

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.//