

Natural Resources Wales
Chester Road
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04th May 2016

Dear Matthew Kelk

The Environmental Permitting (England and Wales) Regulations 2010
Permit Reference: YP3732LZ (BM4848/DP3338MY)
Condition 4.1.5- Fugitive Emissions

Introduction

Condition 4.1.5 of this Environmental Permit requires an annual review of fugitive emissions covering the releases and measures taken to reduce them.

Measurements

Measurements were undertaken in the operator working areas around the Lead melting pot and extruder to determine the workplace exposure to Lead and the VOC from the bituminous coating applied to the Lead and to confirm the effectiveness of the control measures.

Lead Concentrations

Environmental Essentials (UK) Ltd were commissioned by Prysmian Cables and Systems Ltd to undertake a Workplace Air Monitoring survey relating to specified processes and/or activities carried out in the Wrexham facility. The survey was undertaken on 4th November 2015 to determine concentrations by personal and static monitoring for Lead and Total Inhalable Dust.

Total inhalable dust

Samples for total inhalable dust were collected by drawing air at 2 litres/minute through a pre-weighed GFA filter paper, housed in a SKC total inhalable dust-sampling head. The sampling head was connected to a sampling pump with appropriate tubing. For personal monitoring, the sampling head was mounted in the worker's breathing zone, e.g. on his/her lapel. Following exposure the filters were re-weighed. The concentration was then calculated from the difference in weight gain of the filter papers and the sample volume data.

Lead and inorganic compounds of lead in air

Samples for lead were collected by drawing air at 2 litre/minute through a cellulose ester filter housed in a seven-hole SKC total inhalable dust sampling head. Where monitoring was carried out to assess personal exposure, the sampling head was positioned in the breathing zone of the operator. The total running time of the pump was recorded. Following monitoring the filters were analysed by atomic absorption spectroscopy (AAS) to determine the concentration of lead. The airborne concentration of lead was then calculated using AAS and sample volume data.

The filters were analysed by Environmental Essentials UK Ltd, Staffordshire, for fugitive Lead emissions. Samples were taken as a personal sample and at the machine control panel.

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The reported results show that the Lead concentration of both the personal exposure monitor and the control panel monitor were between 1.5% and 2.5% of the WEL. These results are consistent with the previous annual report of approximately 2% of the WEL. Thus the data shows the continued effectiveness of the LEV system in maintaining a safe working environment.

The LEV system is monitored and maintained by a number of checks and inspections:

Monthly First Line Maintenance checks by our production department, quarterly H&S inspections and an annual check by external contractors. Any actions found necessary were under the control of our maintenance department.

To reduce exposure, RPE breathing apparatus is provided for use by the operators when the dressing off operation is performed.

To ensure the control measures continue to provide adequate personal protection for the operators; surveillance testing of the blood Lead levels of a sample of operators is determined periodically, at a frequency governed by the actual results obtained. This was repeated in 2014 and the highest recorded result was 10ug per 100ml. This result is well within the accepted occupational health maximum of 50ug per 100 ml. Occupational health monitoring will still continue with results noted as being well within stated parameters.

Hydrocarbons

The Hydrocarbon containing materials used in the installation is Bituminous Black paint (PF4) being a mixture of Bitumen and white spirit. The Bitumen and white spirit mix is used to provide a thin coating to the extruded Lead cable sheath. The result of the last monitoring test carried out 29th January 2016 at a point within 0.5m from the bituminous paint applicator gave a zero detection at an ambient temperature of 20°C. The test was carried out with a Drager pump fitted with 10 – 300 ppm tubes for the detection of petroleum hydrocarbons.

Conclusions

As the exposure to Lead remained a small percentage of the WEL Time Weighted Average and the exposure to hydrocarbons was not detectable at a lower limit of 10 ppm, no further improvements to the materials we use, the methods of extraction of the LEV system or the maintenance systems are currently necessary.

Yours faithfully

A handwritten signature in black ink, appearing to read 'D. Forsyth'.

Derick Forsyth

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