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A Glance on the Safety Culture in Industrial Gamma Radiography in the Philippines: Regulatory Body Perspective

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Synopsis

The current and latest version of the Code of PNRI Regulations (CPR) Part 11 was published in the Official Gazette on 2010 [1]. It is just a year ahead of the publication of the International Atomic Energy Agency (IAEA) Specific Safety Guide No. 11 [2]. In view of these, radiation safety culture in the practice of industrial gamma radiography was not yet fully introduced in the said national regulations in the country. However, it should not be a reflection that the radiation workers in the country specifically in the said field of practice do not exercise positive safety culture. The Nuclear Regulatory Division (NRD) -regulatory arm, although not yet separated from the Philippine Nuclear Research Institute (PNRI) as mandated by law - the promotional organization, has a well established and systemic regulatory infrastructure. It is attested by several studies and reports [3, 4, 5], among others.

This study aims to assess the status of the existing safety culture in the conduct of industrial gamma radiography in the country thru personnel perception survey of the radiation workers themselves, i.e., managers, radiation safety officers, radiographers and radiographer's assistants, based on the IAEA five characteristics of safety culture stipulated in the IAEA Safety Guide No. GS-G-3.5, The Management System for Nuclear Installations [6]. It is assessed by the NRD of the PNRI. Also, the study determines the existence of safety culture as to the perspective of NRD through observations on the conduct of radiographic operations and walk-through of the facility while using the three-level Schein Model, i.e., "artefacts", "espoused values" and "basic assumptions" and document reviews, among other [7].

The methodology of the study used was mainly based on the IAEA approaches discussed in the draft of the soon to be published Safety Report Series, entitled "Performing Safety Culture Self-Assessments for Facilities and Activities"[8]. The data gathering tools and technique suggested in the said reference and such other in [9,10], were applied as the following:

- a. Conduct of survey using the Safety Culture Perception Questionnaire (SCPQ) survey questionnaire developed by the IAEA;
- b. Review of documents, i.e., regulatory inspection reports and submitted licensing requirements, were consolidated to come up with an acceptable data for analysis and reliable results within a short period of study; and
- c. Walk-through of the facility and observation during the conduct of radiographic operations with guided interview.

This study intends to have a better understanding of the current practices and implementation of the above-mentioned field specifics and come up with broader reflections from this. This study seeks: (Objectives of the Study)

1. To establish the updated profile of the licensees in industrial gamma radiography, based on [11];
2. To determine the status of existing safety culture in the conduct of industrial gamma radiography thru the

conduct of perception survey among radiography personnel themselves in accordance with the IAEA safety culture five characteristics and attributes based on IAEA GS-G-3.5, The Management System for Facilities and Activities;

3. To determine the safety culture in industrial gamma radiography as perceived by the NRD in accordance with the three-level model, i.e., “artefacts”, “espoused values” and “basic assumptions” manifested in the semi-structured (guided) interview and observation of the management, and radiation workers and document review of regulatory inspection reports and submitted licensing requirements.

The significance of this report is to serve as a pilot study on assessment of safety culture not only in industrial radiography but in other radiation facilities and activities, eventually to the Regulatory Body, in compliance with the IAEA safety requirements. The data and results of the survey will serve as a baseline data for a future impact evaluation study. However, due to the limitations of this study, an equally the same and more comprehensive future study needs to be conducted by a properly well-trained team, with better preparations and timeframe, and to fully cover the required respondents using the complete methodology as proposed by the IAEA.

References:

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Country or International Agency

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