DOCKETED	
Docket Number:	23-OPT-02
Project Title:	Darden Clean Energy Project
TN #:	260951
Document Title:	Supplemental Air Quality Data Request Clarifications
Description:	As requested by CEC staff, this document provides additional detail and clarification for Air Quality data requests.
Filer:	Becky Moores
Organization:	Intersect Power
Submitter Role:	Applicant
Submission Date:	1/8/2025 3:50:47 PM
Docketed Date:	1/8/2025

DR AQ-1. Please provide a copy of the spreadsheet that was used to calculate the project impacts (shown in Tables 7 and 8 in Data Request Response Set 3 [TN 255906]) for different pollutants and averaging periods based on estimated emission rates and AERMOD results using unitized emission rates. Please provide a summary table showing air quality impacts for the deleted and remaining emergency generators. Please confirm whether the worst-case project impacts shown in Tables 7 and 8 in Data Request Response Set 3 were due to the deleted emergency generators.

Response:

The spreadsheet that was used to calculate project impacts as shown in Tables 7 and 8 in Data Request Response Set 3 was provided as Appendix E2 to Data Response Set 3. Specifically, it begins in Appendix E, Volume 3 (TN 255910), page 36 and continues through Appendix E, Volume 4 (TN 255909).

Tables 7 and 8 in Data Request Response Set 3 provided conservative worst-case project impacts for two LPG generators, two diesel fire pump engines and two diesel emergency generator sets, and did not result in an exceedance of AAQA thresholds. The spreadsheet provided in Appendix E2 demonstrates that diesel engines/generators are the primary contributors to the maximum air pollutant concentrations at each receptor. The updated project includes three LPG generators and no diesel engines/generators. Therefore, with removal of the diesel engines/generators, air pollutant concentrations would be significantly reduced.

The table below summarizes the original and updated equipment lists and corresponding emissions. As shown in the table, removal of the diesel engines/generators and the addition of one LPG generator results in a minimum 31% reduction in hourly emissions rates and minimum 20% reduction in annual emission rates. Therefore, since original project impacts were below AAQA thresholds and the updated project results in a decrease in air pollutant concentrations, the updated project would remain below AAQA thresholds.

Equipment	NOx		VOC		CO		SOx		PM	
	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)
Power Solutions Int'l (PSI) 8800CAC (LPG) Emerg. Generator Set	0.578	57.8	0.404	40.4	1.155	115.5	0.0	0.0	0.0	0.0
CAT C18 Fire Pump Engine (Diesel)	6.741	674.1	0.355	35.5	6.149	614.9	0.005	0.5	0.355	35.5
CAT C18 Emergency Generator Set (Diesel)	5.375	207.0	0.585	35.9	9.224	627.2	2.311	56.2	0.078	7.8
Original Project Maximum Emissions (2 LPG Generators, 2 Diesel Fire Pump Engines, 2 Diesel Emergency Generators)	6.741	996.6	0.585	152.2	9.224	1473.2	2.311	56.7	0.355	43.3
Updated Project Maximum Emissions (3 LPG Generators)	0.578	173.3	0.404	121.3	1.155	346.6	0.0	0.0	0.0	0.0
Difference in Emissions	-6.2	-823.4	-0.2	-30.9	-8.1	-1126.7	-2.3	-56.7	-0.4	-43.3
Percent Difference	-91%	-83%	-31%	-20%	-87%	-76%	-100%	-100%	-100%	-100%

Note: Hourly emissions were based on a single engine being tested at a time for one hour, as committed by the Applicant. Annual emissions are the sum of total anticipated annual emissions from all the engines.
Please refer to Appendix A in Data Request Response Set 3 for more details regarding emissions methodology.

DR AQ-2. Please provide a summary table showing public health risks for the deleted and remaining emergency generators. Please confirm whether the worst-case public health risks shown in TN 252975 were due to the deleted emergency generators.

Response:

The health risk assessment results were provided in Section 4.2 Health Risk Assessment of the San Joaquin Valley Air Pollution Control District Preliminary Draft Permit Application, which was provided as Appendix A to CEC Data Response Set 3. According to Section 4.2 of the Preliminary Draft Permit Application Package (Appendix A of Data Response Set 3), Table 13, maximum individual residential cancer risk was 0.13 in one million.

The public health risks shown in application section 5.8 Public Health (TN 252975) provided conservative worst-case project impacts for two LPG generators, two diesel fire pump engines and two diesel emergency generator sets and did not result in an exceedance of public health risk thresholds. Diesel particulate matter is widely understood to be a highly carcinogenic toxic air contaminant, and to be a key driver of potential health risk impacts. As demonstrated in the table presented in the response to DR AQ-1 above, diesel particulate matter is no longer emitted with the removal of the diesel emergency engines/generators. Therefore, with removal of the diesel engines/generators, public health risks would be significantly reduced.

The table below summarizes the original and estimated updated maximum cancer health risk. As shown in the table, removal of the diesel engines/generators and the addition of one LPG generator is estimated to result in a 98% reduction to public health risk. Therefore, since original project impacts were below public health risk thresholds and the updated project results in a decrease in public health risk, the updated project would remain below public health thresholds.

Maximum Cancer Health Risk	**Cases Per Million**
Original Project Maximum Emissions (2 LPG Generators, 2 Diesel Fire Pump Engines, 2 Diesel Emergency Generators)	0.13
Updated Project Maximum Emissions (3 LPG Generators)	0.002
Percent Difference	-98%