

## Shared Learning

Exposure to Hazardous Substances



RANSPOWER

TOP ENERGY 6

Orion



## Hot Gas Pass Components of Gas Turbines

## What happened?

An significant risk has been identified within the gas turbine industry that affects combustion and hot gas path components.

Alloy steel containing Chromium metal may become contaminated with Hexavalent Chromium Cr(VI), a carcinogen that is yellow in colour.

The Cr (VI) is thought to occur when chromium metal components react with Calcium under high temperature conditions (over 400°C) to form yellow Cr (VI) powder. What did we learn?

Hexavalent Chromium Cr(VI) is known to cause cancer. In addition, it targets the respiratory system, kidneys, liver, skin and eyes.

A major source of worker exposure to Cr(VI) occurs during "hot work" such as welding on stainless steel and other alloy steels containing chromium metal.

If encountered then the Worker must stop and alert his or her supervisor. Any residues must be checked and appropriate risk control measures put into place prior to recommencement of work.

