

Managing welding fume risk

Issued to: **Network Rail line managers, safety professionals and RISQS registered contractors**

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Contact: The Occupational Health and Wellbeing Team



Overview

The Health and Safety Executive's Workplace Health Expert Committee endorsed the hazard reclassification of mild steel welding fume as a human carcinogen in February 2019.

This brought an enhanced duty in the Control of Substances Hazardous to Health Regulations (COSHH) to reduce exposure to as low as is reasonably practicable.

Manganese, which is present in mild steel welding fume, can cause neurological effects similar to Parkinson's disease.

There is new scientific evidence that uncontrolled exposure to all welding fume, including mild steel welding fume, can cause, in some cases, lung cancer in humans.

Evidence from several sites indicates there is not yet full compliance with required controls.

Discussion Points

- Network Rail and its contractors must control exposure to welding fume, including that from mild steel welding, to as low a level as is reasonably practicable.
 - All business units undertaking welding activities should ensure effective controls are provided and correctly used to control fume arising from welding activities. This includes welding outdoors.
- When implementing controls, we must consider:
- Preventing or reducing exposure through engineering controls.
 - Using local exhaust ventilation (LEV) to remove fumes at source.
 - Using suitable respiratory protective equipment (RPE), to protect workers from inhaling fumes where engineering controls are not possible, for example when welding outdoors.
 - Anyone entering the exclusion zone must use suitable RPE.

Next steps

- All relevant welding risk assessments must be reviewed, and updated where necessary.
- Where suitable engineering controls are not possible, a powered air-fed respirator with a minimum assigned protection factor of 20 (APF20) must be used.
- For Network Rail staff, RPE is available from the PPE catalogue. Please select RPE suitable for the task and make the correct arrangements for any additional wearer fitting.
- Network Rail staff should use the task risk control sheets which can be found at:
 - [NR/L3/MTC/RCS0216/TK61](#)
 - [NR/L3/MTC/RCS0216/TK62](#)
 - [NR/L3/MTC/RCS0216/TK64](#)
- Contractors are free to follow this guidance or demonstrate that their own controls discharge the legal obligations in COSHH.