


Content

Title :	Regulations on the Scope of Inspection and on the Certification of Authorized Inspection Agencies for Nuclear Reactor Facilities 
Date :	2014.01.13
Legislative :	<ol style="list-style-type: none"><li>1. All 15 articles promulgated by Decree Hueih-Her-Tze No. 0930019465, of the Atomic Energy Council, Executive Yuan, on the 23rd day of June, 2004; and being effective henceforth.</li><li>2. Article 2 through Article 4 revised and promulgated by Decree Hueih-Her-Tze No. 0980002770 of the Atomic Energy Council, Executive Yuan, on the 11th day of February, 2009.</li><li>3. All 15 articles revised and promulgated by Decree Hueih-Her-Tze No. 1030000322, of the Atomic Energy Council, Executive Yuan, on the 13th day of January, 2014; and being effective henceforth.</li></ol>
Content :	<p>Article 1</p> <p>This Regulations is enacted pursuant to Paragraph 2 of Article 15 of the Nuclear Reactor Facilities Regulation Act.</p> <p>Article 2</p> <p>The terms used in this Regulations are defined as follows :</p> <ol style="list-style-type: none"><li>1. Examination: Non-destructive testing performed by qualified personnel to examine material and welds in order to detect flaw(s). An examination normally involves one or more of the following non-destructive testing methods: Ultrasonic, Liquid Penetrate, Magnetic Particle, Eddy Current, Radiographic and Visual.</li><li>2. Testing: Specific functional and pressure testing performed by qualified personnel to determine whether or not the structure, system and component meet the required physical, chemical, environmental and operating conditions.</li><li>3. Inspection: Activities performed to assure that the design, installation, examination and testing do comply with the cognizant requirements.</li><li>4. Verification: The use of documentation review, personal interview, on-the-spot observation, etc. to determine whether or not the process of design, installation, examination and testing meet the applicable laws, regulations, codes and quality assurance program requirements.</li><li>5. Authorized Inspection Agency: The agency certified by the competent authority and authorized thereof to independently conduct inspection on nuclear reactor facilities under construction or in operation.</li></ol> <p>Article 3</p> <p>This Regulations applies to the inspection activities on the design, manufacture, installation, examination and testing of safety-related structures, systems, and components during the construction and operation phases of nuclear reactor facilities. This Regulations also applies to the certification and regulation of the inspection agencies.</p>

#### Article 4

The scope of inspection activities during the construction phase shall include the following:

1. Reviewing a licensee' s quality assurance program and verifying its implementation.
2. Reviewing certified material documentation.
3. Witnessing or verifying the manufacturing and installation processes, welding, heat treatment and non-destructive testing activities.
4. Witnessing the final pressure testing.
5. Ensuring the construction report of the primary containment structure be reviewed and signed off by the designer liable and be approved by the licensee.
6. Witnessing selected examinations.
7. Ensuring the applicable design specifications and the design report be certified by a relevant licensed professional engineer.
8. Ensuring code data reports of the pressure safety/relief valve and vacuum breaker be certified by the party liable.
9. Verifying materials specified for non-destructive testing and qualification of the personnel.
10. Certifying the licensee' s code data reports.

#### Article 5

The scope of inspection activities in operational phase shall include the following:

1. Reviewing a licensee' s quality assurance program and verifying its implementation.
2. Verifying materials specified for non-destructive testing and qualification of the personnel.
3. Reviewing the inspection plan for both the pre-service and in-service periods and the testing plan for the in-service period.
4. Verifying examination and system pressure testing operations.
5. Verifying repair and replacement operations and the applicable quality assurance program.
6. Reviewing visual examination reports and verifying visual examination results.
7. Verifying activities of operational testing on pumps, valves and supports or reviewing the test reports.
8. Certifying the licensee' s reports on in-service inspection and testing, repair and replacement.

#### Article 6

The applicant for the Certificate of Authorized Inspection Agency (hereinafter referred to as the Applicant) shall be one of the following:

1. A government agency (institution).
2. A Company Limited by Shares incorporated under the Company Act with a minimum paid-in capital of 5 million New Taiwan Dollars.
3. A government accredited university, college or research institute.
4. A non-profit juridical person.

#### Article 7

The Authorized Inspection Agency shall be staffed with personnel with the following qualifications:

1. One or more Authorized Nuclear Inspector Supervisors and one or more Authorized Nuclear Inspectors.
2. One or more radiation protection personnel approved by the competent authority.
3. Two or more Level III Non-destructive Testing personnel reviewed and approved by the competent authority.

The personnel mentioned in Subparagraph 3 of the preceding paragraph shall be competent in volumetric and surface testing methods.

#### Article 8

The applicant shall complete the application form, and attach the inspection quality assurance program, inspection procedures, the proof of Authorized Nuclear Inspector qualifications and related evidence of training, and submit them to the competent authority for certification. A certificate will be issued when the review is completed and the application is approved.

In addition to complying with the Quality Assurance Criteria of Nuclear Reactor Facilities or other nuclear quality assurance requirements approved by the competent authority, the aforementioned inspection quality assurance program shall specify the following items and include relevant supporting documents:

1. Purpose(s) and the applicable rules.
2. Organization and hierarchy, duty and responsibility, and personnel qualifications and positions held.
3. Inspection procedures, personnel training and documents management and access control.
4. Management of inspection personnel.
5. Independence of inspection operation and reinforcement for recusal of conflicts of interest.
6. Control and management on nonconforming items.
7. Document control, quality assurance program and related operational procedures.
8. Miscellaneous items.

The certificate referred to in Paragraph 1 of Article 8 shall be valid for 3 years. Within 3 to 6 months prior to its expiration, the Authorized Inspection Agency may file out the application form and attach the documents specified in the preceding paragraph, records of inspection performance and personnel on-the-job training, and submit them to the competent authority for renewing the certificate.

The scope and content of the on-the-job training courses mentioned above shall include at least the professional and technical areas specified in Subparagraphs 4 through 7 of Article 11 and Subparagraph 2 and 3 of Article 12. The total time of the on-the-job training every 3 years shall exceed half of the hours set in respective subparagraphs.

#### Article 9

The rights and duties of the Authorized Inspection Agency for the nuclear

reactor facilities are as follows:

1. Accept commission from the licensee, and comply with this Regulations to engage Authorized Nuclear Inspector Supervisor(s) and Authorized Nuclear Inspector(s) to carry out inspection activities.
2. Establish inspection activities procedures, quality assurance program and perform inspection personnel management.

#### Article 10

The Authorized Nuclear Inspector Supervisor for the nuclear reactor facilities during the construction phase or operation phase shall have the following qualifications:

1. Bearing the Level III non-destructive testing qualification reviewed and approved by the competent authority.
2. At least one year experience as an Authorized Nuclear Inspector for the nuclear reactor facilities under construction or as an Authorized Nuclear In-service Inspector for the nuclear reactor facilities in operation.
3. Bearing at least 5 years of experience in nuclear related quality assurance work.

#### Article 11

The Authorized Nuclear Inspector for the nuclear reactor facilities during the construction phase shall have the following qualifications:

1. A graduate of the 2-year or 4-year accredited university or college with a major in engineering or science.
2. Bearing the Level II or higher non-destructive testing qualification reviewed and approved by the competent authority.
3. Bearing the certificate of radiation protection personnel training approved by the competent authority.
4. Completion of at least 60 hours of training in nuclear reactor facilities systems.
5. Completion of at least 30 hours of training in welding technique and at least 30 hours of training in quality assurance.
6. Completion of a total of at least 60 hours of training in code requirements for nuclear reactor facilities related design, construction, installation, examination, testing, etc.
7. Completion of a total of at least 100 hours of training in code requirements for nuclear reactor facility related material, examination, welding, testing during operation phase, etc.
8. Completion of at least one-year on-the-job training in nuclear reactor facilities construction phase inspection work, or at least one-year experience in power boiler or pressure vessel related design, fabrication, installation, examination and testing work.

#### Article 12

The Authorized Nuclear Inspector for the nuclear reactor facilities during the operation phase shall have the following qualifications:

1. The qualifications of Subparagraphs 1 through 4 of Article 11.
2. Completion of a total of at least 60 hours of training in code requirements for operation phase related examination and testing.
3. Completion of a total of at least 100 hours of training in code

requirements for nuclear reactor facilities related design, construction, installation, examination, testing, welding, etc.

4. Completion of at least one-year on-the-job training in operation phase examination and testing inspection work, or at least one year experience in related nuclear reactor design, installation, welding, examination or testing work.

The training specified in Subparagraphs 4 through 7 of Article 11 and Subparagraphs 2 and 3 of the preceding paragraph shall consist of professional training courses organized, commissioned, or recognized by the competent authority or other domestic government agencies. These courses shall be conducted by instructors possessing the qualifications set forth in Article 7 or equivalent, and certificates of completion shall be issued to trainees upon course completion.

#### Article 13

The Authorized Inspection Agency shall report to the competent authority within 15 days of its personnel change involving Authorized Nuclear Inspector Supervisor(s) and/or Authorized Nuclear Inspector(s).

The Authorized Inspection Agency shall submit the work report for the preceding quarter to the competent authority for reference before the 10th day of January, April, July, and October each year.

#### Article 14

The formats of the application forms and accreditation certificate set forth in this Regulations shall be prescribed by the competent authority.

#### Article 15

This Regulations shall be put into practice from the date of promulgation.