

## **Suggestions on the Applicability of Part II of NQA-1**

### **Introduction**

For those DOE entities choosing NQA-1 as their consensus QA standard, the revision to DOE O 414.1C mandates the implementation of applicable portions of Part II.

What is open to interpretation is which sections of Part II shall to be applied. This self help document is intended to help DOE entities make well informed and consistent across the complex, decisions regarding the applicability of the subparts of Part II of NQA-1 to their work scope.

Part II of NQA-1 supplements the quality assurance requirements of Part I of NQA-1. It contains amplifying quality assurance requirements for certain specific work activities. The arrangement of the requirements in Part I and requirements for work practices in Part II permit judicious application of NQA-1. This means simply, if you aren't pouring concrete, then the Part II requirements related to concrete do not apply.

### **Suggestions on the applicability of Part II of NQA-1**

Consult PSO direction

Where PSO direction is not provided<sup>1</sup>

Implement the applicable portions of NQA-1 Part II<sup>2</sup> where:

- Application is needed to effectively accomplish work
- Application is needed to further enhance the safety of specified activities
- Application is needed for product acceptance
- Application would help clarify or define Part I requirements
- Application is needed to accomplish the Program or Project Mission

Other considerations

- Where Part II is not currently implemented, sufficient time should be provided to include part II requirements in implementing documents and their implementation.

The following table, and particularly the applicability questions, is offered as a starting point for determining the applicability of specific sections of Part II, and for recording applicability decisions.

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<sup>1</sup> Documentation of Part II implementation decisions may take the form of blanket memorandums to PSOs or program leads. Where blanket implementation decisions are not applicable, implementation decisions should be documented in applicability matrices that address all elements of part II and document why and why not each element of Part II is applicable.

<sup>2</sup> For specific elements of Part II, consideration could be given to other consensus standards that are more current than those referenced in NQA-1 Part II or that more closely meet program or project needs.

Part II, Subpart #	Subpart Title	Applicability Question	Applicable Yes / No	Comments / Explanation
2.1	Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components for Nuclear Power Plants	<ol style="list-style-type: none"> <li>1. Will the facility include pipe ducts, etc. for the transfer of liquids, powders, etc. from one work station to a second work station?</li> <li>2. Is removal of system contaminations required to ensure mission objectives?</li> <li>3. Is management of cleaning and cleanness control, and inspection of fluid systems necessary during manufacturing, construction, repairs, and modifications?</li> <li>4. Will the facility include the installation of hydraulic, instrument control or lubrication lines or systems?</li> </ol>		
2.2	Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Nuclear Power Plants	<ol style="list-style-type: none"> <li>1. Will a sufficient number of items be shipped to the site to require multiple storage locations and environments?</li> <li>2. Will facility components require special packaging, processing and shipping to maintain their integrity?</li> <li>3. Will the items require protection from exposure to the environment?</li> <li>4. Will the items require special receiving inspections?</li> <li>5. Will the items required care during storage?</li> </ol>		
2.3	Quality Assurance Requirements for Housekeeping for Nuclear Power Plants	<ol style="list-style-type: none"> <li>1. Will metals welded, cut, ground, etc in the work area?</li> <li>2. Will construction activities exceed a 30 day period?</li> <li>3. Will the work conditions and environments affect the quality of the items being constructed or installed?</li> <li>4. Will control of the site area, facility, and equipment be necessary?</li> <li>5. Will areas of differing levels of cleanness be established within the facility?</li> </ol>		

Part II, Subpart #	Subpart Title	Applicability Question	Applicable Yes / No	Comments / Explanation
2.4	Installation, Inspection, and Testing Requirements for Power, Instrumentatio n, and Control Equipment at Nuclear Facilities	1. Does the scope include nuclear related safety or mission critical functions using instrumentation and control equipment? (refers to IEEE Std. 336-1985)		
2.5	Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete, Structural Steel, Soils, and Foundations for Nuclear Power Plants	1. Does the facility include safety-related or mission critical structures made of concrete, structural steel, soils or foundations? 2. Will facility construction or modification include inspections of soils and earthwork to ensure safety or mission critical requirements? 3. Will the work relate to production, preparation, placement, installation, inspection, and testing of structural concrete, structural steel, soils, and foundations? 4. Will facility construction or modification include high strength bolting or welding?		

Part II, Subpart #	Subpart Title	Applicability Question	Applicable Yes / No	Comments / Explanation
2.7	Quality Assurance Requirements for Computer Software for Nuclear Facility Applications	<ol style="list-style-type: none"> <li>1. Does the scope include nuclear related safety or mission critical functions implemented by internally developed software?</li> <li>2. Does the scope involve acquisition, development, operation, maintenance, and retirement of software?</li> </ol>		
2.8	Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems for Nuclear Power Plants	<ol style="list-style-type: none"> <li>1. Will the facility include mechanical equipment and systems (including glove-boxes) that will perform a safety-related or mission critical function?</li> <li>2. Will the work scope include installation, inspection and testing of mechanical equipment and systems?</li> <li>3. Is effective facility operation dependent upon installed mechanical equipment?</li> </ol>		
2.14	Quality Assurance Requirements for Commercial Grade Items and Services	<ol style="list-style-type: none"> <li>1. Will safety-related or mission critical items be procured from suppliers other than those implementing a QA Program that meets NQA-1 requirements?</li> </ol>		

Part II, Subpart #	Subpart Title	Applicability Question	Applicable Yes / No	Comments / Explanation
2.15	Quality Assurance Requirements for Hoisting, Rigging, and Transporting of Items for Nuclear Power Plants	<ol style="list-style-type: none"> <li>1. Does facility construction require the installation of large, heavy, or high value items?</li> <li>2. Will the use of hoisting, rigging and transporting equipment to maintain the quality of the items that requires special handling instructions or procedures?</li> </ol>		
2.16	Requirements for the Calibration and Control of Measuring and Test Equipment Used in Nuclear Facilities	<ol style="list-style-type: none"> <li>1. N/A, previously referenced IEEE standards have been cancelled. Part I requirements considered to be adequate for the control of M&amp;TE.</li> </ol>		cancelled
2.18	Quality Assurance Requirements for Maintenance of Nuclear Facilities	<ol style="list-style-type: none"> <li>1. Will safety-related or mission critical items and systems be relied upon or operated during the lifetime of the facility?</li> <li>2. Does the scope of the assigned work include the maintenance of the facility or portions of the facility (i.e., following acceptance of a completed system)?</li> <li>3. Will the project manager be responsible for operating the facility?</li> <li>4. Will the work scope include needed actions to maintain or restore an item to an acceptable condition?</li> </ol>		

Part II, Subpart #	Subpart Title	Applicability Question	Applicable Yes / No	Comments / Explanation
2.20	Quality Assurance Requirements for Subsurface Investigations for Nuclear Power Plants	1. Will the facility being designed to perform safety-related or mission critical functions be located on an uncharacterized site? Is site characterization required to finalize the facility design? 2. Will facility construction or modification begin before site characterization phase? 3. Will the work scope include subsurface geotechnical investigations such as drilling, coring, sampling, trenching, logging, geophysical methods, or testing, or in interpreting results of subsurface investigations?		