



Republic of the Philippines
Department of Science and Technology

PHILIPPINE NUCLEAR RESEARCH INSTITUTE



24 February 2022

PNRI INFORMATION NOTICE 2022-01

REVISED REGULATION: CPR PART 11, "LICENSES FOR INDUSTRIAL RADIOGRAPHY AND RADIATION SAFETY REQUIREMENTS FOR RADIOGRAPHIC OPERATIONS"

ADDRESSEES

All PNRI radioactive material license holders in the practice of industrial radiography.

PURPOSE

This Information Notice is issued to inform all PNRI licensees of the publication of the revised CPR Part 11, "Licenses for Industrial Radiography and Radiation Safety Requirements for Radiographic Operations, Rev.3" in the Official Gazette Volume 117, No. 49 on December 6, 2021.

DISCUSSION

The practice of industrial radiography in the country has increased dramatically. Industrial radiography work poses a minimal risk if performed in a safe manner. However, experience shows that incidents involving industrial radiography sources have sometimes resulted in high doses to workers, causing severe health consequences such as radiation burns and, in a few cases, death. Members of the public have also suffered radiation overexposures when radioactive sources used for industrial radiography were not properly controlled or regulated. Contamination of people and the environment has also resulted from incidents involving corroded or damaged sources. Industrial radiography work, by its nature, is often carried out under difficult working conditions, such as in confined spaces or extreme hot environment condition. Working under such adverse conditions might result in operational situations in which the principle of keeping doses as low as reasonably achievable is challenged. All of these aspects demonstrate the necessity for senior management to promote a safety culture within their organizations to ensure that safety comes first. This revision provides for ensuring radiation safety in industrial radiography used for purposes of non-destructive testing.

The revision of the CPR Part 11 was initiated to address the issues and concerns previously discussed, and to incorporate new developments and current international best practices in the field of industrial radiography. In 2011, the International Atomic Energy Agency (IAEA) has published the Specific Safety Guide No. SSG-11 – Radiation Safety in Industrial Radiography aimed at providing guidance to ensure that the number of people exposed to radiation and their doses are kept as low as reasonably achievable, and to prevent incidents or to mitigate their consequences. A comparative matrix was prepared to compare the provisions of the 2009 version of CPR 11 and SSG-11 and it was observed that there have been significant discrepancies changes in the administrative and safety requirements that lead to the revision of CPR Part 11. In addition, feedback from the PNRI evaluators and inspectors on the recent developments and practices in the field of industrial radiography was taken into consideration in the revision of CPR Part 11.

The major changes in the revised CPR Part 11 are the following:

1. The following sections were modified accordingly:

Section 1. Purpose and Scope – cites the legal basis on the authority of the PNRI to establish regulation. It also provides the safety objective of providing protection for the health and safety of the workers, the general public and the environment.

Section 2. Definition of Terms - some terms are added and deleted.

Added terms:

- **“Carrier”**
- **“Client”**
- **“Depleted Uranium (DU) Shielding**
- **“Export”**
- **“Management System”**
- **“Worker”**

Deleted terms:

- **“Qualified Radiographer”**
- **“S-tube”**

Section 8. Issuance of license – text on paragraph (e) was added to provide the designation of a Security Manager, who shall consent and agree in writing, and shall ensure the effective implementation of the source security programs in accordance with approved procedures and the regulatory requirements. The disposal plan for radiographic exposure devices containing depleted uranium (DU) shielding was also added in paragraph (r).

Section 18. Radiation Safety Program – Modified to reflect the changes in the radiation safety procedures and measures including the integration of the licensee RPSP into the management system.

Section 22. Operating and Emergency Procedures – Additional text to reflect the inclusion of the telephone numbers of the RPO, ARPO and other key personnel responsible in the event of an emergency.

Section 24. Import and Export of Radioactive Sources – To require the licensee to apply for an authorization intending to import and/or export Category 2 radioactive sources.

2. The following new sections were added to be consistent with other CPRs and to reflect the new requirements as specified in IAEA Specific Safety Guide No. SSG-11 – Radiation Safety in Industrial Radiography:

Section 5. Applicability of other Regulations and Requirements, and Resolution of Conflicts – This was extracted from the new CPRs to provide for the applicability of other regulations, other applicable national and local laws and regulations to be complied aside from the specific requirements of CPR Part 11.

Section 16. Management System – This was added to ensure that the licensee develop, implement, and continually improve a management system that defines the responsibilities of all relevant persons and details the requirements for the organization, personnel, equipment, and recordkeeping, as applicable. The management system shall incorporate procedures for routine internal inspections and audits, as appropriate.

Section 19. Radiation Safety Committee – This was added to ensure that the licensee establish a Radiation Safety Committee (RSC) that oversees the implementation of the Radiation Safety Program. This also provides the composition of the committee including their duties and responsibilities.

Section 21. Duties and Responsibilities of RPO and ARPO – this was extracted from Section 18 of the previous CPR 11 with additional text as stated in paragraphs (a) and (b) to ensure that radiation safety activities are being performed in accordance with approved procedures and regulatory requirements in the daily operation of the licensee's program, and to conduct an inspection program of the job performance of each radiographer and radiographer's assistant to ensure that PNRI regulations, license condition, and the applicant's operating and emergency procedures are followed.

Section 29. Replacement of Radioactive Sources – This was added to ensure that the replacement of any radioactive source contained in a radiographic exposure device is being performed only by persons specifically authorized to do so by PNRI, and proper precautionary measures is being observed.

Section 32. Transport of Radioactive Source Contained in a Radiographic Exposure Device and/or Source Changer – This was added to be in compliance with the provisions of CPR Part 4, CPR Part 27 and the rules and regulations of other government agencies that govern the means of transport when transporting any radioactive source contained in a radiographic exposure device and/or source changer outside of the confines of the facility or other authorized location, or deliver or cause the delivery of any radioactive source contained in a radiographic exposure device and/or source changer to a carrier.

Section 35. Security Requirements – This was added to reflect the requirements of the revised CPR Part 26, “Security of Radioactive Sources”, for Security Level B/Source Category 2 radioactive sources, including the responsibilities of the Security Manager.

Section 36. Training on Security of Radioactive Sources – This was added to provide for the training requirement on security of radioactive sources for workers to handle radioactive source contained in radiographic exposure devices.

Section 40. Personnel Monitoring and Alarm Ratemeter – text added paragraph (f)(3) which set to give an alarm signal at a preset accumulated dose of 2 mSv.

Section 45. Management of Disused Sealed Radioactive Sources – This was extracted from Sec. 39 of the previous CPR Part 11 to provide for the options on how the licensee manage or dispose their disused sources.

Section 46. Transfer of Disused Sealed Radioactive Source – This was added to provide the licensee an option to transfer disused sources to another licensee authorized by PNRI to receive the source for another purpose given its current activity level, and the conditions for such transfer.

Section 48. Inventory of Radioactive Sources and Radiographic Exposure Devices – This was added to provide for the requirement for the quarterly inventory of radioactive sources and of devices containing depleted uranium (DU) shielding as well as record keeping requirement.

3. New Chapter on **Training and Experience Requirements** under **Chapter VI**, which was under Section 18 of the previous CPR 11. This covers the following sections:

Section 41. Qualification and Training of RPO and ARPO – This was extracted from Sec. 18 of the previous CPR Part 11.

Section 42. Training and Experience of Radiographer and Radiographer's Assistant – This was extracted from Sec. 19 of the previous CPR Part 11.

The development of the CPR Part 11 underwent a thorough review process through series of consultations, discussions, and regulatory conference prior to its approval. The CPR Part 11, Rev. 3” was published in the Official Gazette Vol. 117 No. 49 on 6 December 2021 and took effect fifteen (15) days thereafter. The provisions of this order are applicable to all addressees.

The electronic copy of the latest CPR Part 11 is now available and can be downloaded from the PNRI website through this link:

(<https://www.pnri.dost.gov.ph/index.php/nuclear-safety-and-regulations/regulations>)

REQUIRED LICENSEE RESPONSE

The licensee is expected to review the revised regulation and to make necessary revisions in its radiation protection and safety program, as appropriate and applicable, to reflect the changes and additional requirements necessary for compliance.

CONTACT

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APPROVED



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Date: 1 March 2022