



British Nuclear Group

Intelligent nuclear clean-up

Sellafield's Challenge

Tracking radioactive substances, and other things

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Where we are now

- We have reduced the number of radioactive substances over the years to around 2500 now
- We have about 100 stores, all checked daily (since they're used daily)
- We have about 65 RPSs who have specific accountabilities for supervision of radioactive substances
- We have a thorough procedure that ensures we track, account for and know exactly where each source/substance is at any point in time
- We have a dedicated database, linking each substance to an RPS, an RPA and a plant manager
- We have evidence of suitable and sufficient control

How much it costs for where we are now

- To make the present system sufficiently robust has not been a cheap implementation process
- To operate the present system has a given cost, which is not small
- We believe the system's robustness is fit for purpose, given the importance of control of radioactive substances for a site like Sellafield
- To change what we do has a cost implication that is not small and therefore must be measurably justifiable, whether in terms of monetary value or functional benefit/efficiency saving

RFID System for tracking radioactive substances? (1)

- Initial reaction is “it would move control away from source”!
- Need to account for radioactive substances not just RFIDs – each tag would have to be irremovably part of the source
- Would it reliably provide at least the same level of control as we have now? The present system means we see each source (or a tamper indicating tag) in most cases every day (and less often in some justifiable instances)
- Only we need to see where each radioactive substance is – security would require that any tracking system could not be hacked/intercepted

RFID System for tracking radioactive substances? (2)

- If we could devise a control system that managed and highlighted the existence, location and daily check all by itself then there would be some considerable change in the manpower needed to check the source stores/inventories
- Whatever system is introduced it must not devalue the “barrier” that the present control arrangements provide

The Challenge

- Convince us of the monetary and functional benefits so that we can change what we do, to do it at least as robustly as we do now
- Remember that it's not only the initial capital outlay for the technology but it's the implementation and subsequent operating costs that may more significantly influence the justification to change what we do

Other Uses?

- Tracking high significance sources – security against inadvertent movements
- Aid to hand held/movable instrumentation inventory management
- Aid to any inventory system that may not already be controlled to the desired level