

STUDY CASE N° 15: RADIOGRAPHY INCIDENT IN SPAIN

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□ Description and radiological consequences of the incident

On the 28th April, 2004 the Spanish Regulatory Authority (CSN) was notified of an event resulting in the overexposure of two radiographers because they were working near to radioactive source while it was in unsafe position. There were no personnel dosimetry records but estimated doses were 158 mSv and 79 mSv. The device involved in the event was a Technical Operations, model TO-660 serial number 653, with a 19.79 Ci (733 GBq) iridium-192 source.

The incident took place because the operator failed to follow the required operational procedures on radiation protection for mobile gammagraphy activities. This produced the following deviations:

- The operator did not receive from his supervisor a prior assessment of the work to be carried out describing the associated risks and specific requirements on radiological protection, including the need to optimising doses. Such prior assessments have been required by law in Spain since 2001.
- The operator worked all the time without a radiation monitor, so it was not possible for him to know whether the radioactive source was in a safe or unsafe position.
- Both the operator and the assistant were not wearing an individual dosimeter, so it was not possible to determine the doses received.

□ Lessons learned

CSN considers that special attention is needed on the following issues, to prevent similar incidents occurring:

- 1) The radiological protection supervisor responsible for each job (mobile gammagraphy) shall prepare a prior assessment to inform the operators of the associated risks and specific radiation protection requirements to be followed.
- 2) Operators and assistants shall carry out every job in accordance with well-established operational procedures.
- 3) These operational procedures shall include provisions to prohibit starting any work until equipment for detecting and measuring radiation (radiation monitor and personal dosimeters), are fully operable.
- 4) An additional effort shall be made to improve refresher training on radiological protection for operators and assistants, in order to assure they understand and recognize the importance of carrying out the work in a safe manner, to protect not only themselves but also the general public.