



IAEA

International Atomic Energy Agency

IAEA NENP supply chain quality and management activities

-

Mr. Pekka Pyy

IAEA NENP

Rationale behind the IAEA activities

- IAEA 64th General Conference GC(64)/RES/12 number 8 in section 5 *“Encourages the Secretariat to identify best practices and lessons learned with respect to procurement, supply chain, ...and to promote and disseminate them through publications and web-based tools with respect to supply chain management”*.
- TWG-NPPOPS (Technical Working Group on Nuclear Power Plant Operations consisting mainly of many Chief Nuclear Officers) ranked in 2018 *supply chain as the most important theme to focus upon*.
- In 2019 TWG-NPPOPS made further recommendations to the Agency



Rationale behind the IAEA activities



The 2019 recommendations of the Technical Working Group on Nuclear Power Plant Operations (TWG-NPPOPS)

Recommendation ASSC-1: *“IAEA is recommended to continue to work on general principles for use of commercial grade items taking into account risk-informed approach”,*

Recommendation ASSC-2: *“IAEA is recommended to continue developing the nuclear supply chain management toolkit and regulations and standards toolkit...”* and

Recommendation ASSC-3: *“IAEA is recommended to ensure that the IAEA toolkits make it easier for suppliers to supply and buyers to be able to select”.*

The last recommendation appeared in the summary of the minutes in the form: *“Review the current IAEA publications/toolkits and consolidate the guidance about the use of commercial grade items and diversification of the supply”*

Recent activities 2019-2020

Nuclear Supply Chain Management Webpages opened in 2020

Webinar on COVID19 and the Nuclear Supply Chain (July 2020) and Webinar Series of Nuclear Supply Chain started (December 2020)

Nuclear Supply Chain Management toolkit launched in November 2020
CM on Quality Assurance in the context of Nuclear Power Plant Advanced Manufacturing (September 2020)

Toolkit for Regulations and Standards in the Area of Quality and Management Systems Requirements (pilot use from December 2020)

TECDOC 1910 issued: (June 2020): Quality Assurance and Quality Control in Nuclear Facilities and Activities - Good Practices and Lessons Learned

Pilot Training Course on Nuclear Supply Chain Management, Oct 2019



Events 2021

1. **IAEA Training Course on Nuclear Supply Chain Management and Procurement** with Rosatom, virtual, 20-22 Oct 2021
2. SC [Webinars](#) on supply chain (2020-2021) – see the relevant page
3. Conference on [MSE2021](#) “Management systems for a sustainable nuclear supply chain”, 7-9 September 2021 (with Foratom) – virtual
5. **Technical Meeting on Recent Topics of Nuclear Supply Chain Management** (16-20 August 2021, VIC, Vienna) - virtual



Events in 2022

1. **Technical Meeting on Use of Commercial Grade Products and Services in Nuclear Power Plants**, 19-22 April, (virtual/hybrid!) Vienna – [Website](#)
2. **IAEA Training Course on Nuclear Supply Chain Management and Procurement**, Vienna, 18-22 July - [Website](#)
3. **SC [Webinars](#)** on supply chain (2020-2022) – see the relevant page for updates
4. “Enhancing a sustainable nuclear supply chain”, 7-9 September 2022 (with Foratom) – in Helsinki ([Website](#))
5. **[Technical Meeting on Inventory Management for Nuclear Power Plants, Q4, Vienna](#)**

Picture : TVO



Publication Update

“Quality Assurance and Quality Control Activities in Nuclear Power Plants: Lesson Learned and Good Practices” – Issued June 2020

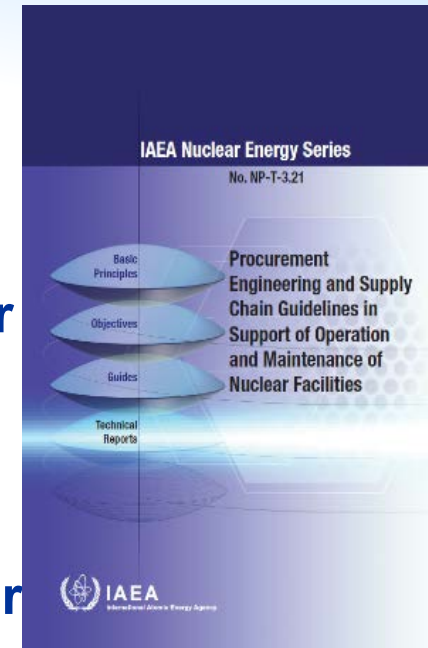
“Management of Nuclear Projects” (Nuclear Energy Series), NG-T-1.6 – Issued in October 2020

Managing Counterfeit and Fraudulent Items in the Nuclear Industry, NP-T-3.26, published in 2019

“Challenges and Approaches for Selecting, Assessing, and Qualifying Commercial Industrial Digital Instrumentation and Control Equipment for Use in Nuclear Power Plant Applications” – September 2020

Acceptance Process of Commercial Grade Products for Use in Nuclear Power Plant Safety Systems (P.Pyy) – TM in April 2022 reviewed positively

Inventory Management in Nuclear Power Plants: Lessons Learned and Good Experiences (A. Dutta Ray)



2016

“Suitability Evaluation of Commercial Grade Products for Use in Nuclear Power Plant Safety Systems”



SSC Suitability Evaluation

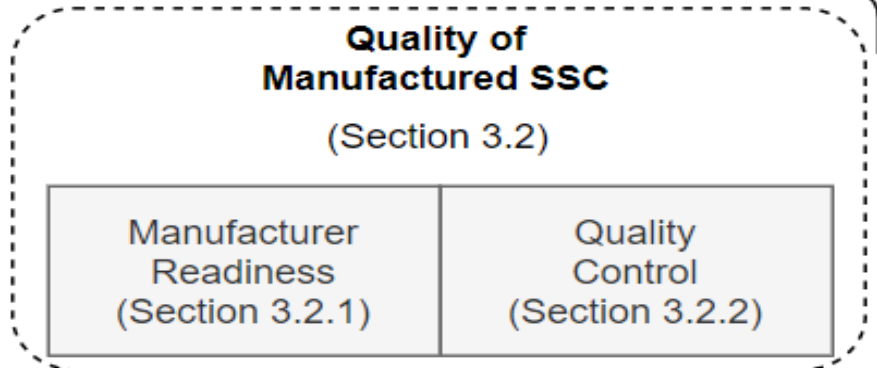
Suitability of SSC Design

(Section 3.1)

Design Review (Section 3.1.1)	Design Verification (Section 3.1.2)
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Quality of Manufactured SSC

(Section 3.2)



Manufacturer Readiness (Section 3.2.1)	Quality Control (Section 3.2.2)
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May include Acceptance Processes such as Commercial-Grade Dedication

- 3.1.1.1 Design Codes and Standards
- 3.1.1.2 Safety Functions
- 3.1.1.3 Materials
- 3.1.1.4 Design Changes

- 3.1.2.1 Equipment Qualification
- 3.1.2.2 Use of Experience Information

- 3.2.1.1 Supplier Awareness
- 3.2.1.2 Management System and Quality Program
- 3.2.1.3 Culture for Safety and Quality
- 3.2.1.4 Qualified Personnel
- 3.2.1.5 Supplier Assessment
- 3.2.1.6 Traceability
- 3.2.1.7 Special Processes

- 3.2.2.1 Supplier Oversight
- 3.2.2.2 Test & Inspections
- 3.2.2.3 Receiving Inspection
- 3.2.2.4 Post-installation Considerations



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Thank you!

Mail to: MSN.Contact-Point@iaea.org

Register to get regular MSN Newsletters!

IAEA acknowledges the Peaceful Uses Initiative Support to the theme “Quality and management system aspects of nuclear procurement engineering and supply chains” from USA and in-kind effort contributions from several other countries

Nuclear Supply Chain Introductory Webinars



- Covid-19 and Its Impact on the Nuclear Power Supply Chain (9 July)
- Nuclear Supply Chain Management – The Global View (3 December)
- Requirements to the Supplier – Why are they important and where do they come from? (16 December)
- How to Find Good Suppliers – and how to know if they are good for you (14 January)
- Supply Chain Management Strategy – How to simplify the complex? (28 January)
- Supervising the Supply Process – What do you need to do? (11 February)
- Non-Conformances – What are they and how to manage them? (25 February)
- Delivery Process Final Stages – What do you have to Remember? (18 March)

Nuclear Supply Chain Advanced Webinars



- Counterfeit, Fraudulent, and Suspect Items – What do you need to know? (6 May 2021)
- Use of Commercial Grade Items - When and how? (9 June in cooperation with NNF21)
- COVID-19 and the Nuclear Supply Chain – What have learned? (9 September 2021 in cooperation with FORATOM MSE2021)
- Obsolescence and inventory – Are there good practices?
- Innovations (such as Advanced Manufacturing) – Solution or threat?
- Remote and Hybrid Verifications, Audits and Inspections – What have we learned? (20 January 2022)
- Graded Approach – What are its secrets? (13 April 2022)
- Supply of service – How is it specific?

Recent publications relevant to nuclear supply chain management and procurement – all freely downloadable



Quality Assurance and Quality Control in Nuclear Facilities and Activities

Good Practices and Lessons Learned

IAEA TECDOC No. 1910

IAEA-TECDOC-1910 | 978-92-0-107020-3

132 pages | 11 figures | € 18.00 |
Date published: 2020



Managing Counterfeit and Fraudulent Items in the Nuclear Industry

**IAEA Nuclear Energy Series
NP-T-3.26**

STI/PUB/1817 | 978-92-0-102318-6

94 pages | 25 figures | € 39.00 |
Date published: 2019



Industrial Involvement to Support a National Nuclear Power Programme

**IAEA Nuclear Energy Series
NG-T-3.4**

STI/PUB/1703 | 978-92-0-103715-2

66 pages | 7 figures | € 36.00 |
Date published: 2016



Procurement Engineering and Supply Chain Guidelines in Support of Operation and Maintenance of Nuclear Facilities

**IAEA Nuclear Energy Series
NP-T-3.21**

STI/PUB/1725 | 978-92-0-107315-0

252 pages | 68 figures | € 56.00 |
Date published: 2016



Use of a Graded Approach in the Application of the Management System Requirements for Facilities and Activities

IAEA TECDOC No. 1740

IAEA-TECDOC-1740 | 978-92-0-105114-1

100 pages | € 18.00 |
Date published: 2014



Nuclear Energy Basic Principles

IAEA Nuclear Energy Series NE-BP

STI/PUB/1374 | 978-92-0-112608-5

11 pages | € 10.00 |
Date published: 2008

Impact of COVID-19 on Managing Obsolescence, Spare Parts and Replacement in Operating Nuclear Power Plants

- Representation from 6 Member States
- Presenters shared summaries of their organization's response to COVID-19
- No organization reported an impact to their NPP operations or their obsolescence, spare parts and replacement programmes due to COVID-19
- INUOG presented survey results of their Members
- EPRI presented innovative approaches for remote supplier audits and inspection
- Output used to support the upcoming General Conference 65 *Progress Update – The Operation, Safety and Security of Nuclear and Radiation Facilities and Activities during the COVID-19 Pandemic*, for the GC in September 2021



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International Atomic Energy Agency
Atoms for Peace and Development

Virtual Event:

**Consultancy Meeting on
Impact of COVID-19 on Managing Obsolescence,
Spare Parts and Replacement in Operating
Nuclear Power Plants**

27–28 May 2021

Ref. No.: EVT2004027

Information Sheet

Introduction

Today's supply chains are the result of what we've done in the past, tomorrow's supply chain will be the result of what we do today and in the aftermath of the global experience of COVID-19 on the industry and operators.

Spare part availability impacts the operation and safety aspects because lack of necessary parts can result in unplanned plant transients. Similarly, spare parts inventory impacts the commercial aspects as both a threat (excessive spare parts inventory) and an opportunity (minimizing down time). Because of the past spare part procurement and level setting practices, excess inventories have accumulated at many nuclear power plants (NPPs). In addition, less than optimal coordination between maintenance work planning and scheduling often leads to inefficiencies in the material supply process, both in labour utilization and

Page 1

“SUITABILITY EVALUATION OF COMMERCIAL-GRADE PRODUCTS FOR USE IN NUCLEAR POWER PLANT SAFETY SYSTEMS”



Disseminate knowledge – what are we talking about and why is it important?

Present known questions and challenges

Present and discuss general models to the operators, regulators and industry

Collect and experience from the Member States and from the International and NGO organizations about their approaches and lessons learned

IAEA is not aiming to present a detailed “one-fits-all” procedure!

Meetings serve as a forum of international exchange of information

Discussion topics (during the meetings):

- 1) CGD – what it may mean;
- 2) Dedication and qualification;
- 3) How to cascade requirements to your supply chain;
- 4) How to deal with your regulator and
- 5) total costs to the owner/operator of using commercial grade items (when compared to OEM manufactured with their manufacturing oversight)



“Suitability Evaluation of Commercial Grade Products for Use in Nuclear Power Plant Safety Systems”

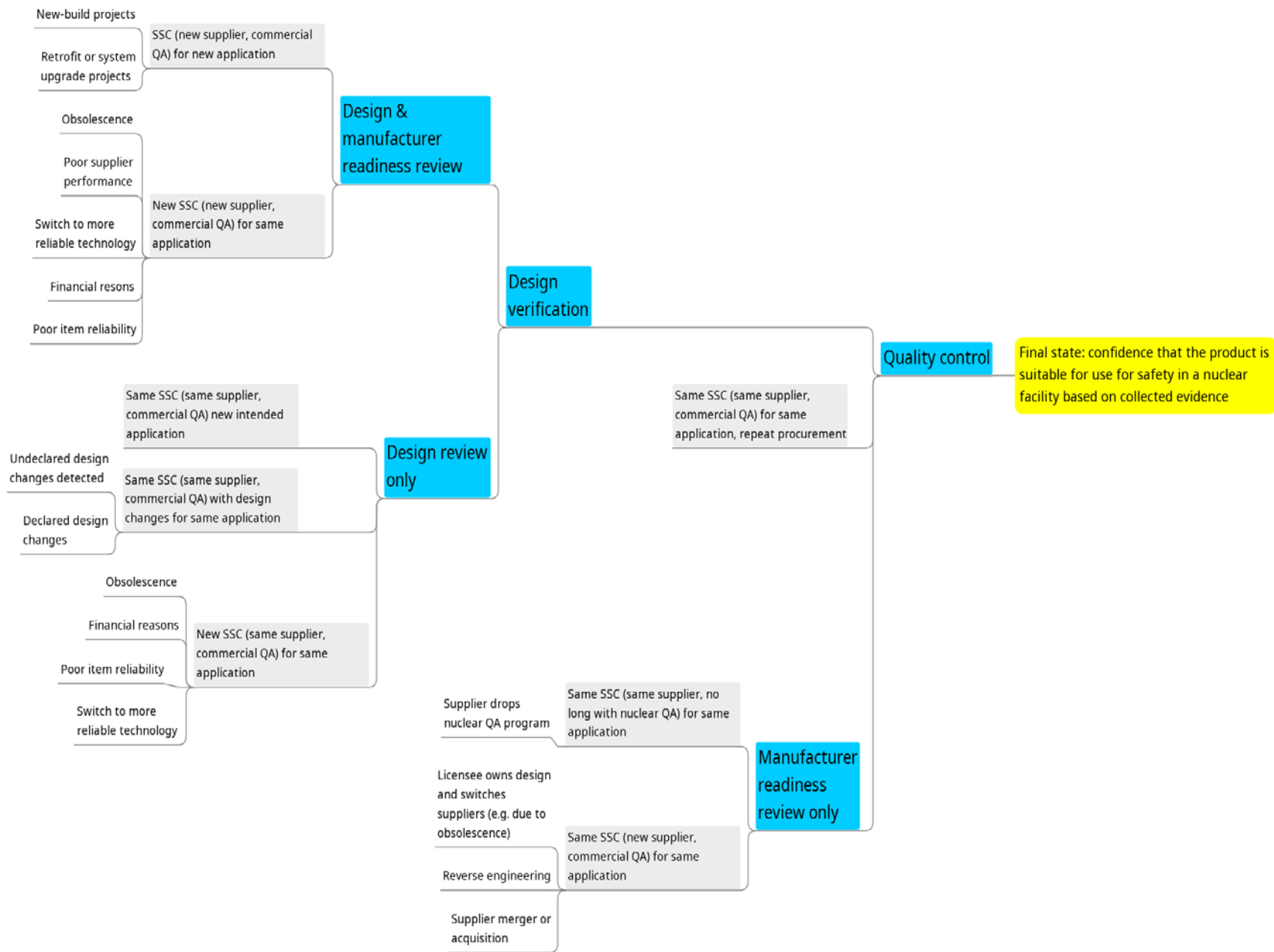
- Requirements (on general level) to design and manufacture
- Evidence to support conformance (“reasonable assurance”)
- Insights on risks (!)
- Nuclear QA vs CGIs
- Different scenarios (CGI needs e.g. obsolescence, ..)
- Special considerations (e.g. design changes,...)

- *“Not CG dedication only but the whole picture including it”*
- *Cooperation with WNA, EU, OECD NEA MDEP VICWG and FORATOM SCOWG / MSWG*

A version of the TECDOC has been distributed to you – we are aware that some material may still need modifications

Note also the newly published [IAEA Safety Standards Series](#)
No. SSG-69, Equipment Qualification for Nuclear Installations

SCENARIOS THAT MAY LEAD YOU TO THE NEED TO USE CGIs



“Suitability Evaluation of Commercial Grade Products for Use in Nuclear Power Plant Safety Systems”

SSC Suitability Evaluation

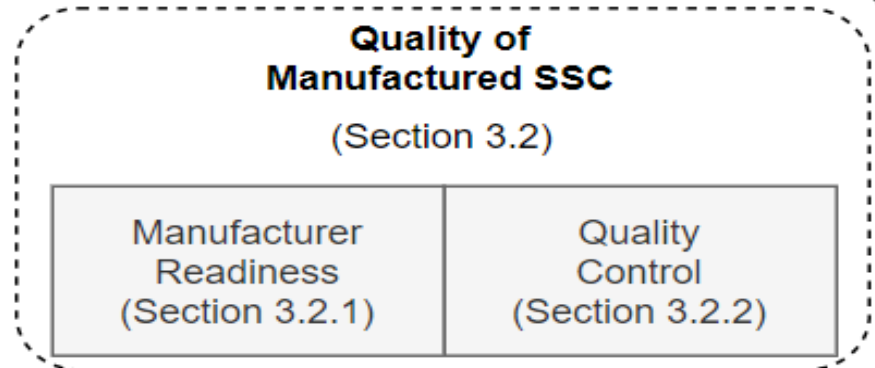
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- 3.2.2.4 Post-installation Considerations



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Thank you!

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TECDOC 1910 (2020)

No valid IAEA NPP related document on quality assurance, quality control and quality management had existed after 2006 (GS-R-3)

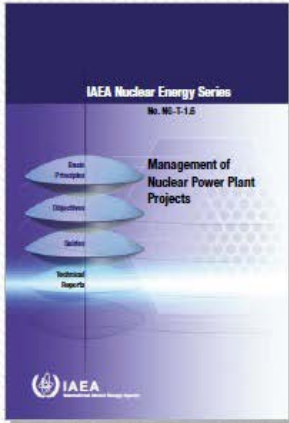
- Confusion leading to repeated requests from the Member States
- Explains the concepts of (quality management,) quality assurance and quality control.
- Management systems of nuclear facilities / interfaces with suppliers and subcontractors have to be managed in a detailed manner.
- Discusses the elements of a management system relevant for the quality assurance and quality control functions, such as the generation and retention of documented information.

Downloadable freely at: https://lnkd.in/eR_5Ngt

What is the right level of quality making it possible to construct and operate a NPP sustainably?



NEW PUBLICATION



Management of Nuclear Power Plant Projects

IAEA Nuclear Energy Series NG-T-1.6

STI/PUB/1868 • ISBN 978-92-0-104719-9
159 pp.; 32 figures • €55.00
Language: English
Published: 2020

DESCRIPTION

Member States intending to introduce a nuclear power programme in their country will need to pass through several phases during the implementation. Experience shows that careful planning of the objectives, roles, responsibilities, interfaces and tasks to be carried out in different phases of a nuclear project is important for success. This publication presents a harmonized approach that may be used to structure the owner/operator management system and establish and manage nuclear projects and their development activities irrespective of the adopted approach. It has been developed from shared management practices and consolidated experiences provided by nuclear project management specialists through a series of workshops and working groups organized by the IAEA. The resultant publication presents a useful framework for the management of nuclear projects from initiation to closeout and captures international best practices.

NG-T-1.6

Management of Nuclear Power Plant Projects

- Downloadable freely



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Web-based material

Management of the nuclear supply chain



Management systems

Nuclear operators and managers depend on chains of suppliers of both products and services to be able to produce nuclear energy. These suppliers provide products and services in all phases of a reactor's life cycle: design, construction, commissioning, operation and decommissioning.

Effective and efficient oversight of the global nuclear supply chain is crucial in both nuclear new build and operating nuclear facilities.

The successful implementation of management of quality, as a part of a power plant's management system, including quality assurance and quality control, is essential in providing confidence in the nuclear industry. A high degree of reliability and integrity is required of products and services. Failure of structures, systems or components to perform their intended function, or resolve their poor performance, could adversely affect the economy as well as safety and confidence in nuclear energy.

The IAEA supports the development of proactive management systems of supply chains, well-planned procurement by the owners and operators, quality assurance/quality control systems and aims to facilitate co-operation in the nuclear industry in these areas.

This includes supporting Member States and nuclear operating organizations in dealing with supply chain challenges. In recent years, both the construction and operation of nuclear power plants have experienced difficulties related to their supply chains. There have been project delays and even temporary shutdowns of reactors due to detection of counterfeit items, obsolescence of original technology and licensing to incorporate a greater amount of digital instrumentation and control technologies. At the same time, new technologies such as advanced manufacturing and remote inspection provide avenues for

News



New Toolkit for Nuclear Supply Chain Management











Nuclear Power Operators Use Remote Assessments to Overcome Pandemic Mobility Restrictions

[More news →](#)

Access

Management System Network

Related resources

-  Nuclear Supply Chain Webinar Series
-  COVID-19
-  Energy
-  Capacity building supporting long-range sustainable nuclear energy system planning
-  Division of Nuclear Power
-  Nuclear Power Engineering Section
-  Department of Nuclear Energy Webinars
-  IAEA Department of Nuclear Energy

New Toolkit for Nuclear Supply Chain Management

Nour Eid, IAEA Department of Nuclear Energy


NOV
19
2020





A new toolkit supports nuclear operators in managing their supply chain. (Image: Lu Han/IAEA)

The IAEA has launched a [Nuclear Supply Chain Toolkit](#) to support countries in coordinating among regulators, technical support organizations, owner/operators of nuclear facilities and their suppliers. The toolkit provides examples, case studies and good practices to help ensure that procurement by nuclear power plants, research reactors and fuel cycle facilities is done efficiently and safely.


Related Stories


 [Nuclear Power Operators Use Remote Assessments to Overcome Pandemic Mobility Restrictions](#)


 [Nuclear Operators' Forum Focuses on Sustainable Management of the Nuclear Supply Chain](#)


 [New IAEA Publication Highlights the Role of Management in Nuclear Power Plant Projects](#)

Related Resources

 [Nuclear Supply Chain Toolkit \(registration required\)](#)

 [Management of the nuclear supply chain](#)

 [Nuclear Supply Chain Webinar Series](#)

 [Management systems for nuclear facilities](#)

Management System Network(MSN) of Excellence

Home > MSN

MSN

Events

MSN Calendar

MSN Newsletters

CG Acceptance Publication

2019 Pilot Course on Nuclear Supply Chain Management and Procurement - Course Materials

Evaluation of Management Systems

The Nuclear Supply Chain Toolkit

The Nuclear Regulations and Standards Toolkit (under construction)

Recent

Management System Network of Excellence (MSN) ⓘ



The IAEA developed a dedicated Management System Network of Excellence (MSN) to facilitate and encourage enhanced co-operation and the exchange of knowledge and experience on management systems and safety culture in the nuclear industry and related disciplines throughout the world. The MSN is one of the networks of CONNECT. CONNECT is a web-based platform hosted by the IAEA on behalf of its Member States that will provide a gateway for interconnecting IAEA networks, increasing the participation of individuals and organizations involved in them, and making available additional sources of information that complement existing training workshops and meetings.

Amongst the features provided by CONNECT the MSN will provide the following features related to management systems and safety culture:

- Overview of important meetings
- Discussion forums on both common and special topics
- Expert search function; find the person who can help you with your problems
- Library of documents, presentations, videos, software tools, glossaries, and other resources
- E-Learning: nuclear education and training, on demand video, and archived presentations and seminars
- Resources, including calendar of meetings and events, training courses, webinars, and online meeting workspaces

For further information or questions please contact MSN.Contact-Point@iaea.org

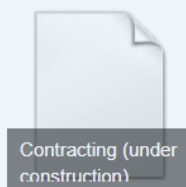
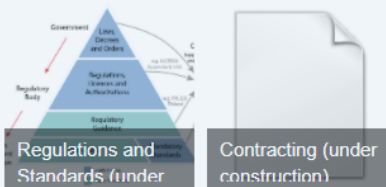
For additional information, please visit:

[IAEA NSNI Meetings and Workshops on the Topics of Management, Leadership and Culture for Safety](#)

[Human and Organizational Factors](#)

These sites are an information hub where presentations and relevant information from held events in the area is made publicly available to be shared and spread among stakeholders.

Toolkits



- MSN Calendar
- Regulations and Standards
- The Nuclear Supply Chain Toolkit**
- Introduction to the Nuclear Supply Chain
- Preparing for Procurement and Supply Chain Management
- Management During the Supply
- Post Supply Stage
- Challenges, Solutions, and Avenues for the Future
- Examples, Good Practices, and Case Studies
- Recent
- The Nuclear Regulations and Standards Toolkit

The Nuclear Supply Chain Toolkit



It is the wish of the developers that this toolkit would help to manage expectations of stakeholders, customers and suppliers alike. It facilitates good practices and consistency, helps ensure purchases are made fairly with a high level of ethics, integrity and transparency, and contributes to long term safe and secure plant operation. The processes and principles described can generally be applied to other large projects in the nuclear sphere such as major plant refurbishments, research reactors or fuel cycle facilities.

In April 2018, SAGNE (Senior Advisory Group of Nuclear Energy) recommended that the IAEA pursue wider international collaboration to manage and improve interfaces between regulators, technical support organizations, owner/operators and suppliers. This recommendation

has been supported by two Technical Meetings: Technical Meeting on Recent Developments in International and National Management System Standards including Quality Management Aspects (December 2017) and a Technical Meeting on QA/QC Activities in Nuclear Power Plants: Lessons Learned and Good Practice (November 2018) discussing supply chain management and quality extensively.

The IAEA has issued recently several publications that deal with these topics, such as NP-T-3.21 [Procurement Engineering and Supply Chain Guidelines in Support of Operation and Maintenance of Nuclear Facilities](#) (2016), NP-T-3.28 [Technical Support to Nuclear Power Plants and Programmes](#) (2018) and NP-T-3.26 [Managing Counterfeit and Fraudulent Items in the Nuclear Industry](#) (2019).

As examples of topics that the toolkit discusses, e.g. the following may be mentioned (list not exhaustive):

- Relation of supply chain management to the management system;
- Informed customer role is managing and overseeing supply;
- How to ensure quality in supply of items and services by qualifying suppliers;
- Practices for supply process oversight at the beginning and during the supply;
- Evaluation of the supplier performance;
- Management of non-conformances;
- Dealing with counterfeit, fraudulent and suspect items (CFSIs);
- New solutions for manufacturing (e.g. additive manufacturing) and the related challenges;
- Oversight of on-site and off-site service suppliers (contractors);
- Justification/dedication of commercial grade items to safety related uses, and
- Other topics related to the supply chain management.

***requires registration)**

Examples of persons who may find the toolkit useful are (list is not exhaustive):

- Managers in charge of developing, implementing and improving procurement and quality assurance (or management) activities at their facilities;
- Specialists from regulatory bodies reviewing suppliers quality management and products/services;
- Representatives of service suppliers (e.g. engineering, testing, etc.) contractors;
- Suppliers of systems, structures and components
- Officers from international and non-governmental organizations that are involved in the development or promotion of quality standards or supply chain sustainability

Front page of the current Beta REST toolkit version (requires registration)

References

Home > MSN > [The Nuclear Regulations and Standards Toolkit \(under construction\)](#)

MSN Calendar

Evaluation of Management Systems

The Nuclear Supply Chain Management Toolkit

[The Nuclear Regulations and Standards Toolkit \(under construction\)](#)

Introduction, Background and Scope

Overview on Legislation, Regulation and Standards

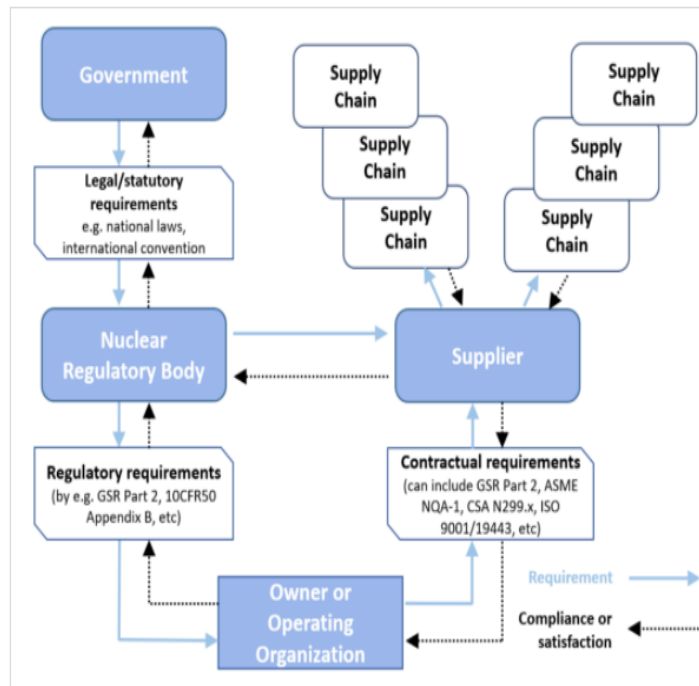
National Laws and Regulations

Standards

Community of Practice

References

The Nuclear Regulations and Standards Toolkit



The purpose of this **Web-based profile tool** is to provide a global overview of the way standards, particularly management system and quality standards, can be used to support the achievement of legislative and regulatory compliance and performance improvement. Emphasis is placed on standards that are widely used, particularly International standards. Similarly, different national regulatory requirements are shown to make it easier for users to understand the differences.

The Website presents an overview of the global **regulations** and **standards** landscape so that users can make informed decisions about adapting appropriate standards to complement the IAEA requirements and practical guidance. The Website can also be used by suppliers to be informed about the different practices in different countries so that they may take them into account early on when preparing for their supply processes.

The **Regulations and Standards** Profiles provide good practices and practical examples of lessons learnt from the adoption and use of standards in countries building, operating, replacing and maintaining

nuclear power plants and used in facilities and activities. For that purpose, material from the Member States will be an important component.

This information provides a basis for enhanced understanding in dialogue between government bodies, regulators, plant operators and suppliers when dealing with management systems and quality issues. Consequently, it is the intention to update the contents in regular intervals.

It is understood that the information provided herein is not static in time. Legislation, regulations and standards are evolving and undergo review processes which may lead to revisions in their content. Therefore, the content on this website should be seen as living. Users are encouraged to

National legal and regulatory requirements in the area of quality and management systems to suppliers



References

🏠 > MSN > The Nuclear Regulations and Standards Toolkit (under construction) > [National Laws and Regulations](#)

Introduction, Background and Scope

Overview on Legislation, Regulation and Standards

National Laws and Regulations

Template

Standards

Community of Practice

References

National Laws and Regulations

This section is based on section "3.0 Template", which questionnaire is including regulatory management systems and quality management requirements in different IAEA Member States. Regulatory guidance is equally included. Often these requirements are those that are least tangible for all those coming from another country. In some cases, check boxes are used with completing free text description. The idea is not to replace any other reporting channel like Convention on Nuclear Safety. This information is intended to represent a brief executive summary with links to your websites or documents (preferably in English, indicate if otherwise) to the extent possible.



Argentina



Armenia



Bangladesh



Belarus



Belgium



Brazil



Bulgaria



Canada



China



Czech Republic



Egypt



Finland

Examples of some commonly used standards



IAEA

🔍 ? ⚙️ 👤 PYY, Pekka

ISO 19443:2018

4.1.5 ISO 19443:2018

Quality management systems — Specific requirements for the application of ISO 9001:2015 by organizations in the supply chain of the nuclear energy sector supplying products and services important to nuclear safety (ITNS)

ASME

ASME NQA-1-2019

4.1.6 ASME NQA-1-2019

Quality Assurance Requirements for Nuclear Facility Applications

ANSI

ANSI/ANS 3.2-2012 (R2017)

4.1.7 ANSI/ANS 3.2-2012

Managerial, Administrative, and Quality Assurance Controls for The Operational Phase of Nuclear Power Plants

CSA

CSA N286-12 (R2017)

4.1.8 CSA N286-12 (R2017)

Management System Requirements for Nuclear Facilities

CSA N299.1:19

4.1.9 CSA N299.1:19

Quality Assurance Program Requirements for The Supply of Items and Services for Nuclear Power Plants - Category 1

Filled templates for MS Regulations

- [3.1 Argentina](#)
- [3.2 Armenia](#)
- [3.3 Bangladesh](#)
- [3.4 Belarus](#)
- [3.5 Belgium](#)
- [3.6 Brazil](#)
- [3.7 Bulgaria](#)
- [3.8 Canada](#)
- [3.9 China](#)
- [3.10 Czech Republic](#)
- [3.11 Egypt](#)
- [3.12 Finland](#)
- [3.13 France](#)
- [3.14 Germany](#)
- [3.15 Hungary*](#)
- [3.16 India](#)
- [3.17 Iran, Islamic Republic of](#)
- [3.18 Japan](#)
- [3.19 Kazakhstan](#)
- [3.20 Korea, Republic of](#)
- [3.21 Mexico](#)
- [3.22 Netherlands](#)
- [3.23 Pakistan](#)
- [3.24 Romania](#)
- [3.25 Russian Federation](#)
- [3.26 Slovakia](#)
- [3.27 Slovenia](#)
- [3.28 South Africa](#)
- [3.29 Spain](#)
- [3.30 Sweden](#)
- [3.31 Switzerland](#)
- [3.32 Turkey](#)
- [3.33 Ukraine*](#)
- [3.34 United Arab Emirates](#)
- [3.36 United Kingdom](#)
- [3.36 USA](#)

Links to webpages:

[CNPP](#)

[CNS](#)

*Work ongoing

Filled Templates for Standards

- These templates we have filled..

[IAEA GSR Part 2](#), [GS-G-3.1](#), [GS-G-3.5](#)

[ISO 9001:2015](#), [ISO 19443:2018](#)

[ASME NQA-1](#)

[ANSI/ANS 3.2](#)

[CSA N286-12](#), [CSA N299.x](#)

[KTA 1401](#), [KTA 1402](#)

[KEPIC QAP](#)

More to be added ...!

Other standards

[ISO 9004:2018](#)

[ISO 10005:2018](#)

[ISO 10006:2017](#)

[ISO 10007:2017](#)

[ISO 19011:2018](#)

[ISO 14001:2015](#)

[ISO 22301:2012](#)

[ISO 26000:2010](#)

[ISO 30301:2019](#)

[ISO 44001:2017](#)

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