

Nuclear power station tank farm – inspection of large storage tank in a pit (1984)

Situation: Inspection contractors were examining a large liquid sodium storage tank (more than 10m long) which was situated below ground level in a concrete-lined pit. The nuclear power station used a lot of argon gas for process reasons, so there were narrow-bore pipes around the plant which were clearly labelled 'Ar' for Argon. The weather was quite warm, and power stations get very hot anyway.

Argon is heavier-than-air, suffocating, and has no smell.

I was duty shift manager. The plant foreman came to me to say that, when walking past the storage tank pit, he had noticed a hose rigged up from an Argon pipe which disappeared into the pit. He investigated - there were men in the pit - and he got them to come out immediately.

*The contractors had thought that 'Ar' meant 'Air'.* They were hot, so they used their initiative to set up a cooling 'air' supply. If the plant foreman (Hughie McCulloch) had not been observant, the argon would have filled the pit and the contractors would have become unconscious and died.

The contractors' work was stopped while they were 're-educated'.

Moral: External contractors working on high-hazard plant may not even begin to understand what the plant does, or what its hazards are. Hence there is a need for induction training, job risk assessments, and close supervision.