Our experience with Acoustics on the iDataplex product family has been that as long as the system fans remained at or below around 4600rpm, the system would meet the 6.6 bels criteria. (This is with the power supply at approximately 4900rpm.)

With the current GPU Thermal profile, there is a SIGNIFICANT DIFFERENCE in Acoustics levels:

IF ONLY the GPU(s) are exercised versus BOTH the GPU & Intel processors exercised simultaneously.

When exercising BOTH GPU and Intel processors with the new GPU Thermal profile and n=2 nVidia M1060 cards, we were seeing speeds up to 5900rpm and observing sound power levels of 7.2 bels !!

IF only exercising the GPUs, the system fan speeds stayed low...seeing about 3600rpm max (and 6.2 bels).

The GPU Thermal profile significantly lowers the T(limit) value below that of the other Thermal profiles.

In the "regular" Thermal profiles, for the 60w 80w and 95w Intel processors,
the T(limit) values are 52C 56C and 60C respectively.

The T(limit) value when a GPU is installed is set to 40C.
This is causing the fans to ramp sooner and ultimately go higher.

Summary of Evaluation -- (See Configuration Details Below)

Exerciser:	Input Power	PS RPM	SysFans RPM	LWAd bels	
nbodyx2	355w	4885	3600	6.2	
nbodyx1 + MP70%	312w	4885	5040	6.8	
nbodyx1 + MP100%	340w	4885	5940	7.2	
nbodyx2 + MP80%	425w	4885	5400	7.0	
nbodyx2 + MP100%	433w	4900	5900	7.2	
Typical idpx @ 80%		4900	<4600	6.6	< IBM Criteria

(All data collected in Semi-anechoic chamber at ambient temperature of 24C.)

Configuration Details:
OS Name Microsoft? Windows Server? 2008 Standard R2
Version 6.1.7600 Build 7600

Each of these is installed:

197_77_TCC_Server08_64.zip
cudatoolkit_3.0_win_64.exe
gpucomputingsdk_3.0_win_64.exe

80w Nehalem (Quadcore)
uEFI -- TME147T
IMM -- YUOO69A