

OC 494/6

To

Agricultural, Factory and Quarries Inspectors (Bands 0-4)

RSG Specialist Inspectors (Occ Hyg) (Bands 0-3)

RSG Medical Staff

CHID Inspectors (Bands 0-3)

HSL Field Staff (Bands 4-5)

Mines Inspectors (Bands 0-2)

Railway Inspectors (Bands 0-3)

POLYCHLORINATED BIPHENYLS - SAMPLING

All uses of polychlorinated biphenyls (PCBs) are to be phased out by the year 2000. Much equipment containing PCBs will be scrapped up until and shortly after that date. This OC provides background and advises inspectors not to undertake sampling for these substances.

INTRODUCTION

1 Polychlorinated biphenyls comprise a group of substances which are good electrical insulators, due to their chemical stability, fire resistance and low volatility. They were used as dielectric filler liquids in types of electrical equipment such as transformers, switchgear, capacitors and in the starter units of fluorescent lights and fractional horsepower motors. They may be found in mixtures referred to as 'askarels' or under a variety of trade names (see *MS(A)19 PCBs and you* (file 846)).

BACKGROUND

2 In 1986, due to their adverse effect on the environment their supply, by way of sale and use in plant and equipment, was banned in the UK as part of an EC initiative.

3 In 1990 the UK and other North Sea states agreed to phase out and destroy remaining identifiable PCBs by the end of 1999. This commitment has now been confirmed by an EC Directive and will be enacted in this country by a UK action plan (see OM 1994/140).

4 As a consequence, it can be expected that many items of electrical plant and equipment containing PCBs will be scrapped over the intervening period to the year 2000 and somewhat beyond. Although PCBs, PCB waste (including protective clothing that has been contaminated with PCBs) and equipment containing PCBs can only be disposed of legally by specialist waste contractors, this significantly increases the potential for incidents involving these substances at the dismantling, transport and incineration stages. Additionally, cases of illegal dumping can be expected. Inspectors may be required to investigate such incidents.

HEALTH EFFECTS AND EXPOSURE

5 PCBs can accumulate in the body and can cause a skin condition, known as chloracne. In animals they are known to cause liver damage.

6 Exposure to PCBs can be by inhalation of fumes, spray or droplets (while equipment containing PCB is being cut or heated), skin contact or ingestion. Skin contact poses the greatest risk to inspectors called to investigate incidents.

ACTION BY INSPECTORS

7 **Inspectors should neither take nor accept samples of PCBs or equipment likely to contain or be contaminated with PCBs under any circumstances.** The Health and Safety Laboratory (HSL) is currently contracted to take samples of all types on behalf of HSE and if sampling is required, HSL staff attached to regional specialist groups should be contacted (see OC 26/3, *The provision of field scientific activities at HSE by HSL*).

8 When called to incidents allegedly involving PCBs, inspectors should take the precautions outlined at paras 9-12.

Prevention of exposure

9 If dismantling, cutting or heating equipment containing PCB is being carried out, no approach should be made to such work until it has ceased and a suitable interval has elapsed for fume and aerosols to disperse. In each case, inspectors will need to judge how long this interval might be, and in cases of doubt no approach should be made.

10 No deliberate contact should be attempted with either PCBs themselves or equipment/ plant containing or contaminated with them.

11 To prevent **inadvertent** exposure to skin or everyday clothing, eg splashes, spillages on ground etc, personal protective equipment (PPE) should be taken and worn as appropriate. This should include:

- (1) wellington boots;
- (2) acrylonitrile (nitrile) gloves - **not** those made of natural rubber or latex; and

(3) disposable overalls, ie those available on general issue from FOD offices.

It should be stressed that none of these items are totally impervious to PCBs and will be insufficient to prevent exposure if there is gross contact for anything more than a few minutes.

12 An impervious container (preferably metal as PCBs can penetrate plastic) large enough to contain the above items, should also be taken in case of significant contamination.

Action in case of contamination

13 In case of slight contamination of PPE or personal clothing:

(1) boots and gloves should be washed with water;

(2) disposable overalls/personal clothing should be removed and stored so as not to spread contamination; advice should then be sought on the laundering of personal clothing.

14 In the case of significant contamination:

(1) contaminated PPE and personal clothing should be removed as soon as possible;

(2) exposed skin should be thoroughly washed with water; and

(3) contaminated items of PPE and personal clothing may need to be disposed of by a specialist waste contractor (see *PCBs and you*) and should be stored safely and securely until this can be done.

ANNOTATION OF INSTRUCTIONS

15 OC 494/3 - note 'See OC 494/6'.

16 FIC 846/3 (Rev) - note 'See OC 494/6'.

17 OM 1994/140 - note 'See OC 494/6'.

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ASI headings

Chemicals - use of: electrical equipment: polychlorinated biphenyls (PCBs): sampling: inspection: personal protective equipment: safety.