DO YOU KNOW HOW TO WORK SAFELY WITH PCBs?

PCBs and YOU

CONTENTS

Department of the Environment

Do you dismantle or replace old electrical equipment, including switchgear, transformers and capacitors?

This equipment may contain chemicals called PCBs which can harm your health.

Do you know how to work safely with PCBs?

Is your health at risk?

Make sure you know what to do before you start work.

This leaflet provides an introduction to these questions. Further, more detailed information is contained in the booklet *How to handle PCBs without harming yourself or the environment*. You should consult this before carrying out regular or substantial work. Alternatively, specialist contractors can carry out the work.

Polychlorinated biphenyls (PCBs) can harm the environment and could damage your health. Because of environmental concerns, an international agreement in 1986 banned most uses. Agreement has been reached to phase out remaining uses by the year 2000.

WHAT ARE PCBs?

PCBs are a family of substances which are good electrical insulators. They are chemically stable, fire resistant and don't easily generate a vapour. You may find them in mixtures referred to as askarels or under a trade name. Examples of trade names of products which have contained PCBs are at the end of this leaflet.

WHERE WILL I FIND PCBs?

PCBs were used as dielectric filler liquids in some types of electrical equipment such as transformers, switchgear, capacitors and in the starter units of fluorescent lights and fractional horsepower motors. Some equipment is labelled as containing PCBs but if you come across old equipment with no identifying label you should check with:

- your employer; or
- the manufacturer or owner of the equipment.

You should assume that any capacitor or transformer manufactured before 1976 may contains PCBs unless you have information to the contrary. It is also possible that there may be PCBs present in capacitors and transformers manufactured between 1976-1986. Even if the PCBs have been replaced by another liquid, significant amounts of PCBs may still be present. PCBs may occur as contaminants in the oil used in oil-filled electrical equipment. Always check with your employer if you are in any doubt.

HOW CAN THEY ENTER MY BODY?

PCBs can enter your body in three ways:

- by direct contact with the skin. PCBs pass easily through intact skin, so this is likely to be the main way they get into your body;
- by breathing in fumes, spray or droplets if PCB-containing equipment is being cut or heated;
- by swallowing PCBs if you eat, drink or smoke in the workplace.

HOW CAN THEY AFFECT MY HEALTH?

If you are repeatedly exposed to PCBs they can gradually build up in your body. PCBs can cause a skin condition called chloracne, which produces pustules, blackheads and cysts. In animals PCBs can cause damage to the liver, reduce the ability to fight infection, as well as other effects. Apart from chloracne, none of the range of effects seen in animals has been seen in people working with PCBs, although it is possible that they could occur if high exposures were to occur.

WHAT PRECAUTIONS SHOULD I TAKE?

All PCB-containing equipment needs to be checked regularly for signs of PCB leakage. If substantial leakage occurs you should obtain the assistance of a specialist contractor immediately.

You should not do any work where there is a possibility that you may come into contact with PCBs, including dealing with spilt PCBs, unless your employer has trained you and given you a method to follow.

Because PCBs can pass easily through your skin, you should wear personal protective equipment if there is any possibility of contact with PCBs. All cuts and abrasions need to be covered with dressings before you put on your protective clothing. Your employer will tell you the right type of protective clothing for your job, which may include:

- an impervious boilersuit or overalls;
- suitable gloves;
- overshoes or wellingtons;
- chemical resistant goggles or visor;
- respirator.

However, no material is completely impervious to PCBs. The booklet *How to handle PCBs without harming yourself or the environment* gives details of those materials which give the best protection.

In some instances capacitors in fluorescent light fittings may leak and need replacing. Here only very small quantities of fluid are involved and it may not be necessary to obtain the assistance of a specialist contactor. To do this you need to wear disposable gloves, wipe down any spillage with paper or cloth wipes, and wash your hands when you have finished the job.

If your protective clothing becomes contaminated with PCBs, do not take it home to wash it, or send it to a laundry. See 'How do I dispose of PCBs?' below.

Where PCBs may be present, do not eat, drink or smoke and wash thoroughly before eating, drinking, smoking or using toilet facilities. These measures are important to ensure that you do not come into contact with PCBs.

HOW DO I DISPOSE OF PCBs?

PCBs, PCB waste (including protective clothing that has been contaminated with PCBs) and equipment containing PCBs *must only* be disposed of by specialist waste contracting firms which are licensed by the Waste Regulation Authority. You must not dispose of PCBs or PCB waste by pouring it into drains, onto land or by burning. PCBs are normally destroyed in an incinerator authorised to burn PCBs, although there are other ways of destroying PCBs. You can get advice on how to dispose of very small amounts of PCBs (such as a few capacitors from fluorescent lights) from your Waste Regulation Authority. The National Association of Waste Disposal Contractors (NAWDC) can provide a list of their members licensed to dispose of PCBs.

ARE THERE ANY RELEVANT LAWS?

Yes, there are several laws which apply to PCBs:

The Health and Safety at Work etc Act 1974 requires employers to ensure so far as is reasonably practicable the health, safety and welfare of all their employees at work. You are required to co-operate with your employer, for example by using safety equipment and working methods as instructed.

The Control of Substances Hazardous to Health Regulations 1994 (COSHH) place duties on your employer to:

- ensure that your exposure to PCBs is either prevented, or if this is not reasonably practicable, adequately controlled;
- assess the risks to your health from PCBs and identify the measures which are needed to protect your health;

- ensure that control measures are adequate and that you use them;
- monitor your exposure;
- provide you with information on the risks of PCBs and the steps which are necessary to protect your health.

You also have duties under COSHH to:

- co-operate with your employer;
- use protective measures and to report any defects.

The Environmental Protection Act 1990 requires, amongst other things, waste holders to exercise a duty of care when disposing of certain materials. For further details see 'Where can I get more information?'

WHERE CAN I GET MORE INFORMATION?

Your local HSE office will provide more advice and information on work involving PCBs. It is listed under Health and Safety Executive in the local telephone directory. If you are worried that you may have absorbed PCBs through working with them, you can obtain confidential advice from the Employment Medical Advisory Service, who can be contacted though your local HSE office. The booklet *How to handle PCBs without harming yourself or the environment* (ISBN 0 7176 0789 5) can be obtained from HSE Books.

For information on the handling and disposal of PCBs see Waste Management Paper No 6 - *Polychlorinated biphenyls* (DoE 1994, available from HMSO) or contact your local Waste Regulation Authority (listed in your local telephone directory) or the Department of the Environment Enquiry Unit, 2 Marsham Street, London SWIP 3EB (Tel 0171 276 3000).

The National Association of Waste Disposal Contractors (NAWDC) will be able to give you a list of contractors who can handle PCBs and PCB waste. Their address is Mountbarrow House, 6-20 Elizabeth Street, London, SWIW 9RB.

HSE priced and free publications are available by mail order from: HSE Books, PO Box 1999, Sudbury, Suffolk CO 10 6FS Tel: 01787 881 165 Fax: 01787 313995

HSE priced publications are also available from Dillons Bookstores and all good booksellers. They can also be ordered at any branch of Ryman the Stationer. Other enquiries should be directed to HSE's Information Centre, Broad Lane, Sheffield S3 7HQ Tel: 0114 289 2345 Fax: 0114 289 2333

PCB TRADE NAMES

Mixtures of substances containing PCBs are often referred to by trade names. The following have been reported as containing PCBs at some time (but should no longer contain PCBs in current products):

ACECLOR	INERTEEN
APIROLIO	KANECHLOR
AROCLOR	KENNECHLOR
ASBESTOL	LEROMOLL
ASKAREL	NO-FLAMOL
AUXOL	OLEX-SF-D
CHLOREXTOL	OROPHENE
CLOPHEN	PHENOCLOR
CLOPHENHARZ	PRODELEC 3010
CLORESIL	PYDRAUL
DIACLOR	PYRALENE
DELOR	PYRANOL
DELORENE	PYROCLOR
DK	SAF-T-KUHL
DYKANOL	SANTOSOL
ELAOL	SANTOTHERM
ELECTROPHENYL	SOVOL
ELEMEX	SOVTOL
FENCLOR	TERPHENYCHLORE
FENOCLORO	THERMINOL

GILOTHERM	TURBINOL
HYVOL	

This list does not contain the names of all PCB mixtures.

This leaflet contains notes on good practice which are not

compulsory but which you may find helpful in considering what you need to do.

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