

SOUND POWER DATA & CHILLER/GENERATOR INFORMATION

See attached for chiller data and table below for summary (including generators) on data used:

Following is a summary of all sound power data and model settings that relate to the ISO standard governing the noise calculation.

Air-cooled chiller, normal operating condition, directly from manufacturer (unit height 4.3m):

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000	dBA
Sound Power Level (dB)	106	99	92	91	88	88	84	84	95

Generator with enclosure, calculated using unboxed generator levels, assuming enclosure reducing sound pressure levels to ~70 dBA at 7m (stacked unit height 12.8m):

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000	dBA
Sound Power Level (dB)	88	100	104	97	90	85	72	60	99

Sound absorption coefficients (α):

Element	Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
Acoustic barrier panel	0.1	0.29	0.8	0.99	0.99	0.96	0.72	0.72
Typical building (ISO default)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Settings for noise model, as per ISO 9613-2-2024:

The below stated values used to generate the Figure 12 graph, along with the overall dBA and dBC levels:

Here are the values used to generate the Figure 12 graph, along with the overall dBA and dBC levels:

Scenario	Octave-Band Center Frequency (Hz)								Overall Level	
	63	125	250	500	1000	2000	4000	8000	dBA	dBC
Scenario 1 - 100% Operation	61	54	47	42	36	33	27	15	45	61
Scenario 2 - Normal Operation	62	51	41	36	31	29	22	10	41	62
Scenario 3 - Generator Testing	62	51	41	36	31	29	22	10	41	62
Scenario 4 - Emergency Power Loss, Equilibrium	62	51	42	36	31	29	22	10	41	26
Scenario 5 - Free Cooling (Reduced Power)	55	50	39	33	30	26	19	6	38	56

Device-specific Information re. Sound Study Baseline Modeling

Chillers

The class of chiller expected for Project Taurus is similar to the Multistack ACF552M unit

- An air-cooled chiller magnetic-bearing centrifugal chiller utilizing oil-free variable-speed compressors, flooded evaporator technology, and EC condenser fans
- The unit will be equipped with free cooling technology to eliminate the need for compressor operation when ambient conditions are favorable and to provide excellent part-load efficiency through integrated control systems that continuously optimize compressor and fan operation to match cooling demand.

Generators

The generator units for Project Taurus will be 3.5 MW diesel engine generators within sound attenuated enclosures

- The engines will be Tier 4-compliant machines with exhaust scrubbers (Selective Catalytic Restrictors – SCRs) to attain the stated tier level and to maintain compliance with state environmental regulations
- The units are planned at 15kV output voltage
- Fuel management will include base mounted fuel tanks with 100% containment rupture basins.