kohler 2800 REOZD | 2,800 | 4,035 | 2007 |
| GN25 | Cummins DQGAB | 1,500 | 2,220 | 2021 |
| GN26 | Cummins DQGAB | 1,500 | 2,220 | 2021 |
| GN27 | Kohler KD2500 | 2,500 | 3,621 | 2022 |

| Source Code | Engine Manufacturer and Model Number | Generator Rating | | Installation Date |
|---------------------------|--------------------------------------|------------------|--------------|-------------------|
| | | (kWe) | (hp) | |
| GN28 | Kohler KD2500 | 2,500 | 3,621 | 2022 |
| GN29 | Kohler KD2500 | 2,500 | 3,621 | 2022 |
| Data Center DC2 | | | | |
| GN30 | Cummins DQKAB60-G6 | 2,000 | 2,922 | 2006 |
| GN31 | Cummins DQKAB60-G6 | 2,000 | 2,922 | 2006 |
| GN32 | Cummins DQKAB60-G6 | 2,000 | 2,922 | 2006 |
| GN33 | Cummins DQKAB60-G6 | 2,000 | 2,922 | 2006 |
| GN34 | Cummins DQKAB60-G6 | 2,000 | 2,922 | 2006 |
| GN35 | Cummins DQKAB60-G6 | 2,000 | 2,922 | 2006 |
| GN36 | Cummins DQKAB60-G6 | 2,000 | 2,922 | 2006 |
| GN37 | Cummins DQKAB60-G6 | 2,000 | 2,922 | 2006 |
| GN38 | Cummins DQKAB60-G6 | 2,000 | 2,922 | 2006 |
| GN39 | Cummins DQKAB60-G6 | 2,000 | 2,922 | 2007 |
| GN40 | Cummins DQKAB60-G6 | 2,000 | 2,922 | 2007 |
| GN41 | Cummins DQKAB60-G6 | 2,000 | 2,922 | 2007 |
| GN42 | Cummins DQKAB60-G6 | 2,000 | 2,922 | 2007 |
| GN43 | Cummins DQKAB60-G6 | 2,000 | 2,922 | 2011 |
| GN44 | Cummins DQKAB60-G6 | 2,000 | 2,922 | 2011 |
| GN45 | Detroit Diesel 12V2000-R1237M36 | 750 | 1,120 | 2006 |
| GN46 | Caterpillar 3516C | 2,500 | 3,634 | 2023 |
| GN47 | Caterpillar 3516C | 2,500 | 3,634 | 2023 |
| GN48 | Caterpillar 3516C | 2,500 | 3,634 | 2023 |
| GN49 | Caterpillar 3516C | 2,500 | 3,634 | 2023 |
| GN50 | Caterpillar 3516C | 2,500 | 3,634 | 2023 |
| GN51⁽¹⁾ | Caterpillar 3516C | 2,500 | 3,634 | 2024 |
| GN52 | Caterpillar 3516C | 2,500 | 3,634 | 2024 |
| GN53 | Caterpillar 3516C | 2,500 | 3,634 | 2024 |
| GN54 | Caterpillar 3516C | 2,500 | 3,634 | 2024 |
| GN55 | Caterpillar 3516C | 2,500 | 3,634 | 2024 |
| GN56 | Caterpillar 3516C | 2,500 | 3,634 | 2024 |
| GN57 | Caterpillar 3516C | 2,500 | 3,634 | 2024 |
| GN58 | Caterpillar 3516C | 2,500 | 3,634 | 2024 |
| GN59 | Caterpillar 3516C | 2,500 | 3,634 | 2024 |

| Source Code | Engine Manufacturer and Model Number | Generator Rating | | Installation Date |
|-------------|--------------------------------------|------------------|--------------|-------------------|
| | | (kWe) | (hp) | |
| GN60 | Caterpillar 3516C | 2,500 | 3,634 | 2024 |

Note: 1. **Bold** indicates new emission source**

Emissions Summary

Detailed emission calculations are included in Appendix C of Application No. 29145 and summarized in the following table.

Facility-Wide Emissions (in tons per year)

| Pollutant | Potential Emissions | | | Actual Emissions | | |
|--|---------------------|------------|------------------|------------------|------------|------------------|
| | Before Mod. | After Mod. | Emissions Change | Before Mod. | After Mod. | Emissions Change |
| PM/PM ₁₀ /PM _{2.5} | 4.13 | 4.11 | -0.02 | 0.58 | 0.65 | +0.07 |
| NO _x | <100 | <100 | N/A | 25.27 | 29.32 | +4.05 |
| SO ₂ | 0.18 | 0.18 | 0 | 0.04 | 0.04 | 0 |
| CO | 23.65 | 26.14 | +2.49 | 2.85 | 3.48 | +0.63 |
| VOC | 7.55 | 8.08 | +0.53 | 1.31 | 1.64 | +0.33 |
| Max. Individual HAP | N/A | N/A | N/A | N/A | N/A | N/A |
| Total HAP | 0.10 | 0.10 | 0 | 0.02 | 0.03 | +0.01 |
| Total GHG (if applicable) | 10,702 | 11,485 | +783 | 2,399 | 2,977 | +578 |

Regulatory Applicability

No change in rule applicability for both Georgia State and Federal Rules.

Permit Conditions

Permit Conditions 2.2, 2.3, 2.7, and 4.1 were modified to include generators GN51 through GN60.

Permit Condition 6.3 requires a NO_x measurement on one of the new emergency generators (GN51 through GN60) to verify the NO_x emission factors in Condition 7.4. The measurement is required within 90 days of startup and uses the procedures from Condition 6.2.

Permit Condition 7.4 requiring the calculation of monthly NO_x emissions based on hours of operation and average emergency generator load was updated to include emergency generators GN51 to GN60.

Permit Condition 7.6 requiring the purchase of certified engines per 40 CFR 60 Subpart IIII for emergency generators was modified to include generators GN51 through GN60.

Permit Condition 7.8 requiring the maintenance of written operating and maintenance instructions per 40 CFR 60 Subpart IIII was modified to include generators GN51 through GN60.

Toxic Impact Assessment

In Appendix D of Application No. 29145, a Toxic Impact Assessment (TIA) was conducted for the combined facility. Benzene was determined to be the only toxic air pollutant (TAP) that exceeds the minimum emission rate (MER) and required modeling. The Division's Data Modeling Unit used AERMOD dispersion model with the emission rates and emission point parameters provided in the application to determine the maximum ground level concentration of benzene. These emission rates and parameters were verified by the Stationary Source Permitting Program. The modeling results from the DMU Modeling Review Report – TAP dated January 2024, are summarized in the following table:

| TAP | Averaging Period | AAC ($\mu\text{g}/\text{m}^3$) | Max Modeled Concentration ($\mu\text{g}/\text{m}^3$) | Percent of AAC |
|---------|------------------|----------------------------------|--|----------------|
| Benzene | Annual | 0.13 | 0.01482 | 11.4 |
| Benzene | 15-minute | 1,600 | 13.658 | 0.85 |

Summary & Recommendations

I recommend that Permit No. 7376-135-0235-S-08-1 be issued to Quality Investment Properties Suwanee, LLC. The permit adds ten (10) 2,500 kWe emergency power generators to be installed at DC2 facility. The facility will continue to operate as a synthetic minor source and will remain assigned to the Stationary Source Compliance Program. A public advisory expired on February 22, 2024. No comments were received.

Addendum to Narrative

The 30-day public review started on month day, year and ended on month day, year. Comments were/were not received by the Division.

//If comments were received, state the commenter, the date the comments were received in the above paragraph. All explanations of any changes should be addressed below.//