- Interventions)
- Documentation (*e.g.*SOPs)
- Change control
- HEPA filter maintenance/testing
- Cleaning and sanitization

- Verification of the "clean process" may include:
  - Monitoring for non-viable particulates, which is performed only "at rest" due to inherent particulate generation from the capper operation.
  - Minimum sampling location(s) may be defined according to a risk assessment.
  - Minimum monitoring frequency should not be less than semi-annually (*e.g.* routine HEPA integrity testing frequency)
  - The use of other physical parameter data including continuous HVAC plenum box fan alarms and differential pressure testing across HEPA filter elements should be in place for added assurance that this critical system remains operational.
  - A Documented rationale to define the frequency of testing to demonstrate continued acceptability of the Grade A air supply may include:
    - Assessing product risk.
    - Historical integrity data of the HEPA air handler.
    - The amount/degree of supportive protective systems.
  - Routine HEPA integrity testing (*e.g.* performed semi-annually[5]).

- The principles that define the intent of a "Grade A air supply" may include:
  - The air handler over the part of the capping operation where vials exit the aseptic area to the point of capping meet ISO 5 requirements for non-viable particulates.
  - The immediate capping environment where the uncapped stoppered vials are located is supplied with unidirectional air that meets ISO 5 specifications immediately downstream of the HEPA filter face.
  - Assessment of acceptable operation may be performed by routinely monitoring the physical parameters of the air handling system to supply Grade A quality air as outlined within EU GMP Annex 1.

In summary, the routine monitoring program may be designed to monitor both the physical parameters of the air handler and empirical data (*i.e.* non-viable particulates) in order to provide information on the air source to the capping operation since this ensures that the monitoring is focused on verification of air quality being supplied to the capping process versus the process itself.

