

Element 3: facilities design and construction

Inherent safety and security can be enhanced, and risk to health and the environment minimized, by using sound standards, procedures and management systems for facility design, construction and startup activities.

- 3.1 Project management procedures are documented, well understood and executed by qualified personnel.
- 3.2 Criteria are established and procedures are in place for conducting and documenting risk assessments at specific project stages to ensure that Operations Integrity objectives are met.
- 3.3 The design and construction of new or modified facilities use approved design practices and standards that:
 - meet or exceed applicable regulatory requirements
 - embody responsible requirements where regulations are not adequately protective
 - address other important operations integrity considerations, including Environmental Aspects and Human Factors
- 3.4 Deviation from approved design practices and standards, or from the approved design, is permitted only after review and approval by the designated authority, and after the rationale for the decision is documented.
- 3.5 A process is in place for evaluating the application of new or updated standards with operations integrity implications for existing facilities.
- 3.6 Quality-assurance processes are in place, which ensure that facilities and materials received meet design specifications and that construction is in accordance with the applicable standards.
- 3.7 A pre-startup review is performed and documented to confirm that:
 - construction is in accordance with specifications
 - Operations Integrity measures are in place
 - emergency, operations and maintenance procedures are in place and adequate
 - risk-management recommendations have been addressed and required actions taken
 - training of personnel has been accomplished
 - regulatory and permit requirements are met