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WATCH COMMITTEE

Disease Reduction Programme: Cancer Project

The nature and extent of use of, and occupational exposure to, chemical carcinogens in current UK workplaces

Issue

1. WATCH will be given a presentation of continuing work on HSE's 2006 profiling exercise for chemical carcinogens in current UK workplaces, carried out as a component part of the Cancer Project of the Disease Reduction Programme (DRP), with the opportunity to probe further and comment on any aspect of current plans and activity.

Timing considerations

2. Consideration of the results of the profiling exercise at this November meeting will provide a good basis for HSE to consider intervention strategies to reduce risk factors for working with chemical carcinogens during 2007.

Recommendation

3. That WATCH members express their views on what is presented to them.

Background

4. The International Agency for Research on Cancer (IARC 2002) has identified 150 category 1 and category 2 (2A) chemicals, biological agents or exposure situations as known or probable carcinogens. They occur in a wide spectrum of industrial operations ranging from microelectronics manufacture to the production of iron and steel.

5. HSE gave a series of informal presentations to WATCH in June 2006 on the component parts of the Cancer Project of the Disease Reduction Programme (DRP). One of the component parts identified was a work product, to be carried out in discrete phases, to provide an up to date review on the use, exposure and management of risks from chemical occupational carcinogens in current UK workplaces.

6. HSE initiated phase 1 of the review by researching and collating information already held by HSE and that freely available in the scientific literature. The aim of the phase 1 review was to use existing information (toxicology, including an assessment of carcinogenic potency; and information on use and occupational hygiene characteristics) to prioritise chemicals for

further work and to exclude from phase 2 those chemicals that are limited in use and/or well controlled.

7. The views of WATCH at the June meeting regarding the toxicology profiles and potency assessments were very helpful in this respect and have modified HSE's approach accordingly. The phase 1 reviews of occupations with known history of occupational cancer were superficially useful, but flawed by the age of some of the employment data (for example, rubber factories and numbers employed have greatly declined even in the past ten years), and materials used in the identified occupations have changed (for example, coal tar pitch is rarely used as a sealant in occupations where previously it was common).

8. With these and similar reservations however, HSE compiled a priority list of substances for more detailed review under phase 2. This priority list is attached at Annex 1. Other carcinogens identified by IARC in EH40/2005 and/or CHIP were excluded from the priority list on the basis of lesser potency (e.g. formaldehyde), and/or restricted/limited use (e.g. benzidine, 4-aminobiphenyl, 2-naphthylamine, hexachlorobenzene), or low use/exposure (e.g. hexamethylphosphoric triamide, 2 methylaziridine); or because the carcinogen is being covered by a different strand of the Disease Reduction Programme (e.g. silica and welding fume where the primary health concern is non-cancer respiratory disease). The priority list is not definitive or unchangeable. As the study proceeds, some of the reasons for assignment may turn out to be over-pessimistic or over-optimistic.

9. The phase 2 reviews were initiated by carrying out a 'new' data gathering exercise. This involved Occupational Hygiene visits to suppliers, users, trade associations and other pertinent stakeholders using a qualitative survey questionnaire developed specifically for this project to determine information on patterns of use and the potentially exposed populations. Detailed summaries of the results from the phase 2 reviews plus a discussion of the results are attached at Annex 2.

Argument

10. Occupational exposure to the chemical carcinogens considered by the phase 1 review to be of concern or possible concern in current UK workplaces is in overall terms in decline. This is due to a number of factors:

- elimination or reduction in size of the process and the number of workers employed;
- substitution by a non carcinogenic alternative; and,
- improvements in exposure control.

11. The only carcinogens found to have increased in use over the last 10-15 years were MbOCA and Beryllium. However, contract processing and repackaging of chemical carcinogens by SMEs is suspected to be increasing as very few carcinogens are now manufactured by the UK chemical manufacturing industry.

12. The traditional areas of exposure risks to chemical carcinogens such as iron and steel production, rubber manufacture and metal finishing still exist as large UK employers despite the general shrinkage of the UK manufacturing industry.

Link to HSC Strategy

13. The Cancer Project is part of the Disease Reduction Programme, itself a component of the “Fit3” Strategic Programme.

Consultation

14. None on this paper in itself, although there has been much consultation on elements of the Cancer Project.

European Context

15. None

Action

16. The aim of the phase 2 reviews was to be wide ranging yet targeted on gaining an understanding of those industries in which there might be the potential for significant exposure to carcinogens meriting particular concern. WATCH is asked to look at Annex 2, receive presentations at the November meeting and consider if the aim was achieved.

17. WATCH is also asked to consider whether they are aware of any other chemicals or exposure situations which should have been included in this review and if so how might this have influenced the findings. One specific concern is that no significantly sized female populations have been identified in this study, whilst cancer statistics indicate that breast cancer is increasing in occurrence. We need to ensure that we haven't overlooked some important evidence that could possibly inform on breast cancer statistics.

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References / Attachments

Annex 1 Priority list of chemical carcinogens
Annex 2 Detailed summaries of the results from the phase 2 reviews plus
 a discussion of the results