ORR occupational health programme update

October 2012

OFFICE OF RAIL REGULATION

Introduction

This quarterly brief aims to bring you up-to-date on progress with some of the work under the ORR Occupational Health programme 2010-14, to help inform discussions on health at routine liaison meetings with ORR inspectors. We have identified key messages for rail duty holders and would welcome feedback.

This issue focuses on:

- **Diesel engine exhaust emissions – guidance on what rail employers need to do**
- **Selecting the right respiratory protective equipment for the job – free on-line tool to help rail businesses**
- **ORR health programme news – 7 November ORR occupational health seminar, new stress good practice case study, and new ORR stress web pages**

1. Diesel engine exhaust emissions (DEEE) – need for active precautionary approach

Diesel engines are in widespread use in the railway industry, with potential for fume levels to build up in stations, depots, and worksites in tunnels when diesel engines are left running.

In June 2012, the World Health Organisation International Agency on Research for Cancer (IARC) classified DEEE as carcinogenic to humans (group1,) based on sufficient evidence that exposure is associated with an increased risk of lung cancer. DEEE had previously been classified by IARC as a group 2A probable human carcinogen.

HSE has advised that this re-classification does not trigger the specific requirements for control of carcinogens under the COSHH Regulations and Appendix 1 to the COSHH ACOP on control of carcinogenic substances. However, employers do need to consider the up-to-date evidence in assessing the risk from DEEE, and should be able to demonstrate a robust precautionary approach to controlling DEEE exposures.

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A precautionary policy means ensuring that DEEE exposure is prevented or adequately controlled by strictly applying the COSHH hierarchy of control, with proper consideration given to prevention.

In practice, rail employers will need to consider a range of measures. In the short term these should include systems of work, engineering controls, and training and supervision. In the medium term, use of 'fuel saving' train management software to reduce the use of engines when stationary; 'green' diesel such as Ultra Low Sulphur Diesel (ULSD); and 'shore supplies' to eliminate load on engines running a train management system (TMS) where design permits, may be reasonably practicable. In the longer term, proper consideration should be given to plans for design, supply and procurement of diesel traction which meets latest emission standards, or progressive replacement by electric trains (where infrastructure configuration permits).

Implementing a programme of proper engine maintenance and management will be a key control for train operators. This will involve actively enforcing minimum idling times and unnecessary revving of engines at stations and in depot testing. Consideration should also be given to 'country end only' running at terminus stations and/or single (cylinder) bank running; and in depots, running engines for the shortest period to allow the fault/repair in question to be dealt with, and use of 'shore supplies' to reduce load on engines.

In locations where DEEE fume is not easily or quickly cleared, consideration should be given to fitting exhaust removal systems to stationary trains (especially in depots), or organisational arrangements to ensure trains stop with engine exhausts within the effective swept area of a fixed local exhaust ventilation system (particularly relevant at stations). For maintenance or renewals work in tunnels, air tools supplied from a compressor sited outside the tunnel should be used in substitution for diesel-driven equipment where reasonably practicable. Diesel generators should, where possible, be sited downwind of work groups or outside short tunnel sections. Where diesel locomotives cannot be sited outside the tunnel, active consideration should be given to uncoupling them from equipment and wagons once these have been hauled into position, or shutting off engines while the locomotive remains in the tunnel.

Organisational controls including job rotation to reduce exposure; and provision of adequate information, instruction and training to staff will also be needed. In some cases, for example at stations, rail duty holders will need to work together to agree a joint solution as required under Regulation 11 of the Management of Health and Safety at Work Regulations 1999.

There is helpful practical guidance both on assessing and controlling exposures to DEEE in HSE guidance HSG137 Control of DEEE in the workplace.

Key messages:

- **Does your COSHH assessment for DEEE exposure reflect the weight of current evidence on health risk?**
- **Can you demonstrate a precautionary approach to control that considers all the elements of the COSHH control hierarchy? Has active consideration been given to prevention and substitution, including for example use of ULSD, fuel saving TMS, and shore supplies? Does your equipment procurement policy recognise and support the reduction of DEEE exposures?**
- **Are systems of work to minimise DEEE exposures clearly defined and complied with? How do you monitor and enforce effective idling time policies at stations and depots? Do method statements for maintenance and engineering working in tunnels specify the control measures required to minimise exposures to DEEE?**

- **Do your front line managers and supervisors know what you expect from them in terms of managing DEEE exposures?**
- **Are adequate arrangements in place to train relevant staff in the risk and control measures needed in specific jobs involving significant DEEE exposures, and to share relevant information with others working on your premises/infrastructure?**

2. Selecting the right respiratory equipment (RPE) for the job – free online RPE Selector Tool

Use of RPE as a short term measure may be necessary to adequately control exposures to a range of hazardous substances in railway operations, particularly in rail construction, renewals, and maintenance, but also in depot work and in heritage. COSHH requires that RPE should only be used as the last resort after you have taken other reasonable steps to control the exposure, including technical and engineering controls.

Selecting the right type of RPE is critical to ensuring that workers are adequately protected, but should also help rail employers to avoid unnecessary costs incurred by choosing inappropriate equipment. HSE has worked with NHS Scotland and Healthy Working Lives to develop a free on-line RPE Selector Tool. By answering a few questions about the work area, the hazardous substance, and the task for which RPE is needed, the Selector Tool will help you to find the right RPE for your workers.

The Selector Tool considers a range of task related factors directly relevant in railway settings, including the need for safety critical communication, and the risks from process by-products such as dust and fumes (relevant for example to silica in ballast dust, dust and fume from paint spraying, rail grinding and welding). It recommends an assigned protection factor (APF) and filter type and/or class of RPE suitable for wearers that have passed face fit testing and also those that have not, for example due to facial hair. Reports, with illustrations of suitable RPE designs, can be printed and downloaded to be used in employee briefings/tool box talks.

The RPE selector tool is consistent with HSE guidance HSG53 Respiratory protective equipment at work – A practical guide, which contains further detail on selection and use of RPE.

ORR has found examples of poor practice in RPE selection and use, including use of FFP2 respirators in track renewals work involving potential for significant exposures to silica in ballast dust, and also in manual train under-frame cleaning. A proper assessment of the jobs indicated that RPE with a FFP3 filter was required. We have also found cases of individuals wearing tight fitting RPE that did not fit correctly, mainly because of other protective equipment such as glasses, and facial hair breaking the seal, and formal enforcement action has been taken.

Key messages:

- **Do you have a reliable method for selecting the appropriate level of protection and design of RPE for the task and the wearer? Do your managers and supervisors understand the range of factors to be considered in ensuring that the RPE provided is suitable? The free HSE RPE selector tool and/or HSG53 should be able to help.**
- **Do you place over- reliance on employee 'common sense' to use RPE correctly? Have all workers wearing tight fitting respirators been face fit tested, and do they understand the importance of maintaining a good face piece seal, including the importance of being clean shaven? How often do managers and supervisors check**

that the RPE in use is suitable for the task and is being worn properly, with particular attention to face fit?

- **Are there arrangements are in place to ensure that RPE is properly maintained; that essential spare parts are readily available; and that they are stored in a clean place, including for those workers with mobile work sites, such as track workers?**

3. ORR Health Programme News - ORR health seminar and new guidance on stress

ORR is looking forward to welcoming the rail industry to a free seminar next month focusing on the financial case for better occupational health management. Over 100 representatives from across all parts of the industry have been invited to the seminar on 7 November at our London office – 1 Kemble St, London WC2B 4AN. The day will explore how rail companies can invest in order to save on health, with varied contributions from within and outside the rail sector. If you would like more information on who within your organisation has been invited, or on the agenda for the day, please email or call 0207 282 3867.

The 7 November occupational health seminar coincides with National Stress Awareness Day (NSAD) 2012, and includes a presentation on good practice in managing post incident stress by Arriva Trains Wales (ATW). More detail on ATW's work on stress, as well as 14 other good practice case studies across a range of health topics can be found on our Managing workers health – good practice web page.

In support of NSAD, ORR has also updated and extended our web pages on stress. We set out ORR's strategy on work related stress for 2011-14, and provide guidance on the role of managers, employees, and HR professionals in preventing stress. We highlight the importance of managers developing the positive skills and behaviours to prevent stress among their staff, and the help available via the free on-line stress management tool developed by HSE, the CIPD, and Investors in People, in support of the Management Standards approach.

Key messages:

- **Rail industry representatives are encouraged to attend the ORR occupational health seminar and cascade any useful learning points within their organisations**
- **Rail company managers, HR professionals and employees are encouraged to visit the new ORR stress web pages and consider how they might work more effectively together to manage stress in the workplace.**