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MQP Level 1

MQP L1 ITER Quality Assurance Program (QAP)

The purpose of this Quality Assurance Program (QAP) is to ensure that ITER activities are performed at a level of quality appropriate to achieving the safety and performance objectives of the ITER Project in compliance with regulatory and industry quality requirements.
Also, the QAP ensures that sufficient objective evidence is maintained to demonstrate that the required quality has been achieved.

Approval Process			
	Name	*Action*	*Job Title / Affiliation*
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Change Log			
MQP L1 ITER Quality Assurance Program (QAP) (22K4QX)			
Version	***Latest Status***	***Issue Date***	***Description of Change***
v1.0	In Work	06 Sep 2005	
v2.0	Signed	14 Sep 2005	
v3.0	Signed	30 Nov 2005	
v4.0	Signed	05 Dec 2005	
v5.0	Signed	08 Dec 2005	
v5.1	Signed	08 Dec 2005	
v5.2	Signed	13 Jan 2006	
v6.0	Signed	07 Nov 2006	
v6.1	Signed	13 Nov 2006	
v6.2	Signed	14 Nov 2006	
v6.3	Signed	16 Nov 2006	
v7.0	Signed	19 Jan 2007	
v7.1	Signed	19 Jan 2007	
v7.2	Signed	22 Jan 2007	
v7.3	Approved	26 Jan 2007	
v8.0	Signed	17 Mar 2017	As part of the simplification/ optimization of MQP as approved by MQPWG, this Major revision of QAP reflects progress of project and new MQP process map defined by MQPWG. This includes the merge of 2NS3UH (ITER Management & Quality Programme (MQP)) into this version. This version has been pre-reviewed by QAA, concerned Process Owners-Representatives, DAs (iteration of drafts including review of their comments).
v8.1	In Work	31 Mar 2017	Changes to version 8.0 accepting RCO DDG's comments: (1) Delete DA from the definition of Performer (2) Add DA’s responsibility and the requirement for joint QA/QC work, as well as Project Team establishment when necessary.
v8.2	Signed	31 Mar 2017	Changes from version 8.1 to version 8.0 accepting RCO DDG's comments: (1) Delete DA from the definition of Performer (2) Add DA’s responsibility and the requirement for joint QA/QC work, as well as Project Team establishment when necessary. Changes from version 8.2 to 8.1: change from track mode to a clean mode by accepting the changes from 8.1 to version 8.0
v8.3	In Work	04 Apr 2017	Accepting COO DDG's request to add 'Construction Teams in Construction Organization should be noted as having full responsibility of Assembly and Installation Works, with a specific organization chart with defined specific responsibility' in Section 1.2.
v8.4	Revision Required	05 Apr 2017	integration of Reviewers comments: Section 2.5: Roles and Responsibilities: adding of a dedicated section for DA, strengthening the synergy approach for implementing Quality activities Section 1.2: project organizational structure, adding precision on Construction Teams Section V (reference): complement the list of external Regulation requirements by adding the PE/NPE Regulation references
v8.5	Approved	18 Apr 2017	As per DG's request: Changing 2.5.1 as

			The IO Director General may consult the IO Central Team Management Board (CTMB) before taking his decision to stop work for the ITER Project. Adding to 2.9: The Non-conformities shall be resolved with high priority and that this resolution shall not exceed 9 months in average and 12 months individually, except initial agreement from the IO DG or the QAA Head.
v9.0	In Work	13 Oct 2025	MQP level 1 documents, ITER Quality Assurance Program updates following the IO QMD internal review (E6BXBZ) and after integration of feedback from DAs' quality representatives via 'Draft review of PA AD_ITER Quality Assurance Program (QAP) (ELFGY7)' . The key changes made to ITER QAP are as following: - The Quality policy has been removed from this QAP and is integrated in ITER Policy on Safety, Security, Quality and Environment Protection (43UJN7) - Reflected IO current organization and MQP process structure (Management / Project Realization / Quality) - Harmonization with International ISO Quality Standards (ISO 9001 & ISO 19443) - Delete redundant or unnecessary requirements
v9.1	Signed	13 Oct 2025	MQP level 1 documents, ITER Quality Assurance Program updates following the IO QMD internal review (E6BXBZ) and after integration of feedback from DAs' quality representatives via 'Draft review of PA AD_ITER Quality Assurance Program (QAP) (ELFGY7)' . The key changes made to ITER QAP are as following: - The Quality policy has been removed from this QAP and is integrated in ITER Policy on Safety, Security, Quality and Environment Protection (43UJN7) - Reflected IO current organization and MQP process structure (Management / Project Realization / Quality) - Harmonization with International ISO Quality Standards (ISO 9001 & ISO 19443) - Delete redundant or unnecessary requirements
v9.2	Signed	12 Nov 2025	Comments from previous reviewers have been discussed and implemented.
v9.3	Approved	14 Nov 2025	Integrated reviewers' comments.

Table of Contents

1 Management and Quality Programme (MQP)

1.1 Introduction

According to the ITER Project Specification [1], the ITER Quality Assurance Programme is developed under an integrated ITER Management and Quality Programme (MQP) to ensure that:

- The level of QA appropriate to achieving the safety and performance objectives of ITER is specified;
- Regulatory requirements have been achieved; and
- Sufficient objective evidence is maintained to demonstrate that the required quality has been achieved.

The QAP promotes compliance with applicable regulatory [6] and industry quality requirements [11], fosters continuous improvement, and facilitates transparent communication among all Project Execution Entities (PEE) to ensure safety, reliability, and performance integrity.

The ITER MQP documentation is established in the following hierarchy.

- The MQP Level-0 documents, define guiding policies and principles which shall be translated throughout the MQP documentation.
- The MQP Level-1 documents shall list plans and specific requirements.
- The MQP Level-2 procedures and MQP Level-3 working instructions shall not duplicate the contents in the upper-level MQP documents but shall detail them further.

The QAP, as one of the Level-1 MQP documents, incorporates Level-0 principles defined in the ITER Project Management Plan (PMP) [2] and ITER Policy on Safety, Security, Quality and Environment Protection [3], and supports the management of activities affecting quality through the implementation of Level-2 procedures and Level-3 work instructions.

The MQP processes are categorized into Project Realization Process, Quality Process and Management Process [14].

Management process for IO Nuclear Safety, Occupational Health & Safety, Environmental Protection, and Security are integrated in ITER Integrated Safety, Environment and Security Management System Manual [4].

By process approach, the ITER MQP documents:

- Shall provide for a disciplined and systematic approach to activities affecting quality and for production of objective evidence to demonstrate that the required quality has been achieved;
- Shall detail requirements, assign responsibilities and authorities and provide for the performance and assessment of work

1.2 Scope

This ITER QAP applies to all quality-related activities and processes and all Project Execution Entities (PEE) involved in ITER project through all the stages and/or phases of ITER project (e.g. R&D, Design, Procurement, Manufacturing, Assembly & Installation, Commissioning, Operation, Maintenance).

The individual Project Execution Entities (PEE), (e.g. ITER Organization (IO), the Domestic Agencies (DA) and their respective supply chains) shall either implement (flow down) the applicable provisions from this QAP to their own established quality plans, or agree to adopt the ITER QAP as their quality plan in the completion of their scope of work on the ITER Project.

The extent of quality plan provisions applied to any specified task is proportional to, and appropriate for, the safety and/or project success significance of the task, as determined by the ITER Management.

1.3 Basic Principles and Responsibilities

The current ITER Project overall organization structure is described in the ITER Organization Chart [7].

The Quality Assurance (QA) activities shall be commensurate with the importance to safety, reliability, and performance of the ITER Facility [1][2].

Activities during ITER project phases that affect the quality of items and services shall be controlled by the development and use of MQP documents.
Critical Quality Activities may be addressed in MQP documents, as referenced in section 3.1.

Given the inherently complex and evolving nature of ITER Project for nuclear fusion science, the MQP reflects and supports multi-national collaboration, multi-parti structure, and multi-disciplinary integration.

The ultimate PEE responsible for the quality compliance of the ITER Facility is the IO, whereas the other PEEs are responsible for the quality compliance of items & activities. To ensure full implementation and delivery of their contributions to the ITER Project, the PEEs shall:

- Establish internal project management and QA systems meeting the ITER project quality and management requirements described in this QAP; and
- Ensure that each of its contractors performs in full compliance with quality requirements defined by the IO.

When the IO acts as manufacturer of Pressure Equipment or Nuclear Pressure Equipment (PE/NPE), the IO is considered “Performer” as per the Implementation plan for design & manufacture of PE/NPE [9].

1.3.1 Authorities for Maintaining the MQP

The Director General (DG) shall bear the ultimate responsibility for the quality of the ITER Project. The DG may delegate his authority on matters pertaining to quality.

The Quality Management Division (QMD), under the authority of the Director General, shall be responsible for developing and maintaining this QAP and for monitoring its implementation and effectiveness.

The IO QMD shall provide support to other PEEs in their efforts to provide sufficient level of Quality Management, QA, Quality Supervision (QS) and Quality Control (QC) activities.

This shall include but is not limited to monitoring of MQP performance and coordination of QA activities.

The Head of IO QMD shall have:

- sufficient authority and organizational freedom from cost/schedule pressures, and shall alert the responsible organization of any nonconforming conditions or risks regarding design, manufacturing, delivery, installation, testing and commissioning, maintenance, preservation and operations activities.
- direct access in all quality-related challenges, risks, opportunities, events and issues to the ITER Project Senior Management, including the DG and DDGs, and the Heads of other organizational units. This access ensures the capacity of the IO Quality team to identify quality problems, initiate actions, make recommendations, and verify implementation of solutions.

1.3.2 Domestic Agency (DA)

The DG specifies work activities performed outside the IO by procurement arrangement or contract documents. Applicable quality requirements shall be passed on to subcontractors, but the responsibility for meeting the necessary quality requirements remains with the contracted organization.

This term refers to an organization appropriately formed and appointed within and by each PEE to supply in-kind goods and services to the IO, on the basis of defined specifications.

To realize the Quality Objectives, the following shall be put into place:

- Each DA will have a well-defined management and quality program that will be reviewed and accepted by the IO.
- Each DA will take due consideration of the IO technical opinion
- Each DA will allow and facilitate, if requested, IO presence on the premises of any subcontractor.
- Each DA will perform, jointly with the IO, both internal and external QA audits to assess the QMS ensuring the propagation of the IO requirements.
- Each DA will perform, jointly with the IO, Quality Supervision onto its suppliers or contractors checking the quality of the products, i.e. compliance to the IO requirements in proactive way.

1.3.3 IO-DA Quality Leadership Team (QLT)

The IO-DA QLT [8] ensures

- MQP governance implementation, documentation change management, continuous improvements and collaboration between all Project Execution Entities in QLT scope;
- That the IO and DA quality management and internal control practices are in line with the ITER Policy on Safety, Security, Quality and Environment Protection [3] and the jointly defined annual objectives; and

- That the activities, analyses, and decisions within the QLT scope are properly communicated, tracked and monitored until completion and closure, and openly shared and propagated.

1.3.4 MQP Process Owner

Each MQP process is under the responsibility of a Process Owner designated by the DG, and the Process Owners shall ensure that the requirements defined in the MQP documents are deployed, implemented, maintained and improved in real-life workflows.

1.3.5 MQP documents' control and review

As stated in the Project Specification [1], the MQP documents as controlled documents shall:

- Provide for a disciplined and systematic approach to organize activities affecting quality and for production of objective evidence to demonstrate that the required quality has been achieved.
- Detail requirements, assign responsibilities and authorities and facilitate the performance and assessment of work.

All MQP documents are subject to continuous improvement as follows:

- Changes to MQP documents shall be formally reviewed.
- MQP changes shall be properly communicated to the impacted users.
- MQP structure and documents shall be reviewed every 3 years to assess the applicability and need for update.
- The impact of internal/external changes on MQP shall be assessed during the Management Review [13]

1.4 Quality Culture

The Quality Culture within the IO and DAs starts from the top management and is cascaded to each individual staff and finally reflected in daily behaviour, attitude and awareness with regards to quality.

ITER quality culture is achieved by taking responsibility on quality by all PEEs in a proactive and transparent manner to achieve quality objectives.

As per the ITER Policy on Safety, Security, Quality and Environment Protection [3], IO and PEEs shall consider nuclear safety, occupational health and safety, quality and environment as their first priorities. This policy shall be effectively communicated, well understood, and consistently implemented at all levels of the PEE.

1.4.1 Quality Objectives

The overall quality objectives are to ensure:

- Attainment of the level of quality necessary to accomplish the project objectives commensurate with the project's responsibility for protection of the public health and safety, protection of the environment, and reliable facility operation
- That Structures, Systems, and Components (SSCs) designed, procured, fabricated, installed, constructed, and tested for the project shall conform to established and documented requirement.

1.4.2 Performance Monitoring

To monitor the achievement of ITER quality objectives, the IO shall identify, track, and report indicators of project performance. For the performance monitoring at other PEEs than the IO, it may reach for assistance through the IO-DA Quality Leadership Team (QLT) [8]. Quality indicators shall be tracked on an ongoing basis and reported to responsible management at the concerned PEE(s).

For the purpose of achievement of ITER quality objectives, the performance indicators should include but are not be limited to:

- Assessment, audit, inspection and surveillance findings;
- Non-Conformance Report management status;
- Quantitative/ qualitative metrics of MQP processes performance; and
- Verification of corrective actions taken and effectiveness review.

1.4.3 Continuous Quality Improvement

ITER is convinced that those closest to the working level of an activity are the most knowledgeable of the activity and its problems or shortfalls. The IO management strongly encourages all personnel to offer their recommendations for improvements of its processes and programs. These recommendations should be considered at the lowest appropriate organizational level in order to expedite improvement implementation.

ITER recognizes that there will be problems during the course of the project. Project personnel are required and encouraged to report problems to appropriate management for correction. Identifying problems is the necessary first step in getting them fixed and preventing their recurrence. This forms the basis for a continuous improvement culture. Root Cause Analysis and Corrective Action should be utilized to correct current issues and prevent reoccurrence.

Lessons learned from both failures or successes during events, incidents, CFSI detection or implementation and evaluation of systems, processes or programs should be used to identify strengths and weaknesses, and therefore to improve the MQP.

1.4.4 Quality Support Service

The PEEs are supported by quality services, for example Non-Destructive Test, Quality Inspection, Laboratory Testing & Calibration, Quality Audit, Quality Training, or NCR support.

Quality support services are implemented in a controlled manner to ensure all PEEs are aware of the quality culture and to encourage a questioning attitude.

1.5 Graded approach to the application of quality requirements

The IO applies graded approach to ensure that application of the requirements related to MQP, documentation, monitoring and measurement is commensurate with ITER Project stakes and complies with relevant regulatory and organizational standards.

1.5.1 Identification of PIC/PIA and determination of defined requirements

In application of INB Order [6], the “Protection Important Components” (PIC) and “Protection Important Activity” (PIA) are identified and classified. These PICs and PIAs including their defined requirements are linked to the main safety functions in ITER, and they are managed in MQP Nuclear Safety Process according to [4].

1.5.2 Quality Classification

For applying a graded approach, a quality classification is introduced to provide a basis for the management of structures, systems and components (SSC), spare parts and activities necessary for ITER operation or for supporting ITER operation.

A Quality Classification scheme shall be used to identify items requiring less stringent quality requirements with consequential cost saving, and to establish a basis on which a stepwise hierarchy of quality requirements can be developed.

All items important to the safety and performance of the ITER Facility shall be assigned Safety and Quality classifications. Requirements shall be defined for those classifications.

2 Project Realization Process

2.1 Configuration Management

Configuration Management (CM) is the process that shall ensure:

- The characteristics of the SSCs comprising the ITER plant are identified and documented and changes and/or deviations to these characteristics are properly developed, assessed, approved, issued, implemented, verified, validated, recorded and incorporated into the project documentation.
- The activities, and their associated cost and schedule data, to achieve the objectives of the project are identified, documented and changes or deviation to these are properly developed, assessed, approved, issued, implemented, verified, validated, recorded and incorporated into the project documentation.
- The management and technical processes required to support these activities are identified, documented and changes or deviation to these are properly developed, assessed, approved, issued, implemented, verified, validated, recorded and incorporated into the project documentation.
- Consistency is maintained between the parameters, the requirements, the physical and functional configuration of ITER and its documentation, particularly as changes and/or deviations are made throughout the ITER life-cycle. CM extends beyond the design, ultimately controlling all documentation referred to in construction, and operation.

CM shall be applied to the parameters, systems, components, instructions and procedures whose failure to satisfy requirements could lead to inconsistencies of design, violations of safety requirements, non-compliance with regulations, significant loss of operational capability, or significant changes in cost or schedule.
At ITER, following CM approach is used for CM implementation:

- Identified needs for change to the established configuration baselines are managed through the Project Change Request (PCR) procedure,
- Specific demands to depart from a particular requirement of an item's current approved configuration during procurement and manufacturing phase are managed by the Deviation Request (DR) procedure,
- Changes to be implemented during the construction/ installation activities are managed through Field Change Request (FCR) procedure,

- Non-compliance with requirements from the approved configuration at the end of the manufacturing or installation activities are treated as non-conformities and managed through the NCR procedure.

2.1.1 Identification and Control of Items

Identification shall be maintained on the items or in documents traceable to items, or in a manner that assures that identification is established and maintained. The suitable means shall be determined according to the type of item and its conditions: for instance, complexity of the product, unitary or serial products, risk of mixing of material grades, etc.

The traceability system should be proportionate to the risk of mixing items during their life cycle. It shall be maintained by procedural methods that cover receipt, identification, storage, and transfer to production, temporary storage and use in production, availability of correct inspection documents at the final inspection.

Control shall be established to assure that only correct and accepted items are used or installed.

Items of production (batch, lot, component, part) shall be identified from the initial receipt and fabrication of items up to and including installation and use in ITER activities. This identification shall relate an item to an applicable design and other pertinent specifying documents. Physical identification shall be used to the maximum extent possible. Where physical identification in the item is either impractical or insufficient physical separation, procedural control or other appropriate means shall be deployed.

Identification markings shall be applied using material and methods that provide a clear and legible identification and do not degrade the function or service life of the item. Markings shall be transferred to each part of an identified item when subdivided and shall not be obliterated or hidden by surface treatment or coating unless other means of identification are substituted.

When applicable codes, standards, or specifications include specific identification or traceability requirements, this shall be identified and controlled.

Items having limited calendar or operating life or cycles shall be identified and controlled to preclude use of items whose shelf-life or operating life has expired.

Provisions shall be made for the control of item identification consistent with the planned duration and conditions of storage such as:

- provisions for maintenance or replacement of markings and identification records due to damage during handling or aging,
- protection of identifications on items subject to excessive deterioration due to environment exposure,
- provisions for updating existing plant records.

2.2 Documents and Records

2.2.1 Control of Documents

The IO Document Control process shall be established to control the preparation, review, approval, issuance, distribution, revision and validation of documents, which prescribe all activities affecting quality, essential to the management, performance and assessment of work in the IO. An electronic document management system shall be used to aid in document control and management.

A system for control of documents and data to assure appropriate review and approval for use shall also be established and implemented by all organizations performing ITER-related activities, using clearly established protocols for which documents shall be reviewed, by whom, and in what time period. These systems shall include procedures to be used to implement quality program requirements, thus to ensuring that all activities affecting quality are planned, controlled, and documented. The document control systems shall assure only correct and current information is available for the performance of ITER activities.

Types of documents subject to controls include, but are not limited to:

- Procurement and contract documents, including document deliverables
- Management plans
- Quality regulation and plans
- Technical documents (i.e., design drawings, safety documentation, technical specifications, etc.)
- Licensing Documents
- MQP Process, Plan, Procedure, Working Instruction, etc.

Documents prepared, used, and maintained for each work activity shall be controlled from preparation through to distribution. The control shall assure that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel and are distributed to and used at the location where the prescribed activity is performed. The control also includes change notice and revision controls for documents to ensure the timely issuance of the revisions of the controlled documents. Changes to documents shall be reviewed and approved by the same organizations that performed the original review and approval unless the applicant designates another responsible organization.

The control process shall ensure that documents are approved according to a prescribed method before they are issued for use. Applicability of the documents for use shall be clearly defined. The responsibilities for approval shall be clearly defined by senior management. An effective electronic document management system shall be built on and it shall utilize the necessary controls applied for this process. The system shall support clear identification and version control. Documents stored in the system shall be protected by online security and made available through controlled access. In case wide public distribution is requested, documents shall be cleared through a defined publication process.

2.2.2 Records

Records provide objective evidence of activities performed or results achieved. Those activities that result in data, technical reports, drawings, specifications, and analyses for use by the IO shall provide a traceable trail to be preserved to resist deterioration for the necessary retention times.

Original items, or documents, should be provided where possible, but a high-quality reproducible (digitalized) copy is acceptable.

Records shall be accessible at all times during the specified retention periods. Retention times of records and associated test materials and specimens shall be established to be consistent with the statutory requirements and knowledge management of obligations of ITER. Access to locations where records are retained should be controlled. Responsibilities for maintaining and operating the records process and the facilities for the storage of records should be clearly defined and documented.

The responsibility to identify, collect, classify, index, file, and maintain records of work performed for the IO shall be specified in contract documents and scopes of work. The indexing system and the filing system should provide proper identification and ability to retrieve requested records. Records shall be filed in a storage system that provides a suitable environment to minimize deterioration or damage and prevent loss.

Special processed records such as radiographic film, electronic media (such as magnetic media, optical media), archival samples, and photographs shall be handled and stored to preclude damage. At a minimum, manufacturer information for proper handling and storage should be used in preparing proper controls for these types of records. When transmitted to IO for final storage, records in special formats should be converted into high-quality digitalized documents to allow long-term storage, retrieval and accessibility.

2.2.3 Sign-Off Authority

The direction for ensuring proper level of review and approval for the key types of documents generated or received by PEEs for use in the ITER Project shall be specified by considering the significance of the project document and the impact on other project activities.

2.3 Design

Design control shall apply through the lifetime of the technical items, SSCs. The control of design activity shall ensure that specified design requirements are met in the design solution and on the end-product in accordance with the design input. The control of design activity including verification activities shall be done using plans and documented processes which shall ensure a level of control commensurate to the risk, safety role and complexity of the end-product to be developed.

Design control records shall include not only final design documents, such as drawings and specifications, and revisions to those documents, but also documentation that identifies the important steps in the design process, including sources of design inputs that support the final design, calculations, design development computer models, and computer software used in design.

2.3.1 Design Planning

Design plans shall be prepared for each design work package and for each design stage. The design plans shall be the basis for the execution and control of the design development activities. The plans shall describe objectives, scope, design inputs, tasks to be performed, processes to be used, outputs to be delivered, verification and validation methodology, risks, organization, roles and responsibilities, key milestones, design interfaces necessary to accomplish the design

activity, ensuring that the final design meets the specified requirements. The design plans shall be properly updated as the design evolves.

The design activities shall be assigned to qualified personnel with adequate resources as per 4.2.

2.3.2 Design Input Control

Design inputs shall be identified, assessed for adequacy to design development, documented, and controlled. The design inputs shall be defined prior to the design development. Any changes in the design inputs shall be identified, assessed and accordingly controlled.
The design input shall consider

- functional and performance requirements
- applicable statutory and regulatory requirements (incl. safety)
- industry codes and standards
- technical requirements including interfaces
- potential consequences of failure due to the nature of design
- information derived from previous similar designs (where applicable)

In particular, the design requirements shall be complete, unambiguous and not in conflict with each other. The organization shall retain documented information on design and development inputs.

2.3.3 Design Development

The purpose of the design development activities to define the activities to be done starting from given design inputs (and any derived technical constrains identified during the design development process) up to design output generated documents that satisfy the applicable requirements.
Design development shall be carried out in accordance with approved design plan and applicable procedures. The design output which can be technical specification for SSC products and their operation, drawings, results of analysis shall be documented and recorded.
At each development stage, the design output shall be traceable to the design input with documentation in sufficient detail to permit design verification.

Design output shall contain or make reference to monitoring and measuring requirements, as appropriate, and acceptance criteria for completion of the actual design work at the end of each design phase. Design development procedures shall ensure that the design outputs meet the design requirements including any necessary actions taken to solve the problems determined during the reviews, or verification and validation activities.

2.3.4 Design Interface Control

Design interfaces shall be identified, established documented, and placed under configuration control including coordination among the participating design organizations. Interface controls shall include assignment of responsibility and establishment of procedures among participating design organizations for review, approval, release, distribution, and revision of documents involving design interfaces. Design information transmitted across interfaces shall identify the status and applicability of the design information or design document provided, and identify incomplete items that require further evaluation, review, or approval. All interface requirements shall be associated with their verification requirements.

2.3.5 Design Verification and Validation

Design verification shall be performed in accordance with planned arrangements to ensure the design outputs have met the design inputs. Design verification method(s) shall be determined for each input requirement and planned for each appropriate stages of the design and construction of the SSC. The results of design verification shall be documented with the identification of the verifier clearly indicated.

Design verification shall be performed by competent person(s) or group(s) different from those having performed the design.

Acceptable verification methods should include, but are not limited to, any one or a combination of the following:

- design reviews (analysis of documents),
- alternate calculations,
- qualification testing,
- benchmarking against a similar successful design.

Design verification shall be performed before release for procurement (unless done as part of a procurement action), manufacturing, construction, or unconditional release to other organizations for use in associated designs. Any unverified design information shall be identified and controlled during design verification process. However, in all cases, the design verification shall be completed before the design is relied upon to perform its function.

Where tests are necessary such as qualification or final product testing for verification and/or validation of the design, these test shall be performed in accordance with planned arrangements to ensure that the resulting product is capable of meeting the requirements for the specified application or intended use, where known. Validation shall follow successful verification and shall be completed prior to the delivery or implementation/operation of the product. Records of the validation results and any necessary actions shall be maintained.

2.3.6 Analysis and Calculation

Analysis models are used to develop/optimise a design and/or to verify and/or validate the design and/or requirements. The process and its procedures for analysis model development are strongly linked with those for design development, and design verification and validation.

The analysis model including the boundary conditions and applied loads shall be consistent with the design. The analysis model shall be formally reviewed and validated, as the software for which the model is generated. Consistency of the analysis model with the as-built structure shall be demonstrated when construction and assembly is completed. If the as-built structure is somehow different from the design model, a reconciliation of the analysis model as its results with the as-built structure should be performed.

In some cases the complete analysis model validation by experimental testing or other means may not be possible until the final hardware product is created and operated. When this is the situation, operational testing plans should provide the necessary data points to achieve full validation. Interim benchmarks can and shall be established that provide reasonable interim confidence in the model's validity as part of the formal process planned to fully validate the model.

Where the interim benchmarks or testing cannot be met, such lack of control shall be clearly stated in the technical basis documents of the affected systems. As for the software validation, the experimental program of ITER shall then take into account this issue with the aim of model validation.

2.3.7 Design Change Control

Changes to designs and design outputs shall be identified, documented, and controlled. The changes shall be reviewed and approved before implementation. The review of design changes shall include evaluation of the effect of the changes on other designs and/or constituent products already delivered.
Design Change Control should also focus on planning of required change actions and verification method of the design modification and design integrity.

The changes shall be approved by the same affected groups or organizations that have reviewed and approved the original design. When a design change is approved, the contents of the design change shall be incorporated in all affected documents.

2.4 Software Control

Any software used for R&D, design, manufacturing, installation, construction, commissioning, and operation of ITER facility shall be appropriately qualified prior to approval for use to provide adequate confidence that a software item or product conforms to established technical requirements.

The qualification shall be done to demonstrate that the software adequately and correctly performs all intended functions and user needs.

The procedures and work processes used to establish and maintain control of software shall formulate a software management methodology, including authorization control, for software acquisition, and development, the deployment and configuration management of the software used, and change, maintenance, and disposition.

2.5 CAD Process

CAD models & drawings representing the components & systems used in the ITER Project shall be unambiguously identified, controlled and verified for validity prior to their publication and use for downstream activities.

The CAD models and drawings development shall be managed based on a CAD work-plan and be implemented based on:

- trained & certified users per 4.2.
- validated CAD infrastructure meeting project requirements (such as complex geometrical interfacing systems requiring common design data management, tools and methods)
- pre-defined project standards & processes
- CAD manual requirements.

The developed CAD data shall be verified to comply with the project standards & processes and CAD manual requirements. Only after the verification, the CAD data can be used for CAD exchange process and/or other downstream processes like publications.

2.6 Manufacturing, Assembly and Installation Process

Manufacturing, Assembly and Installation shall be controlled to the extent necessary to ensure items conform to ITER procurement requirements and supervisory authority.

All activities shall be controlled to the extent necessary to ensure that the installation of each item shall not compromise the integrity and the safety:

- of the item to be installed,
- of the assembly where item is installed and of the ITER facility.

2.6.1 Planning

Approved planning shall be established and shall define:

- the operations to be performed
- the identification of competent and qualified personnel to perform the task
- the systematic sequential progression of operations
- The work procedures or instructions required to comply with the requirements of the defined work scope.

Planning shall include a review to ensure that:

- all activities have been incorporated
- The work can be accomplished as specified
- the time and resources are sufficient to accomplish the work in accordance with the specified requirements.

2.6.2 Execution

Work shall be carried out under controlled conditions:

- using approved drawings, procedures, standards and other documents
- according to approved pre-established checklists of operations
- assigning competent and qualified personnel as appropriate
- using controlled and calibrated measurement and test equipment
- Ensuring that engineering and design changes during operations are documented and controlled.

Prior to implementation, work documents shall be reviewed for compliance with ITER requirements, approved “for manufacture”, and controlled.

Processes that cannot be adequately inspected after completion shall be carried out according to approved procedures implemented by qualified personnel using calibrated equipment, where applicable.

Where examination during final inspection is no longer possible particular attention shall be put on definition of examinations and tests before and during manufacturing, assembly and installation.

Documents and records shall be maintained to reflect the progress status of item’s configuration, and approved “as built” on item completion.

Arrangements to verify the completion of manufacturing, assembly and installation activities shall be defined and implemented.

A Factory Acceptance Test (FAT) shall be carried out at a facility/factory of PEE as per contractual requirements prior to the shipping to verify that the SSC is compliant with technical requirements.

This verification shall be formally documented and shall confirm that SSCs have been manufactured, assembled and installed to the specified requirements as applicable.

2.6.3 Handover

Provisions shall be made to control and coordinate the handover of completed works from one party to another and from the manufacturing, assembly and installation to the commissioning and operations phases.

These provisions shall ensure maintaining of the integrity of the completed works and shall include:

- review for completeness and accuracy of documentation relating to transferred items including contractor release notes
- identification of the boundaries of transferred systems and equipment
- proper planning and implementation of record transfer.

2.7 Handling, Storage and Transportation

2.7.1 Handling and Transportation of ITER Items

Special requirements for the handling and transportation of items to prevent damage or deterioration shall be contained in specifications, drawings, or supplier documents that become part of the documentation package for them.

Handling and transportation processes should allow for different methods to provide appropriate care in handling and transportation in accordance with the manufacturer's recommendations. Handling and transportation provisions shall consider types of containers, preservation, and other environmental or safety considerations applicable to the items. Where multiple PEEs are involved, procedures shall describe interface and any chain-of-custody requirements.

2.7.2 Storage of Items

Preservation of equipment and materials during transport, storage, and construction activities shall be managed to ensure SSCs retain their condition and performance before entering operations, including prevention of deterioration over time and protection from external damage.

It shall indicate necessary storage environment, any special protective measures during storage and specific shelf-life if applicable. The requirements and recommendations for preservation, primarily specified by the suppliers, shall then be followed by any PEE who receives the items.

2.8 Commissioning

ITER commissioning is to validate that the system meets its design and safety requirements, and to bring the system to an operating mode.

For system commissioning, ITER plant system requirements shall be decomposed into functions, and plant system functions shall be tested from the component level up to system and integrated testing.

This Site Acceptance Test (SAT) should be conducted when IO decides to formally accept the component or system upon delivery during construction or as part of system commissioning.

At the end of the construction period, an Integrated Commissioning of ITER systems shall be performed to demonstrate that the integrated operation of the Tokamak and to ensure readiness for safe plasma operation.

Following the commissioning of a particular system, it may enter into a temporary operation to deliver a service but not ready for operation.

2.9 Operation and Maintenance

2.9.1 Operation

ITER facility shall be operated in accordance with the operational program and the operating states of the Tokamak Machine in compliance with regulations applicable to ITER as a Basic Nuclear Installation (INB).

The operation of ITER facility shall enable access to a wide variety of operational domains and scenarios, including operating in proximity to operational limits and conditions.

All events and return of experience during operations shall be captured and analyzed in order to continuously improve the operation processes.

During operations, systems and/or operating procedures could be modified as a result of operational experience, site conditions, optimization of performance or maintenance

2.9.2 Maintenance

Maintenance activities shall be undertaken at specific intervals by qualified resources to ensure critical SSCs will perform their expected functions that are required to preserve or restore the safety, reliability, and availability of ITER facility.

The type and frequency of maintenance activity applied to each SSC is commensurate with the SSC’s classifications, design function and required performance according to safety analysis, regulatory requirements, performance analysis, and codes and standards.

In addition, foreign material shall be managed over the full life-cycle for ITER SSCs to prevent or mitigate the potential deleterious effects of foreign material on systems to perform their intended functions.

The maintenance, supervision, surveillance and in-service inspections tasks shall be implemented via detailed procedures.

3 Quality Processes

3.1 Inspection and Testing

PEEs responsible for Critical Quality Activity (CQA) shall execute Inspections and Testing as per the requirements in contract documents and in compliance with applicable codes, regulations and standards.
And, IO, DAs or their authorized representative shall monitor and control the execution of Inspection and Testing activities in terms of Quality Supervision (QS) focusing on critical items and important operations by using a graded approach as per 1.5.

For execution of Inspection and Testing, intervention points shall be identified on an approved Inspection Plan (e.g. Manufacturing Inspection Plan (MIP) and/or Inspection and Test Plan (ITP for assembly, installation, or commissioning) and ensure relevant planning and allocation of appropriate resource.

Inspection Plan shall be developed before the beginning of the operations based on their design requirements (including instructions, procedures and drawings) and address:

- Requirements and instructions applicable to particular operations,
- Operations to be inspected or witnessed by DA, IO, and (Agreed) Notify Body, etc.
- Reference documents providing traceability and recording of the verification and completion of these operations

Inspection and Test shall be performed by competent individuals other than those who performed the activity being inspected or tested, and Quality Supervision shall be performed by SQEP from IO, DA or their representative. IO Quality Supervisor shall be qualified, and their competences shall be maintained according to 4.2.
Each Inspection and Test shall not be bypassed and that equipment, material, or fabricated assemblies shall not be released for further work activities until all inspections and tests are complete and the results accepted.
When non-conformance is detected during Inspection and Test activities, non-conformance report (NCR) shall be issued according to the 3.3.

After Inspection and Test, the results shall be documented and evaluated to assure that applicable requirements have been satisfied. The Inspection and Test records shall be maintained as per 2.2:

Where IO acts as manufacturer of Pressure Equipment or Nuclear pressure Equipment, the Quality Supervision should be managed as per [9].

3.2 Calibration of Measurement and Test Equipment (M&TE)

M&TE shall be uniquely identified, properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits.

M&TE shall be calibrated before put into service according to an established calibration plan at appropriate determined intervals by competent personnel.
The calibration of M&TE shall typically be traceable to certified equipment or a national or internationally recognized measurement standard. Where no such standard exists, the basis for calibration shall be justified and the results shall be documented.

M&TE shall be safeguarded from adjustment, damage and deterioration that would invalidate the calibration status and subsequent measurements results. And, M&TE shall be suitably marked, tagged, or labelled to indicate their identification number from which it shall be possible to check its calibration status on records.

When M&TE is damaged, overdue for calibration or found to be out of calibration, it shall immediately be removed from service by segregation, prominent labelling or marking.
The validity of previous measurement shall be evaluated and, when necessary, appropriate corrective action shall be taken.

Calibrations records including necessary information should be available through M&TE calibration certificate.

3.3 Non-conformance Management

Any item, process or work that does not fulfil its specified requirements shall be identified and segregated as being nonconforming. Each nonconforming item or work shall be prominently identified, tagged, or uniquely labelled and, when practical, segregated to prevent its mis use.

The non-conformance report (NCR) shall be issued by the appropriate PEEs specifying the requirement and evaluated by IO Responsible Officers, then resolved by the PEEs as defined in contract documents and applicable scopes of work.

NCR shall be immediately raised in IO NCR database to record the NC and relevant treatment for their resolution, including evidence of remedial or corrective actions taken.
A graded approach is applied which classifies the non-conformance as major or minor in consideration of 1.5.

Following the review and approval of proposed actions to the non-conformance, the item or work shall be placed back in service, repaired, reworked, or rejected. If an item is repaired or reworked to return it to a satisfactory condition, it shall be re-inspected to confirm its fitness for use.
A technical justification shall be documented for the acceptability of a nonconforming item determined as use-as-is or repair.

3.4 Quality Assurance

3.4.1 Self-Assessment

The Responsible Officers should conduct appropriate and timely assessment of assigned tasks. The readiness of an activity or one phase of an activity, to proceed to the next phase or to the next follow-on activity needs to be assessed and agreed upon prior to proceeding. These self-assessment will be of varying degrees of formality, as appropriate to the activity being evaluated.

3.4.2 Management Review

The IO Senior Management shall regularly assess the adequacy and effective implementation of the MQP to ensure its continuing suitability, adequacy, effectiveness and alignment with the strategic direction of the organization [13].

Management Review input includes impact of known changes to the internal/external requirements (regulation, safety, environmental aspects), information on audit results, MQP process performances, non-conformities including the corrective actions status, and lessons learned for improvement.

Management Review output includes improvement activities, any need for updating of project objectives or MQP processes, and resource needs.

The results of Management Review shall be documented and maintained.

3.4.3 Quality Audit

The Quality Audit is a systematic, independent and documented process for obtaining objective evidence and evaluating it objectively the adequacy and effectiveness of the QMS and the application of requirements, in order to identify risks and improvement opportunities.

These audits shall be performed in accordance with audit criteria, including regulations, standards, policies, procedures or requirements, by qualified auditors who are independent from the activities being audited.

Together with the DAs, the IO's Quality Management unit establishes an annual audit program for the DG approval.
Individual Quality Audits shall be scheduled in a manner to provide coverage and coordination with ongoing activities, based on the status and importance of the activity. The scheduled audits may be supplemented by additional unplanned quality audits of specific subjects when necessary.

Quality Auditors shall be qualified and their competences shall be maintained according to 4.2. The audit team shall be identified prior to the beginning of each quality audit. Quality Auditor could participate in an audit as Lead Auditor, auditor and/or technical expert.
Quality Auditors shall be granted sufficient authority and organizational freedom to have a value-added and effective audit, and they perform a quality audit by interviewing the auditee using specific checklist if necessary.

The Quality Audit result shall be documented in a defined quality audit report format and agreed with auditee before officially issued. Quality Audit findings shall be recorded in a database for tracking purpose. Quality Audit findings shall be closed when actions are implemented and necessary evidence is provided to the quality auditors. The verification of quality audit actions normally should happen during the subsequent quality audit.
Quality Audit results shall be reported to the concerned management layers.

3.4.4 Prevention of Counterfeit, Fraudulent and Suspect Items (CFSI)

IO's oversight of PEEs' QMS will support effort to reduce the risk of CFSI entering the ITER site. The procurement document as per 4.3 shall have a CFSI clause as a general terms and conditions, and it shall state that the items or services provided by the supplier shall not include CFSI.

When CFSI is detected by PEEs, IO shall take appropriate actions, such as, but not limited to:

- Communicates immediately with the French regulatory body and Agreed Notified Body (ANB) where applicable
- Items to be quarantined until retuned to supplier
- Identification of CFSI supplier from the IO procurement database
- Take legal actions if necessary

IO shall ensure through oversight and quality audit activities, that potential CFSI's are assessed and if necessary investigated and that necessary measures and controls are in place to cover activities for the identification and control of potential CFSI from the suppliers.

4 Management Process

4.1 Project Control

4.1.1 Project Planning and Control

The ITER project planning and control involves a comprehensive framework for developing and managing the schedule of work including the risks that influence achievement of the project schedule, milestones, or project cost.

4.1.2 Risks and opportunities

In ITER Project, the risks and opportunities which potentially could impact the project's technical performance, cost and schedule are identified, assessed and mitigated.

The risk and opportunity management process is central to the effective management and successful on time and cost delivery of ITER and will be used to inform project decision making at all levels throughout the lifecycle of the ITER project.

4.2 Human Resource Management

4.2.1 Competence Requirements

Line managers should ensure that the work is performed by competent people. Line Managers should ensure that their staff is appointed on the basis of an assessment of his/her suitability for the position. This suitability shall consider ability to apply skills, knowledge, processes and attitudes to perform the job to specified standards in an effective and efficient manner. This necessary competence may be developed through education, experience and formal training.

Documented procedures for selecting, evaluating, and training the personnel whose work affects the performance and effectiveness of MQP processes shall be available.

Staff education, training, experience, competence and qualification requirements should be consistent with the complexity of their functions that might be assigned to the personnel.

Documented information as evidence of competence shall be retained and where applicable, actions shall be taken to acquire the necessary competence and evaluate the effectiveness of the actions taken (like training, hiring or contracting of competent persons).

4.2.2 Training Requirements

Personnel shall be trained, as appropriate, on their organization's specific missions, plans, and procedures for performing assigned tasks, and a process for ensuring effectiveness of training and maintenance of competence should be defined.
Documentation of personnel training shall be established and include such items as attendance sheets, training outlines, and read-and-acknowledgment sheets, as appropriate, for the training given.

Training needs and their fulfilment shall be assessed in order to evaluate the grading process for implementation of training of the staff. Training for a significant activity may require application of a systematic approach to training, including needs analysis, training design, training development, training delivery and evaluation. Training for an activity of lower significance may

not require full application of the systematic approach to training or a specific qualification for performance.

4.2.3 Qualification and Certification

The IO shall control qualification of people performing Critical Quality Activity (CQA) including special process. Performance of a significant activity may require specific qualification and certification such as welding, non-destructive examination, nuclear safety and quality supervision.
Whereas special processes are performed by other organization assigned for the work activity, these organizations shall establish and maintain appropriate procedures and the documentation of personnel qualifications as applicable and in accordance with specifications supplied by the IO.

4.2.4 Matrixed Engineering Services Management

The IO utilizes a matrixed engineering resource model to optimize expertise and flexibility across the project needs. Engineering resources are assigned to the various projects based on technical requirements, availability, and project priorities, while maintaining their competencies in alignment within the respective functional organizations.
Resource allocation and competency development are coordinated through regular reviews between project managers and functional managers, ensuring that quality objectives and project milestones are consistently met.

4.3 Procurement

Items or services to be contracted by the ITER Project shall be specified in procurement documents either as an In-Cash procurement through a Contract or Purchase Order (PO) or a Task Agreement with a DA or as a Procurement Arrangement (PA) under In-Kind procurement.

Components technical requirements may involve conformance assessments or product compliance requirements such as arising from the INB Order [6], the European Pressure Equipment Directive (PED) or Nuclear Pressure Equipment Order (ESPN) [9].
Where these requirements are applicable, those regulatory requirements for pressure, nuclear safety and conformity assessment shall be defined in the procurement document. Such documents shall be reviewed, approved and controlled.

The Contracts shall be placed according to selection and award criteria derived from the technical requirements. Contractors' Quality Plan shall be evaluated and approved by the IO or the DAs for the procurement activity for which they will be used.

Items or services relevant documentation shall be reviewed and formally accepted by the IO prior to delivery.

4.3.1 Identification of the need to be procured

The need for an item or service is usually identified from a Work Package. A Technical Specification shall be issued describing in detail all the requirements.

4.3.2 Establishment of Technical and Quality Requirements

Technical and quality requirements shall be prepared in the form of technical or equipment specifications. The procurement process covers the technical and quality review of the

procurement documentation to ensure that appropriate technical and quality requirements, as well as acceptance criteria, are adequately and clearly stated.

Procured items or services shall be in accordance with the governing statements of work and any additional requirements. These documents shall specify the scope to be performed, the required documentation, the qualifications of those performing the work, and the required schedule of performance. These documents shall also include all appropriate technical and quality requirements. The reviews and approvals of these procurements shall be in accordance with the approval process.

4.3.3 Selection and Award of Contractors

The evaluation of the potential Contractors shall include the assessment of their quality capabilities (programmatic and quality of items provided). Qualified suppliers shall have demonstrated relevant financial, technical, and quality capacity to supply items or services at the quality level required, substantiated by appropriate documentation.

DAs are responsible for the work performed either by them or Contractors in the frame of Procurement Arrangements and Task Agreements signed with the IO.

4.3.4 Monitoring of Contractors Performance

The extent of contractor monitoring will be a function of the criticality of the item being supplied and the performance history of the contractor for similar items or services. Contract performance monitoring should be performed through in-process inspections of item or documents review, as stated in appropriate Inspection Plan that could be performed at the Contractor's facility and/or upon delivery of the completed item or service. Sub-Contractors of critical items should also be monitored to ensure that items and services conform to requirements.

4.3.5 Item Deviation from requirements

Contractors may request to deviate from the technical specifications or quality requirements contained in the contract. The Contractor concerned shall describe in details the proposed deviation identifying the changes, additions, or deletions to the technical requirements. Any deviation request (DR) shall justify the adequacy of the proposed deviation and the potential impact on the technical requirements, as well as how the overall technical requirements will still be satisfied, state the extent to which the original document remains in effect; identify the number of items that will be affected by the proposed deviation; and provide a schedule of actions necessary to complete the proposed changes. Deviation requests shall be reviewed and approved.

Contractors may discover that the product does not meet the specified requirements. In such cases, a nonconformance report shall be submitted to the IO identifying the nature and extent of the nonconformance and requesting necessary action.

4.3.6 Item or Service Acceptance

Items or service acceptance shall occur after evidence that acceptance criteria have been met. Acceptance is predicated on the receipt of contract items or deliverables and inspection reports as well as evaluations, contractor oversight reports (e.g., audit, surveillance, and inspection), and contractor performance documentation.

Regarding services, contractors shall be required to provide deliverables in the form of reports, studies, progress reports, etc. These shall be reviewed and accepted by Responsible Officers.

The procured items shall not be released for unconditional use until all procurement requirements have been satisfied, including the resolution of nonconformances.

4.3.7 Use of Commercial-Off The-Shelf (items)

Any PEE procures and utilizes COTS for PIC/PIA shall be responsible for the conformity of all externally provided processes, products, and appropriate procedures shall provide reasonable assurance that a COTS item will perform its intended function during its lifetime.
The assurance is achieved by identifying their critical characteristics and verifying their acceptability by appropriate control methods.

Appendix A Acronyms and Definitions

Term	Acronym	Definition
Activity	-	task which contributes to the realization of the products or services
Commercial-off the-shelf (items)	COTS	A commercial grade item or activity that affects nuclear safety and that was not designed, manufactured or performed in accordance with specific nuclear requirements
Counterfeit, Fraudulent and Suspect Items	CFSI	**Counterfeit item** - items that are intentionally manufactured, refurbished or altered to imitate original products without authorization in order to pass themselves off as genuine **Fraudulent Item** - items that are intentionally misrepresented with intent to deceive. **Suspect Items** - items where there is an indication or suspicion that it may not be genuine.
Critical Quality Activity	CQA	Any activity and/or operation that if not performed correctly may affect safety, functionality or reliability of a product/item.
Item	-	All-inclusive term used in place of any of the following: assembly, component, equipment, material, module, part, software, structure, sub-assembly, sub-system, system or unit
Measurement and Test Equipment	M&TE	Tools, gauges, instruments, devices, or systems used to inspect, test, calibrate, or measure parameters
Management and Quality Program	MQP	The Quality Management System (QMS) for the ITER Project, centrally administrated by the ITER Organization (IO). Also referred to as “management baseline”
Process	-	A set of interrelated and interacting activities that use inputs to deliver an intended result
Protection Important Component	PIC	Specific category of systems, structures or components as defined in Article 1.3 of the INB Order [6]
Protection Important Activity	PIA	Any activity which is related to or can impact a Protection Important Component as per the Article 1.3 of the INB Order [6]
Quality Leadership Team	QLT	Responsible for the performance of quality management activities performed under the IO and DAs responsibility
Suitably Qualified and Experienced Persons	SQEP	A person who possesses the appropriate qualifications, knowledge, skills, and experience to perform a particular function to the required standards.

Appendix B References

[1] Project Specifications (PS) (2DY7NG)
[2] ITER PMP – Project Management Plan (AVAMQG)
[3] ITER Policy on Safety, Security, Quality and Environment Protection (43UJN7)
[4] ISMS - ITER Integrated Safety, Environment and Security Management System Manual (4HCWJU)
[5] ITER Organization Delegation of Legal Authority (4AFC6R)
[6] Order dated 7 February 2012 relating to the general technical regulations applicable to INB - EN (7M2YKF)
[7] ITER Organization at a Glance
[8] Terms of Reference (ToR) for IO-DA Quality Leadership Team (QLT) (9LUA5Z)
[9] Implementation plan for design & manufacture of PE/NPE (VE2DSP)
[10] ISO 9000 (2015): Quality Management Systems - Fundamentals and Vocabulary
[11] ISO 9001 (2015): Quality Management Systems, Requirements
[12] IAEA GSR part 2 (2016): Leadership and Management for Safety – General Safety Requirements
[13] Management Review (MR) Procedure (3L7SWX)
[14] Management and Quality Program (MQP)