

Why foundries ?

**Large numbers of workers (20,000 at 400 sites)
exposed to multiplicity of substances with potential
to cause long latency disease**

**Complex process with significant exposure control
challenges**

**Epidemiology studies have identified excess cancer
risk**

Visits to date



Extensive occupational hygiene surveys conducted in 7 foundries identified with CMF assistance

Exposure assessed at all stages of founding process

~ 30 substances measured using air sampling and biological monitoring, plus assessment of control strategy

Detailed feedback provided to all sites

Results - summary

Several hundred data points from each visit :

- **93 'significant' inhalation exposures (inhalable FFP, RCS, formaldehyde, benzene, respirable FFP)**
- **81 'significant' BM results (isocyanate, toluene)**

Definition of 'significant' :

- **inhalation exposure > 0.5 WEL except formaldehyde and furfuryl alcohol**
- **BM results above guidance values**

CTI data



~50,000 data points provided to HSE

Statistical analysis conducted by HSL's MSU (RR 677)

Lacks detailed contextual data (working practices, controls etc), no BM data

Provides a basis for further work

Matching on a 'like for like' with more detailed data from current LLHR visits

Job exposure matrix

Drawn up in consultation with CMF

**Identifies 20 foundry types and 8 binder systems –
160 permutations**

**Visits (completed and proposed) target areas of
highest risk – 15 foundry types**

Exposure controls

Deficiencies in LEV systems and RPE use at all sites

**Dutyholders responsive to recommendations –
improvements already made and more in progress**

**Opportunity for substitution to remove exposures of
highest risk – involvement with the industry chemical
supply chain**

Medical aspects



Investigate link between exposure and symptoms/early markers of disease

Longitudinal study of several hundred foundry workers

Use to predict future disease and effectiveness of interventions

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