Company Name:	Valara Holdings High Performance Compute Center	**Permit Writer:**	Tyler D. Dunlop
Agency Air Number:	2060-0674	**Date:**	DRAFT
Permit Number:	CP-50000422 v1.0		

DATE APPLICATION RECEIVED: March 04, 2026

PROJECT DESCRIPTION

Valara Holdings High Performance Compute Center (Valara) is proposing to construct five simple cycle 17 MW natural gas fired Baker Hughes combustion turbines and six simple cycle 54 MW natural gas fired General Electric combustion turbines. These turbines will provide continuous on-site power to the facility. The facility will not be selling power to the grid. Each turbine will be equipped with selective catalytic reduction (SCR) to control nitrogen oxide (NO_x) emissions and oxidation catalysts (OX) to control carbon monoxide (CO), volatile organic compound (VOC), formaldehyde, and other hazardous air pollutant (HAP) emissions. In addition, the facility plans to install continuous emissions monitoring systems (CEMS) for NO_x on the turbines. The project also details the construction of equipment considered exempt from air construction permitting but are included for the calculation of facility wide emission totals. This includes one 100 hp emergency diesel-fired fire pump engine, four natural gas fired hot water boilers, and sixteen cooling towers.

Air construction permit CP-50000316 was issued on September 17, 2025 for the installation of 24 natural gas fired generators. That construction permit established synthetic minor limits of less than 250.0 tons per year (TPY) to become a minor source with respect to SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration and synthetic minor limits of less than 100.0 TPY avoid being a major source under SC Regulation 61-62.70 Title V Operating Permit Program. The facility will retain the synthetic minor limits of less than 250.0 TPY for prevention of significant deterioration (PSD) avoidance. This construction permit will remove the synthetic minor Title V avoidance limits established in the construction permit CP-50000316. With this project, the facility will become major source under SC Regulation 61-62.70 Title V Operating Permit Program. The facility will be required to submit an application for a Title V operating permit within 12 months of when the first turbine or generator becomes operational.

FACILITY DESCRIPTION

SIC CODE: 7374 – Computer Processing and Data Preparation and Processing Services
NAICS CODE: 518210 – Computing Infrastructure Providers, Data Processing, Web Hosting, and Related Services

Valara Holdings High Performance Compute Center will host computing services to common ownership entities. The facility will provide its own on-site power using twenty-four natural gas fired generators (permitted under CP-50000316) and the proposed eleven simple cycle natural gas fired turbines of varying size. Each generator and turbine will be equipped with selective catalytic reduction control devices to control nitrogen oxide (NO_x) emissions and oxidation catalyst control devices to control carbon monoxide (CO), volatile organic compound (VOC), formaldehyde, and other hazardous air pollutant (HAP) emissions.

OPERATING PERMIT INCORPORATION

The facility will have twelve months to submit a Title V operating permit application after beginning operation of the first turbine or generator.

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EMISSIONS

Turbines

The facility is proposing to install five 17 MW Baker Hughes natural gas fired turbines and six 54 MW General Electric natural gas fired turbines. The vendor of the turbines provided data detailing several operating scenarios for each turbine type. Normal operation of the turbines is expected to be at 100% load, so these datasets are used to estimate potential emissions. Additionally, datasets where the ambient temperature is less than 0°F are not considered to be representative of the normal climate of South Carolina. The following table provides a summary of the vendor guaranteed emission factors used to determine the facility's potential to emit.

Turbine Dataset Summary				
Pollutant	**Individual 17 MW Turbine Emission Rate (lb/hr)**		**Individual 54 MW Turbine Emission Rate (lb/hr)**	
	Uncontrolled	**Controlled**	**Uncontrolled**	**Controlled**
$PM/PM_{10}/PM_{2.5}$	0.36*	0.36*	5.04	5.04
SO_2	0.09*	0.09*	0.25*	0.25*
NO_x	10.32	1.56	48.32	4.59
CO	6.28	1.52	29.42	3.36
VOC	0.34	0.34	2.02	1.21

*See following clarifying examples

With the exception of the following examples, the vendor of the turbines provided emission rate guarantees for criteria pollutants.

Example Calculation for SO_2

To calculate sulfur dioxide (SO_2) emissions, it is assumed that natural gas contains 2000 grains S/MMscf (AP-42 Chapter 1.4 – Natural Gas Combustion). It is assumed that 100% of the sulfur in the natural gas is converted to SO_2 during combustion. The 17 MW turbines have a capacity of 158 MMBtu/hr each and the 54 MW turbines have a capacity of 453.4 MMBtu/hr each.

$$SO_2(17\ MW\ Turbines) = \frac{2000\ grains\ S}{10^6\ scf} * \frac{1\ lb\ S}{7000\ grains\ S} * \frac{1\ scf}{1038\ Btu} * \frac{158 * 10^6\ Btu}{1\ hr} * \frac{64\ lb\ SO_2}{32\ lb\ S} = \frac{0.09\ lb\ SO_2}{hr}$$

$$SO_2(54\ MW\ Turbines) = \frac{2000\ grains\ S}{10^6\ scf} * \frac{1\ lb\ S}{7000\ grains\ S} * \frac{1\ scf}{1038\ Btu} * \frac{453.4 * 10^6\ Btu}{1\ hr} * \frac{64\ lb\ SO_2}{32\ lb\ S} = \frac{0.25\ lb\ SO_2}{hr}$$

Example Calculation for PM

PM emissions for the 17 MW turbines are based on vendor data for a 16.5 MW turbine and then multiplied by a safety factor of 1.2.

$$PM\ (17\ MW\ Turbines) = \frac{1.304\ ton}{yr} * \frac{yr}{8760\ hr} * \frac{2000\ lb}{ton} * 1.2 = \frac{0.36\ lb\ PM}{hr}$$

Startup and shutdown emissions are calculated separately from normal operation emissions using emission rate data provided by the turbine vendor. Startup and shutdown times are excluded from yearly operational time. Taking this into account, the 17 MW turbines are assumed to operate 8746.95 hours per year, and the 54 MW turbines are assumed to operate 8717.75 hours per year under normal operation. The facility estimated that there may be 29 startup/shutdown events for each 17 MW turbine and 65 startup/shutdown events for each 54 MW turbine per year for the purposes of calculating the facility's potential to emit. Startup and shutdown emissions are required to be calculated when calculating the 12 month rolling sums.

Startup and Shutdown Summary				
Pollutant	**Individual 17 MW Turbine Emission Rate (lb/event)**		**Individual 54 MW Turbine Emission Rate (lb/event)**	
	Startup	**Shutdown**	**Startup**	**Shutdown**
$PM/PM_{10}/PM_{2.5}$	0.10	0.07	2.6	0.5
SO_2	0.02	0.02	0.1	0.0
NO_x	2.71	1.76	19.7	3.2
CO	7.10	2.78	21.5	21.1
VOC	0.02	0.13	2.3	1.0

Example Calculation for NO_x (other listed pollutants calculated in a similar manner)

$$\frac{Uncontrolled\ Yearly\ NO_x\ Emissions\ for\ the\ 17\ MW\ Turbines}{\frac{51.59\ lb\ NO_x}{hr} * \frac{8746.95\ hr}{yr} + \frac{2.71\ lb\ NO_x}{event} * \frac{29\ events}{yr} + \frac{1.76\ lb\ NO_x}{event} * \frac{29\ events}{yr}}{2000\ \frac{lb}{ton}} = \frac{225.93\ ton\ NO_x}{yr}$$

$$\frac{Controlled\ Yearly\ NO_x\ Emissions\ for\ the\ 17\ MW\ Turbines}{\frac{7.78\ lb\ NO_x}{hr} * \frac{8746.95\ hr}{yr} + \frac{2.71\ lb\ NO_x}{event} * \frac{29\ events}{yr} + \frac{1.76\ lb\ NO_x}{event} * \frac{29\ events}{yr}}{2000\ \frac{lb}{ton}} = \frac{34.34\ ton\ NO_x}{yr}$$

Most HAP emissions are calculated using AP-42 Chapter 3.1 – Stationary Gas Turbines emission factors (Table 3.1-3). Note that the turbines have SCR and oxidation catalysts, so the formaldehyde and benzene emission factors are taken from the footnotes of that table. The oxidation catalyst controls HAP emissions by 33% for both turbine types.

$$54\ MW\ Turbine\ Uncontrolled\ Formaldehyde\ Emissions = \frac{2.0 * 10^{-5}\ lb}{MMBtu} * \frac{453.4\ MMBtu}{hr} = \frac{9.07 * 10^{-3}\ lb}{hr} per\ turbine$$

$$9.07\text{E-}03\ \text{lb/hr} * 6\ turbines = 5.44\text{E-}02\ \text{lb/hr}$$

Hexane emissions from the turbines are calculated using an emission factor from the California Air Resources Board's (CARB) California Air Toxic Emission Factor (CATEF) database. This database is based primarily on data collected in the 1990s and has not been updated since 1996. The other HAP emission factors from AP-42 Chapter 3.1 are based on a

more robust sample of data, but AP-42 does not provide a factor for hexane from turbines. For this reason, the use of AP-42 emission factors is preferred when calculating the facility's potential to emit HAP other than hexane.
CATEF Hexane Emission Factor: 0.381653151 lb/MMcf

$$54\ MW\ Turbine\ Uncontrolled\ Hexane\ Emissions = \frac{0.381653151\ lb}{MMcf} * \frac{453.4\ MMBtu}{hr} * \frac{scf}{1038\ Btu} = \frac{0.17\ lb}{hr} per\ turbine$$

$$0.17\ \text{lb/hr} * 6\ turbines = 1.00\ \text{lb/hr}$$

Turbine Emissions						
Pollutant	**Uncontrolled**		**Controlled**		**PTE**	
	lb/hr	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**
PM	32.03	140.24	--	--	32.03	140.24
PM_{10}	32.03	140.24	--	--	32.03	140.24
$PM_{2.5}$	32.03	140.24	--	--	32.03	140.24
SO_2	1.93	8.45	--	--	1.93	8.45
NO_x[†]	341.49	1494.06	12.37	158.96	341.49	<250.0
CO[†]	207.91	915.76	10.93	129.95	207.91	<250.0
VOC[†]	13.81	60.88	2.89	39.71	13.81	60.88
Formaldehyde (HAP)[‡]	0.07	0.31	0.05	0.21	0.07	<10.0
Acetaldehyde (HAP)[‡]	0.14	0.62	0.09	0.41	0.14	<10.0
Hexane (HAP)[‡]	1.29	5.65	0.86	3.79	1.29	<10.0
Total HAPs[‡]	2.44	10.67	1.63	7.15	2.44	<25.0

[†]The facility has established facility wide PSD avoidance limits for NO_x, CO, and VOC.
[‡]The facility has established facility wide limits on single HAP and total HAP emissions to avoid major source MACT applicability.

Exempt Sources/Insignificant Activities
In addition to the engines and turbines, the facility is proposing to construct four small boilers, one emergency diesel fire pump, and sixteen cooling towers. These sources are considered exempt from the needs of construction permitting, but their potential emissions are calculated in order to assess an accurate facility wide total and must be included in any facility wide limits included in the permit

100 hp (75 kW) Diesel Fire Pump
Emissions for the emergency fire pump are calculated using the emission factors from NSPS Subpart IIII Table 4 for NO_x, VOC, CO, and PM. In this table, the NO_x and VOC standard is given as a single combined limit of 4.0 g/kW-hr. 95% of this limit is assumed to be NO_x while the remaining 5% is VOC. It is conservatively assumed that PM=PM_{10}=$PM_{2.5}$. The HAP and SO_2 emission factors are taken from AP-42 Chapter 3.3 – Gasoline and Diesel Industrial Engines. Emergency engines are assumed to operate a maximum of 500 hours per year.

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Fire Pump Emissions						
Pollutant	**Uncontrolled**		**Controlled**		**PTE**	
	lb/hr	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**
PM	4.93E-02	1.23E-02	--	--	4.93E-02	1.23E-02
PM_{10}	4.93E-02	1.23E-02	--	--	4.93E-02	1.23E-02
$PM_{2.5}$	4.93E-02	1.23E-02	--	--	4.93E-02	1.23E-02
SO_2	2.05E-01	5.13E-02	--	--	2.05E-01	5.13E-02
NO_x	0.62	0.16	--	--	0.62	0.16
CO	0.82	0.21	--	--	0.82	0.21
VOC	3.29E-02	8.22E-03	--	--	3.29E-02	8.22E-03
Formaldehyde (HAP)	8.26E-04	2.07E-04	--	--	8.26E-04	2.07E-04
Acetaldehyde (HAP)	5.37E-04	1.34E-04	--	--	5.37E-04	1.34E-04
Total HAPs	4.52E-03	1.13E-03	--	--	4.52E-03	1.13E-03

Boilers

Each boiler has a capacity of 3.078 MMBtu/hr and is fired on natural gas. Emissions are calculated using AP-42 Chapter 1.4 - Natural Gas Combustion emission factors for small boilers with low NO_x burners. Heating content of natural gas is assumed to be 1026 Btu/scf. Each boiler is assumed to operate 8760 hours per year.

Boiler Emissions						
Pollutant	**Uncontrolled**		**Controlled**		**PTE**	
	lb/hr	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**
PM	9.12E-02	0.40	--	--	9.12E-02	0.40
PM_{10}	9.12E-02	0.40	--	--	9.12E-02	0.40
$PM_{2.5}$	9.12E-02	0.40	--	--	9.12E-02	0.40
SO_2	7.20E-03	3.15E-02	--	--	7.20E-03	3.15E-02
NO_x	0.60	2.63	--	--	0.60	2.63
CO	1.01	4.42	--	--	1.01	4.42
VOC	6.60E-02	0.29	--	--	6.60E-02	0.29
Formaldehyde (HAP)	9.00E-04	3.94E-03	--	--	9.00E-04	3.94E-03
Hexane (HAP)	2.16E-02	9.46E-02	--	--	2.16E-02	9.46E-02
Total HAPs	2.27E-02	9.92E-02	--	--	2.27E-02	9.92E-02

Cooling Towers

The facility is proposing to construct sixteen identical cooling towers. Each tower will have a flow rate of 7740 gal/min. The source water has a total dissolved solids (TDS) content of 632 ppm. The drift loss is given as 0.001%. The towers are assumed to operate 8760 hours per year. It is assumed that 70% of the total PM emissions from the towers are PM_{10}.

$$Hourly\ PM = \frac{7740\ gal}{min} * \frac{60\ min}{hr} * \frac{0.001}{100} * \frac{8.34\ lb\ water}{gal} * \frac{632\ lb\ PM}{1000000\ lb\ water} * 16\ towers = \frac{0.39\ lb\ PM}{hr}$$

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Cooling Tower Emissions						
Pollutant	**Uncontrolled**		**Controlled**		**PTE**	
	lb/hr	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**
PM	0.39	1.72	--	--	0.39	1.72
PM_{10}	0.27	1.20	--	--	0.27	1.20
$PM_{2.5}$	0.27	1.20	--	--	0.27	1.20

TOTAL PROJECT EMISSIONS						
Pollutant	**Uncontrolled**		**Controlled**		**PTE**	
	lb/hr	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**
PM	32.56	142.37	--	--	32.56	142.37
PM_{10}	32.44	141.85	--	--	32.44	141.85
$PM_{2.5}$	32.44	141.85	--	--	32.44	141.85
SO_2	2.14	8.54	--	--	2.14	8.54
NO_x[†]	342.72	1496.85	36.57	161.74	342.72	<250.0
CO[†]	209.74	920.38	29.55	134.57	209.74	<250.0
VOC[†]	13.91	61.17	9.05	40.00	13.91	61.17
Formaldehyde (HAP)[‡]	0.07	0.31	0.05	0.21	0.07	0.31
Acetaldehyde (HAP)[‡]	0.14	0.62	0.09	0.41	0.14	0.62
Hexane (HAP)[‡]	1.31	5.75	0.89	3.88	1.31	5.75
Total HAPs[‡]	2.46	10.77	1.66	7.25	2.46	10.77

[†]The facility has established facility wide PSD avoidance limits for NO_x, CO, and VOC.
[‡]The facility has established facility wide limits on single HAP and total HAP emissions to avoid major source MACT applicability.

FACILITY WIDE EMISSIONS						
Pollutant	**Permit CP-50000316 v1.1**			**New Total**		
	Uncontrolled	**Controlled**	**PTE**	**Uncontrolled**	**Controlled**	**PTE**
	TPY	**TPY**	**TPY**	**TPY**	**TPY**	**TPY**
PM	16.63	--	16.63	159.00	--	159.00
PM_{10}	16.63	--	16.63	158.48	--	158.48
$PM_{2.5}$	16.63	--	16.63	158.48	--	158.48
SO_2	0.98	--	0.98	9.51	--	9.51
NO_x	614.32	61.43	<100.0	2111.17	223.17	<250.0
CO	1084.87	67.26	<100.0	2005.25	201.83	<250.0
VOC	352.91	20.94	<100.0	414.08	60.94	<250.0
Formaldehyde (HAP)	117.64	9.18	<10.0	117.95	9.39	<10.0

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FACILITY WIDE EMISSIONS						
Pollutant	**Permit CP-50000316 v1.1**			**New Total**		
	Uncontrolled	**Controlled**	**PTE**	**Uncontrolled**	**Controlled**	**PTE**
	TPY	**TPY**	**TPY**	**TPY**	**TPY**	**TPY**
Acetaldehyde (HAP)	13.92	1.39	<10.0	14.54	1.80	<10.0
Hexane (HAP)	1.85	0.18	<10.0	7.60	4.07	<10.0
Total HAPs	149.93	12.41	<25.0	160.80	19.65	<25.0

Note the facility wide emissions table does not include emissions from any temporary sources. Neither the turbines nor the permanent engines are permitted to be operational at the same time as any temporary sources. See the statement of basis for construction permit CP-50000316 v1.1 for the quantification of emissions from temporary sources.

SOURCE TEST REQUIREMENTS

40 CFR 60 Subpart KKKKa requires the facility to conduct an initial source test for NO_x within 180 days of startup per § 60.4333a(b) and § 60.8. The facility is proposing to demonstrate continuous compliance of the NO_x standard by using CEMS. Per § 60.4333a(b), facilities performing continuous monitoring consistent with § 60.4345a, i.e. using a NO_x CEMS, are not required to conduct subsequent source testing for NO_x.

Per Subpart KKKKa § 60.4333a(d)(3), the facility must conduct an initial performance test for SO_2 according to § 60.8 following the applicable method in § 60.4415a. The facility shall satisfy this requirement by maintaining and submitting fuel records per § 60.4415a(a).

The facility has taken a limit of <10.0 TPY of any single HAP in order to be considered a minor source of HAP. The facility's total potential controlled emissions for formaldehyde are close to the major source threshold of 10 TPY. To ensure the accuracy of the facility's minor source status, the facility shall be required to conduct an initial source test within 180 days of startup for formaldehyde on each type of turbine proposed by the facility. This source test shall be utilized to develop a site-specific emission factor for formaldehyde for each type of turbine. This emission factor shall be used in the 12 month rolling sum calculations. The facility may utilize representative testing of sources as approved by the Department.

SPECIAL CONDITIONS

B.26 - The facility is prohibited from operating any turbines and any temporary sources at the same time because compliance with Standard No. 2 was demonstrated separately for these sources.

B.27 – The facility is prohibited from selling power to the grid in order to avoid applicability to 40 CFR 60 NSPS Subpart TTTTa.

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REGULATIONS

Applicable - Section II(E) *(Synthetic Minor)*

The facility originally established synthetic minor limits to avoid Title V, PSD, and major source MACT in CP-50000316 v1.0. With this new project, the facility will be major for Title V. Consequently, the facility wide limits of <100.0 TPY for NO_x, CO, and VOC have been removed. The facility will maintain the <10.0 TPY limit of any single HAP and the <25.0 TPY limit on total combined HAP to avoid major source MACT thresholds, i.e., to be considered an area source of HAP. The facility will maintain the <250.0 TPY limit on NO_x, CO, and VOC to avoid PSD applicability.

To comply with the federally enforceable limits in the following table, the facility will maintain records adequate to calculate a 12-month rolling sum for these pollutants and will operate and maintain control devices in accordance with manufacturer's emission-related written instructions. The facility shall meet specified monitoring, recordkeeping, and reporting requirements detailed in the construction permit. Facility wide totals shall include emissions from all sources at the facility, including those that are considered exempt, insignificant, or temporary.

Synthetic Minor Limits					
Permit ID	**Equipment ID**	**Permit Issue Date**	**Pollutant**	**Emission Limit (TPY)**	**Explanation**
CP-50000316 v1.0	Facility Wide	September 17, 2025	NO_x	<250.0	Facility has established a limit on NO_x emissions to remain below PSD thresholds.
CP-50000316 v1.0	Facility Wide	September 17, 2025	CO	<250.0	Facility has established a limit on CO emissions to remain below PSD thresholds.
CP-50000316 v1.0	Facility Wide	September 17, 2025	VOC	<250.0	Facility has established a limit on VOC emissions to remain below PSD thresholds.
CP-50000316 v1.0	Facility Wide	September 17, 2025	Single HAP	<10.0	Facility has established a limit on single HAP emissions to avoid major source MACT applicability.
CP-50000316 v1.0	Facility Wide	September 17, 2025	Total Combined HAP	<25.0	Facility has established a limit on total HAP emissions to avoid major source MACT applicability.

Algorithms

The algorithms for calculating the emissions from the turbines have been included in this permit to be consistent with the previous construction permit issued for this facility. For NO_x, the facility shall use CEMS data to derive the 12 month rolling sum. For CO, VOC, and HAP, the facility must monitor the temperature of the oxidation catalysts and maintain the catalysts according to a maintenance plan in order to use controlled emission rates when calculating the rolling sums. Additionally, the facility shall conduct an initial source test on the turbines (or a representative subset as approved by the Department) for formaldehyde in order to develop a site-specific emission factor for this pollutant. This emission factor shall be used to calculate formaldehyde emissions during normal operation.

Startup/Shutdown Emissions
The facility shall calculate emissions during periods of startup, shutdown, and malfunctions and include those calculations in the 12 month rolling sums. As mentioned previously, the facility provided vendor emission rates for each turbine during periods of startup and shutdown. The facility shall use these emission rates when calculating emissions during these periods. The facility shall use the uncontrolled AP-42 Chapter 3.1 emission factor for benzene and formaldehyde when calculating startup emissions for these HAP. After the startup period, the facility may use the controlled emission factors found in the footnotes of Table 3.1-3 of that chapter to calculate emissions from normal operation. Once a site-specific emission factor for formaldehyde is developed, the facility shall use that emission factor to calculate formaldehyde emissions during normal operation.

Applicable - Standard No. 1 *(Emissions from Fuel Burning Operations)*
Fuel burning operations are defined as any "furnace, boiler, device, or mechanism used principally, but not exclusively, to burn any fuel for the purpose of indirect heating" (SC Regulation 61-62.1 Section I(31)). The facility's proposed turbines and emergency fire pump do not meet the definition of a fuel burning operation. The exempt small boilers do meet the definition of a fuel burning operation. Therefore, the boilers are subject to the requirements of this regulation. There are no permitted sources at this facility which are subject to this standard.

Not Applicable - Standard No. 3 (state only) *(Waste Combustion and Reduction)*
This facility does not have any waste combustion and reduction activities. The turbines and boilers only burn natural gas meeting the definition of virgin fuel as defined in SC Regulation 61-62.1 Section I(99). The emergency fire pump burns only diesel, which is also considered a virgin fuel.

Applicable - Standard No. 4 *(Emissions from Process Industries)*
A process industry is defined as "any source engaged in the manufacture, processing, handling, treatment, forming, storing, or any other action upon materials except fuel-burning operations" (SC Regulation 61-62.1 Section I(72)). This facility is not one of the listed process industries in the standard. Section VIII does not apply to this facility because the PM emissions at this facility are only a result of the combustion of liquids or gases used solely as fuel. Therefore, the facility does not have a process weight as defined in SC Regulation 61.62.1Section I(73).

The sources at this facility are subject to the 20% opacity limit in Section IX of this standard since their construction is after December 31, 1985.

Not Applicable - Standard No. 5 *(Volatile Organic Compounds)*
The facility does not meet the definition of an existing process (SC Regulation 61-62.5, Standard No. 5, Section I(A)(18)) as it was not in existence or under construction prior to July 1, 1979/1980. This facility does not match the description of any of the plants described in Section II of this standard to meet the applicability in Section I(B)(2).

Applicable - Standard No. 5.2 *(Control of Oxides of Nitrogen (NOx))*
The turbines at this facility are stationary combustion sources constructed after June 25th, 2004. Section I(B)(7) of this standard exempts any equipment from this standard which has a more stringent or equivalent limit from 40 CFR 60, 61, or 63.

For simple cycle turbines <50 MW, the NO_x limit is 25 ppmv at 15% O_2. The 17 MW (158 MMBtu/hr heat input) turbines are subject to 40 CFR 60 KKKKa which has a limit of 15 ppmv at 15% O_2 for new turbines firing natural gas with a utilization rate greater than 45% with a heat input >50 MMBtu/hr and <850 MMBtu/hr. The NSPS limit is more stringent than the limit in this standard, so these turbines are exempt from this standard.

For simple cycle turbines >50 MW, the NO_x limit is 9 ppmv at 15% O_2. The 54 MW (453.4 MMBtu/hr heat input) turbines are subject to 40 CFR 60 KKKKa which has a limit of 15 ppmv at 15% O_2 for new turbines firing natural gas with a utilization rate greater than 45% with a heat input >50 MMBtu/hr and <850 MMBtu/hr. The NSPS limit is less stringent than the limit in this standard, so these turbines are subject to this standard. Per Section IV, the use of NO_x CEMS and semiannual reporting is required under this standard.

Not Applicable - Standard No. 7 *(Prevention of Significant Deterioration)*
This facility has control technologies equipped on its permanent generators and turbines to keep its potential to emit regulated pollutants below 250 TPY. Additionally, this facility has established federally enforceable limits on NO_x, CO, and VOC to remain below the 250.0 TPY threshold. Therefore, this facility is not a major source as defined in Section B(32)(a) of this standard. The facility isn't one of the listed categories in B(32)(a) that have a major source threshold of 100 TPY. Since the facility is a minor source for PSD, no project specific limits are required for this permit or CP-50000316.

Air construction permit CP-50000316 was issued on September 17, 2025 for the installation of 24 natural gas fired generators. That construction permit established synthetic minor limits of less than 250.0 TPY to become a minor source with respect to SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration. The facility will retain the facility-wide synthetic minor limits of less than 250.0 TPY for PSD avoidance with this project. Facility-wide emission limits include emissions from all generators previously permitted, the turbines being permitted in this project, and any exempt sources.

The Department recognizes the relatively short time period between this permit and air construction permit CP-50000316. The Department would have considered the two projects as one, if the facility had not demonstrated that the controlled emissions at the facility can meet the facility-wide limits already established for PSD avoidance. The limitations established for the facility are the same limitations that would have been established if the two projects had been submitted as one. The Department will continue to follow the requirements for evaluating PSD applicability and grouping for any future applications submitted.

If the facility were to remove the PSD avoidance limits in future permitting, the turbines and engines would be considered one project under PSD and would need to be evaluated together.

Applicable - 61-62.6 *(Control of Fugitive Particulate Matter)*
This facility is subject to the statewide requirements in Section III of this standard.

40 CFR 60 and 61-62.60 *(New Source Performance Standards (NSPS))*

Not Applicable – Subpart D (*Standards of Performance for Fossil-Fuel-Fired Steam Generators*)

This regulation defines fossil-fuel-fired stream generating units as any furnace or boiler used in the process of burning fossil fuel for the purpose of producing steam by heat transfer. This subpart applies to each fossil-fuel-fired steam generating unit of more than 73 megawatts (MW) heat input rate. This facility does not use any furnaces or boilers greater than 73 MW to generate steam.

Not Applicable – Subpart Da (*Standards of Performance for Electric Utility Steam Generating Units*)
This regulation applies to each electric utility steam generating unit with a heat input >250 MMBtu/hr constructed after 1978. This facility will use simple cycle turbines, which do not generate steam, to produce power for the facility. None of the proposed boilers have a heat input capacity greater than 10 MMBtu/hr. The facility is also not selling power to the grid. Therefore, the facility is not subject to this regulation.

Not Applicable – Subpart Db (*Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units*)
This regulation applies to each steam generating unit with a heat input >100 MMBtu/hr constructed after 1984. This facility will use simple cycle turbines, which do not generate steam, to produce power for the facility. None of the proposed boilers have a heat input capacity greater than 10 MMBtu/hr. Therefore, the facility is not subject to this regulation.

Not Applicable – Subpart Dc (*Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*)
This regulation applies to each steam generating unit with a heat input <100 MMBtu/hr but >10 MMBtu/hr constructed after 1989. This facility will use simple cycle turbines, which do not generate steam, to produce power for the facility. None of the proposed boilers have a heat input capacity greater than 10 MMBtu/hr. Therefore, the facility is not subject to this regulation.

Not Applicable – Subpart GG (*Standards of Performance for Stationary Gas Turbines*)
This regulation applies to stationary gas turbines with a heat input at peak load ≥10 MMBtu/hr (§ 60.330(a)). However, stationary gas turbines subject to Subpart KKKKa are not subject to this subpart (§ 60.330(d)). The turbines at this facility are subject to Subpart KKKKa, so this regulation is not applicable.

Applicable – Subpart IIII (*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*)
This regulation applies to compression ignition internal combustion engines which commence construction after July 11, 2005 and manufactured after July 1, 2006 for fire pump engines (§ 60.4200(a)(2)). The facility's emergency fire pump is subject to this regulation. The facility shall comply with this regulation by:

- Operating a fire pump which complies with Table 4 of this subpart (§ 60.4205(c)).
- Operating the engine using only ultra-low sulfur diesel fuel (0.0015% sulfur) (§ 60.4207(b)).
- Operating and maintaining the engine according to the manufacturer's emission-related written instructions and changing only those emission-related settings as permitted by the manufacturer (§ 60.4211(a)).
- Limiting non-emergency use, including operations for maintenance and testing, to less than 100 hours per year (§ 60.4211(f)).

There are no permitted sources at this facility which are subject to this regulation.

Not Applicable – Subpart KKKK (*Standards of Performance for Stationary Combustion Turbines*)
This regulation applies to stationary combustion turbines constructed after February 18, 2005 with a heat input at peak load >10 MMBtu/hr. However, turbines subject to Subpart KKKKa are not subject to this subpart (§ 60.4305(c)). The turbines at this facility are subject to Subpart KKKKa, so this regulation is not applicable.

Applicable – Subpart KKKKa (*Standards of Performance for Stationary Combustion Turbines*)
This regulation applies to stationary combustion turbines constructed after December 13, 2024 with a base load rating ≥10 MMBtu/hr (§ 60.4305a(a)). All of the proposed turbines meet this applicability criteria. This standard regulates NO_x and SO_2 emissions.

The facility must conduct an initial source test for NO_x per § 60.4333a(b) using the method described in § 60.4405a. The facility is proposing to demonstrate continuing compliance with the standard by using CEMS. By using CEMS, the facility will not need to conduct subsequent source testing for NO_x. The facility will demonstrate compliance with the SO_2 standard by maintaining and submitting fuel records (§ 60.4372a).

Not Applicable – Subpart TTTTa (*Standards of Performance for Greenhouse Gas Emissions for Modified Coal-Fired Steam Electric Generating Units and New Construction and Reconstruction Stationary Combustion Turbine Electric Generating Units*)
This regulation applies to stationary combustion turbines constructed after May 23, 2023 which have a base load rating greater than 250 MMBtu/hr and serve a generator capable of selling electricity to a utility power distribution system. This facility will have turbines with a rating greater than 250 MMBtu/hr, but will not be selling power to the grid. Therefore, this regulation is not applicable to this facility.

The facility is prohibited from selling electricity to the grid and must submit a letter to the Department certifying the fact that the facility lacks the connections necessary to sell power to the grid prior to the operation of any turbines. If the facility wishes to sell power to the grid in the future, they will need to request a permit modification to revise the permit.

40 CFR 61 and 61-62.61 *(National Emission Standards for Hazardous Air Pollutants (NESHAP))*

Not Applicable - This facility does not emit the pollutants in a way that is subject to this standard (asbestos, benzene, beryllium, coke oven emissions, arsenic, mercury, radio nuclide, radon, or vinyl chloride).

40 CFR 63 and 61-62.63 *(National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories)*

Applicable – Subpart ZZZZ (*National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*)
The fire pump is a stationary reciprocating engine subject to 40 CFR 60 Subpart IIII. By complying with Subpart IIII, the facility will comply with Subpart ZZZZ per § 63.6590(c).

Not Applicable – Subpart YYYY (*National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines*)
This regulation applies to stationary combustion turbines located at major sources of HAP. The facility has established synthetic minor limits of <10.0 TPY for any single HAP and <25.0 TPY for total combined HAP. As such, the facility is considered an area source of HAP emissions. Therefore, the facility is not subject to this regulation at this time.

Not Applicable - 40 CFR 64 *(Compliance Assurance Monitoring)*
This regulation applies to Title V facilities which use control devices to achieve compliance with emission limitations. While this facility will operate under a Title V operating permit and the sources at this facility use control devices, no individual source (unit) has the potential to make the facility a major source on its own (§ 64.2(a)(3)). That is to say each individual engine and turbine have uncontrolled potential emissions which are less than 100.0 tons per year. Therefore, the facility is not subject to CAM.

Not Applicable - 40 CFR 72 *(Acid Rain)*
This facility will not be selling power to the grid. Therefore, the facility is not considered a utility. Non-utility units are not subject to the Acid Rain Program (§ 72.6(b)(8)).

AMBIENT AIR STANDARDS REVIEW

Applicable - Standard No. 2 *(Ambient Air Quality Standards)*
See modeling summary dated DRAFT
The turbines were modeled separately from any temporary sources previously permitted, so the facility shall not operate these sources simultaneously without first providing the Department a revision to the modeling demonstration or using other information to demonstrate compliance with the standard.

Not Applicable - Standard No. 8 (state only) *(Toxic Air Pollutants)*
The facility only burns natural gas or diesel which are considered virgin fuels. This standard does not apply to fuel burning sources which burn only virgin fuel or specification used oil (Section I). Therefore, the turbines are not subject to this standard.

Company Name:	Valara Holdings High Performance Compute Center	**Permit Writer:**	Tyler D. Dunlop
Agency Air Number:	2060-0674	**Date:**	DRAFT
Permit Number:	CP-50000422 v1.0		

PERIODIC MONITORING					
Equipment ID	**Applicable Requirement (Limiting Condition)**	**Measured Parameter**	**Required Monitoring Frequency**	**Reporting Frequency**	**Monitoring Basis/ Justification (Monitoring Condition)**
17T, 54T	Facility Wide Synthetic Minor Limits (B.1)	Calculated Emissions	Monthly	Semiannual	Direct comparison to limits (B.2, B.3, B.4). Proper operation and maintenance of control devices, including monitoring temperature of catalysts, is required to use controlled emission rates for CO, VOC, and HAP (B.8-B.10). Fuel usage records are needed to calculate HAP emissions. The use of CEMS is required for NO_x reporting per 40 CFR 60 Subpart KKKKa and Std 5.2. Formaldehyde emission factor shall be developed with source testing (B.28).
17T, 54T	Facility Wide Synthetic Minor Limits (B.1)	Temperature	Every 15 minutes	Semiannual	
17T, 54T	Facility Wide Synthetic Minor Limits (B.1)	NO_x CEMS	Continuous	Semiannual	
17T, 54T	Facility Wide Synthetic Minor Limits (B.1)	Fuel Usage	Monthly	Semiannual	
17T, 54T	Std. 4 20% Opacity (B.5)	--	--	--	Facility is subject to 20% opacity limit as it is constructed after December 31, 1985. Proper operation and maintenance of turbines as required under 40 CFR 60 Subpart KKKKa should be adequate (B.12-B.25). Combustion of natural gas is not expected to produce opacity. Facility is required to maintain fuel records per Subpart KKKKa and Std 5.2. No further monitoring required.
17T, 54T	Std. 2 (I.1)	Temperature	Every 15 minutes	Semiannual	Controlled emissions were modeled so demonstration of proper operation of control devices is required (B.8-B.10).

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PERIODIC MONITORING					
Equipment ID	**Applicable Requirement (Limiting Condition)**	**Measured Parameter**	**Required Monitoring Frequency**	**Reporting Frequency**	**Monitoring Basis/ Justification (Monitoring Condition)**
17T, 54T	Std. 2 (I.1)	Operating Time	Daily	Report in 6 months	Turbines and permanent generators were modeled separately from temporary sources permitted in CP-50000316 v1.1. Therefore, the turbines must not operate at the same time as temporary sources (B.26).
54T	Std. 5.2 NO_x Limit (B.6)	NO_x	Continuous	Semiannual	As required by regulation (B.3, B.7). The use of CEMS is also required in accordance with 40 CFR 60 Subpart KKKKa.
54T	Std. 5.2 Fuel Usage (B.7)	Fuel Usage	Monthly	Semiannual	As required by regulation (B.7). Fuel records are also required to be maintained and submitted in accordance with 40 CFR 60 Subpart KKKKa.
54T	Std. 5.2 Tune-ups (B.7)	Tune-ups	Every 24 months	On-site Records	As required by regulation (B.7).
17T, 54T	40 CFR 60 Subpart KKKKa (B.12-B.25)	--	--	--	Post 11/1990 Federal Regulation. Monitoring inherently adequate.
Facility Wide	40 CFR 60 Subpart TTTTa Avoidance	Electrical Connections	One-time	One-time	The facility shall submit a letter signed by the local power utility certifying that the facility lacks the power connections necessary to sell power to the grid (B.27).

PUBLIC NOTICE

This construction permit(s) will undergo a 30-day public notice period, in accordance with SC Regulation 61-62.1, Section II(N) and SC Regulation 61-62.1, Section II(E), to supersede limits established in CP-50000316 for Title V avoidance.

SUMMARY AND CONCLUSIONS

It has been determined that this source, if operated in accordance with the submitted application, will meet all applicable requirements and emission standards.