



## Loss of Control of a High Activity Well Logging Source – the Lessons Learned

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### Incident

- Well logging operations using radioactive sources (60 GBq  $^{137}\text{Cs}$  & 590 GBq  $^{241}\text{Am/Be}$ ) was being carried out on a UK offshore drilling rig. ( $^{137}\text{Cs}$  contact dose rate 30 Sv/h)
- High activity  $^{137}\text{Cs}$  source (photograph 1) was dropped onto the drill floor during transfer of the source from a shipping container to a logging tool (photograph 2).
- Source present on the drill floor for 4 to 5 hours until it was discovered and made safe.
- 13 workers potentially exposed in the area.
- Dose reconstructions estimated radiation doses to workers less than the legal dose limits (max 6.8 mSv, extremity 250 mSv).
- Extremely fortunate no worker came into close contact with the source.



Photograph 2

### Lessons learned

- Comprehensive risk assessment required to consider the risks associated with all aspects of the work activity: failure to successfully transfer a source from a shipping container to a logging tool was not considered by the duty holder and adequate control measures were not in place.
- Confirmatory checks of the source location with a radiation monitoring instrument should be fundamental elements of any safe system of work and detailed in the work instructions.
- Work instructions to be clear and concise and disseminated to workers at appropriate intervals.
- Performance audits should be adopted and routinely carried out as these are essential elements of successful health and safety management systems.



Photograph 1

- Legal proceedings were taken and the company were fined €515,000.
- Head of prosecution said: "This wholly avoidable incident could have had devastating consequences for the workers involved in the operation."

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