

## Experiences from continuous improvement of nuclear security at CEADEN

The Centre of Technological Applications and Nuclear Development (CEADEN) is an organization of investigation, development and innovations destined to generate and diffuse knowledge; as well as, develop and market products and competitive services starting from the science and the nuclear technique, laser, optic and related. Inaugurated on October 28 of 1987 with the presence of the Mr. Hans Blix, then General Director of the International Organism of Atomic Energy (OIEA), it has been from their beginnings an installation leader of the application of the nuclear technologies in Cuba, also, regional reference for the nuclear equipment.

Between their principals radioactive installations highlight two facilities of investigation and several analytic techniques and of rehearsals not destructive. It provides besides a department of nuclear equipment. In order to materialize the objectives of investigation, development and technological innovation, it has an inventory of radioactive sources that include all the categories risk.

In the frame of the Plan composed of support at the physical nuclear security in Cuba (INSSP), the CEADEN has benefitted from the execution of a combined project with the OIEA in order to reinforce their system of physical protection. During the years 2014- 2015 were installed systems of detection and observation for CCTV circuit, established a local station of alarms and installed other systems of protection reinforced with technique- engineering.

Among the challenges outlined is the continuous improvement of the security system and physical protection of radioactive materials implemented, so we are developing a training plan for the Department of Surveillance and Protection of the institution. This training has been divided into 3 stages

- Stage 1 Relationship of Radiological Protection concepts with Security
- Stage 2 Security application,
- Stage 3 Discussion of a case
- Stage 4 Table exercise.

Parallel to this challenge specialists of the instrumentation department are immersed in the design construction and implementation of the instrumentation of a monitoring system in real time (radiological surveillance) to interconnect it to the physical security system that was installed in the centre through the project together with the IAEA. This system will send the measurements to the Radiological Protection Officer of the entity and to the national alarm monitoring centre.

The commitment with the technological securities and physics come implemented since the high management until the base, for the one which the development of seminars of qualify and the permanent surveillance of the execution of the administrative procedures has played an important role.

The CEADEN provides has professional credited in the specialization of administration of the physical security of radioactive sources, in the completion of the basic module and Certified Nuclear Security Physician (CNSP) of the Academy of the World Institute of Nuclear Security (WINS).

The present work summarizes the introduction of good practices recommended internationally; as well as, the combined work of the entity user with the Competent Authority for the physical security, the Regulating Nuclear Center and the OIEA.

### Gender

Female

### State

Cuba

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