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Upgrading of Cobalt 60 in Temporary Pool for Dry Storage Irradiation Facility SIBO INRA/Tangier Morocco

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In any irradiation facility, upgrading of ^{60}Co activity is one of the most important maintenance operations, which should be done periodically to maintain the dose rate in the irradiation process given the decay of ^{60}Co . In general there are two kinds of irradiator with either wet storage or dry storage of ^{60}Co in the facility.

For wet storage facilities, the ^{60}Co upgrade receives the cobalt in a supplier provided shipping container and the source is transferred into the pool of the facility to the source rake of the irradiators.

For dry storage, cobalt upgrade is done at the supplier facility by shipping the entire cobalt irradiation container, which serves also as transport container, back to the supplier to upgrade the source ^{60}Co .

The Station d'ionisation de Boukhalef (SIBO), is a panoramic irradiator with dry storage of ^{60}Co in a container which is also used as the transport container in the first loading. We have been faced with a problem of the container transport and we need to find a solution to upgrade the ^{60}Co . Our proposed solution is to bring cobalt in a supplier container and transferring the new sources to our facility container using a temporary pool fabricated in the facility.

The objective of this paper is to show a case study experience. This operation has been considered as a success story by the IAEA and opened this solution method for similar irradiators in other countries which have the same problem. Its execution was a real application of the nuclear security system installed in the facility and during the transport of ^{60}Co .

Country/Organization invited to participate

Morocco

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