Nuclear

ISO 19443

The quality management system for
the nuclear supply chain

LRQA

ISO 19443 specifies quality management system requirements for organizations supplying products and services that are important to nuclear safety (ITNS).

This standard is based on the widely recognized ISO 9001 but includes additional requirements tailored to meet the stringent safety and regulatory demands of the nuclear industry.

The standard provides a framework for managing and improving the quality and safety of products and services, helping organizations mitigate risks, enhance performance, and achieve compliance with national and international nuclear regulations. It applies to a wide range of organizations involved in the nuclear supply chain, including manufacturers, contractors, service providers, and suppliers of nuclear-specific

Why choose ISO 19443

Enhanced safety ensures suppliers adhere to stringent safety protocols to protect against nuclear risks.

ISO 19443 helps organizations comply with national and international nuclear regulations.

ISO 19443 facilitates the evaluation and selection of suppliers based on their ability to meet nuclear safety standards.

The framework provides consistent quality assurance in the supply chain.

Identify and mitigate risks specific to the nuclear supply chain.

Key components of ISO 19443
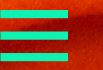
Quality management principles

Quality Management Principles are essential for ensuring that an organization consistently meets customer requirements and improves its performance over time.

Here are the principles that are integral to the ISO 19443 standard:

Customer focus

Understanding and meeting customer requirements is fundamental. This principle emphasises the importance of ensuring that nuclear safety and quality needs are consistently met.

Leadership

Leadership involvement at all levels establishes unity and creates conditions in which people are engaged in achieving the organization's quality objectives.

Engagement

Competent, empowered, and engaged people at all levels are essential to enhance the organization's capability to create and deliver value.

Process approach

Consistent and predictable results are achieved more effectively and efficiently when activities are understood and managed as interrelated processes.

Continuous improvement

Successful organizations focus on continual improvement. This principle is crucial in the context of nuclear safety to adapt to new regulations and technologies.

Data-led decision-making

Decisions based on the analysis and evaluation of data and information are more likely to produce desired results.

Relationship management

For sustained success, organizations manage their relationships with interested parties, such as suppliers, to optimize their performance and ensure nuclear safety.

Key components of ISO 19443

Specific requirements for nuclear safety

Risk management

- **Risk identification:** identifying risks related to nuclear safety at all stages of the supply chain.

- **Risk assessment:** evaluating the significance of identified risks and their potential impact on nuclear safety.

- **Risk mitigation:** implementing measures to reduce or eliminate risks to an acceptable level.

Competence and awareness

- **Training:** Provide training programs to ensure that all employees are competent in their roles, especially concerning nuclear safety.

- **Awareness:** ensuring that all personnel are aware of the importance of their activities and how they contribute to nuclear safety.

Documented information

- **Documentation control:** establishing procedures for creating, updating, and controlling documentation to ensure accuracy and consistency.

- **Record keeping:** maintaining detailed records of all quality management activities to provide evidence of compliance and facilitate traceability.

Product realization

- **Planning:** developing plans for product realization that address nuclear safety requirements.

- **Process control:** implementing controls to ensure that products and services meet specified requirements.

- **Verification and validation:** conduct verification and validation activities to confirm that products and services meet nuclear safety standards.

Control of externally provided processes

- **Supplier evaluation:** evaluating and selecting suppliers based on their ability to meet ISO 19443 requirements.

- **Supplier monitoring:** continuously monitoring supplier performance to ensure ongoing compliance with nuclear safety standards.

- **Supplier development:** working with suppliers to enhance their capabilities and ensure they can consistently meet nuclear safety requirements.

The implementation process

Preparation

Gap Analysis

Conduct an analysis to identify gaps between current practices and ISO 19443 requirements.

Implementation planning

Develop a detailed plan to address identified gaps, including timelines, responsibilities, and resources.

Training

Provide training to employees on ISO 19443 requirements and nuclear safety principles.

Implementation

Process establishment

Establish and document quality management processes and procedures.

Risk management

Implement risk management strategies tailored to nuclear safety.

Documentation

Ensure all processes are documented and records are maintained for traceability.

Audit and certification

Internal audits

Conduct regular internal audits to assess compliance with ISO 19443 requirements.

External audits

LRQA nuclear experts will perform an independent audit.

Certification

Achieve ISO 19443 certification upon successful completion of an external audit.

Why choose LRQA?

At LRQA, we enable businesses to build, maintain and decommission nuclear facilities, ensuring their critical assets are safe and operating efficiently. Our comprehensive nuclear services span the entire supply chain, ensuring that safety, efficiency, and regulatory compliance are maintained at every stage. LRQA has a track record of supporting over 600 clean energy projects, including nuclear power, in over 25+ countries and providing clients with expert assurance at every stage of their facilities' lifecycles – from design to decommissioning.

On-the-ground expertise

Our solutions are delivered by a global team of specialists who are dedicated to sharing insights and knowledge that will help solve your business challenges. Our deep pool of expertise will help you minimize risk, however your business needs support.

Track record in Civil Nuclear

With over 70 years of experience, we've established an extensive track record in low carbon power – supporting some of the world's leading energy producers, manufacturers and operators throughout their transition to cleaner forms of energy including hydrogen, nuclear, wind and solar.

Solution-based partnerships

We have been pivotal in supporting clients' low carbon energy projects with compliance, assurance and advisory services, and have delivered over 600 projects across 25 countries.

Data-driven decision making

We invest in digital platforms that give you deep insight into your operations. Our human intelligence is enhanced by extensive analytics capabilities which can be applied to address current and future risks within your operations and supply chain.

Your energy transition partner

About LRQA:

LRQA is the leading global assurance partner, bringing together decades of unrivaled 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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