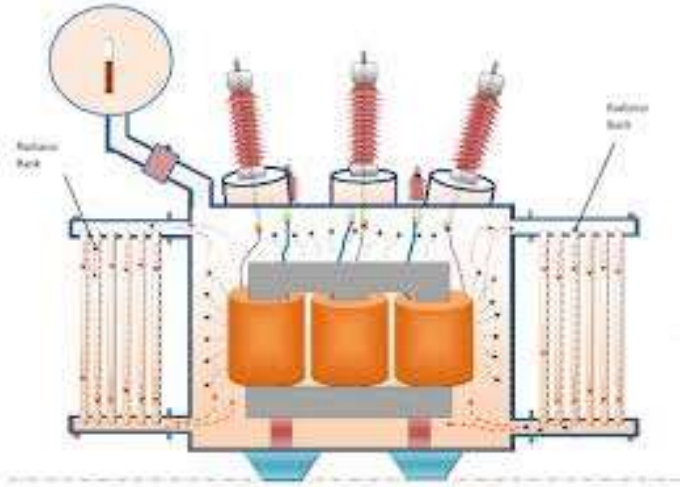
Enviro Liquid Waste Transformer Oil Drain Procedure

- Prior to any Transformer Pump Out or Drain, a certified testing laboratory MUST provide a current report (< 3 months old) indicating Polychlorinated biphenyls (PCBs) level in the oil being transported.
- Failure to provide a current report with the following conditions means we are unable to transport the oil to a waste treatment facility.

What are PCBs

- **Polychlorinated biphenyls** (**PCBs**) are highly carcinogenic chemical compounds, formerly used in industrial and consumer products, whose production was banned in the United States by the Toxic Substances Control Act in 1976 and internationally by the Stockholm Convention on Persistent Organic Pollutants in 2001.

Drain Plugs & Transformer Oil Reservoir Locations



Transformer oil drain is an operation, that no transformer can do without. In this article we will look what types of it do exist and when it is performed

Full and Partial Transformer Oil Drain

According to the degree of emptying of the tank transformer oil drain can be full and partial. Full drain is carried out during maintenance or repair of the transformer, when the oil blocks access to the parts that require attention.

Partial drain foresees oil removal to the level of the upper yoke of the magnetic circuit.

If the oil is suitable for further use, a partial drain is performed for the inspection of the transformer with the lifting of the active part and for defecting.

Depending on the power of the transformer, the oil is drained through a special tap or a hole for draining and taking samples. Draining is carried out into a previously prepared container through oil lines (rubber hoses) or a Vacuum Truck utilising a reducer / adapter to connect to a 2inch or 3inch Camlock.

Please read the information below from the EPA in Victoria around the management of Polychlorinated Biphenyls (PCBs).

Polychlorinated Biphenyls (PCB) Management

Publication IWRG643.2* December 2017

** This replaces IWRG643.1 issued September 2009*

Industrial Waste Resource Guideline

Contents

Introduction

This guideline summarises the requirements for the storage, handling, use and transport of materials containing polychlorinated biphenyls (PCBs) in Victoria.

What are PCBs?

Polychlorinated biphenyls (PCBs) are a group of very stable chlorinated aromatic hydrocarbons.

Prior to 1980, PCBs were widely used in electrical equipment such as transformers, generators and capacitors, as well as in fluorescent light fittings, electric motors, ceiling fans and dishwashers.

Due to the persistence in the environment of PCBs and the serious health concerns associated with these chemicals, the importation and manufacture of PCBs in Australia has been banned since the 1970s. Phase-out of equipment containing PCBs has been ongoing since this time.

PCB management framework

PCBs are primarily managed under the *Environment Protection Act 1970* (the Act) via a Notifiable Chemicals Order (the Order), which implements The Polychlorinated Biphenyls Management Plan (the National Management Plan), published by the Australian and New Zealand Environment and Conservation Council (ANZECC).

Contravention of the Order is an offence under the Act and may attract significant penalties.

Waste PCBs are subject to statutory controls under the Environment Protection (Scheduled Premises and Exemptions) Regulations 2007 and the Environment Protection (Industrial Waste Resource) Regulations 2009.

The National Management Plan provides guidance on the safe management and phase-out of PCBs; setting minimum standards for storage, handling, use and disposal of PCB materials.

The Order specifies that material or waste containing PCBs at a concentration of more than 2 mg/kg requires regulation.

The aim of the PCB management framework is to:

1. protect human health and the environment
2. manage and phase out all remaining equipment and materials containing PCBs in line with the objectives of the National Management Plan
3. ensure that PCBs are stored, handled, transported, treated and disposed of in a safe and proper manner
4. minimise contamination of other materials with PCBs
5. maintain a public register that lists the location, quantity and concentration of PCBs at premises where material, equipment and waste is greater than 10 kg or in excess of the threshold concentration and quantity of 50 mg/kg and 50 g.

Sale or supply

The sale or supply of PCBs is prohibited without prior written consent from EPA in the form of:

This guidance forms part of the Industrial Waste Resource Guidelines, which offer guidance for wastes and resources regulated under the *Environment Protection (Industrial Waste Resource) Regulations 2009*.

Authorised and published by Environment Protection Authority Victoria
200 Victoria Street, Carlton VIC 3053
W epa.vic.gov.au | T 1300 372 842 (1300 EPA VIC)

- an approved environment improvement plan (EIP) for PCBs

or

- an approved Application for Consent to sell or supply PCBs.

The EIP should identify the types of circumstances when sale or supply may be envisaged, as well as all other required information (see Environment Improvement Plan section below).

Information that must be provided in the Application for Consent includes: estimated PCB concentration, quantity, proposed transporter and EPA licence number of the intended destination premises. If approved, EPA will issue a consent number.

Estimates of the quantities and concentrations of PCBs can be based on the outcomes of the risk-based strategy and statistical survey procedure outlined in the National Management Plan. Where analyses have been undertaken, the results should be included.

Emergency situations, such as transport accidents involving PCBs, may necessitate the sale or supply of PCBs. In this circumstance, contact EPA through the emergency services.

Environment improvement plan (EIP)

The Order requires any premises that store, treat, destroy, dispose of or otherwise handle PCBs, and any person who transports PCBs, to have an EPA-approved EIP, which must meet the objectives of the National Management Plan (NMP).

The EIP must be signed by the occupier of the premises, or by an officer authorised by the occupier, and should include information on relevant equipment maintenance and inspection programs, emergency containment and clean-up procedures, and staff training.

If there is an existing environmental management system (EMS), EIP, licence or transport permit, the EIP for PCB management should be integrated into these existing systems; however, a separate application is required.

Approved plans will be issued with a letter of approval and an EIP number.

Management and storage of PCBs

The NMP provides guidance on a risk-based strategy for the management and phase-out of equipment containing PCBs.

Any containers or equipment likely to contain PCBs that are found to be leaking or in poor condition, must be removed or repaired and any associated contaminated soil safely disposed of, as soon as practicable.

Equipment surveys to identify likely locations, quantities and concentrations of PCBs on your premises must be carried out by appropriately qualified staff. Where analysis of PCB containing material is required, this must be carried out by NATA-accredited laboratories. Further guidance is provided in the NMP.

Transport, treatment and disposal of PCBs

Transport of waste PCBs must be in accordance with the Environment Protection (Industrial Waste Resource) Regulations 2009, which regard PCBs as prescribed industrial waste (PIW).

Requirements under these Regulations include:

- the use of waste transport certificates
- transport by vehicles with a current permit to transport the stated category and concentration of PCBs
- treatment or disposal at facilities licensed by EPA to accept waste containing the given concentration of PCB.

If you are intending to have PCBs stored, treated, reprocessed or disposed of, your EIP should specify the facility(ies) that you intend to use for this purpose.

Disposal of solid waste PCBs to landfill (for example, PCB contaminated soil) must only occur where the concentration of the solid is within the limits prescribed in the landfill licence. Landfills are only licensed to accept solid waste with a PCB concentration of 50 mg/kg or less. Solid waste with a PCB concentration greater than this will require treatment at a licensed facility.

Disposal of liquid PCBs to landfill is prohibited.

Go to the EPA website for further information on transporting of PIW:

- Industrial Waste Resource Guidelines – Transport section
- Permitted transporters and licensed waste receivers in the EPA prescribed industrial waste database.

Interstate transport of PCBs

For interstate movement of waste PCBs the following forms must be completed prior to transport:

- *Application for consignment authorisation: Movement of controlled waste into Victoria* (form F1006).
- *Application for consent to sell or supply polychlorinated biphenyls (PCB)* (form F1003).

Further information for interstate transport:

- Industrial Waste Resource Guidelines – Movement of prescribed industrial waste from Victoria.

Record keeping

Records must be kept by the occupiers of premises involved in the management of PCBs, so the PCBs can be tracked from the point of generation, through any handling, including transport, storage, or treatment to final destruction or disposal.

Records must include the following:

- Probable or known PCB locations, concentrations and quantities, the transporter(s) and the eventual disposal route(s). Waste transport certificates with this information may be considered an adequate record.
- Certificates of destruction or disposal linking the results of equipment surveys with the phase-out and removal of PCBs from premises.

All premises must have adequate record keeping systems to be able to:

- confirm the estimated concentrations of each load of PCBs consigned for removal from the premises
- account for and notify EPA of notifiable quantities of PCBs (see 'Notifiable Quantity')
- update EPA annually on any changes.

An EPA officer may ask for records to be produced upon request.

Dilution

The dilution of PCBs is prohibited without prior written consent from EPA. Approval of an EIP that provides the relevant information, including the types of circumstances where dilution may be envisaged, constitutes written consent.

Approval for dilution may be given in the following circumstances:

- If the concentration is within the threshold concentration of 50 mg/kg and 2 mg/kg (non-schedule PCB), PCBs can be diluted to less than 2 mg/kg to enable energy recovery, but must only occur with written consent. Only licensed premises or premises with an approved EIP will be permitted to prepare fuels derived from PCB wastes.
- Dilution of scheduled PCBs to less than the threshold concentration of 50 mg/kg may only be permitted for the purpose of destruction. Destruction of PCBs must only occur at a facility licensed to do so.

Notifiable quantity

Where premises:

- contain more than 10 kg of PCBs in material and waste

or

- are in excess of the threshold concentration and quantity of 50 mg/kg and 50g ('scheduled PCB' as outlined in the (NMP))

the occupier must notify EPA of the quantity, concentration and location of PCBs by completing *Notification of Polychlorinated Biphenyls* (form F1005).

Note: EPA must be advised annually of any changes. This information will be recorded on a publicly accessible register.

The basis on which the notifiable quantity was determined should accompany the notification.

Certificate of destruction and disposal

When PCBs have been destroyed or disposed of, the facility that received them must:

- issue a *Certificate of Destruction or Disposal of Polychlorinated Biphenyls* (form F1004) to the occupier of the premises consigning the PCBs.
- state on the Certificate of Destruction or Disposal whether the PCBs have been disposed of, destroyed or diluted to less than 2 mg/kg to enable energy recovery.

The occupier of the premises consigning the PCBs must:

- ensure that they obtain a Certificate of Destruction or Disposal from the receiving facility.
- ensure that a copy of the Certificate of Destruction and Disposal is forwarded to EPA.

Records of the Certificate of Destruction or Disposal must be maintained and made available to EPA officers upon request.

Further information

Contact EPA Victoria's Development Assessments Unit if you wish to discuss PCBs or submit an EIP.

Tel: 1300 372 842

www.epa.vic.gov.au

All PCB forms can be downloaded from the waste transportation forms page on the EPA website.

For the ANZECC publication, Polychlorinated Biphenyls Management Plan, 2003; see the Department of the Environment and Energy: www.environment.gov.au