

HEALTH AND SAFETY ALERT N^o 6

EXPOSURE TO ALCALINE MATERIALS



The Incident

An incident occurred when the spoil from excavation of the Diaphragm wall works on site was loaded onto the conveyor by a loading shovel which tips the spoil into the conveyor hopper and onto the conveyor belt. On this occasion the spoil was too sticky/heavy for the gradient of the conveyor system causing the spoil to slide back down the conveyor and blocking the boot end of the conveyor belt.

This resulted in the conveyor team isolating the system and then removing the guards to enable them to clear the blockage.

The IP involved in this operation suffered a reaction to his skin on his left buttock as he sat in the spoil which he was attempting to clear. An alkaline substance within the spoil soaked through his overalls onto his skin.

The IP was first treated on site by the onsite OH nurse before going to hospital for a further check up.

Chemical analysis carried out on samples proved that the material was neither corrosive nor irritant according to WM2.

What Went Wrong

- No in-depth risk analysis of the chemical make up of the spoil mixed together from different processes.
- Muck away workforce unaware of the potential effect of alkaline substances in the spoil
- Wrong type of PPE was being used for unknown substances in excavated spoil
- Wet spoil not mixed robustly enough with dry inert materials before being loaded onto incline conveyor system.
- No risk assessment in method statement covering breakdowns or working with high pH materials.

Key Learning Points

- Improve control of addition of chemicals into the spoil
- Ensure anyone involved in spoil handling/removal process is briefed on any associated risks.
- Ensure Risk Assessment/Method Statement covers maintenance and breakdown issues.
- Eliminate the risk of exposure to all regarding levels of pH and ensure the correct PPE and control measures are in place.

