



# Argentine regulatory experience on the implementation of specific standards in the use of radioactive material in industrial applications



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## 1. Introduction

Since AR 7.9.2 "Operation of Radiation Sources for Industrial Applications" and AR 7.11.2 "Individual Permit for Operation of Radiation Sources for Industrial Applications" Standards came into force in 2006 it became feasible to increase and standardize the measures and control mechanisms used with regulatory purpose in these kind of applications of ionizing radiation.

## 2. Objectives

Since their publication and implementation the entities responsible for radiological safety have been required to include specific improvements within the facilities, the implementation of procedures and criteria in all radiological practices so as to keep high radiological and physical safety levels associated to the use of radioactive sources.

## 3. Methods

Administrative and technical requirements according to AR 7.9.2 Standard were implemented in order to establish the regulatory requisites that should be met to authorize the use of radioactive material in industrial facilities.



The implementation of these requirement introduced actions which together increased the quality of the regulatory control mechanism.

At the same time, specific criteria were developed for Radiation Safety Officers (RSO) in AR 7.11.2 Standard "Individual Permit for Operation of Radiation Sources for Industrial Applications". Some of them are:

- To be over age.
- To be a graduate from secondary school.
- To pass a specific course authorized by NRA.
- To prove additional instruction and training in those cases required.
- To attend an upgrade course in the case of renewal of the permit.
- Importers and exporters must attend a course on radiation safety.



## 4. Results

Among the improvements achieved due to the implementation of these Standards, we find the following:

### AR 7.9.2. Standard

- More than 600 radioactive sources in disused were disposed of.
- Specific radiological safety measures for industrial applications were set into practice.
- All radioactive material store areas have been refitted.
- Specific procedures to maintain and repair have been developed and implemented.
- Procedures for Radiological emergencies situations were developed and implemented.
- All facilities have at least one radiation monitor and they have to verify radiation levels at working areas.
- More requirements for implementing and maintaining security measures of radioactive sources.

### AR 7.11.2. Standard

- Greater instruction and training on the RSO part by curricula supervised and approved by the NRA.
- Equalization of knowledge for RSO who got their permits in the past regarding the education and training required at present.
- Upgrade of radiological safety and security criteria of radioactive material used in industrial applications.

## 5. Conclusions

- ✓ The implementation of both Standards brought in huge benefit for the regulatory control of radioactive material in industrial applications. Moreover, it resulted in a substantial improvement to maintain a high level of radiological safety and security of radioactive sources.
- ✓ These improvements also had a positive impact in audit mechanisms and in the evaluation and subsequent licensing, all related to this application of radioactive material.
- ✓ The development and applications of these NRA Standards contribute to increase the radiological safety and to promote safety culture in industrial applications.