

NASA Ames Research Center  
NNA11387659Q-AKK  
Attachment Four  
Question and Answer Set One

Cleanroom One

- Q1. Is the TVAC chamber to be lowered through Soft Wall ceiling or is the soft wall to be moved over the chamber? What is the diameter of the chamber?
- A1. Moving the Soft wall CR to the side is expected. The chamber Clearance OD is 8' 3" if a removable panel is the proposed design.
- Q2. View A – mentions “no vertical structure” – please provide additional information – details. It appears that we cannot locate a support leg in that corner?
- A2. A vertical structure at approximately mid span would conflict with (crash into) any integrated test article, thus impeding rolling the cleanroom across/over the TVAC base. Structure in the Corner is acceptable and expected.
- Q3. View A - The Height for the Vinyl Curtain shows as TBD, please clarify.
- A3. The base (floor line) of the Vinyl Curtain will need to be tailor cut to fit around the irregular elevated floor levels which cover the plumbing and other assorted lines leading from the pump to the chamber. Only a portion of the curtain is expected to be cut to fit on installation.
- Q4. Requirement 2.2 – Provide a means for ESD control – please explain what is required?
- A4. Provide a Grounding point to prevent/control static build up.
- Q5. You mention that the overall Height must be limited to 11'H, however, you have 11' 6 ¾" to the bottom of the crane – can we pick up a few more inches here (the HEPA fan units are 16"H).
- A5. 11' 4' H can be granted for local clearance of upper portion of HEPA filter units (10' + 16").

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Cleanroom Two

Q6. Cleanroom Two - 3 x 3 ceiling access, can this be a removable roof section and can we assume the clean room specifications would not be applicable when the ceiling is open?

A6. Yes

Q7. Modular 6' extension to 22 feet total – Requirement 2.0: Do you want this as an Addition?

A7. It should be part of the bid, but it is a separate addition to the “primary” 16'x24' cleanroom, but the area would be continuous when the addition is on (i.e. it's not a separate room, it just changes the size from 16'x24' to 24'x22'). If such a modular setup isn't available, please quote the 24'x22' size.

Q8. Is this also Class 10K / ISO 7? Confirm the dimensions – 24' x 22'?

A8. Yes.

Q9. Are any Entrance / Exits required?

A9. Yes, as per requirements, we want one removable or roll-up opening at least 8' by 14.'

Q10. Is Removable Strip Vinyl Curtain acceptable for the 8'W x 14'H access?

A10. Yes.

Q11. Is this the only entrance / exit?

A11. Yes.

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Q12. Does this unit require Casters or Leg Levelers?

A12. Casters are optional. We don't require them but if they are there they should follow the requirements for wheels outlined in the specifications.

Q13. Is the Power dist panel and/or the control panel required for this unit the same as the Cleanroom One's requirement?

A13. No

Cleanrooms One and Two:

Q14. A soft wall clean room will not provide a positive pressure environment. This type of clean room functions based on dynamic air flow and not pressure. Can this requirement be removed?

A14. By "soft walls" we don't necessarily mean they should be flaps. The walls can be a clear, "soft" material covering a fixed frame. We'd prefer not to have something like hard plastic. If no positive pressure is maintained, suitable flow analysis and modeling must be provided to confirm the 10k environment will be maintained throughout the enclosure.

Q15. A soft wall structure on casters will not meet seismic up lift requirements since it is not bolted to the floor. Can this spec be modified or eliminated?

A15. Overturning shall be addressed, uplift is relieved/eliminated, Tie down feature (attach point of appropriate size) will mitigate for a rolling Cleanroom. The wheels in Cleanroom Two procurement are optional ("If wheels are provided"...), Cleanroom One can either be moveable as an entire unit OR have a removable cover for the Chamber through the cleanroom ceiling.

Q16. Are both units to be installed at the same time, same week?

A16. Preferred but not required. Cleanroom Two (16x24' unit) first if delivered serially.