

AIR COMPLIANCE ANALYSIS SUMMARY SHEET

COMPANY/FACILITY: Valara Holdings High Performance Compute Center
LOCATION (COUNTY): Spartanburg (Spartanburg) **DATE:** 09-18-2026
PERMIT NUMBER: 2060-0674 **REVIEWED BY:** SWS

REQUEST:	☒ CONSTRUCTION PERMIT	☐ STATE PERMIT
	☐ OPERATING PERMIT - NEW	☒ CONDITIONAL MAJOR
	☐ OPERATING PERMIT - RENEWAL	☐ GENERAL CM
	☐ PERMIT - MODIFICATION	☐ TITLE V PERMIT
	☐ AIR COMPLIANCE DEMO	☐ PSD MAJOR
ANALYSIS:	☒ AMBIENT AIR QUALITY STANDARDS	☐ PSD INCREMENT
	☐ TOXIC AIR POLLUTANTS	☐ DE MINIMIS
	☒ EXEMPTION	☐ DEFERRAL
OTHER:	☐ EXPEDITED	☒ COLLOCATED (Y or N)

PROJECT DESCRIPTION:

The facility plans to install 5 17-megawatt Baker Hughes combustion turbines and 6 54-megawatt GE combustion turbines. Each turbine will be fired on natural gas and will include a selective catalytic reduction device for NO_x control and an oxidation catalyst for control of CO, VOC and HAPs. Additional permit-exempt equipment to be installed will include a 100 hp diesel-fired fire pump engine, 4 natural gas-fired hot water boilers and 16 non-contact cooling towers.

SUMMARY OF ANALYSIS & RESULTS:

Jacobs Solutions Inc. submitted a modeling analysis on behalf of the facility.

Standard 2: The combustion turbines will emit PM₁₀, PM_{2.5}, SO₂, NO_x, and CO. The SO₂ emission rates (per source) will be less than the exemption rate and are listed in the exempted emission rate table. The facility-wide emissions of the other pollutants were modeled with AERMOD. Although PM₁₀ and PM_{2.5} emission rates (per source) for the 5 Baker Hughes turbines will be less than the exemption rate, they were included in the modeling since the facility-wide rate for those pollutants will exceed the respective PSD significance thresholds. [Note: BAQ has required this facility to model pollutants for which the facility-wide emission rate exceeds the PSD significance level even if individual emission rates per source are less than exemption level.]

Standard 7: Since this is not a PSD project, no Standard 7 analysis is required. An increment emission rate table was added to support the PSD emissions inventory.

Standard 8: All emissions arise from combustion of natural gas. Thus, the facility is exempt from a compliance demonstration.

This is a complete compliance summary with changes relative to the 9/17/2025 summary marked in **bold**.

STANDARD NO. 2 - AMBIENT AIR QUALITY STANDARDS ANALYSIS							
Pollutant	Averaging Time	Basis	Maximum Concentration (µg/m ³)	Background Concentration (µg/m ³)	Total (µg/m ³)	Standard (µg/m ³)	% of Standard
PM ₁₀	24-Hour	AERMOD	4.7 ⁽¹⁾	35	40	150	27
PM _{2.5}	24-Hour	AERMOD	3.6 ⁽²⁾	16.2	20	35	57
	Annual	AERMOD	0.9 ⁽³⁾	7.8	9	12	75
NO ₂	1-Hour	AERMOD	29.6 ⁽⁴⁾⁽⁵⁾⁽⁸⁾	74.0	104	188	55
	Annual	AERMOD	3.2 ⁽⁵⁾⁽⁶⁾⁽⁸⁾	12.8	16	100	16
CO	1-Hour	AERMOD	55.3 ⁽⁷⁾	1105	1160	40,000	3
	8-Hour	AERMOD	32.6 ⁽⁷⁾⁽⁸⁾	687	720	10,000	7
1) The sixth-high over five years of met data.							
2) The five-year average of the eighth-high concentrations.							
3) The five-year average of the maximum annual concentrations.							
4) The five-year average of the eighth-high 1-hr daily maximum concentrations.							
5) The NO ₂ /NO _x ARM2 conversion with a minimum ratio of 0.5 and a maximum ratio of 0.9 was applied within the model							
6) The highest 1 st high							
7) The highest 2nd high							
8) The BAQ modeled concentration was slightly higher than that of the facility and is listed here.							

BACKGROUND MONITORING DATA (µg/m ³)									
Pollutant	Site Name	County	Year	1-Hr	3-Hr	8-Hr	24-Hr	3-Mo	Annual
PM ₁₀	Greenville ESC	Greenville	22-24				35		
PM _{2.5}	Greenville ESC	Greenville	22-24				16.2		7.8
NO ₂	Greenville ESC	Greenville	22-24	74.0					12.8
CO	Parklane	Richland	22-24	1105		687			
PM ₁₀ 24-hr is the fourth-high over 3-year period.									
The concentration listed for all other pollutants and averaging periods is the 3-year design value.									

STANDARD NO. 2 - AMBIENT AIR QUALITY STANDARDS EMISSION RATES (LB/HR)						
Emission Point ID	PM ₁₀	PM _{2.5}	SO ₂	NO _x ⁽¹⁾	CO	Lead
EP01	0.16	0.16	--	0.58 ⁽²⁾	0.64 ⁽²⁾	--
EP02	0.16	0.16	--	0.58 ⁽²⁾	0.64 ⁽²⁾	--
EP03	0.16	0.16	--	0.58 ⁽²⁾	0.64 ⁽²⁾	--
EP04	0.16	0.16	--	0.58 ⁽²⁾	0.64 ⁽²⁾	--
EP05	0.16	0.16	--	0.58 ⁽²⁾	0.64 ⁽²⁾	--
EP06	0.16	0.16	--	0.58 ⁽²⁾	0.64 ⁽²⁾	--
EP07	0.16	0.16	--	0.58 ⁽²⁾	0.64 ⁽²⁾	--
EP08	0.16	0.16	--	0.58 ⁽²⁾	0.64 ⁽²⁾	--
EP09	0.16	0.16	--	0.58 ⁽²⁾	0.64 ⁽²⁾	--
EP10	0.16	0.16	--	0.58 ⁽²⁾	0.64 ⁽²⁾	--
EP11	0.16	0.16	--	0.58 ⁽²⁾	0.64 ⁽²⁾	--
EP12	0.16	0.16	--	0.58 ⁽²⁾	0.64 ⁽²⁾	--
EP13	0.16	0.16	--	0.58 ⁽²⁾	0.64 ⁽²⁾	--
EP14	0.16	0.16	--	0.58 ⁽²⁾	0.64 ⁽²⁾	--
EP15	0.16	0.16	--	0.58 ⁽²⁾	0.64 ⁽²⁾	--

STANDARD NO. 2 – AMBIENT AIR QUALITY STANDARDS EMISSION RATES (LB/HR)						
Emission Point ID	PM ₁₀	PM _{2.5}	SO ₂	NO _x ⁽¹⁾	CO	Lead
EP16	0.16	0.16	--	0.58 ⁽²⁾	0.64⁽²⁾	--
EP17	0.16	0.16	--	0.58 ⁽²⁾	0.64⁽²⁾	--
EP18	0.16	0.16	--	0.58 ⁽²⁾	0.64⁽²⁾	--
EP19	0.16	0.16	--	0.58 ⁽²⁾	0.64⁽²⁾	--
EP20	0.16	0.16	--	0.58 ⁽²⁾	0.64⁽²⁾	--
EP21	0.16	0.16	--	0.58 ⁽²⁾	0.64⁽²⁾	--
EP22	0.16	0.16	--	0.58 ⁽²⁾	0.64⁽²⁾	--
EP23	0.16	0.16	--	0.58 ⁽²⁾	0.64⁽²⁾	--
EP24	0.16	0.16	--	0.58 ⁽²⁾	0.64⁽²⁾	--
EP25	0.36	0.36	--	1.56	1.52	--
EP26	0.36	0.36	--	1.56	1.52	--
EP27	0.36	0.36	--	1.56	1.52	--
EP28	0.36	0.36	--	1.56	1.52	--
EP29	0.36	0.36	--	1.56	1.52	--
EP30	5.04	5.04	--	4.59	4.48⁽³⁾	--
EP31	5.04	5.04	--	4.59	4.48⁽³⁾	--
EP32	5.04	5.04	--	4.59	4.48⁽³⁾	--
EP33	5.04	5.04	--	4.59	4.48⁽³⁾	--
EP34	5.04	5.04	--	4.59	4.48⁽³⁾	--
EP35	5.04	5.04	--	4.59	4.48⁽³⁾	--
FACILITY TOTAL	35.88	35.88	--	49.26	49.84	--
1) NO _x emissions are listed here but the facility applied the EPA ARM2 in their modeling to obtain the NO ₂ results. See the AERMOD/AERMAP Specifications table below for more information.						
2) Controlled emission rate calculated by BAQ permit engineer is slightly higher than the facility provided.						
3) Rate is higher than provided by the vendor (GE).						

STANDARD NO. 7 - PSD INCREMENT EMISSION RATES (LB/HR)						
Emission Point ID	Minor Source Baseline Date(s)					
	12/21/92	None			None	12/21/92
	PM ₁₀	PM _{2.5}			SO ₂	NO _x
		Primary	SO ₂	NO _x		
EP25	--	--	--	--	1.56	--
EP26	--	--	--	--	1.56	--
EP27	--	--	--	--	1.56	--
EP28	--	--	--	--	1.56	--
EP29	--	--	--	--	1.56	--
EP30	5.04	--	--	--	4.59	--
EP31	5.04	--	--	--	4.59	--
EP32	5.04	--	--	--	4.59	--
EP33	5.04	--	--	--	4.59	--
EP34	5.04	--	--	--	4.59	--
EP35	5.04	--	--	--	4.59	--
FACILITY TOTAL	30.24	--	--	--	35.34	--
Standard 7 is not required to be modeled for non-PSD projects. This table is included to keep track of the increment inventory for future PSD project use.						

STANDARD NO. 2 – EXEMPTED AMBIENT AIR QUALITY STANDARDS EMISSION RATES (LB/HR)						
Emission Point ID	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	Lead
EP01	--	--	0.01	--	--	--
EP02	--	--	0.01	--	--	--
EP03	--	--	0.01	--	--	--
EP04	--	--	0.01	--	--	--
EP05	--	--	0.01	--	--	--
EP06	--	--	0.01	--	--	--
EP07	--	--	0.01	--	--	--
EP08	--	--	0.01	--	--	--
EP09	--	--	0.01	--	--	--
EP10	--	--	0.01	--	--	--
EP11	--	--	0.01	--	--	--
EP12	--	--	0.01	--	--	--
EP13	--	--	0.01	--	--	--
EP14	--	--	0.01	--	--	--
EP15	--	--	0.01	--	--	--
EP16	--	--	0.01	--	--	--
EP17	--	--	0.01	--	--	--
EP18	--	--	0.01	--	--	--
EP19	--	--	0.01	--	--	--
EP20	--	--	0.01	--	--	--
EP21	--	--	0.01	--	--	--
EP22	--	--	0.01	--	--	--
EP23	--	--	0.01	--	--	--
EP24	--	--	0.01	--	--	--
EP25	--	--	0.09	--	--	--
EP26	--	--	0.09	--	--	--
EP27	--	--	0.09	--	--	--
EP28	--	--	0.09	--	--	--
EP29	--	--	0.09	--	--	--
EP30	--	--	0.25	--	--	--
EP31	--	--	0.25	--	--	--
EP32	--	--	0.25	--	--	--
EP33	--	--	0.25	--	--	--
EP34	--	--	0.25	--	--	--
EP35	--	--	0.25	--	--	--
FACILITY TOTAL	--	--	2.19	--	--	--

EMISSION POINT DESCRIPTIVE INFORMATION				
Emission Point ID	Source Identification & Description	Date Installed (Modified)	Status	Other
Boilers	4 Boilers (3.08 MMBTU/hr each, NG-fired; only 3 operate at a time)	2026	Exempt Std 2, 7, 8: < 10 MM BTU/hr burning virgin gas fuels	
Cooling Towers	16 Non-contact Cooling Towers	2026	Exempt Std 2, 7, 8: BAQ Permitting Exemption List – Section B.6.xii	
EP01 - EP24	24 Cummins Generators (2103 KW each, NG-fired)	2025	Exempt Std 2, 7: SO ₂ < 1.14 lb/hr Exempt Std 8: Burns only virgin fuel	
EP25 – EP29	5 Baker Hughes Combustion Turbines (17.5 MW each, NG-fired)	2026		
EP30 – EP35	6 GE Combustion Turbines (54 MW each, NG-fired)	2026		
Fire Pump Engine	Fire Pump Engine (100 hp, diesel-fired)	2026	Exempt Std 2, 7: Emergency generator operating < 500 hr/yr Exempt Std 8: Burns only virgin fuel	

POINT SOURCE PARAMETERS													
Emission Point ID	Date Last Modeled	Location (UTM) ⁽¹⁾		Release Height AGL (ft)	Exit Temp. (°F)	Exit Velocity (ft/sec)	Inside Diameter (ft)	Discharge Orientation	Cap? (Y/N)	Distance To Property Line (ft)	Building Parameters		
		East (m)	North (m)								Height (ft)	Length (ft)	Width (ft)
EP01	Current	422584	3864959	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP02	Current	422585	3864966	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP03	Current	422586	3864975	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP04	Current	422587	3864982	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP05	Current	422588	3864991	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP06	Current	422589	3864997	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP07	Current	422590	3865007	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP08	Current	422591	3865013	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP09	Current	422592	3865023	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP10	Current	422593	3865029	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP11	Current	422595	3865039	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP12	Current	422596	3865045	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP13	Current	422688	3864944	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP14	Current	422689	3864950	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP15	Current	422690	3864960	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)

POINT SOURCE PARAMETERS

Emission Point ID	Date Last Modeled	Location (UTM) ⁽¹⁾		Release Height AGL (ft)	Exit Temp. (°F)	Exit Velocity (ft/sec)	Inside Diameter (ft)	Discharge Orientation	Cap? (Y/N)	Distance To Property Line (ft)	Building Parameters		
		East (m)	North (m)								Height (ft)	Length (ft)	Width (ft)
EP16	Current	422691	3864966	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP17	Current	422692	3864976	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP18	Current	422693	3864983	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP19	Current	422694	3864992	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP20	Current	422695	3864999	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP21	Current	422696	3865008	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP22	Current	422697	3865015	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP23	Current	422698	3865025	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP24	Current	422699	3865031	30.75	720	66.7	1.83	Vertical	N	(2)	(2)	(2)	(2)
EP25	Current	422352	3864961	50.0	906	79.4	7.0	Vertical	N	(2)	(2)	(2)	(2)
EP26	Current	422337	3864963	50.0	906	79.4	7.0	Vertical	N	(2)	(2)	(2)	(2)
EP27	Current	422322	3864965	50.0	906	79.4	7.0	Vertical	N	(2)	(2)	(2)	(2)
EP28	Current	422307	3864967	50.0	906	79.4	7.0	Vertical	N	(2)	(2)	(2)	(2)
EP29	Current	422293	3864969	50.0	906	79.4	7.0	Vertical	N	(2)	(2)	(2)	(2)
EP30	Current	422259	3864997	87.0	772	55.8	13.0	Vertical	N	(2)	(2)	(2)	(2)
EP31	Current	422223	3865002	87.0	772	55.8	13.0	Vertical	N	(2)	(2)	(2)	(2)
EP32	Current	422189	3865007	87.0	772	55.8	13.0	Vertical	N	(2)	(2)	(2)	(2)
EP33	Current	422154	3865011	87.0	772	55.8	13.0	Vertical	N	(2)	(2)	(2)	(2)
EP34	Current	422119	3865017	87.0	772	55.8	13.0	Vertical	N	(2)	(2)	(2)	(2)
EP35	Current	422084	3865022	87.0	772	55.8	13.0	Vertical	N	(2)	(2)	(2)	(2)

1) NAD83 datum

2) See modeling files.

AERMOD / AERMAP SPECIFICATIONS TABLE												
MET DATA		GSP-GSO 2015-2019 [Surface = Greenville, SC (972 ft MSL); Upper Air = Greensboro, NC]										
		ADJ_U*		☒ Y								
ARM2 SETTINGS		NO ₂ /NO _x Minimum = 0.50					NO ₂ /NO _x Maximum = 0.90					
NED TERRAIN FILES		Spartanburg Co.										
PROJECTION DATUM		NAD27		☐	NAD83		☒ X	WGS-84		☐	NWS-84	☐
RURAL or URBAN?		Rural		☒ X	Urban		☐					
ELEVATIONS EXTRACTED		Bldgs ⁽¹⁾		☒ X	Sources ⁽¹⁾		☒ X	Tanks		☐	Receptors	☒ X
1) Base elevations of the buildings and sources were determined using AERMAP. Then an average height across all buildings and sources was determined and applied within the model to represent the base elevation of the facility after construction, considering a leveled surface.												

HISTORY			
Date	By	Reason	Description
Current	SWS	C/P	Adding 11 combustion turbines and some permit-exempt equipment. STD 2: SO ₂ is exempt per source (turbine); facility-wide PM ₁₀ , PM _{2.5} , NO _x and CO were modeled with AERMOD. STD 7: Increment emission rate table was added. STD 8: All emissions are due to combustion of natural gas and are exempt from modeling.
Current	SWS	C/P Revision (Expedited)	21 temporary engines will power the facility for up to 6 months while permanent power equipment is constructed. Partial modeling summary addresses only the 21 engines. STD 2: SO ₂ is < exemption level; PM ₁₀ , PM _{2.5} , NO _x and CO were modeled with AERMOD. STD 7: N/A. STD 8: Exempt (combustion of natural gas).
9/17/25	TJT	Expedited C/P	Facility will be powered by 24 2103-kW natural gas-fired generators. STD 2: All emissions per source will be below the exemption threshold, but facility-wide emissions of PM ₁₀ , PM _{2.5} , and NO _x will be above the PSD significance threshold and were modeled with AERMOD. CO and SO ₂ are listed in the exemption table. STD 7: N/A. STD 8: All equipment is exempt (burning virgin fuel).