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HEALTH AND SAFETY COMMISSION

Proposal for a Workplace Exposure Limit for Respirable Crystalline Silica

A Paper by Peter Roberts, Band 4, Disease Reduction Programme

Advisor(s): Maureen Meldrum, Marion Dale

Cleared by Steve Coldrick on 14 March 2005 and Jane Willis on 15 March 2005

Issue

1. Proposals for a new workplace exposure limit (WEL) for respirable crystalline silica under the Control of Substances Hazardous to Health Regulations 2002 (as amended 2004). The draft consultative document on the proposals is attached as Appendix 1.

Timing

2. Routine. If the proposals are accepted, the new WEL will appear in the next edition of EH40, due to be published in April 2006.

Recommendation

3. It is recommended that the Commission agree that a consultative document is published to obtain views on the proposals.

Background

4. Crystalline silica is a naturally occurring mineral present in sands, rocks, stones, clays etc, and in building materials made from these materials such as bricks and concrete. The term "respirable" refers to particles that are small enough to be inhaled into the lungs. Dusts containing respirable crystalline silica (RCS) are encountered in a wide range of industry sectors. HSE estimates that at least 100,000 workers are regularly exposed to RCS. The sectors involved include quarries, iron and steel foundries, brick manufacture, potteries, stonemasons, the industrial sand industry and construction. There is also exposure to RCS in the mining industry, but the COSHH Regulations do not apply to the control of dust in the underground coalmines, where separate legislation applies. However, the WEL proposals outlined in this paper are relevant to all non-coal mines.

5. Exposure to RCS over a prolonged period can cause the development of silicosis, an irreversible lung disease. The effects of silicosis range from mild to severe, depending on the extent of exposure. Severe cases are disabling and can lead to premature death. Although much reduced over the decades, there is no evident sign of a downward trend in recent years, and in 2002 there were 150 cases of silicosis that received compensation under the Industrial Injuries Scheme. In addition, there is evidence that exposure to RCS can result in lung cancer. The current maximum exposure limit (MEL) for RCS is 0.3mg.m^{-3} (measured as an 8-hour time weighted average). Recent evidence indicates that there can be up to a 20% risk of developing silicosis with exposures up to the current MEL. It is this evidence that has driven the work to develop a new WEL for RCS.

6. The Commission have previously agreed that a new system of occupational exposure limits (in the form of Workplace Exposure Limits - WELs) should be introduced. This new system will come into force on 6 April 2005. When the new limit system comes in, the existing MEL for RCS will be converted into a WEL of the same value.

Argument

7. In line with the recommendations from the Advisory Committee on Toxic Substances (ACTS), the draft consultative document invites views on a WEL of either 0.1mg.m^{-3} or 0.05mg.m^{-3} . The key arguments surrounding these options are summarised in the consultative document (Table 2 on page 15). ACTS discussed the proposals at their meeting on 25 November 2004. The current draft of the consultative document takes full account of the outcomes of that meeting, which included discussions about the economic impact on industry if the lower level is finally chosen.

Consultation

8. A significant amount of informal consultation has taken place with the industry. Relevant trade associations and over 20 UK companies were visited and consulted about the Regulatory Impact Assessment (RIA). Contact was also made with a range of small businesses – about 15 sites were visited. The ACTS meeting on 25 November was well attended, and the relevant trade unions contributed towards the discussion.

Presentation

9. A copy of the consultative document will be sent to all consultees noted in the consultation list. It will also appear on the HSE Website, and a press notice will support its publication. If a general election has been called in the meantime, then the consultative document and press notice would not be published until after the election. However, this would not affect the overall timetable.

Costs and Benefits

10. Costs and benefits are detailed in a summary of the RIA in the draft consultative document (see page 26 in Appendix 1). Whichever limit is finally chosen, there will be significant costs to industry. If the lower limit is chosen, there will be serious implications for the quarrying and brick making industries, leading to probable job losses and plant closures.

Financial/Resource Implications for HSE

11. Although the costs of enforcing the new WEL are expected to be significant, HSE anticipates that costs would be absorbed within existing budgets.

Environmental Implications

12. None.

European Implications

13. The European Scientific Committee on Occupational Exposure Limits (SCOEL) issued a recommendation in 2002, stating that to protect against silicosis, an occupational exposure limit for RCS would need to be below 0.05mg.m^{-3} . It was anticipated that this recommendation would form the basis for European negotiations on a future-binding limit for RCS. However, given the lack of current activity in Europe on the development of binding limits, any action on this may not occur for many years.

Link to HSC Strategy

14. Given the large size of the working population exposed to RCS, and the potential severity of the health effects, the WEL proposals for RCS are viewed as a contribution to HSE's Disease Reduction Programme. However, silicosis develops after long-term exposure to RCS, thus the health benefits will not become apparent for a number of years.

Action

15. The Commission is invited to agree that the attached consultative document is published to obtain views on the proposals.