

<b>To:</b> EMT, OMT, E&CMT, H&S Advisors, S.e.H. Ltd	<b>Date:</b> 02-03-16
<b>From:</b> John Corden, Head of H&S, Southern Water	<b>Recommended circulation:</b> <u>All staff</u> (SW and Suppliers) working on SW sites

### Injury due to Release of Stored Energy



Detritor rake arm and channel



Rag removal tool



Counterbalance weight

A SW operator recently sustained a very serious injury to tip of his index finger when he was clearing rag from a Dry Weather Flow Detritor with a simple purpose made rag removal tool. The tool is a steel rod approx 1.9m long, with a curved handle (similar shape to an umbrella) and an angled pick end to drag out the rag.

Rag had become jammed between the Detritor arm and the concrete channel in which it operated. As the rag was pulled from around the arm with the tool, the arm unexpectedly dropped down a small distance, dragging the tool firmly down and trapping the operator's index finger between the curved handle and the top of the fixed handrail.

Subsequent investigation has identified that when the arm was freed of rag, the machine's integral counterbalance weight unexpectedly moved due to gravity and this directly led to the movement of the rake arm.

In this case the Detritor had been electrically isolated prior to cleaning, but this incident highlights the fact that plant may still present a hazard from **stored energy**.

#### **Recommended actions:**

- Any rag cleaning tools should have their **handles** designed so as to protect the users fingers from accidental entrapment. E.g. Not a "Umbrella Handle" shape but one that forms a complete loop or "D" shape.
- Identify and manage risk of **Stored Energy**: The risk from the uncontrolled release can take many forms, but include:
  - Uncontrolled movement of a component due to **gravity** (e.g. remove risk by ensuring a counterbalance weight is at its lowest position before cleaning or dismantling related components)
  - a sudden release of **pressure** from oil/water or air (e.g. release the pressure of ensure it is suitably locked to prevent release)
  - a uncontrolled release of a compressed **spring** (de-compress or lock to prevent accidental release)

**For more information see SW SI 206 – Isolation of Electrical and Mechanical Plant**

**ENSURE THAT THESE BULLETINS ARE CASCADED THROUGH YOUR PART OF THE ORGANISATION'S STRUCTURE AND DISPLAYED AT MANNED OPERATIONAL SITES**