AREVA SPECIFICATION

AREVA

SUPPLIER MANAGEMENT SYSTEM SPECIFICATION

Effective date: APRIL 1st, 2014

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That document is the English translation of the original document in French "Spécification de système de management pour les fournisseurs" dated from April 1st, 2014.

The English version is available as from April, 2015.

1 PURPOSE OF DOCUMENT

This specification formalizes additional requirements to the ISO 9001:2008 standard with which the supplier or service provider must comply in executing a contract awarded by an AREVA entity operating one or more regulated nuclear facilities located in France (called "basic nuclear installations", BNI) and connected with the protection of interests. The interests protected by law concern the nuclear safety, the occupational safety, and the health and environmental challenges.

The formulation of these additional requirements is the result of an article-by-article reading of the ISO 9001:2008 standard [6]. Each of the clauses called out from this standard is associated with a footnote.

The specification aims to allow the operator of an INB to comply with the regulatory requirements in terms of purchasing and procurement defined in:

- the order of February 7, 2012 setting the general rules related to regulated nuclear facilities, called "the BNI order"[1] [1];
- the decision of the French nuclear safety authority (Autorité de sûreté nucléaire, ASN) relating to the protection of interests policy (PIP) and the integrated management system (IMS) for regulated nuclear facilities, called "the PIP and IMS decision"[2] [2].

In practice, the generic requirements of this specification are supplemented by specific requirements noted in the expression of needs and/or in the contract.

The contracts concerned by the specification may be purchasing contracts of:

- goods and equipment;
- design/engineering;
- services or construction/repairs;
- intellectual services.

A correspondence is established in the appendix between the requirements of this specification and the requirements of the NSQ-100 standard [7], which the group applies and has its suppliers apply in their activities as constructor, equipment manufacturer and nuclear reactor fuel fabricator.

[1] Article 2.2.1: "The Operator notifies the subcontractors of the measures necessary to the application of this order."
[2] Article 1.2.1: "The Operator ensures that the contracts or other agreements drawn up with the subcontractors under the meaning of the above-mentioned order of February 7, 2012 […] include the listing of measures ensuring compliance with this decision, for the aspects applicable to them."

2 DEFINITIONS

For information, the definition of terms is as follows:

- "protected interests" are as defined in article L. 593-1 of the French Environmental Code;
- "operator" and "subcontractor" are as defined in the BNI order [1];
- "customer", "supplier", "product" and "service" are as defined in ISO 9000:2005 [5].

It should be noted that:

- an activity important for protection (AIP) is an activity that contributes to the technical or organizational measures to prevent or sufficiently limit the risks and drawbacks presented by the facility in terms of protected interests;
- an item important for protection (EIP) is a structure, system, component and/or software present in the facility or falling under the operator's responsibility that performs a function necessary to the demonstration of the protection of interests or that verifies that that function is ensured.

A list of activities important for protection, which may be adjusted according to the facility, may include:

- design and engineering, the development of safety standards, and the justification notes called for;
- purchasing and procurement[3] ;
- facility operations and monitoring;
- repairs, servicing, maintenance and modifications;
- periodic inspection and testing (PIT), compliance review;
- handling of deviations;
- training (or training design alone), personnel authorization and qualification.

The term "management system" refers to the organization set up by the supplier to manage its activities, improve its performance and satisfy the customer.

The scope of application is as follows:

- The customer is an AREVA entity responsible for the construction or operation of an INB which receives a product or a service based on an expression of requirements.
- The supplier is an organization which signs a contract with an AREVA entity (the customer) and procures the requested product. The products may be categorized as equipment (in which case the term "supplier" is used), as services, as labor or as software (in which case the term "service provider" is used).
- The subcontractor is an organization which signs a contract with a supplier. Consequently, there is no direct contractual link with the AREVA entity.

The supplier may be a company or a grouping of companies that may take a variety of legal forms, such as an economic interest grouping, a joint venture or a joint stock company. In that case, the legal representative is referred to as the "principal supplier".

[3] This may involve raw materials, products, equipment, labor and/or services.

3 GENERAL REQUIREMENTS

3.1 Standards and regulatory requirements

The supplier complies with the requirements of ISO 9001. The supplier complies with all of the legal and regulatory requirements applicable to its field of activity.

The applicable requirements are passed through to the supplier's subcontractors concerned by the contract, regardless of their tier. AREVA has limited the supplier's authority to subcontract **to two lower tiers** [3].

3.2 Quality-nuclear safety-safety-environment culture

The supplier promotes and supports **a culture of Quality-Nuclear Safety-Safety-Environment** by:

- ensuring a uniform and well-balanced understanding of the fundamentals of the Quality-Nuclear Safety-Safety-Environment culture internally[4];
- providing the means enabling individuals and teams to complete their work successfully in view of the interactions between people, the technology and the organization;
- strengthening a learning and questioning approach at each level of the organization to contribute to continual improvement in the protection of interests;
- disseminating within its organization a policy of personnel responsibility and continuous commitment to comply with the customer's requirements and aim for its satisfaction.

In that sense, the supplier develops management practices and a working environment that promote on a long-term basis the appropriate attitudes, behaviors and actions.

Components of awareness are given in appendix 3 of this specification.

3.3 Risk analysis and proportionality to the challenges

The supplier analyzes the customer's requirements and verifies that all the provisions of its management system take into account all risks that may compromise its proper operation and the achievement of the performance objectives (risk analysis).

The risk analysis is done for purposes of the contract review. The main conclusions of the risk analysis are documented. They are integrated into the "quality" document cited in § 4.2 for the cases concerned.

For any service or supply presenting issues in terms of protected interests, the requirement levels for the management system, for control, for monitoring and for documentation are proportionate to the importance of the risks and challenges in terms of protected interests.

3.4 Continuous improvement

The supplier adopts a continuous improvement approach in terms of protection of interests which promotes **the detection and handling of deviations** and the collection and analysis of operating experience[5].

The supplier adopts a product or services optimization initiative, or innovation, which it carries out for AREVA. It makes proposals to the customer in terms of the offer or during execution for validation.

[4] This includes the description of any abnormal situation that could compromise the protection of interests.
[5] In particular the "BNI order", article 2.6.1 and article 2.7.2.

3.5 Verification by the customer

The supplier facilitates the work of verifying the application of this specification carried out by the customer or its representative during audits or when executing the surveillance plan. It will transmit any document or data necessary to the preparation of these verifications.

It will provide access to the places where the activities are being performed and to the necessary documentation. It will ensure that the same is true among its subcontractors, regardless of their tier within the limit authorized by the customer.

The supplier favors any action by the customer **to assess the ability of subcontractors to apply its protection of interests policy**[6], to accomplish all or part of an activity or to provide an item important for protection, and to contribute to the improvement of the protection of interests.

4 ADDITIONAL REQUIREMENTS

4.1 Control of language requirements (clause 4.2 of ISO 9001:2008)

The supplier's management system **must specify the language used** and include control of the language translation of the contract documents.

Special attention is paid to verify the conformity to the original document and to communicate applicable requirements to its personnel and to those of its subcontractors.

4.2 Management system (clause 4.2.2 of ISO 9001:2008)

The supplier defines what it commits to doing to comply with these requirements in a **"quality" document**[7]. This document is mandatory in the three specific cases below:

- when the contract includes an ISO 9001 certification requirement and the supplier is either not ISO 9001 certified or is ISO 9001 certified but not for the scope concerned by the contract order;
- when the work requires an organization dedicated to that activity for a given period of time;
- in the case of a grouping of companies, even if each of the companies is ISO 9001 certified.

This document is submitted to the customer for review and approval.

Any grouping of companies thus gives rise to:

- **a joint venture (JV) agreement**;
- **a "quality" document** based on the grouping's architecture which describes the organization, responsibilities, interfaces and control requirements of the other members of the grouping by the legal representative. The document defines the procedures established by the grouping as concerns project follow-up (including management review), compliance with specified requirements, identification and handling of deviations, and internal audits. **The legal representative coordinates and validates this document**.

The supplier notifies the customer without delay of **any notable change in its management system** or its organization.

For contract orders requiring approvals, certifications or accreditations, the supplier sends all of the required documentation to the customer along with its proposal. The supplier commits to sending to the customer evidence that they are maintained over time throughout the contract order period.

[6] It includes the Nuclear Safety Policy, the Health and Safety Policy, and the Environmental Policy.
[7] This may consist of a quality manual, a quality management plan, a quality assurance plan, or other.

4.3 Control of documents (clause 4.2.3 of ISO 9001:2008)

The data and documents related to the order are verified. The verification is done by persons who are different from those who collected the data and drew up the documents.

The documents related to the order must be up to date, known, understood and used appropriately by the personnel concerned.

Reports, meeting reports and other records to be drawn up for purposes of the order, along with their methods of validation, keeping and filing, are described in the document mentioned in paragraph 4.2.

4.4 Control of records (clause 4.2.4 of ISO 9001:2008)

The supplier sends the specified records to the customer for the duration of the product lifecycle or during the course of the service.

In particular, technical inspections and verification and assessment activities carried out for an activity important for protection are **subject to documentation and traceability requirements** for purposes of before-the-fact demonstration and after-the-fact verification of compliance with defined requirements[8].

4.5 Management commitment (clause 5 of ISO 9001:2008)

In carrying out AREVA projects, **the supplier's Management agrees to comply with**:

- the Values Charter;
- the Nuclear Safety Charter;
- the HSE Charter or Agreement or Policy for the jobsites, if one exists (site document);
- the Protection of Interests Policy;
- the Social Specification, within the limit of its field of application [3].

The supplier's Management is responsible for:

- the exactness of the data transmitted for its listing and responses to calls for bids;
- the technical skills of its employees and their knowledge of what is at stake in their activity in terms of protected interests and the risks of the INB or of the site;
- the nuclear and occupational safety culture level of its employees, teams and organization;
- the application of regulations applicable to its field of activity;
- the application of nuclear safety, radiation protection and occupational safety rules of the customer AREVA entity;
- its participation in discussions initiated by the customer's Management concerning its nuclear and occupational safety culture, occupational safety performance and/or event OPEX[9], followed if necessary by the definition and deployment of a performance improvement plan.

The supplier identifies and manages all of the risks involved in its activity.

4.6 Competence, training and awareness (clause 6.2.2 of ISO 9001:2008)

Persons assigned to an activity important for protection and who work on an item important for protection must be aware of the importance of their work and of the potential impacts that any failing in exercising their activity could have on the protection of interests.

[8] In particular the "BNI order", article 2.5.6.
[9] The customer and the supplier will put into application the instruction related to listed OPEX [4].

The supplier takes appropriate measures in terms of **awareness, training and mandatory qualification** to ensure that the persons assigned to an activity important for protection and working on an item important for protection have the necessary skills.

The supplier takes measures in terms of training or special work authorization to ensure that persons assigned to activities for which the challenges in terms of the protection of interests requires individual authorization by the customer meet the required conditions for authorization.

The supplier puts processes in place to confirm that the persons it assigns to activities important for protection (AIP), technical inspections, verification activities or assessment of those activities, possess the necessary mandatory qualifications and skills.

4.7 Project control (clause 7.1 of ISO 9001:2008)

In addition to actions to schedule and perform activities, the supplier defines and implements an organization and measures enabling it to ensure project management, project risk management and configuration management meeting the customer's requirements and addressing the challenges in terms of protected interests.

The supplier sets up structured and controlled project management in order to meet the requirements with an acceptable level of risk while complying with the constraints related to resources and deadlines.

The supplier implements a project risk management initiative as necessary in connection with compliance with listed requirements.

The supplier establishes, implements and maintains, when necessary, a process for **product configuration management** or for **management of data** to be transmitted to the customer so that the latter may enter it in its configuration management process.

4.8 Design and development (clause 7.3 of ISO 9001:2008)

The supplier defines its organization and requests customer's acceptance about:

- **interfaces**;
- **input data and output data**;
- **necessary reviews**;
- **approaches to verification, validation and control of changes**.

In particular:

- The supplier produces the documents, procedures and qualifications required by the contract order. It specifies the conditions for all qualifications. This concerns, for example, tools and engineering notes, among other things.
- Persons in charge of design and development verification are different from the persons who participated in those activities.
- Design and development changes must be controlled: they must be identified, documented, validated by the customer and filed.

4.9 Technical inspections (clause 7.1 of ISO 9001:2008)

An organization is defined by the supplier and approved by the customer to perform **technical inspections** of activities important for protection.

The technical inspections are executed in accordance with the organization defined either by the supplier or by its subcontractors (measures enabling compliance with technical inspection requirements are listed in the contracts).

Technical inspections are operations carried out according to a systematic method to ensure that:

- the activity is accomplished according to the defined requirements;
- the results correspond to the defined quality;
- the appropriate corrective and preventive actions are defined and implemented.

The persons in charge of technical inspection tasks are:

- **different** from the persons who accomplished the activity;
- **competent and informed** of the issues related to the quality of realization of the activity;
- **present during key phases** of the execution of the activity.

Technical inspections are recorded by the supplier or its subcontractors and **transmitted to the customer** in the tools specified by the customer or, in their absence, in the supplier's own recording materials.

4.10 Surveillance (clauses 7.1, 7.6 and 8.2 of ISO 9001:2008)

Hold points[10] and witness points[11] are indicated on the appropriate documents sent by the customer or, in their absence, in the supplier's own documents and validated by the customer.

For operations entrusted to subcontractors, the supplier regularly performs independent verifications and assessments, relying as necessary on:

- scheduled surveillance of the performance of operations and/or technical inspections;
- audits carried out by trained personnel.

The objective of the supplier's surveillance of subcontractors is to ensure that:

- the subcontractors apply the Protection of Interests Policy they received;
- the operations carried out by the subcontractors or the goods or services they supply comply with the defined requirements;
- the subcontractors comply with the measures mentioned in this specification.

The results of verifications and assessments carried out by the supplier are recorded. The records are sent to the officer in charge of surveillance and to the customer's contract manager.

4.11 Control of non-conforming product (clause 8.3 of ISO 9001:2008)

The supplier takes the necessary measures **to detect deviations** in its products or activities and to bring them to the attention of the customer without delay[12].

The supplier and the customer exchange information necessary to the analysis and handling of the deviation[13].

Any deviation observed by the supplier is the subject of a commitment that is kept, filed and made available to the customer.

The supplier incorporates information and analytical results concerning OPEX transmitted by the customer into its continual improvement initiative as concerns the protection of interests. **It disseminates them internally to persons who may benefit from them**[14].

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[10] Point beyond which the design, development, production and preparation of the product should not continue without the customer's approval.
[11] Point at which the customer decides whether or not to witness the operation or its inspection. This notice does not stop continuation of the operations.
[12] In particular the "BNI order", article 2.6.1.
[13] In particular the "BNI order", article 2.7.2 and the "PIP and IMS decision", article 3.5.2.
[14] In particular the "BNI PIP and IMS decision", article 3.6.1.

The supplier informs the customer without delay of:

- any observed failing or incident that could alter the protection of interests;
- any change or anomaly that could compromise the product qualification.

Any proposal for use of the product that does not comply with the specified requirements is presented to the customer or to its representative for a waiver before operations continue.

Any proposal for repairs using a process that was not previously approved by the customer is presented to the customer or its representative for a waiver.

5 DOCUMENT CHARACTERISTICS

5.1 Scope of application

This specification is to be used by AREVA entities that operate one or more BNIs (nuclear facilities located in France) in connection with purchases having an impact on protected interests.

The specification applies to all phases in the INB lifecycle: design, construction, operation, final shutdown, dismantling, maintenance and monitoring.

The specification is addressed to suppliers and service providers connected with the quality of finished products at AREVA sites or whose products or services contribute to the protection of interests, i.e. to the management of the sites' nuclear safety, occupational safety, health and environmental challenges.

With respect to nuclear safety in particular, the specification is addressed to:

- the suppliers of structures, systems, components (SSC) and/or software subject to the defined requirements (DR) associated with one or more equipment items important for the protection of an INB created or operated by an AREVA entity;
- service providers to which is entrusted all or part of an activity important for protection on an item important for the protection of an INB created or operated by an AREVA entity.

For equipment suppliers subject to a requirement, the latter is sent to all final contractors for the assembled products, for they are responsible for guaranteeing conformity.

5.2 Schedule of application

This specification is applicable as from **April 1, 2014**.

It is applicable to any new contract resulting from a call for bids process launched as from April 1, 2014, or to any amendment to contracts signed before April 1, 2014, which amendment is motivated by a change in the technical scope or by a risk analysis.

The English version is available as from April, 2015.

5.3 Upstream documents

[1] Order of February 7, 2012 setting general rules relative to basic nuclear installations (in English)

[2] French nuclear safety authority (ASN) decision related to the Protection of Interests Policy (PIP) and the integrated management system for regulated nuclear facilities (only in French)

[3] PO ARV SCM GEN 21 (previously PO ARV 3SE GEN 21) – The Group's Social Specification: criteria for lowest bidder purchases (only in French)

[4] CM ARV 3SE GEN 8 - Instruction for strengthening subcontractors' participation in the OPEX of events concerning them (only in French)

5.4 Associated documents

[5] NF EN ISO 9000: 2005 – Quality Management Systems – Fundamentals and Vocabulary

[6] NF EN ISO 9001: 2008 – Quality Management Systems – Requirements

[7] NSQ-100: 2011 (NQSA) - Nuclear safety and quality management system – Requirements (model for quality management in design and development, manufacturing, erection, commissioning and related services)

5.5 Revisions to this specification

R0: this is the initial issue.

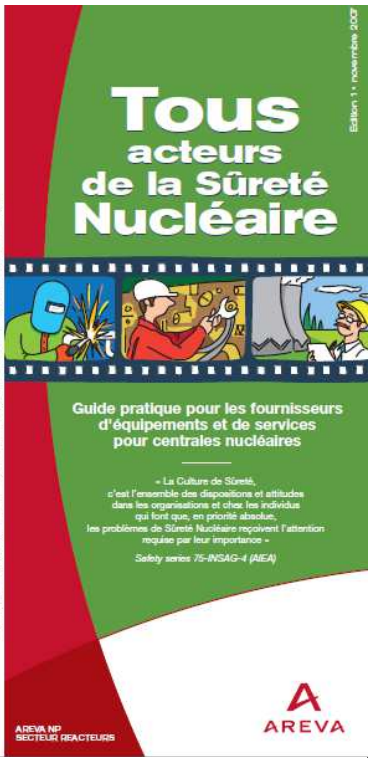
6 APPENDIX 1 – ACRONYMS

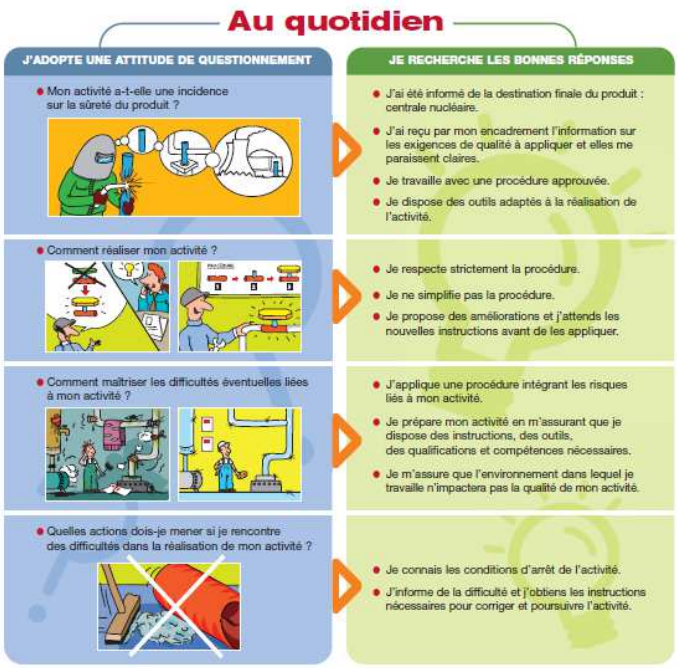
AIP	Activity Important for Protection
ASN	Autorité de Sûreté Nucléaire (French nuclear safety authority)
DR	Defined Requirement
HSE	Health Safety Environment
IIP	Item Important for Protection
IMS	Integrated Management System
INB	Installation Nucléaire de Base (French regulated nuclear facility)
JV	Joint Venture
OPEX	Operating Experience
PIP	Protection of Interests Policy
PIT	Periodic Inspection and Testing

7 APPENDIX 2 – TABLE OF CORRESPONDENCE WITH NSQ-100

Topic	NSQ-100 clause	Specification paragraph
General requirements	4.1	-
Nuclear safety culture	4.1.1	3.2
Classification of items and activities	4.1.2	-
Grading the application of quality requirements	4.1.3	3.3
Documentation requirements – General	4.2.1	4.1
Quality manual	4.2.2	4.2
Control of documents	4.2.3	4.3
Control of records	4.2.4	4.4
Management commitment	5.1 (and 5.3)	4.5
Customer focus	5.2	-
Planning	5.4	-
Responsibility, authority and communication	5.5	-
Management review	5.6	4.2
Provision of resources	6.1	-
Human resources	6.2	4.6
Planning of product realization	7.1	4.7
Customer-related processes	7.2	-
Design and development	7.3	4.8
Purchasing	7.4	-
Verification of purchased product	7.4.3	3.5
Production and service provision	7.5	-
Inspection and surveillance activities	7.5.1.3	4.9 and 4.10
Control of monitoring and measurement equipment	7.6	-
Monitoring and measurement	8.2	-
Control of nonconforming product	8.3 (and 8.5)	4.11
Continuous improvement	8.5.1	3.4

8 APPENDIX 3 – NUCLEAR SAFETY AND SAFETY CULTURE (IN FRENCH)





CONTENTS

1 PURPOSE OF DOCUMENT 1
2 DEFINITIONS 2
3 GENERAL REQUIREMENTS 3
3.1 Standards and regulatory requirements 3
3.2 Quality-nuclear safety-safety-environment culture 3
3.3 Risk analysis and proportionality to the challenges 3
3.4 Continuous improvement 3
3.5 Verification by the customer 4
4 ADDITIONAL REQUIREMENTS 4
4.1 Control of language requirements (clause 4.2 of ISO 9001:2008) 4
4.2 Management system (clause 4.2.2 of ISO 9001:2008) 4
4.3 Control of documents (clause 4.2.3 of ISO 9001:2008) 5
4.4 Control of records (clause 4.2.4 of ISO 9001:2008) 5
4.5 Management commitment (clause 5 of ISO 9001:2008) 5
4.6 Competence, training and awareness (clause 6.2.2 of ISO 9001:2008) 5
4.7 Project control (clause 7.1 of ISO 9001:2008) 6
4.8 Design and development (clause 7.3 of ISO 9001:2008) 6
4.9 Technical inspections (clause 7.1 of ISO 9001:2008) 6
4.10 Surveillance (clauses 7.1, 7.6 and 8.2 of ISO 9001:2008) 7
4.11 Control of non-conforming product (clause 8.3 of ISO 9001:2008) 7
5 DOCUMENT CHARACTERISTICS 8
5.1 Scope of application 8
5.2 Schedule of application 8
5.3 Upstream documents 8
5.4 Associated documents 9
5.5 Revisions to this specification 9
6 APPENDIX 1 – ACRONYMS 10
7 APPENDIX 2 – TABLE OF CORRESPONDENCE WITH NSQ-100 10
8 APPENDIX 3 – NUCLEAR SAFETY AND SAFETY CULTURE (IN FRENCH) 11