

QUALITE ASSURANCE APPLIED TO RADIOLOGICAL PROTECTION

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ABSTRACT

Quality Assurance is required for most industrial activities. In France, a by-law was passed concerning Quality Assurance for Safety of Nuclear Facilities (Code of Practice 50-C-QA of IAEA). What are the advantages of introducing these rules in Health Physics ?

Of the three fundamental recommendations given by the ICRP (Publication 26), Quality can bring effective help to the optimisation of exposure (ALARA) and to the control of exposure limits. It leads to an extensive analysis of the activity concerned, and of the different working positions and conditions in Health Physics. A great deal of exposure can be avoided or minimised, cheaply, if work conditions were considered in more detail. Optimisation can then be reached, at the same time improving workers' security. A list of important elements for Health Physics can be set up, and so optimise technical and human means, thanks to a risk "hierarchisation".

Applied to Health Physics, Quality could be considered in the following way : census and quantification of risks, study of the "cost-advantage" of the different measures it is possible to undertake, study of each working position and optimisation. Of course, Quality can also be applied in a more classical way to all that concerns measuring devices, protection equipment, formation of personnel, projects, etc.

The existence of written documents would allow for a perfect continuity in Radiation Protection, and a good transmission of knowledge. It would ensure a rigorous control of statutory laws and audits would guarantee Quality, which could only improve the protection of workers. The introduction of Quality would fundamentally change the work of Health Physicists. There is no reason why Health Physics should not benefit by modern analysis techniques and Quality Assurance.

Existing rules have incited us to develop essential steps for Quality Assurance practices to be applied to Radiation Protection. In utilizing the safety guideline 50-SG-QA2 of the IAEA, an example can be shown by bringing out a records system. We are therefore studying the development of a new way to approach and solve Health Physics problems.