CODE OF PRACTICE
Code of Practice for the Safe Handling of Timber Preservatives and Treated Timber

gazetted 20 September 1991, commenced 1 November 1991

1. Foreword

Citation

This Code of Practice may be cited as the Code of Practice for the Safe Handling of Timber Preservatives and Treated Timber 1991.

Object

The object of this Code of Practice is to adopt the National Code and Guidance Note and thereby provide practical guidance to employers, self-employed persons and employees to ensure the health and safety of workers handling timber preservatives and timber treated with preservatives.

Commencement

This Code of Practice commences on 1 November 1991.

Authority

This Code of Practice is approved as an industry code of practice pursuant to section 44A of the Occupational Health and Safety Act 1983 by the Minister for Industrial Relations and Minister for Further Education, Training and Employment on the recommendation of the WorkCover Authority.

Definitions

n this Code of Practice:

"Guidance Note" means the guidance note that was published in July 1989 under the title "Guidance Note for the Safe Handling of Timber Preservatives and Treated Timber", prepared by the National Occupational Health and Safety Commission (Worksafe Australia);

"National Code" means the code of practice that was published in July 1989 under the title "National Code of Practice for the Safe Handling of Timber Preservatives and Treated Timber", being a code of practice the subject of a declaration by the National Occupational Health and Safety Commission (Worksafe Australia) under section 38(1) of the National Occupational Health and Safety Commission Act 1985 of the Commonwealth.

Application of Code of Practice

This Code of Practice applies to all places of work other than mines within the meaning of the Coal Mines Regulation Act 1982 or the Mines Inspection Act 1901.

Adoption of National Code and Guidance Note

The National Code and the Guidance Note have effect as if they formed part of this Code of Practice.

2. Introduction

Objectives

The objectives of this code of practice are:

- to ensure the health and safety of workers handling timber preservatives and timber treated with preservatives; and

- to provide guidelines for persons working within the timber preservatives industry by specifying safe working practices and employer and employee responsibilities.

Consultation and co-operation between all relevant parties and the full exchange of information pertaining to health and safety are essential to the effective implementation of this code of practice.

Substitutes are to be environmentally and occupationally safe chemicals, and procedures for using them, by less toxic alternatives, should be used wherever realistic and practicable in terms of efficacy and social consequences. These substitutes should be thoroughly evaluated for potential hazard before introduction into the industry.

Scope

Timber preservatives and timber treated with them may be encountered in various occupations, for example, power and telecommunication linesmen and associated classifications, workers in the timber preserving industry, building workers, agricultural workers, municipal workers, gardeners, pest control workers, storemen, drivers, railway and fettler workers and treatment plant operators. Some timber preservatives and treated timber are also freely available to the general public.

This code of practice covers timber preservatives used in Australia. Those in current use can be grouped as follows:

- water-borne preservatives, for example, *copper chrome arsenic, boron compounds* and sodium fluoride;
- oil-type or oil-borne preservatives, for example, *creosote*; and
- light organic solvent preservatives, for example, solutions containing *pentachlorophenol*, copper naphthenate and *tributyltin oxide.*

This code of practice does not cover working practices applicable to the manufacture of timber preservatives. Inclusion of any timber preservative in the code of practice does not necessarily indicate any recommendation for its use.

Guidance note

The guidance note gives detailed information on:

- the characteristics and uses of individual timber preservatives;
- first aid procedures;
- health hazards of preservative chemicals; and
- medical monitoring for the guidance of medical practitioners.

3. Employer responsibilities

General

Employers have a responsibility to provide and maintain, so far as is reasonably practicable, safe and healthy working environments and work practices in which the risks to health arising from working with timber preservatives and treated timber are minimised. In addition to complying with legal requirements, measures for achieving these objectives may include:

- setting out in writing, in readily understood language, their policy and arrangements to reduce to a minimum the health hazards of timber preservatives, and to bring this to the notice of employees;
- giving necessary instructions and training before commencing work, and at regular intervals thereafter;
- providing adequate supervision of work, of work practices and of the application of health and safety measures to protect workers from health hazards of timber preservatives;
- providing adequate personal protective clothing and equipment, which are necessary when exposure to timber preservatives cannot be otherwise prevented or controlled;
- ensuring that adequate first aid facilities are available at the workplace for emergency treatment; and
- notifying local medical treatment centres of the nature of the preservatives used in the plant, providing a copy of this code of practice and arranging, through these centres, medical monitoring where required.

Hazard control

Health hazards should be minimised primarily by reducing and controlling hazards at their source. These measures may include,

Health hazards should be minimised primarily by reducing and controlling hazards at their source. These measures may include, but are not confined to:

- substitution of toxic materials by the least toxic alternatives;
- engineering controls, such as containment of processes involving timber treatment;
- selection of treatment processes that minimise and ultimately eliminate the exposure of workers handling treated products;
- provision of adequate and approved drainage to remove excess preservatives;
- use of mechanical ventilation to remove vapours and dusts at their sources; and
- ensuring that contaminated protective clothing is not re-used and is laundered at an appropriate facility.

Personal protection

Respiratory protective equipment should be made available where atmospheric concentrations of any chemical exceed, or are likely to exceed, 50 per cent of the exposure standards. All protective clothing and equipment should conform to relevant Australian Standards. Training should be provided in the use and maintenance of such equipment, which should only be used where there is no other practical method, or as a short-term solution.

Compliance with legislation

The employer is required to be aware of any relevant Commonwealth, State or Territory legislation relating to occupational health and safety, pesticides, poisons, regulations of pressure vessels, environmental protection, and transportation of dangerous goods. Relevant legislation should be made available to employees and their representatives and to health and safety committees.

Branding and provision of information

Compliance with legislation, where applicable, is required. Where no such legislation exists, Australian Standards AS 1604 and AS 1608 should be complied with in respect to branding of commercially treated timber (1,2).

Suppliers of preservatives should prepare material safety data sheets on their products in conformity with the standard content and format developed by the National Occupational Health and Safety Commission3. These shall be made available routinely to all purchasers. Purchasers shall, in turn, make these accessible to those handling the preservatives. Employers should compile a register of products used on their premises and give access to this register to all employees and their representatives.

Suppliers of treated timber should also prepare information sheets on their products, and make these available to users and employees on request. Employers using treated timber should compile a register of the classes of treated products used on their premises or in their operations, and give all employees and their representatives access to this register.

Training and retraining

It is important for management to focus on aspects related to safety for the sake of both new employees and other staff. New employees should receive appropriate training in occupational safety and health as part of their usual induction training.

Health and safety induction and retraining should:

- specify the objectives of training, including first aid, and the level of proficiency expected;
- outline occupational safety and health policy;
- highlight potential hazards existing in the workplace;
- make new employees aware of the appropriate handling and emergency procedures for various chemicals used;
- emphasise facilities such as the location of safety showers and first aid stations;
- stress safety aspects such as care and use of protective equipment, and the nature of the chemicals involved; and
- provide instruction on provisions contained within Commonwealth, State and Territory legislation (see also *paragraph 2.4* above).

Safe working practices should be reinforced by periodic retraining as appropriate.

4. Employee responsibilities

Employees have a responsibility, in the course of performing their work, to:

- take reasonable care for their own safety and that of other persons who may be affected by their acts or omissions;
- co-operate with their employer to ensure that the provisions of this code of practice are followed;
- comply with instructions and procedures for their own safety and health and those of others; and
- report immediately to their supervisor, health and safety representative and/or committee any situation that they have reason to believe could present a risk and which they cannot themselves correct

Employees have a responsibility to:

- comply with the relevant provisions of Commonwealth, State and Territory legislation;
- be familiar with the information contained on the labels of all preservative chemicals they use; and
- wear protective equipment, where necessary, and ensure that it is correctly selected and fitted.

5. Safe handling procedures

General precautions

Skin contact is the most likely route for preservative absorption and, as such, skin contact with treatment solutions, including the wet residue on treated timber, should be avoided. Inhalation of sprays, mists or dusts should also be avoided. While handling preservative chemicals, employees shall not smoke, eat, drink or use toilet facilities. Before engaging in these activities, hands and exposed skin should be washed.

Specific precautions

Handling preservatives

The specific requirements for the safe use of individual chemicals (see guidance note) should be read in conjunction with this chapter. Any instructions contained on the label or material safety data sheet shall be followed.

The gloves used should be impervious to the preservative chemicals being used and conform to Australian Standard AS 2161 (4). Respiratory protective equipment should comply with Australian Standard AS 1716 (5).

Manual Application

By *brushing, deluging or dipping.* Protective clothing with long sleeves, full leg coverage, impervious boots and gauntlet gloves is essential. Respiratory equipment shall be worn where exposure standards are exceeded.

By *spraying.* Manual application by spraying is not to be conducted in unventilated areas or confined spaces. In well-ventilated areas the following protective equipment is required: hooded coveralls (treated so as to be solvent or water-repellent) fastened at the neck, ankles and wrists; full-length trousers; PVC apron; impervious boots; chemical face shield or goggles; gauntlet gloves and respiratory equipment.

Remote Application by Pressure Impregnation, Mechanical Dipping or Spraying

Precautions when handling water-borne preservatives:

- during normal plant operation, coveralls and impervious boots shall be worn;
- when mixing liquid concentrates, additional requirements are: fasten coveralls at wrists, ankles and neck; PVC apron; gauntlet gloves; face shield or goggles; respiratory protection and head covering as required by label instructions for the particular chemical; and
- when mixing dry chemicals, all of the above plus a particulate respirator (according to Australian Standard 1716, Class M for toxic dusts and Class H for arsenicals) and chemical goggles if eye protection is not incorporated into the respirator (5).

Precautions when handling *creosote*:

- during normal plant operation, coveralls and impervious boots shall be worn; and
- during cylinder door opening operation, a respirator with organic vapour cartridge, suitable eye protection and gauntlet gloves shall also be worn.

Precautions when handling other oil-borne preservatives:

- precautions as for creosote.

Precautions when handling light organic solvent preservatives.

- precautions as for creosote.

Handling and transportation of treated timber

After treatment, preservatives dry at different rates. Consequently, handling practices will vary according to the preservative used and are virtually independent of the application method.

Water-borne Preservatives

Where treated timber is wet with preservative solution, water-repellent coveralls, head covering, impervious boots and PVC gauntlet gloves shall be worn.

Provided the treated timber is surface dry, there are no additional requirements except that the wearing of leather or cotton gloves is recommended.

Creosote

Within a period of three months from treatment, it is recommended that creosote-treated timber be mechanically handled.

Where close contact is essential immediately following treatment, the following protective clothing is required: hooded coveralls, fastened at neck, ankles and wrist; goggles; gauntlet gloves; impervious boots: and a respirator with twin cartridge (5) combined dust/organic vapour cartridge.

Where close contact is necessary beyond the three-month holding period, the following protective clothing is required: full-length coveralls; impervious boots and gauntlet gloves.

Exposed skin should be protected from sunlight with an ultraviolet block-out preparation.

Other Oil-borne Preservatives

Precautions are as for creosote, except that there is no requirement for ultraviolet cream.

Light Organic Solvent Preservatives

Precautions are as for water-borne preservatives, except that coveralls need not be water repellent.

Working with treated timber

Water-borne Preservatives

Where working with timber treated with water-borne preservatives produces any dust, local exhaust ventilation should be provided to remove it at the source. If such measures are impracticable, employees should be provided with dust masks or respirators, as appropriate' and work should be carried out in an area well-separated from other employees. Substantial amounts of dust should be cleaned up and not be left to accumulate.

Organic Preservatives

Sawing timber treated with organic preservatives creates heat at the cutting face and vapour is produced. Greater concentrations of vapour are produced with the use of power tools. Exposure of skin to, and inhalation of, both vapour and contaminated timber dust may occur. Accordingly, local exhaust ventilation should be provided to remove the dust and vapours at the source. If such measures are impracticable, employees should be provided with the following protective clothing and equipment: gauntlet gloves and hooded coveralls fastened at wrists, ankles and neck. A respirator may be required where there is poor ventilation. A Class M (Australian Standard AS 17165) respirator is recommended, otherwise a cartridge respirator with twin dust/organic vapour cartridges should be used. Substantial amounts of dust should be cleaned up and not be left to accumulate.

Personal hygiene

Before eating, drinking, smoking, or using toilet facilities, persons handling treatment fluids or treated timber should thoroughly wash exposed areas, such as hands and face, with soap and water.

Action should be taken to avoid the inhalation of dust and vapour at all times.

At the end of the job, the following clean-up procedures should be observed:

- first wash gloves and remove;
- then remove goggles and wash;
- then remove other protective clothing;
- finally remove the respirator;

- if using a cartridge type respirator, the cartridges should be removed and discarded;
- if the respirator is disposable, it should be discarded; and
- if the respirator is re-usable, it should be thoroughly cleaned after use as per the manufacturer's directions.

Contaminated protective clothing shall not be worn and should be laundered by the employer at an appropriate laundry after each day's work. Contaminated clothing should be placed in an appropriately labelled polyethylene bag and should not be laundered with other clothing.

Storage

Storage of chemicals

Treatment solutions should be stored in containers suitable to prevent escape of vapour and spillage/leakage of liquid. Organic preservatives should be stored in a well-ventilated area. Storage should be well away from foodstuffs, food containers and food preparation and consumption areas. Separate lockable storage shall be provided for chemicals that require restricted access. Records must be kept of all chemicals entering and leaving the store. Liquid chemicals should be stored within a non-permeable bunded area capable of containing at least 120 per cent (as per Australian Standard AS 2843.1 (6) of the total volume of the chemicals stored.

The transfer of concentrates from original to subsequent containers, other than for direct usage, is discouraged, but if transfers are made the new containers shall be appropriately labelled. Containers shall be disposed of in accordance with the requirements of the appropriate authorities and relevant legislation.

The location and design of the store should take into account the risks of fire and explosion. Local fire authorities shall be notified of the presence of all chemicals and solvent carriers in the store. Chemicals should be stored so that decontamination of a spill can be facilitated.

Emergency clothing, respirators, showers and eyewash fountains shall be available. Emergency and first aid instructions shall be posted in a prominent place, together with the names, addresses and telephone numbers of persons to contact. Wherever practicable, a telephone should be installed.

Storage of timber following treatment

Freshly treated timber should be stored in well ventilated areas in such a manner as to prevent contamination of other materials with the treatment fluid. Such timber shall be stored over an approved drainage and collection area for sufficient time to permit drainage and surface drying.

Disposal of treated timber

Treated timber shall be disposed of in accordance with appropriate legislation. It is recommended that treated timber to be discarded should be buried in a suitable location, for example, away from underground watercourses and rivers. Burning treated timber is not recommended since various harmful decomposition products may be released. However, if burying is impracticable, timber may be burnt provided it is burnt in an open area or a suitable incinerator and the ashes buried. Any persons tending open-air burning operations should be supplied with appropriate protection, including respirator.

Treated timber should not be burnt in cooking or heating fires or in confined or unventilated spaces.

Spillages

All spillage should be contained and appropriate protective equipment be worn during any cleaning operation to minimise exposure.

Small spillages of treatment solutions on to soil should be covered with at least 25 mm of soil. Spillages elsewhere should be soaked up on to paper, vermiculite, rags, or sawdust (and for copper chrome , cement or lime) and buried. Final cleaning should be made by absorbing on to dry sand or earth, or in the case of creosote, with kerosene or mineral turpentine with subsequent burial of the contaminated material.

Procedures for handling large-scale spills (for example, larger than 50 litres) should be developed in consultation with the manufacturer, the responsible environmental protection authority, waste disposal authority, local government authority or emergency services.