

ISO 19443 in action

Your questions answered

The LRQA logo is a white square with a thin white border, containing the letters 'LRQA' in a bold, white, sans-serif font. It is positioned in the bottom right corner of the image, over the water.

LRQA



Enhancing quality and safety in the nuclear supply chain

ISO 19443 is the internationally recognised standard that sets out quality management system requirements for organisations supplying products and services important to nuclear safety (ITNS). Based on ISO 9001, it incorporates additional criteria tailored to the nuclear sector's unique demands, including risk management, traceability, regulatory compliance, and continuous improvement.

Designed to support the evolving needs of the nuclear supply chain, ISO 19443 helps organisations strengthen quality

assurance, improve operational efficiency, and demonstrate a commitment to safety and reliability. Certification to ISO 19443 enhances stakeholder confidence and ensures alignment with industry best practices, regulatory expectations, and the highest standards of nuclear safety.

This document is based on insights shared during a live webinar with LRQA experts and our client, KSB SAS, discussing the practical application of ISO 19443, its benefits and its role in driving quality and safety across the nuclear supply chain.



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General questions on ISO 19443

Q | How does ISO 19443 differ from ISO 9001?

A | ISO 19443 is based on ISO 9001 but includes additional requirements for companies whose products and services are classified as “important to nuclear safety.”

Q | Has ISO 19443 been mapped to other nuclear standards such as IAEA, EURATOM, or ICRP?

A | There is no officially published mapping exercise, but various groups have developed comparison tables.

Q | What is IPSN?

A | IPSN is the French acronym for “ITNS - Important to Nuclear Safety.”

Q | Is ISO 19443 a requirement for EDF in France?

A | Yes, EDF recognises ISO 19443 as a requirement.

Q | Will ISO 19443 phase out NQA-1?

A | No, NQA-1 is an ASME quality assurance programme that may still be applicable depending on market and customer needs. ISO 19443 provides a process-oriented management system, whereas NQA-1 offers specific operational guidance.

Q | How does ISO 19443 relate to ASME NQA-1?

A | While both focus on nuclear quality assurance, NQA-1 provides concrete examples of operational procedures, whereas ISO 19443 is more process-oriented.

Q

Is ISO 19443 mandatory for nuclear supply chain management globally?

A

ISO 19443 is an international standard applicable worldwide, supplemented by local and customer-specific requirements.

Q

Is ISO 19443 only applicable to new nuclear projects?

A

No, it is relevant across the nuclear lifecycle, from construction through to operations and decommissioning.





Certification and implementation

Q How long does it take to achieve ISO 19443 certification?

A On average, it takes around 12 months, assuming a dedicated team is in place.

Q What are the key steps to implementing ISO 19443?

A Key steps include defining a graduated approach, conducting internal audits, assessing processes, managing suppliers, training staff and updating documentation.

Q What are the major cost considerations for ISO 19443 certification?

A The cost depends on organisational size, complexity, number of locations and the level of process maturity. LRQA can provide a quotation based on these factors

Q Does certification require additional staff in QA/QC?

A One full-time role may be required to implement and maintain the standard, but operational quality teams typically remain unchanged.

Q Is a minimum amount of training hours required to become a Lead Auditor for ISO 19443?

A Each certification body has its own competency scheme. Typically, auditors need to qualify for audit techniques, receive ISO 19443 training and demonstrate practical application.

Q Is ISO 19443 certification likely to become mandatory?

A ISO 19443 is not mandatory, but many nuclear supply chain projects, operators, and procurers are interested in its adoption.



Supplier and supply chain management

Q

What happens if a supplier is not ISO 19443 certified?

A

Certification is not always required for all suppliers. However, if a supplier is required to be certified under an organisation's management system but does not have certification, an internal audit should be conducted in line with the standard, followed by an action plan to address any gaps.

Q

How does ISO 19443 impact supplier selection?

A

The standard strengthens supplier monitoring, quality control and compliance measures, making certified suppliers more desirable for nuclear projects.

Q

If we are a company without design responsibility (working based on customer specifications), do we need to identify ITNS, or is this provided by the customer?

A

Best practice is to receive ITNS classification from the customer and then assess and validate the requirement.

Q

How does holding ISO 19443 certification make a supplier preferable over those who provide other standard certifications?

A

ISO 19443 includes additional criteria beyond ISO 9001. Some purchasers accept ISO 19443 certification in place of their own supplier audits.



Nuclear safety and risk management

Q

What types of Nuclear Safety KPIs are implemented under ISO 19443?

A

Common KPIs include customer complaints, percentage of staff effectively trained and identification of counterfeit, fraudulent, and suspect items (CFSI) in processes.

Q

How is nuclear safety culture assessed within an organisation?

A

It is evaluated through internal audits, staff training questionnaires and flash audits, particularly for employees involved in security-sensitive activities.

Q

What has been the main concrete benefit for KSB in achieving ISO 19443 certification?

A

Key benefits include understanding and applying the graduated approach, strengthening supplier monitoring, and improving nuclear safety culture.

Q

How was the graded approach implemented?

A

The approach involves defining and applying risk-based requirements across key processes such as design, supplier qualification, procurement, staff training and documentation.

Q

What are the key benefits of ISO 19443 for an organisation?

A

Benefits include improved supplier oversight, strengthened nuclear safety culture, better risk management and enhanced process control.



Nuclear waste and equipment reuse

Q

How does ISO 19443 address the quality of nuclear waste management and disposal?

A

The standard provides a framework for a global quality approach but technical expertise and product-specific standards also play a crucial role.

Q

Does ISO 19443 cover the reuse and recycling of nuclear components?

A

The quality of reused equipment is determined by agreements with customers and must align with ITNS (Important to Nuclear Safety) requirements.





Regulatory and market considerations

Q

Do nuclear regulators have expectations regarding ISO 19443?

A

While there is no formal regulatory mandate, various nuclear safety groups have expressed interest in its application for strengthening safety culture and CFSI management.

Q

Does having ISO 19443 certification make a company more attractive to customers?

A

ISO 19443 certification enhances credibility and demonstrates a commitment to quality and nuclear safety. It strengthens trust with Tier 1 suppliers and can provide a competitive advantage when engaging with major industry principals. Certification helps meet regulatory and customer expectations, positioning an organisation as a reliable partner in the nuclear supply chain.

Q

Is there a public list of companies certified to ISO 19443?

A

There is no global database, but organisations such as the NQSA (www.nqsa.org) maintain partial lists.

Q

Is ISO 19443 beneficial for industrial-grade equipment suppliers in the nuclear market?

A

While not mandatory, many nuclear projects prefer suppliers certified to ISO 19443 due to its focus on process control and nuclear safety.

Strengthen your nuclear supply chain with ISO 19443 certification. Discover our full range of ISO 19443 services. →



Your energy transition partner

About LRQA:

LRQA is the leading global assurance partner, bringing together decades of unrivalled expertise in assessment, advisory, inspection and cybersecurity services. Our solutions-based partnerships are supported by data-driven insights that help our clients solve their biggest business challenges.

Operating in more than 150 countries with a team of more than 5,000 people, LRQA's award-winning compliance, supply chain, cybersecurity and ESG specialists help more than 61,000 clients across almost every sector to anticipate, mitigate and manage risk wherever they operate.

In everything we do, we are committed to shaping a better future for our people, our clients, our communities and our planet.

Get in touch

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