*NEW Dangerous Goods (Storage and Handling) Regulations 2012*

On 1 December 2012, the Dangerous Goods (Storage and Handling) Regulations 2012 (DG (S&H) Regulations 2012) replaced the Dangerous Goods (Storage and Handling) Interim Regulations 2011 (Interim Regulations) which expired on this date. The DG (S&H) Regulations 2012 have retained most of the legal requirements contained in the Interim Regulations. There are only a small number of changes. This document has not yet been updated to reflect the changes introduced by the DG (S&H) Regulations 2012. More information on the key changes introduced by these new regulations can be found in the guidance titled *Information about: Key changes to dangerous goods storage and handling requirements* available at worksafe.vic.gov.au/dgkeychanges and *More information about: Incident reporting* available at worksafe.vic.gov.au/incidentreporting.

On 18 June 2017, the Occupational Health and Safety Regulations 2017 (OHS Regulations 2017) replaced the Occupational Health and Safety Regulations 2007 (OHS Regulations 2007), which expired on this date. This publication has not yet been updated to reflect the changes introduced by the OHS Regulations 2017 and should not be relied upon as a substitute for legal advice.

Information on the key changes introduced by the OHS 2017 Regulations can be found in the guidance titled *Occupational Health and Safety Regulations 2017: Summary of changes* - available at https://www.worksafe.vic.gov.au/__data/assets/pdf_file/0011/207659/ISBN-OHS-regulations-summary-of-changes-2017-04.pdf. However, this guidance document contains material of a general nature only and is not to be used as a substitute for obtaining legal advice.
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The proper handling of waste is an issue of significant concern to the Victorian community.

Recognising this fact, a WorkSafe Victoria Steering Committee was convened to produce Safe Handling of Industrial Waste: A Practical Guide for Workplaces as the first practical document of its type. Through this guide, the Committee outlines the responsibilities of every participant in the waste chain – from waste producers to waste transporters and finally, waste treaters.

This guide has been produced to reflect current industry information and assist those who work with waste at every stage. WorkSafe Victoria would like to thank the Steering Committee for their invaluable work – without specialist industry consultation this document would not have been as comprehensive or as easy to follow. Particular thanks must go to the Plastics and Chemicals Industry Association (PACIA) and the Victorian Trades Hall Council.

If you have any feedback on this document, please contact us with your comment or suggestions. As this is the first guide of its kind, ongoing industry consultation as established by the Steering Committee will be integral to ensuring that future publications are up to date, practical and relevant.

John Merritt
EXECUTIVE DIRECTOR
WORKSAFE VICTORIA

The Plastics and Chemicals Industries Association is pleased to be involved in the creation of this important guide targeting improved workplace safety and protection for the environment when dealing with the management of industrial waste.

All companies have a responsibility to safely and effectively manage waste as a normal part of their operation. This guide, a cooperative effort between government, industry and Trades Hall, provides a foundation based on practical advice that companies can implement.

I urge all sections of the waste management supply chain to use this guide to improve safety and environmental performance.

Martin Jones
CHIEF EXECUTIVE OFFICER
PLASTICS AND CHEMICALS INDUSTRIES ASSOCIATION
Hazardous waste can create many health and safety problems if not dealt with in a safe and responsible manner. These problems can affect everyone in the ‘pipeline’ – from people who produce waste to those who transport it, and finally, those that receive, treat and store it.

This guide has been developed by WorkSafe Victoria to assist those involved at every step in the waste-chain. Our goal is to provide people who handle waste occupationally with information so that they may better manage potentially hazardous waste from a health and safety perspective. The document aims to provide guidance for waste producers, transporters, receivers and waste treaters on how to manage waste safely where and when it is produced. This guide then describes the steps required to maintain safe conditions for transport and treatment activities.

The Aim of This Guide

The advice in this guide aims to simplify actions employers can take to meet some of their legal requirements in providing a safe working environment. It has been developed for people who deal with waste at their own workplace and at sites undertaking downstream processes.

It is important for those involved in waste management to realise the twofold benefits of following industry guidelines: safety and commercial advantage. The results will not only mean a safer work environment. Workplaces that effectively manage their waste may also experience cost savings resulting from less waste being produced, minimisation of hazardous waste that needs expensive disposal methods, lower waste disposal costs, and more efficient waste handling processes.

This document is applicable for both the OHS management of hazardous wastes, and is also relevant to those waste streams classified by the EPA as Prescribed Wastes.

With effective waste management Victorian employers can gain health and safety benefits, environmental benefits and commercial benefits. Responsible workplaces not only look after their employees and their physical surrounds; they can minimise waste produced and the costs associated with its disposal.
WHAT ARE THE LEGAL ISSUES?

All parties associated with the storage, transport and treatment of waste have responsibilities under Victorian WorkCover Authority and Environment Protection Authority legislation. The Victorian Occupational Health and Safety Act 1985 requires employers to provide, as far as practicable, a working environment for employees that is safe and without risk to health. This responsibility also extends to the management of waste.

Employers also have a legal duty to provide adequate information about any substance supplied for use at a workplace, to enable that substance to be used safely and without risk to health. Again this requirement applies to waste.


Acts and regulations are available from Information Victoria. Phone 1300 366 356 or order online at www.bookshop.vic.gov.au.

HOW TO USE THIS DOCUMENT

This guide has been divided into three sections which describe the stages involved in production, transport and receipt of commercial and industrial waste. Information has been grouped for waste producers, waste transporters and waste receivers/treaters.

Each section provides practical guidance on how to assess any waste handling risks and provides a series of steps for minimising these risks. Information includes:

- An outline of your responsibilities;
- An examination of what wastes are involved, their potential risks, and ways to protect people, property and the environment;
- Flowcharts which track the waste production and transport process; and
- A helpful checklist of dos and don’ts.

You only need to refer to the section of the guide that applies to your activities. Appendices are cross-referenced in the final section. They contain sample forms, a checklist and practical examples that have been designed to assist workplace groups involved with waste.
AN OVERVIEW

The table below demonstrates the three groups involved in waste handling:

1. Waste producers;
2. Waste transporters; and

Key issues for each group are covered on the pages indicated. Remember, you only have to read the section which explains your responsibilities and helps identify your best methods of risk management.

<table>
<thead>
<tr>
<th>1. WASTE PRODUCERS</th>
<th>2. WASTE TRANSPORTERS</th>
<th>3. WASTE RECEIVER/TREATERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>You need to consider:</td>
<td>You need to consider:</td>
<td>You need to consider:</td>
</tr>
<tr>
<td>Could my generated waste hurt people, property or the environment? [See page 8]</td>
<td>Could the waste I transport hurt people, property or the environment? [See page 14]</td>
<td>Could received or generated wastes hurt people, property or the environment? [See page 22]</td>
</tr>
<tr>
<td>How do I protect people, property and the environment from these wastes? [See page 9]</td>
<td>How do I protect people, property and environment during transfer and transport? [See page 16]</td>
<td>How do I protect people, property and environment at the treatment facility? [See page 22]</td>
</tr>
</tbody>
</table>

KEY QUESTIONS

At each stage of the waste chain, employers have a major responsibility to keep their staff and other people safe from the dangers which can be associated with waste.

Preventing danger means asking these key questions:

1. What wastes are you dealing with?
2. Could these wastes damage anyone or anything?
3. How can I best protect people, property and the environment from these waste products?

No matter which stage of the waste chain you are involved in, this guide outlines a series of practical and straightforward steps to follow in order to minimise any handling risks.
SUMMARY OF RESPONSIBILITIES

If you are a producer of waste, you have a responsibility to ensure your waste does not hurt people at your workplace or those who come into contact with it when it leaves your workplace, and does not destroy or pollute property and the environment. You should therefore take precautions to make sure your waste is stored, handled and transported as safely as possible. This duty of care also includes assessing your waste and providing information to your employees and those who pick up your waste, and transport it to a facility for treatment and/or disposal.
You only need to do a comprehensive review of the waste you produce once, and then again whenever you change your raw materials or processes. The steps outlined here link with the appendices specified to give you a practical guide on how to safely manage waste you are producing.

WHAT WASTES AM I PRODUCING?

As the waste producer, your first step is to identify what wastes you produce.

This section will help you to identify and record these by examining:

- Where your wastes comes from;
- The form of those wastes;
- What is in the wastes; and
- How to record and label your wastes.

You only need to do this review once, and thereafter only whenever you change your raw materials or processes.

To begin, study your workplace and your waste, and record information that you have in the Waste Record Sheet in Appendix 1. This record sheet can also be used for label and transport information.

The sample sheet is not a legal requirement – you can use any type of format you like to provide health and safety information on your waste. The EPA however, has legal requirements for transporting prescribed wastes which you should be aware of (Appendix 7, Reference 10).

Use the table below to help identify wastes you produce, where those wastes come from, what comprises them and which types of safety information you can access.

### WASTE PRODUCTION REVIEW

<table>
<thead>
<tr>
<th>What wastes do you produce?</th>
<th>Gases? Do you see fumes or smell anything when first entering the work area? If so, determine the source and record as a waste. If you have ventilation systems check what happens to any gases collected by them.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>For wastes discharged to the environment via chimney stacks, EPA air discharge requirements are established in the State Environment Protection (Air Quality Management) Policy and licensing of air discharges under the Environment Protection (Scheduled Premises and Exemption) Regulations 1996.</td>
</tr>
<tr>
<td></td>
<td>For further information regarding discharges to the environment consult your local EPA office, industry association or for a site audit contact an environmental consultant.</td>
</tr>
<tr>
<td></td>
<td>Liquids? Are waste liquids collected from work areas? If so, record each as a separate waste.</td>
</tr>
<tr>
<td></td>
<td>Sludges? Do you need to remove settled solids from tanks, vats or other vessels, or generate thick wastes during cleaning? If so, record each as a separate waste.</td>
</tr>
<tr>
<td></td>
<td>Dusts? Do you need to sweep the work area often or have extraction equipment operating? If so, determine the source of the dust and record each as a separate waste.</td>
</tr>
<tr>
<td></td>
<td>Solids? Are there solid wastes collected in the work area? If so, record each as a separate waste. This will include material collected in a filtering operation. The classification of solids collected within filters needs to be reviewed with the details of the liquids as well as the solid. Treat the filter solids according to these guidelines. Manual filter cleaning may pose high-risk exposure activities for respiration, eye and skin contact.</td>
</tr>
<tr>
<td></td>
<td>Contaminated packaging? Is there packaging contaminated with chemicals in the workplace? If so, record each as a separate waste.</td>
</tr>
</tbody>
</table>

Each waste identified requires a description. This can be recorded on the Waste Record Sheet in Appendix 1 on page 26 of this guide. Discharges to sewer may also be problematic and should also be identified. Also identify any wastes such as oils, paints, solvents, cleaning agents, diesel and petrol products, lubricants, pesticides, contaminated equipment, spilt product, excess product, and mixed chemical residues from processing.
# SECTION 1: ISSUES AND INFORMATION FOR WASTE PRODUCERS

## WASTE PRODUCTION REVIEW (continued)

### Where does your waste come from?
- Process upsets
- Pollution control processes
- Cleaning/maintenance
- Product wastage
- Product testing
- Packaging

Cutting or grinding of product may generate dusts that are hazardous when airborne in the workplace. These are also types of wastes and should be recorded as product wastage in the Waste Record Sheet.

Wastes from cleaning and maintenance work can be different from normal production wastes and therefore require separate record sheets.

Review each production area and seek input from area operators.

Dusts from benign materials such as flour, cement, sand, wood may become either explosive or hazardous under workplace conditions. Wet cement may contain Cr\textsuperscript{6+}, and grinding will generate dust laden with crystalline silica. Wood dust contains possible carcinogens and flour and coal dust can be explosive under certain conditions. It is important these hazards are identified in your workplace and when you dispose of them.

For all newly-identified wastes complete Waste Record Sheet (Appendix 1).

### What ingredients make up your waste?
For each waste you have identified you need to find out what ingredients are in that particular waste. To identify the ingredients, look at the raw products that go into the process that produces the wastes. Locate the labels and MSDS (Material Safety Data Sheets) for each of the raw products. If you have a process chemist on-site ask for information on any waste substance that may be produced as a result of two or more ingredients coming together.

Record information on the substances/ingredients that make up the waste on the relevant Waste Record Sheet.

### What safety information do you have?
- Raw material MSDSs [Material Safety Data Sheets]
- Material MSDSs
- Raw material labels
- ADG code [Appendix 7, Reference 3]
- Information on ingredients from NOHSC Internet site [Appendix 7, Reference 8]
- Information on ingredients from List of Designated Hazardous Substances [Appendix 7, Reference 8]
- Process chemist
- Other: ___________________________________________________ (please specify)

Ensure the correct name of the material is extracted from the packaging label and is used for identification.

MSDS and label information is the basis for assessing risks of your waste. If you do not have this information contact your supplier or the manufacturer or importer and they will forward the relevant MSDS to you.

**Material Safety Data Sheets, known as ‘MSDSs’, are required for all dangerous goods and hazardous substances. Manufacturers, importers and suppliers are obligated to forward an updated MSDS to you on or before purchasing a product/ingredient.**

Ensure relevant MSDSs are on file and readily available to the workforce.
COULD MY GENERATED WASTE HURT PEOPLE, PROPERTY OR THE ENVIRONMENT?

Now that you have identified and recorded each of the wastes produced on your site, the next step is to assess any potential health and safety hazards so that you can protect the people who have to work with the waste. This includes the people who transport and treat the waste.

Hazards to look for include possible health effects (both short and long term) and whether any of the waste ingredients can catch fire, explode, corrode, spontaneously combust, react with water; or are toxic to people, animals or the environment; or are perhaps incompatible and require a specific separation distance from other material types. MSDS and label information should provide this type of information. You should also look for any manual handling risks (i.e. risks from lifting or moving waste or waste containers) that may be present.

Wastes that come from raw materials that are hazardous substances or dangerous goods are more than likely ‘hazardous’ wastes and should be treated as such. You need to assess each waste individually and determine if it is a potentially hazardous waste. You also need to determine if the way you collect, handle, store and dispose of the waste is creating a potential risk for people, property and the environment. The questions below will assist you when determining this.

Each identified waste on your Waste Record Sheet needs a separate assessment. The following questions will help your investigation. Record this information on the Waste Record Sheet and make this available for workers, waste transporters and off-site storage/treatment/disposal facilities.

1. Does the collected waste information indicate any of the following?
   - Harmful to health if swallowed, inhaled, contact with skin or eyes, or injected?
   - Flammable?
   - Corrosive?
   - Oxidising?
   - Spontaneously combustible?
   - Explosive?
   - Water reactive?
   - Toxic?
   - Incompatible with other materials?

   If you answer yes to any of these, then you are dealing with a potentially hazardous waste and you need to ensure safety measures are in place. Record this information in the Waste Record Sheet and give it to waste transporters and treatment/disposal facilities as handling instructions.

2. Do process changes affect the potential hazards associated with the wastes?

   The use of the raw material in a process may change the hazards of the material and therefore the waste generated. A by-product or intermediate may have different hazards and the handling risks should therefore be evaluated separately.

   Evaluation may be complicated. When in doubt consult a plant chemist, supplier technical support or an industry association.

3. Is there any evidence in the workplace of leaks, spills, odours, fumes or dust?

   If so, then you need to implement better safety measures to eliminate or reduce any risks.

4. Is the waste stable or are there circumstances to be avoided with collection and storage?

   Look to see if the collected waste information indicates any special handling issues such as:
   - Isolating from sparks, matches, naked flames, electrical equipment etc.
   - Protection from moisture, heat or shock.
   - Keeping the substance away from incompatible materials or wastes.

   If so, ensure all equipment installation and operating instructions explain the precautions required. You must also ensure all operators are aware of the hazards through appropriate training and instruction.
### SECTION 1: ISSUES AND INFORMATION
FOR WASTE PRODUCERS

**HOW DO I PROTECT PEOPLE, PROPERTY AND THE ENVIRONMENT FROM MY WASTES?**

**DOs**

| **Use the hierarchy of control.** | Eliminate the hazardous waste material by:  
- Replacing with a non-hazardous or less hazardous alternative if available  
- Recycling or re-using on-site where possible  
- Minimising the generation where possible  
- Isolating any waste material produced |
| **Review the use of hazardous raw materials on-site. Aim to replace hazardous substances with less or preferably non-hazardous material.** | The use of less-hazardous material will generally reduce risks to people and property, and reduce the costs of equipment to control risks. |
| **Recycle on-site where practical.** | The fewer dangerous goods on-site, the lower the risk of an adverse event occurring. |
| **Know the quantity of waste stored on-site and maintain minimal stock.** | Make separate storage areas for waste away from the work area, raw materials, people and incompatible materials (Appendix 7, Reference 5). Ensure the storage area capacity is not exceeded. Double handling of wastes should not occur. For waste collection, use containers that are appropriate for both storage and safe transport to a treatment facility. Where a waste contains Dangerous Goods then an approved storage container is required. Generally an open-top drum fitted with a lid and Dangerous Goods approved locking ring is required. Consult the Australian Dangerous Goods Code (available from the Australian Government Info Shop, phone (03) 9670 4224 for guidance. |
| **Clearly label the collected waste with the waste name, origin, waste risk statements, and contact details.** | Refer to the sample label in Appendix 6 on page 31 of this guide. Labelling allows simple identification of the container’s contents without having to open a sealed unit and test the contents. Labels should be weatherproof and permanently secured to each individual package/container. Potentially hazardous wastes generally exhibit similar hazards as their ingredients but cannot be confirmed in most workplaces. They therefore require general hazard statements such as one or more of the following:  
- May be harmful to health if breathed in, swallowed, or skin or eye contact occurs  
- May be flammable  
- May be corrosive  
- May be explosive  
- May be subject to spontaneous combustion  
- May be water reactive  
- May be an oxidiser  
- May be toxic  
- May be harmful to the environment  
If any of these precautions are indicated on the raw material label, then you need to assume the waste exhibits the same hazard and record these on the label and in the information provided to waste transporters and treatment facilities. Include as much information as you have available that is applicable. If you have classified the waste material under NOHSC guidance (Appendix 7, Ref 1) then use the appropriate risk and safety phrases. |
### DOs (continued)

**Minimise safety risks (and operational costs) by segregating incompatible wastes.**
- Separate liquids from sludges, pastes, dusts and other solids
- Separate dusts from all other waste forms
- Separate water soluble materials from hydrocarbons (e.g. oil from water)
- Separate chlorinated solvents from non-chlorinated hydrocarbons (e.g. perchloroethylene from oil)
- Separate acids from alkalis
- Separate flammable material from non-flammable material
- Separate contaminated packaging from clean packaging
- Separate recyclable packaging from non-recyclables

Waste disposal costs include materials, labour, machine time, storage, transport and treatment components. Segregation of waste reduces risks when the waste is treated and should reduce the cost of treatment. Use equipment, isolation or administrative procedures to segregate wastes.

Note: It is easier to consider re-using and recycling options when materials are segregated.

| Store only in sealed and secure containers on impermeable surfaces, preferably undercover in an isolated bunded area. Store so that labels are visible. | • Separate liquids from sludges, pastes, dusts and other solids
- Separate dusts from all other waste forms
- Separate water soluble materials from hydrocarbons (e.g. oil from water)
- Separate chlorinated solvents from non-chlorinated hydrocarbons (e.g. perchloroethylene from oil)
- Separate acids from alkalis
- Separate flammable material from non-flammable material
- Separate contaminated packaging from clean packaging
- Separate recyclable packaging from non-recyclables |
| Prevent spills and leaks from entering the environment. | Waste materials must be prevented from entering the soil or stormwater systems. |
| Ensure regular maintenance checks on any safety equipment associated with waste handling, storage or transport. | Problems associated with spills and leaks are often due to the lack of maintenance on safety or collection equipment. Regular maintenance will significantly reduce the occurrence of hazardous wastes entering the workplace unintentionally. |
| Train your employees in the safe handling of the waste materials. | Employees should be aware of safety precautions to be taken to reduce exposure to potentially hazardous waste. |
| Ensure operating procedure instructions and training are provided and followed. | |
| Include the waste production and collection actions in standard operating procedures. | The standard operating procedure for a process should address safe waste handling including the risks to health. |
| Use simple hygiene rules and don’t ignore work areas with spills, dust and rubbish on floors and bench tops. | |
| Use appropriate personal protection equipment (PPE) such as gowns, masks and gloves. | |
### SECTION 1: ISSUES AND INFORMATION FOR WASTE PRODUCERS

#### SAFE HANDLING OF INDUSTRIAL WASTE

- **KEY CHECKLIST DOS**
  - Eliminate wastes.
  - Isolate wastes.
  - Label wastes.
  - Separate wastes.
  - Train staff.
  - Conduct regular maintenance checks on equipment and containers used in handling, storing and transporting waste.
  - Practise commonsense hygiene.
  - Recycle on-site.

- **KEY CHECKLIST DON'TS**
  - Don’t allow employees to breathe in potentially hazardous waste gases or fumes.
  - Don’t allow potentially hazardous wastes to come into contact with employees’ skin or eyes. Where practicable, put safety measures in place to stop this occurring. Use suitable gloves and goggles if required.
  - Don’t store unlabelled packages.
  - Don’t store wastes in leaking or unsealed containers, or containers in poor condition such as rusty or old drums.
  - Don’t introduce a new material without a review.
  - Don’t mix wastes of different origin.
  - Don’t add rags to liquid or sludge waste.
  - Don’t dispose of potentially hazardous waste including contaminated packaging to commercial waste bins.
  - Don’t fill transport containers more than 90%.
  - Don’t leave old and incorrect labels on waste drums/containers.

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</tr>
</tbody>
</table>
SAFE HANDLING OF WASTES: WASTE PRODUCER REQUIREMENTS

Is the use/generation of hazardous Substances, dangerous goods, prescribed industrial wastes formally recognised?

NO

Review raw materials and product listing for hazardous substances listing. Ensure MSDS information is available for all materials. Review operating instructions for inclusion of handling of waste materials.

YES

Has a hazardous substances replacement evaluation indicated safer alternatives?

NO

Replace hazardous substance with non-hazardous substance or low hazard material.

YES

Has a risk assessment of the use of hazardous materials addressed the generation of waste and its handling?

NO

Complete risk assessment on any waste materials.

YES

Has there been included in the operating procedures the recording, minimisation, segregation, safe collection, identification, labelling, safe storage and removal off-site of hazardous wastes?

NO

Is risk assessment and MSDS information updated and available to all workplace personnel, waste transporters and treaters?

YES

Make available in the workplace all risk assessment, MSDS and EPA waste transport certificate information and every review/update that is undertaken.

NO

Develop a training program that addresses the interpretation of MSDS information, use of control equipment, segregation and compatibility of waste materials and labelling and disposal of wastes.

YES

Is there a training program that indicates hazards associated with wastes and indicates relevant reference activities?

NO

Update procedures to include waste minimisation activities, safe storage and handling activities and correct labelling activities.

YES

Is there a training program that indicates hazards associated with wastes and indicates relevant reference activities?
SUMMARY OF RESPONSIBILITIES
As a transporter of waste, you have a responsibility to ensure your load does not hurt people who come into contact with it at workplaces or as it travels on private or public roadways. Likewise, you have a duty to ensure your loaded vehicle does not discharge to the environment during transfer and transport. Precautions, therefore, must be taken to ensure the waste is handled and transported as safely as possible. This process also includes assessing the waste in relation to transfer equipment, the vehicle construction, possible incompatibilities from prior loads, and providing information to your employees and those who receive the waste for treatment and/or disposal.
Waste transporters should review each load of waste carried. A systematic approach is suggested so that the assessment is efficiently completed and becomes automatic. Particular care must be shown where information on a hazardous or potentially hazardous waste material indicates incompatibility with other materials or storage conditions.

The following steps will guide you on how to assess and manage transported waste safely.

**WHAT WASTES AM I MOVING?**

The transport of waste materials can be a high-risk activity for the driver, vehicle, public and the environment if the information about the waste being transported is not available, is not up-to-date or is inaccurate.

Importantly, a waste transporter must only allow material to be transferred to a vehicle when it is known the waste can be transported safely under all conditions and when an acceptable destination for the material is confirmed.

To understand the transport requirements for a waste material, the waste information must be reviewed prior to acceptance of the work.

Waste transporters are responsible for placarding vehicles to identify the type of waste being transported. The symbols, like the labels on hazardous waste containers, allow emergency service workers such as ambulance officers, fire fighters and police to immediately identify the potential hazards in case of an emergency.

**COULD THE WASTE I TRANSPORT HURT PEOPLE, PROPERTY OR THE ENVIRONMENT?**

The following information should be supplied by the consignor or waste producer and should be reviewed by the transporter prior to committing to the transport.

*What information do you have for each type of waste being transported?*

- MSDSs for waste or ingredients (if available)
- Waste description and origin
- Producer handling instructions
- Emergency procedure guide
- Material health hazard information
- Material incompatibility information
- UN number (if applicable)
- DG class (if applicable)
- Packaging group (if applicable)
- EPA Waste Code (if applicable) (Appendix 7, Reference 10)

*If the above information cannot be supplied and the material is not known, it should not be handled or transported until information can be obtained.*

It is the role of the waste producer to supply the information not the transporter. This information is necessary to identify the waste material for transport and helps assess risks during transport.

The following will guide you through the assessment steps.

1. **Does the waste information indicate any potential health effects and indicate how operators may be exposed?**

Drivers must be made aware of both acute and chronic effects if exposed to the waste. They must also understand the steps to minimise the exposure.

Ideally the driver must have training in the common symptoms associated with generic chemical groups so that recognition of high-risk exposure can be identified. The use of personal protective equipment is the most efficient mechanism to protect a driver during transfer; however, other higher order safety measures should still be considered and implemented where practicable.
2. Does the safety information indicate any special precautions to be undertaken regarding incompatible materials?

Violent reactions can occur if incompatible materials are mixed. Ensure the MSDS and safety information indicates those materials that are incompatible.

Possible vehicle contamination from a previous load or pick-up may present an extreme hazard. The vehicle running sheet should record previous load types. This should be checked along with the load content and any incompatible materials segregated. The vehicle should be cleaned following each delivery.

Ensure materials of the same class are compatible. The individual transport requirements of nitric, sulphuric and hydrochloric acids are different and may be incompatible with the vehicle materials of construction.

Fittings on hoses and valves on vehicles may be of different materials than the vehicle. Be aware of the incompatible situations for these materials. (e.g. Do not use aluminium fittings with caustic soda.)

The decision to clean out the transport vehicle must be made following a risk-based assessment. Where a hazard and operations evaluation indicates the waste transport vehicle has not contained any incompatible materials relative to a proposed load, it will be acceptable to forgo a clean-out before transferring the next load on to the vehicle.

CLEANING OF WASTE TRANSPORT VEHICLES

Bulk liquid waste transporters should endeavour to pre-arrange any tanker clean-out by the waste treatment facility receiving the load. For aqueous wastes transported to a treatment plant, a complete washout with water should follow unloading. (Commercial and operational arrangements need to be confirmed with the waste receiver and waste producer at the planning stage and not at the time of delivery.)

For deliveries of non-aqueous wastes in bulk where a water washout is not appropriate or available at the treatment facility, off-site cleaning of the road tanker should be arranged with a commercial bulk tanker/container laundering operation prior to the use of the vehicle for other waste materials. (EPA waste transport certificates are not required for tanker residues but waste producer/transporter safety information should be passed on to the cleaning operator.)

It is very important to review the clean-out requirement implications for safety and the environment, as these may be different than for the waste materials. (e.g. The use of steam for cleaning hydrocarbon based materials may cause odour and significant contaminant loadings to sewer discharge, or flammability, etc.)

Note: Never enter a road tanker for any purpose unless fully supervised and following all the confined space requirements. This includes the procedure for tanker isolation. Enter a confined space only when using appropriate PPE, following training and ensuring all equipment required has been checked for operational serviceability (Appendix 7, Reference 13).

3. Does the safety information indicate a risk to the community if a leak or spill occurs during transportation?

Drivers must be given information on what to do if a leak or spill occurs during transportation. Information on potential damage to people, property and the environment should be provided.

Once transport requirements are understood and the necessary precautions are in place, the destination of the materials must be confirmed by the waste transporter. Each receipt facility has its own acceptance requirements and these conditions need to be understood prior to delivery.

When planning has been completed, the movement of the waste should be reviewed at the waste producer’s premises.
HOW DO I PROTECT PEOPLE, PROPERTY AND THE ENVIRONMENT DURING TRANSFER AND TRANSPORT?

Safe transport of waste means the condition of the packages and/or the road tanker are fit for road transport under all likely transport conditions at all times. As a waste transporter you must ensure that the waste transport vehicle and the transported load complies with all the requirements of any transit state road transport regulations, the vehicle has a current permit for the transport of the waste materials, is capable of transporting the material to its destination without incident, and that it can be unloaded without issue at the load destination.

Driver responsibility is an essential factor in the proper and safe handling and transport of waste. As an employer, you must ensure the driver has enough information to make the final decision on the transport activity. The following points should assist this process.

DOs

- **Ensure driver training has been completed.** All drivers should be trained in MSDS interpretation, hazardous substances, dangerous goods, EPA requirements, emergency procedures and incident evaluation. This should include the methodology to evaluate the suitability for packaged materials to be transported safely; and what to do if a spill, leak or incident occurs.

- **Ensure an emergency procedure guide is available within the vehicle for all transportation activities.** It is a legal requirement to have an emergency procedure guide if transporting dangerous goods.

- **Ensure the condition of the vehicle and associated equipment can allow safe and effective transfer at the producer site and during transit.** Appropriate lifting equipment for drums and containers may reduce risks from containers being dropped or punctured and subsequently leaking. It may also reduce sprains and strain injuries. Segregation and emergency equipment should be checked regularly.

- **Ensure appropriate vehicle placarding if wastes that can be classified as Dangerous Goods are being transported.** Refer to the ADG Code for placarding requirements. EPA Prescribed Waste requirements (Appendix 7, Reference 7) must also be met where applicable.

- **Separate incompatible waste materials from each other.** Refer to waste information and relevant Australian Standards for advice on what substances to separate. For example, separate organics from oxidising agents.

- **Ensure the driver understands the transport quality standards that are to be met.** Transport quality standards must include packaging and pallet condition. This includes considering cleanliness and integrity for unacceptable load conditions. The driver should have the final right of approval for transport where health and safety issues are concerned.

- **Use the PPE specified in the MSDS or safety information supplied.** Check PPE regularly to ensure it is available, working adequately and being used correctly by the driver.

- **Ensure that the driver is familiar with the receipt procedure at the treatment or storage facility.** (Appendix 7, Reference 5).

- **Ensure the transport vehicle is fitted with all DG installations and fall protection equipment if applicable.**

- **Ensure the transport vehicle is in a clean and presentable condition and has been regularly maintained.**

- **Ensure the driver is working within the mandatory work hours for local and regional deliveries.** Fatigue will play a major role in the increased risks for incidents during transportation. VicRoads has issued an information bulletin to address the questions associated with the requirements for local driving times (Appendix 7, Reference 11).
Transport employers should inform drivers of their rights and responsibilities when picking up waste for transport. Ensure drivers are aware of the following precautions:

### DOs (continued)

<table>
<thead>
<tr>
<th>Undertake an on-site assessment of the waste prior to vehicle loading and confirm the health and safety risks, the DG labelling details, the EPA labelling details, the EPG availability, the DG placarding, the EPA transport certificate details, the pack condition and the requirement for segregation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>To assist the process a load checklist is included in Appendix 3.</td>
</tr>
<tr>
<td>Refuse to transport if the waste material is unknown or in a condition that may give rise to an incident during transport such as a leak or spill.</td>
</tr>
</tbody>
</table>

### DON'Ts

- Don’t transfer a material without knowledge of its health and safety hazards.
- Don’t transfer a material without knowing its material incompatibility and how to transport it safely.
- Don’t transfer a potentially hazardous material without the correct PPE and other safety measures.
- Don’t load dirty or damaged drums, pallets or packaging.
- Don’t transport without DG, EPA transport paperwork where applicable.
- Don’t transport a load that is not correctly labelled or placarded.
- Don’t transport without confirmation of acceptance from treatment or storage facility.
- Don’t transport if you are not sure what to do if an emergency occurs such as a spill, leak or accident.

### KEY CHECKLIST DOS

- Ensure driver training has been completed.
- Ensure an Emergency Procedure Guide is available within the vehicle for all transportation activities.
- Ensure the condition of the vehicle and associated equipment is safe for transport and delivery.
- Ensure appropriate vehicle placarding of wastes.
- Separate incompatible waste materials from each other.
- Ensure that the driver is familiar with the receipt procedure at the treatment or storage facility.
- Refuse to transport if the waste material is unknown or may leak or spill during transport.

*Please note: Placarded loads of dangerous goods are not permitted in all tunnels. For more information call 13 26 29.*

### KEY CHECKLIST DON'TS

- Don’t transfer a material if you are unsure about its hazards.
- Don’t transfer a material without knowing its material incompatibility and how to transport it safely.
- Don’t transport a load that is not correctly labelled or placarded.
- Don’t transport without confirmation of acceptance from treatment or storage facility.
SAFE HANDLING OF WASTES: WASTE TRANSPORTER REQUIREMENTS

Liaise with consignor for material details for every load of material.

**Does vehicle meet roadworthy conditions and is it EPA permitted?**

- **NO**
  - Obtain EPA permit for material and ensure compliance with conditions and roadworthiness.

- **YES**
  - Formalised driver workplace training completed and recorded.

**Is driver trained in MSDS, dangerous goods, hazardous substances and EPA transport requirements?**

- **NO**
  - EPA training required to be formalised every three years.

- **YES**
  - Obtain EPA permit for material and ensure compliance with conditions and roadworthiness.

**Has delivery of material to treater been confirmed?**

- **NO**
  - Liaise with consignor for alternative treatment site.

- **YES**
  - Driver to review MSDS information, manual handling requirements, material compatibility warnings, personal protective equipment use and chemical exposure routes.

**Has driver read MSDS or waste handling advice including compatibility, safety and risk phrases?**

- **NO**
  - Driver to review MSDS information, manual handling requirements, material compatibility warnings, personal protective equipment use and chemical exposure routes.

- **YES**
  - Ensure driver is aware of correct manual handling, use of personal protective equipment and chemical exposure route.

**Is driver personal protective equipment adequate?**

- **NO**
  - Supply appropriate training and personal protective equipment.

- **YES**
  - Ensure driver is aware of correct manual handling, use of personal protective equipment and chemical exposure route.

**Is truck spill kit, EPG and placarding appropriate?**

- **NO**
  - Confirm spill treatment activity with consignor and obtain necessary support and accurate EPG and placard information.

- **YES**
  - Ensure appropriate labelling and packaging.

**Does driver have all contact and pick-up details including emergency contacts?**

- **NO**
  - Incorporate all delivery and contact details on consignment paperwork.

- **YES**
  - Liaise with treater, obtain EPA Schedule 4 licence copy.

**Has driver been inducted in site procedures at generator and treater sites?**

- **NO**
  - Liaise with treater, obtain EPA Schedule 4 licence copy.

- **YES**
  - Ensure appropriate labelling and packaging.

**Driver reviews packaging and labelling of goods and elects to transport where safe.**

- **NO**
  - Ensure appropriate labelling and packaging.

- **YES**
  - Undertake pick-up and delivery under consignor direction; clean out transport vehicle as risk assessment indicates.
SUMMARY OF RESPONSIBILITIES
Waste treaters offer a treatment, re-use or disposal service for waste materials that in general are a hindrance or of little importance to waste producers. As a commodity, the waste material is a liability and therefore the minimum value-adding effort by the producer should generally be expected. It is for this reason that caution be observed prior to the agreement of a treater to receive a waste material. To minimise health and safety risks, waste treaters should work with waste producers to appropriately define and classify waste materials.
The Occupational Health & Safety Act requires employers including waste treaters/receivers to supply information, instruction and training and risk assessments for all materials presented at the workplace. For waste materials a generic material type assessment and safe handling information sheet should be generated by the waste treatment facility site chemist or management (Appendix 3). This type of information should classify in general terms, the risks associated with the material class. Waste treatment facilities are licensed by the EPA to treat specific waste materials by a specific treatment method. Materials accepted for treatment are therefore generically understood and any subsequent waste produced is also generally known.

The information supplied by a waste producer [refer to Appendix 2] is critical to a review and subsequent generic classification. Information gathered in steps previously described in these guidelines should form the basis for material classification by the waste treater.

**GENERAL PROCESS BY WASTE TREATER**

*Typically a waste treater should classify a waste the first time a customer presents the waste and at regular intervals thereafter. The classification may be via a pre-delivery assessment (see Appendix 4 on page 29 of this guide) and should aim to give employees confidence to receive and handle the waste. The assessment should be completed with reference to a sample and information supplied from the waste producer.*

*The waste treater may elect to reject a load of waste if the treater assessment of the presented materials varies from the pre-delivery assessment.*

These notes aim to improve the transfer of information from the generator to the treater by describing the needs of all parties.

The following table summarises the actions that a waste treater should complete in order to reduce the health and safety hazards in handling and treating waste materials at the treatment facility.
## SECTION 3: WASTE RECEIVER/TREATMENT
### ISSUES AND INFORMATION

### SAFE HANDLING OF INDUSTRIAL WASTE

**Identify the properties of the waste received.**

How do you know the properties of the waste received? Is it because of:

- On-site sample analysis?
- Off-site sample analysis?
- Producer MSDS?
- Producer information?
- Waste previously received and treated on-site?
- Producer explanation of the waste generating process?

An on-site assessment is the best method to establish the acceptability of a waste material. Contact the facility chemist who understands the site's activities and analytical results and make sure they evaluate the waste using their skills and experience. Off-site analysis is usually test result focused and therefore may not report side effects for handling. To classify the waste, use the on-site evaluation and the producer information and record this information (refer to Appendix 4 for Waste Treater Pre-delivery Checklist).

**Ensure for each waste type treated there is a generic safety and handling information sheet.**

Check generic safety and handling sheets are available for waste types. These may include the following:

**Non-Hydrocarbons:**
- Mineral acids, organic acids, alkalis
- Cyanides, toxic salts, pesticides
- Perchlorates, reducers, oxidisers, reactive wastes
- Washwater, waste residues
- Medical wastes, cytotoxics, pathogenic wastes
- Radioactive wastes, carcinogenic wastes
- Inert wastes, putrescible waste

**Hydrocarbons:**
- Flammables, combustible wastes
- Halogenated waste, non-halogenated waste
- Scheduled wastes

**Classify on-site wastes generated from treatment activities.**

For each individual category licensed there should be a waste data sheet developed with similar information as contained in an MSDS. This should be available in the workplace (refer to Appendix 5 for example of a generic waste information sheet).

Check wastes generated from treatment activities are classified by either:

- On-site quality control process sample analysis
- Off-site quality control process sample analysis

The materials generated through waste treatment could be hazardous materials. A generic safety information sheet should be produced by the facility chemist for treatment intermediates and products. Waste producer record sheets (Appendix 1 and 2) will aid the assessment.

**Evaluate every delivery to the facility.**

Is every delivery to the facility evaluated by:

- On-site confirmation testing?
- Off-site confirmation testing?

At the time of receipt the delivery must be sampled and confirmed to be as expected. Ensure quick turnaround testing and/or storage isolation until test results are available.

*Note: Representative sampling is often difficult to obtain from a vehicle load.*
COULD THE RECEIVED OR GENERATED WASTES HURT PEOPLE, PROPERTY OR THE ENVIRONMENT?

All materials received at a waste treatment facility have a potential to hurt people, property or equipment and will pose a major risk to the environment if not processed appropriately.

Waste materials and associated hazards should be known prior to receipt if the acceptance procedures described in the previous section have been followed. The treatment plant operating procedures should have advised the materials receipt personnel of the incoming materials and their generic description prior to their arrival at the site.

Receipt activities should confirm the incoming materials are as expected. The site chemist at the time of receipt must confirm the pre-delivery evaluation and the extent the received materials may affect site personnel, plant and equipment.

HOW DO I PROTECT PEOPLE, PROPERTY AND THE ENVIRONMENT AT THE TREATMENT FACILITY?

### DOs

| Have available prior to receipt of a waste material type. | Make sure you have:  
1) Generic safe storage, handling and treatment information including any risk assessments.  
2) Generic class training programs for the handling and treatment of the material.  
If the information is not available, serious safety issues could arise particularly where a facility may receive multiple DG classes or have restrictive storage requirements (refer to Appendix 5 for an example generic safety information sheet). |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Have available historical information in relation to previously handled generic class material.</td>
<td>The reference to the historical information particularly from the specific customer is very helpful from a production and safety perspective. A readily accessible database system can generate the required information.</td>
</tr>
<tr>
<td>Have necessary control equipment available, operational, performance monitored and maintained.</td>
<td>Particular waste materials require specialised control equipment such as vapour capture systems.</td>
</tr>
<tr>
<td>Ensure the received and generated waste has been class confirmed, formally accepted and recorded in the inventory records, correctly labelled and stored in a designated area prior to handling.</td>
<td>Confirmation of the accepted waste class allows the referenced safety issues to be implemented.</td>
</tr>
</tbody>
</table>
| Ensure labelling includes the associated risk and safety phrases where applicable. | If waste is classified according to NOHSC criteria (Appendix 7, Reference 1) then use the appropriate risk and safety phrases. If not then use general risk statements where applicable such as:  
• May be harmful to health if breathed in, swallowed, or skin or eye contact occurs  
• May be flammable  
• May be corrosive  
• May be explosive  
• May be subject to spontaneous combustion  
• May be water reactive  
• May be an oxidiser  
• May be toxic  
• May be harmful to the environment |
| Ensure when handling the waste class, the following is available. | • Standard operating procedure including the use of control measures and PPE  
• Emergency incident training program  
• Employee monitoring where relevant |
**KEY CHECKLIST DOS**

- Have information and documentation in order and up-to-date.
- Ensure that staff have been appropriately trained.
- Have control equipment properly monitored and maintained.
- Ensure the waste has been class confirmed, formally accepted and recorded in the inventory records, correctly labelled and stored in a designated area prior to handling.
- Ensure labelling includes the associated risk and safety phrases where applicable.

**KEY CHECKLIST DON’Ts**

- Don’t receive waste on-site without prior material classification and delivery notification.
- Don’t process waste until approved by the Site Chemist.
- Don’t process waste unless the material safety information has been issued by the Site Chemist.
- Don’t process waste without the standard control measures operational and all PPE is available and in good working order.
SAFE HANDLING OF WASTES: WASTE RECEIVER/TREATER REQUIREMENTS

Pre-delivery
- Obtain customer details, representative sample of waste, MSDSs of waste/raw materials and material volume and pack details.
- Assess dangerous goods, health and safety and hazardous substances requirements, class segregation, labelling, fixed control measures, handling procedures, risk analysis and training against current site levels and standards.
- Implement workplace actions under regulations.
- Ensure all generic risk assessments are completed including recommendations for control measures and reports are available to employees.
- Ensure all operational staff have been formally trained in all relevant procedures and interpretation of MSDS and safety information.
- Ensure personal protective equipment is suitable and in good operational condition.
- Distribute MSDS and safety information to employees prior to materials delivery.
- Pre-delivery: Obtain customer details, representative sample of waste, MSDSs of waste/raw materials and material volume and pack details.
- Receipt: Sample, test and confirm waste confirms pre-delivery assessment.
- Production area: Production activities should be assessed against all the actions indicated for the waste producer on page 18 of the guidelines.

Receipt
- Sample, test and confirm waste confirms pre-delivery assessment.
- Reject delivery and re-negotiate treatment options.
- Does material characteristics match pre-delivery sample?
  - NO
  - YES: Complete EPA transport certificate acceptance requirements.
- Is health surveillance required under the regulations?
  - NO
  - YES: Allocate to warehouse in designated and signed area.
- Is the waste potentially hazardous?
  - NO
  - YES: Comply with DG and EPA requirements.

Comply with workplace requirements.

Allocate to warehouse in designated and signed area.
Comply with workplace requirements.
Does material characteristics match pre-delivery sample?
Is health surveillance required under the regulations?
Is the waste potentially hazardous?

## APPENDIX 1: RECORD SHEET A

<table>
<thead>
<tr>
<th>Name of Area:</th>
<th>Name of Unit:</th>
<th>Date:</th>
</tr>
</thead>
</table>

**Production Output:**
- **Product Name:**
- **Form:**
- **Waste Packaging:** Bulk/Drum/Pack/Other

**Waste Description:**

**How are wastes generated?** (Tick only one box, complete a new sheet for each type)
- [ ] Process wastage
- [ ] Process upset
- [ ] Handling or use (cutting/grinding, etc.)
- [ ] Equipment cleaning
- [ ] Pollution control
- [ ] Process testing
- [ ] Packaging
- [ ] Other

<table>
<thead>
<tr>
<th>ITEM #</th>
<th>INGREDIENT/MATERIAL NAME</th>
<th>MSDS*</th>
<th>DG*</th>
<th>HAZ SUB*</th>
<th>HEALTH HAZARD*</th>
<th>PHYSICAL, CHEMICAL AND ENVIRONMENTAL EFFECT*</th>
<th>% IN WASTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>[ ] Yes [ ] No</td>
<td>[ ] Yes [ ] No</td>
<td>[ ] Yes [ ] No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>[ ] Yes [ ] No</td>
<td>[ ] Yes [ ] No</td>
<td>[ ] Yes [ ] No</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td></td>
<td>[ ] Yes [ ] No</td>
<td>[ ] Yes [ ] No</td>
<td>[ ] Yes [ ] No</td>
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<td></td>
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</tr>
<tr>
<td>4</td>
<td></td>
<td>[ ] Yes [ ] No</td>
<td>[ ] Yes [ ] No</td>
<td>[ ] Yes [ ] No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>[ ] Yes [ ] No</td>
<td>[ ] Yes [ ] No</td>
<td>[ ] Yes [ ] No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Waste generation: __________ per __________

---

† Form is the physical state: solid / liquid / gas / mist / dust / sludge / paste / multiple

* Refer to Material Safety Data Sheet (MSDS) and packaging label
APPENDIX 2:
EXAMPLE OF COMPLETED RECORD SHEET A

Name of Area: SubProdA
Name of Unit: Dashboard Mould 5
Date: 13 Feb 2000

Production Output:
Product Name: Suba D13
Form: Sludge
Waste Packaging: Bulk/Drum/Pack/Other: Drum

Waste Description:
Polymerised cleaning waste and resin

How are wastes generated? (tick only one box, complete a new sheet for each type)
☐ Process wastage ☐ Process upset ☐ Handling or use (cutting/grinding, etc.) ☑ Equipment cleaning
☐ Pollution control ☐ Process testing ☐ Packaging ☐ Other

<table>
<thead>
<tr>
<th>ITEM #</th>
<th>INGREDIENT/MATERIAL NAME</th>
<th>MSDS*</th>
<th>DG*</th>
<th>HAZ*</th>
<th>HEALTH HAZARD*</th>
<th>PHYSICAL, CHEMICAL AND ENVIRONMENTAL EFFECT*</th>
<th>% IN WASTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Resin D</td>
<td>☑ Yes</td>
<td>☑ Yes</td>
<td>☑ Yes</td>
<td>Toxic by inhalation, Skin, eye, lung irritation</td>
<td>Breathing difficulty, reactive with water, incompatible with NaOH</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☑ No</td>
<td>☑ No</td>
<td>☑ No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Shellite</td>
<td>☑ Yes</td>
<td>☑ Yes</td>
<td>☑ Yes</td>
<td>Inhalation/Ingestion</td>
<td>Flammable, Harmful by inhalation, Water pollution hazard</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☑ No</td>
<td>☑ No</td>
<td>☑ No</td>
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<tr>
<td>3</td>
<td></td>
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<td>4</td>
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<tr>
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<td>☑ No</td>
<td>☑ No</td>
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</tr>
</tbody>
</table>

Waste generation: 200L per quarter

† Form is the physical state: solid / liquid / gas / mist / dust / sludge / paste / multiple
* Refer to Material Safety Data Sheet (MSDS) and packaging label
## LOAD CHECKLIST

<table>
<thead>
<tr>
<th>WASTE DESCRIPTION</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dangerous good class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazardous substance review</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk assessment for transfer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste classification (Reference 10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Load compatibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency contacts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal protective equipment (PPE) specified available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging suitable for transport</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Package labelling legible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Load placarding accurate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Procedure Guide available (where a DG)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed EPA Transport Certificate (where a Prescribed Industrial Waste)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specialist advice contact details</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Load secured</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remember, if you answer ‘no’ or ‘not available’ to any of the above do not transport the load.
### APPENDIX 4: WASTE TREATER PRE-DELIVERY CHECKLIST

<table>
<thead>
<tr>
<th><strong>Customer Identification:</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Waste Identification:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Waste MSDS(s)</td>
</tr>
<tr>
<td>Hazardous Substance(s)</td>
</tr>
<tr>
<td>Dangerous Goods</td>
</tr>
<tr>
<td>Customer Waste Risk Assessment</td>
</tr>
<tr>
<td>Waste Sample</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Sample Testing:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
</tr>
<tr>
<td>Flammability</td>
</tr>
<tr>
<td>Combustibility</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Waste Type Classification:</strong></th>
<th><strong>Generic Waste Data Sheet:</strong></th>
<th><strong>Generic Risk Assessment:</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Proposed Waste Treatment:</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Safety Phrases:</strong></th>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>Risk Phrases:</strong></th>
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<table>
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<tr>
<th><strong>Control Measures:</strong></th>
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<table>
<thead>
<tr>
<th><strong>Personal Protective Equipment:</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Proposed Delivery Date:</strong></th>
</tr>
</thead>
</table>
APPENDIX 5: SAMPLE GENERIC WASTE CLASS
SAFETY AND HANDLING INFORMATION

This information is developed up by the plant chemist or safety advisor for the site activities.

Name: Chlorinated Hydrocarbon Solvent
Waste Class: H

Protective Equipment:

<table>
<thead>
<tr>
<th>TO BE WORN AT ALL TIMES:</th>
<th>PVC Gloves</th>
<th>Overalls</th>
<th>Safety Glasses</th>
</tr>
</thead>
</table>

FIRST AID

Skin Contact:
- Wash affected areas with plenty of soap and water
- If irritation occurs — seek medical advice

Eye Contact:
- Wash eyes with copious amounts of water
- Seek medical advice

Inhalation:
- Remove person to fresh air
- Monitor breathing of patient
- If necessary, apply artificial respiration
- Seek IMMEDIATE medical advice

Ingestion:
- Do NOT induce vomiting
- Give water or milk to drink
- Seek medical advice

SPILL CONTROL

PVC COAT AND PANTS PLUS CANISTER MASK ARE TO BE WORN DURING THE CLEAN UP OF SPILLS

- Prevent material from entering stormwater drainage system
- Use sand bags, soil and/or rags to block open drains
- Transfer spilt material into suitable holding vessels e.g., Pallecons (NOTE: Any vessel used to hold spilt material MUST be correctly labelled with its contents and an identifying number — EPA transcert, etc.)
- Use sawdust to soak up any residual material (ensure compatibility)
- Drums of contaminated adsorbent must be labelled accordingly
- Incident report MUST be submitted to the production manager NO LATER than 24 hours after the spill.

MATERIAL DESCRIPTION

General: Thin heavy liquid with sweet, ethereal odour. Generally used as a cleaning solvent.

Ingredients: This group covers those solvents that are non-flammable. Main ingredients of this group are:
- Dichloromethane
- 1,1,1-Trichloroethane
- Trichloroethylene
- Perchlorethylene
- Level of chlorinated solvent: 10–100% v/v

Note: Chlorinated solvents with a flash point less than 61°C are classified as Group J materials.

For additional information consult the individual ingredients MSDS information.
### Waste Material Name

| **Risk message:** | Flammable/Corrosive etc. |
| **Safety information:** | Do not breathe vapour  |
| | Keep away from ignition sources  |
| **Spill and leak information:** | Restrict access  |
| | Wear gloves, overalls, canister mask  |
| | Prevent stormwater ingress  |
| | Absorb with vermiculite, sand  |
| | Dispose to licensed site  |
| **Fire information:** | Use dry chemical/water  |
| | Generates toxic gas  |
| | Wear breathing apparatus  |
| | Etc.  |

### Dangerous Goods symbol

- **UN#**
- **HazChem code**
- **Packaging group**
- **EPA TransCert #**

### Note:
Include as much information as you have available where applicable.
These references may provide further useful information:

1. **Approved Criteria for Classifying Hazardous Substances** [NOHSC:1008 (1999)]
2. **Control of Workplace Hazardous Substances, National Model Regulations** [NOHSC:1005(1994)]
4. Dangerous Goods separation distances as prescribed by Australian Standards.
5. Dangerous Goods transport vehicle specifications as described in Australian Standard documents AS 2809 1-6.
11. **Local Truck Driving Hours**, refer VicRoads Publication Number 00700/1, April 2001.
13. **Occupational Health & Safety (Confined Spaces) Regulations 1996 (Victoria).**
14. **Occupational Health & Safety (Hazardous Substances) Regulations 1999 (Victoria).**
15. **Occupational Health and Safety Act 1985 (Victoria).**
17. Risk assessment evaluation should include steps set out in: AS/NZS 4360 (1999); or **Code of Practice for the Storage and Handling of Dangerous Goods**, WorkCover Victoria.
19. **Dangerous Goods (Storage and Handling) Regulations (Victoria).**
Company ‘Manufacture IT’ has a maintenance workshop that undertakes repairs and routine maintenance on the manufacturing site and within the workshop area. The manufacturing activities include the use of some common solvents as well as some unusual organic chemicals and acids. The company is seeking to produce parts for local and export supply to a large multinational company who requires all downstream suppliers to provide an auditable cradle-to-grave tracking system for all aspects of the business. The maintenance superintendent is required to generate a flowchart of the wastes generated and the safety aspects within the maintenance department to include in the total site safety and environmental management system.

**MAINTENANCE PLANNING – SAFETY AND ENVIRONMENT**

1. **Review the maintenance tasks that are completed on site and list every routine maintenance activity that has a safety issue or generates waste materials.**

2. **Develop through health and safety team a risk-based assessment of task actions and generate instruction documents to minimise risks from all workplace hazards. Review issues related to electrics, workheight, crush or impact, heat, confined space, material ignition, movement and chemical exposure.**

3. **Does maintenance add any chemicals to the mix during cleaning or repair?**

4. **Train the relevant personnel in the procedure for handling the waste in the approved manner.**

5. **Issue written instructions for material collection, segregation storage, labelling and future use activities.**

6. **For the maintenance task confirm which materials were processed prior to the plant shut or failure.**

7. **Request from production supervisor the MSDS for the raw materials.**

8. **Investigate the collection and end use/disposal of cleaning solutions or wastes collected during maintenance and information required for labelling.**

9. **Evaluate the MSDS information for each component and develop for each job a list of potential waste characteristics including: hazardous nature, flammable/combustible, solubility in water/solvent, corrosiveness, compatibility with materials and health effects.**

10. **For each job evaluated the likelihood of chemical exposure and physical risk to personnel and develop risk-based actions to render the risk acceptable.**

11. **Where the risk is high or unacceptable eliminate activity or replace high-risk materials with lower-risk substances.**

12. **Review the maintenance tasks that are completed on site and list every routine maintenance activity that has a safety issue or generates waste materials.**

13. **For each listed activity indicate the source of the waste or safety issue.**

14. **Is there a risk assessment available for each listed task?**

15. **Develop through health and safety team a risk-based assessment of task actions and generate instruction documents to minimise risks from all workplace hazards. Review issues related to electrics, workheight, crush or impact, heat, confined space, material ignition, movement and chemical exposure.**

16. **Does maintenance add any chemicals to the mix during cleaning or repair?**

17. **Request from production supervisor the MSDS for the raw materials.**

18. **Investigate the collection and end use/disposal of cleaning solutions or wastes collected during maintenance and information required for labelling.**

19. **Evaluate the MSDS information for each component and develop for each job a list of potential waste characteristics including: hazardous nature, flammable/combustible, solubility in water/solvent, corrosiveness, compatibility with materials and health effects.**

20. **For each job evaluated the likelihood of chemical exposure and physical risk to personnel and develop risk-based actions to render the risk acceptable.**

21. **Where the risk is high or unacceptable eliminate activity or replace high-risk materials with lower-risk substances.**

**APPENDIX 8: SAMPLE FLOWCHART USING GUIDELINES**
CLEANING SOLVENT USED IN A MAINTENANCE WORKSHOP

Company ‘Manufacture IT’ has a maintenance workshop that undertakes repairs and routine maintenance of the manufacturing site and within the workshop area. The manufacturing activities include the use of some common solvents as well as some unusual organic chemicals and acids. The company is seeking to produce parts for a multinational customer which requires that all chemicals and wastes be managed safely to protect staff, equipment and the environment. The multinational has a good public image which they want to retain, and as a result, the maintenance supervisor, along with other supervisors, was asked to assess and, if possible, improve the safety management of wastes at the site.

Where the waste is generated

After identifying and then documenting wastes observed in and around the workshop, and after talking to maintenance staff about other wastes produced on-site, the maintenance supervisor chose to review the cleaning solvent most commonly used first.

He evaluated the original solvent used by the maintenance workers, and the associated waste solvent produced and found:

- It was obtained from the production area.
- It was a solvent mix with varying physical and chemical components. Used solvent contained contaminated oil, some plastic residues, dissolved resins and other polymers such as pigments.
- The MSDS of the raw ingredients said all the components were flammable and one component highly toxic and carcinogenic (cancer causing).
- A production area risk assessment undertaken 12 months earlier had stopped manual handling and staff contact with the solvent but did not address maintenance related activities.

The maintenance supervisor’s initial actions were to:

- Discuss the safety and cleaning requirements with solvent suppliers and the health and safety work group.
- Replace the solvent with a cost-effective, single non-flammable solvent with low volatility, low toxicity but with good solvency for cleaning. (The replacement solvent was listed as a hazardous substance but not dangerous goods therefore was a safer product overall. However, repeated skin/eye exposure to the alternative solvent still presented a health risk if safety measures were not in place or used).
- Circulate the MSDS for the new solvent to maintenance personnel and file the master copy in the maintenance supervisor’s office.
- Highlight to staff the need for skin and eye protection to be used when splashing of the solvent was likely and highlighted use of VOC canister mask where spray application was required.
- Instruct the maintenance personnel in the possible exposure routes to common workplace chemicals such as skin/eye contact, breathing in; and accidental swallowing.
- Instruct the maintenance personnel in the reasons and requirements for personal safety including the use of compatible gloves, aprons, disposable Tyvec overalls and overshoes; and the proper timing and use of PPE.

The maintenance supervisor then arranged the following:

- Procedures and staff instruction to ensure separation of the used solvent from contaminated plastic packaging and paint wastes that had previously been placed in the same container.
- The multiple use of the solvent by collecting it in closed head drums.
- Labelling of the used solvent with weatherproof and permanent labels, that included the name of the waste, its origin and that it was a combustible liquid and included the likely safety risk statements hand-written in permanent marker: ‘may be harmful to health if breathed in, swallowed, or skin or eye contact occurs; may be toxic; and may be an environmental hazard’; (Note: No DG classification, Haz Chem information or UN # was required on the label as the liquid waste was a combustible liquid not a flammable or toxic liquid).
- Segregation of the grossly-contaminated used solvent to an isolated but accessible quarantine area at the rear of the workshop.
Next the maintenance supervisor planned what to do with the waste liquid when it was no longer suitable for cleaning, and organised for it to be disposed off-site by a waste treater/recycler. In the process the supervisor identified the drum label needed an EPA waste classification code ‘LJ120’ which was added to the label later.

From there the supervisor forwarded a sample of the typical waste drum contents to the waste treater/recycler. The waste treater/recycler then tested the sample and reviewed the MSDS and safety information and in turn indicated to the supervisor that the material could not be economically recycled but had good fuel value and would be included in a waste-to-energy program.

The waste treater and the maintenance supervisor together planned that the waste material would be:

- Pumped from the drum on-site to an EPA-permitted road tanker, operated by a transporter that sub-contracts the transport operation for a waste treater/recycler.
- Picked up by a waste transport vehicle previously carrying oil as the material was not incompatible with hydrocarbons or water.
- Agreed that the maintenance supervisor would advise the waste treater and driver of any safety equipment needed and any changes concerning incompatible materials that may be present at times.
- Labelled clearly stating the drum contents and relevant risk and safety statements.
- Transported with relevant safety documentation such as a completed waste record sheet and the individual MSDS for the solvent and any contaminants. Also transported with relevant test information supplied by the waste treater.
- Agreed such documents would be made available for the driver by the maintenance supervisor at the time of pick-up.

When the waste transport truck arrived:

- The maintenance supervisor, before any material was transferred, assessed the condition of the waste transport vehicle and associated equipment. If there was any doubt about the safety and environmental risk associated with the handling of the waste the supervisor was given instruction to halt any transfer of material.
- The driver viewed the labelled drums, and checked the hazard statement: ‘May be harmful to health if breathed in, swallowed, or skin or eye contact occurs’. He then fitted the required PPE, and proceeded to dip the drums to visually confirm they contained the material that was expected.
- The driver highlighted to the supervisor that if there was doubt in relation to the description of the waste he may refuse to transfer the material, or delay the pick-up to confirm details with the treatment facility operator.
- After visually checking the contents and the waste containers and confirming they were okay, he asked for the relevant paperwork.
- The maintenance supervisor then oversaw the transfer of the waste material from the drum to the road tanker and had on hand, all equipment and suitably trained personnel to address any associated handling or spill issues.
- The maintenance supervisor at the completion of the transfer to the vehicle signed the relevant section of the EPA transport documentation as did the driver and the material was transported off-site in bulk.

When the truck arrived at the waste treatment plant:

- As the waste transporter had previously arranged for the material to be ‘booked in’ at the waste treatment facility, upon arrival the driver announced the intention to deliver the waste material involving a mixed load of solvent and hydrocarbon comprising the volumes and waste classifications indicated on the EPA transport paperwork.
- As the treater had been previously notified of the proposed load, the MSDS, and relevant safety information – all the necessary safety and handling precautions were in readiness for the receipt of the material.
- The waste treatment operator fitted the appropriate personal protective equipment (eye, skin and impact protection) and took a sample of the individual compartments of the tanker. (Note: A fall protection system was in place for top sampling of the vehicle.) The operator then undertook delivery screening tests to confirm the material was as previously arranged with the waste producers, or the waste transporter.

- As the sample results were as expected the load was transferred to a receipt tank by the waste treatment operator and the EPA paperwork signed as delivered.

- If the load had been unacceptable, the vehicle would have been turned away or at a minimum, quarantined at the treatment facility, within the vehicle, until the waste producer was contacted and questioned to the discrepancy of the load.

- After the load was received at the treatment facility a receipt notification from the waste treater/recycler was forwarded to the maintenance supervisor who then understood that the waste material had been received at its planned destination and would be disposed of via an energy recovery program.

- The waste treatment operator placarded the receipt tank as holding Combustible Liquids NOS and also with the waste classification code that designated the risks, safety and spill information. The operator then recorded the tank quantity in the site manifest so that all operators were aware of the tank contents and associated risks.

**Conclusion**

In this case study wastes were identified, assessed and relevant safety measures put in place to ensure people, property and the environment were protected. The smooth transfer of waste from producers to transporters to waste treaters/recyclers was assured when the appropriate safety and material classifications were made and passed on to downstream operators.
### APPENDIX 9:
INFORMATION SOURCES

<table>
<thead>
<tr>
<th>INFORMATION SOURCE</th>
<th>CONTACT DETAILS</th>
<th>PUBLICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Government Info Shop</td>
<td>190 Queen Street, Melbourne Telephone (03) 9670 4224</td>
<td>Control of Workplace hazardous Substances: National Model Regulations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>National Code of Practice for the Preparation of Material Safety Data Sheets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Australian Dangerous Goods Code</td>
</tr>
<tr>
<td></td>
<td></td>
<td>List of Designated Hazardous Substances</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Victorian and Federal Acts and Regulations</td>
</tr>
<tr>
<td>VicRoads Bookshop</td>
<td>60 Denmark Street, Kew Telephone (03) 9854 2782</td>
<td>All VicRoads publications</td>
</tr>
<tr>
<td>Information Victoria</td>
<td>356 Collins Street, Melbourne Telephone 1300 366 356</td>
<td>Government Gazette, Victorian Government publications and regulations</td>
</tr>
<tr>
<td>Standards Australia</td>
<td>19-25 Raglan St, South Melbourne Telephone 1300 654 646</td>
<td>All Australian Standards</td>
</tr>
<tr>
<td>Victorian WorkCover Authority</td>
<td>Level 24 222 Exhibition St, Melbourne Telephone (03) 9641 1333</td>
<td>Codes of Practice and other guidance material</td>
</tr>
<tr>
<td>Environment Protection Authority</td>
<td>40 City Road, Melbourne Telephone (03) 9695 2700</td>
<td></td>
</tr>
<tr>
<td>Victorian Waste Management Association</td>
<td>Wirraway Drive, Fisherman’s Bend Telephone (03) 9646 8590</td>
<td></td>
</tr>
<tr>
<td>Plastics and Chemicals Industries Association (PACIA)</td>
<td>Level 2 263 Mary Street, Richmond Telephone (03) 9426 3810</td>
<td></td>
</tr>
<tr>
<td>Victorian Trades Hall Council</td>
<td>Cnr Lygon and Victoria Streets, Carlton South Telephone (03) 9662 3511</td>
<td></td>
</tr>
</tbody>
</table>
ACRONYMS
The following acronyms are used throughout this guide.

<table>
<thead>
<tr>
<th>ACRONYM</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADG Code</td>
<td>Australian Dangerous Goods Code</td>
</tr>
<tr>
<td>DG</td>
<td>Dangerous Goods</td>
</tr>
<tr>
<td>DG Class</td>
<td>Dangerous Goods Class as defined in the ADG code</td>
</tr>
<tr>
<td>EPA</td>
<td>Environment Protection Authority</td>
</tr>
<tr>
<td>EPG</td>
<td>Emergency Procedure Guide</td>
</tr>
<tr>
<td>MSDS</td>
<td>Material Safety Data Sheet</td>
</tr>
<tr>
<td>NOHSC</td>
<td>National Occupational Health and Safety Commission</td>
</tr>
<tr>
<td>Pkg Grp</td>
<td>Packaging Group as defined in the ADG code</td>
</tr>
<tr>
<td>PPE</td>
<td>Personal Protective Equipment</td>
</tr>
<tr>
<td>UN #</td>
<td>The United Nations number for a particular Dangerous Good</td>
</tr>
<tr>
<td>VWA</td>
<td>Victorian WorkCover Authority</td>
</tr>
</tbody>
</table>

DEFINITIONS

<table>
<thead>
<tr>
<th>TERM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acid</td>
<td>Any material with a pH value less than 5.</td>
</tr>
<tr>
<td>Alkali</td>
<td>Any material with a pH value greater than 8.</td>
</tr>
<tr>
<td>By-product</td>
<td>Means a material that is not one of the primary products of a production process and is not solely or separately produced by the production process. Examples are process residues such as slags or distillation column bottoms.</td>
</tr>
<tr>
<td>Chlorinated</td>
<td>Any chemical compound containing chlorine.</td>
</tr>
<tr>
<td>Container</td>
<td>Means a portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.</td>
</tr>
<tr>
<td>Dangerous Goods</td>
<td>Means a substance or article that may be corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising or water-reactive as defined in the Victorian Dangerous Goods Storage and Handling Regulations 2000.</td>
</tr>
<tr>
<td>Environment</td>
<td>Refers to any air, land, water, or groundwater.</td>
</tr>
<tr>
<td>Flammable</td>
<td>A material with a closed cup flash point of less than 60.5°C.</td>
</tr>
<tr>
<td>Hazardous substance</td>
<td>Means a substance which is potentially hazardous to people’s health as defined in the Victorian Occupational Health and Safety (Hazardous Substances) Regulations 1999.</td>
</tr>
<tr>
<td>Hydrocarbon</td>
<td>Any organic chemical compound containing primarily hydrogen and carbon but also including other inorganic elements.</td>
</tr>
<tr>
<td>Incompatible waste</td>
<td>Means a waste which is unsuitable for placement in a particular device or facility because it may corrode or decay the containment materials, or is unsuitable for mixing with another waste or material because the mixture might produce heat or pressure, fire or explosion, violent reaction, toxic dusts, fumes, mists, or gases, or flammable fumes or gases.</td>
</tr>
<tr>
<td>Material Safety Data Sheet</td>
<td>A document that provides information on the uses of a product – its physical, chemical and toxic properties, health hazard information, precautions for use and safe handling information.</td>
</tr>
<tr>
<td>Operator/occupier</td>
<td>In relation to a workplace, means a person who has the management or control of the workplace.</td>
</tr>
<tr>
<td>Personal Protective Equipment (PPE)</td>
<td>Equipment or clothing used to provide protection to a person, e.g. gloves, safety glasses, helmet, goggles, earmuffs, aprons, body suits, safety shoes, respirators and fall arrest systems.</td>
</tr>
</tbody>
</table>
DEFINITIONS (continued)

<table>
<thead>
<tr>
<th>TERM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placard</td>
<td>A notice for display in a public place. Can be a poster, small card or plaque. Placards and placarding in relation to dangerous goods must be in accordance with the <em>Australian Dangerous Goods Code</em>.</td>
</tr>
</tbody>
</table>
| Potentially hazardous waste | Potentially hazardous waste is waste that can potentially harm people, property and the environment. It can be liquids, solids, semi-solids, contained gases, or sludges. A waste is potentially hazardous if it exhibits one or more of the following characteristics:  
  - Flammability – Flammable wastes can create fires under certain conditions. Examples include used solvents.  
  - Corrosivity – Corrosive wastes are acids or alkalis that are capable of destroying material, such as storage tanks, containers, drums, and barrels. They can also cause burns to humans. Battery acid is a good example.  
  - Reactivity – Reactive wastes are unstable under ‘normal’ conditions and can increase the handling risks. They can contribute to explosions, toxic fumes, gases, or vapours when mixed with water and other materials. Examples include lithium-sulphur batteries and explosives.  
  - Toxicity – Toxic wastes are harmful when breathed in, swallowed, absorbed through skin or eyes, or accidentally injected.  
  - Irritability – Irritable substances cause inflammation of the skin or eye; serious eye effects or irritation to the respiratory system. Common examples are hydrogen peroxide and some adhesives (Corrosives).  
Potentially hazardous wastes may also be:  
  - Mixtures of non-hazardous and hazardous wastes (e.g. dirty water mixed with used solvents) derived from the treatment, storage, or disposal of a hazardous waste (e.g. incineration ash or emission control dust).  
  - Manufactured objects, plant or animal matter, or natural geological material (debris) containing hazardous waste that are intended for disposal (e.g. concrete, bricks, industrial equipment, rocks, and grass).  
  - Soil, ground water, or sediment contaminated with hazardous waste. |
| Representative sample       | A sample which can be expected to exhibit the average properties of the sample source.                                                        |
| Sludge                      | Primarily solid material with a component of liquid not sufficient to allow the material to flow.                                              |
| Spent material              | Any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing.       |
| Suspension                  | Fine solid matter suspended in a liquid.                                                                                                     |
| Toxic                       | Having the properties to cause or to significantly contribute to death, injury, or illness in humans or wildlife.                               |
| Transport vehicle           | A motor vehicle, water vessel, or rail car used for the transportation of cargo by any mode. Each cargo carrying body (trailer, railroad freight car, steamship, etc.) is a separate transport vehicle. |
| Transportation              | The movement of waste by air, rail, highway or water.                                                                                         |
| Treatment                   | The physical, chemical, or biological processing of waste to make such wastes re-usable, non-dangerous or less dangerous, safer to transport, amenable for energy or material resource recovery, amenable for storage or discharge to the environment, or reduced in volume. |
| Waste                       | Any material in a form that offers no asset value to the owner or producer.                                                                      |
| Waste producer              | Any employer or self-employed person whose act or process produces waste.                                                                         |
| Waste receiver/ Waste       | Refers to a person approved by the EPA to engage in the receiving of waste for the purpose of recycling, reusing, reclaiming, transferring, treating, storing, or disposing of waste. |
| Waste transporter           | Refers to a person engaged in the off-site transportation of waste by air, rail, highway or water.                                                |
WorkSafe Victoria would like to thank the following people and organisations for their involvement in the development of this guide. Particular thanks must go to the Plastics and Chemicals Industry Association (PACIA) and the Victorian Trades Hall Council for their management and involvement in the development process that led to these guidelines being developed.

**Steering Committee Members**

Mr Rob Allen  
*Victorian Waste Management Association*

Mr Peter Bury  
*Plastics and Chemicals Industries Association (Chair)*

Ms Cathy Butcher  
*Victorian Trades Hall Council*

Mr Patrick Davern  
*Interactive Environmental Solutions (Consultant to PACIA)*

Mr Bruce Dawson  
*Environment Protection Authority*

Dr Ian Grayson  
*Victorian WorkCover Authority*

Mr Geoff Ereaut  
*Huntsman Chemicals Pty Ltd*

Ms Lynn Steele  
*Victorian WorkCover Authority*

Mr Daryl Wallace  
*Bostik Findley Pty Ltd*

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Mr Paul Burggraaf  
*Integrated Packaging*

Mr Joe De Luca  
*Clariant Pty Ltd*

Mr John Jones  
*Teris (Aust) Pty Ltd*

Mr Volker Meier  
*Nufarm Pty Ltd*

Mr Ian Swann  
*Plastics and Chemicals Industry Association*
VICTORIAN WORKCOVER AUTHORITY

WorkSafe Victoria offers a complete range of health and safety services.
- Emergency response
- Advice, information and education
- Inspections and audits
- Licensing and certification
- Publications

WORKSAFE VICTORIA CONTACTS

Head Office
Victorian WorkCover Authority
24th Floor
222 Exhibition Street
Melbourne Victoria 3000
GPO Box 4306
Melbourne Victoria 3001
Phone . . . . . . . . . . . . . . . . . . . 9641 1555
Fax . . . . . . . . . . . . . . . . . . . . . . 9641 1222
Toll-free . . . . . . . . . . . . . . . . . . 1800 136 089

LOCAL OFFICES

Ballarat . . . . . . . . . . . . . . . . . 5337 1400
Bendigo . . . . . . . . . . . . . . . . . 5443 8866
Dandenong . . . . . . . . . . . . . . . 8792 9000
Geelong . . . . . . . . . . . . . . . . . 5226 1200
Melbourne
(628 Bourke Street) . . . . . . . . 9941 0500
Mildura . . . . . . . . . . . . . . . . . 5021 4001
Mulgrave . . . . . . . . . . . . . . . . 9565 9444
Preston . . . . . . . . . . . . . . . . . 9481 4355
Shepparton . . . . . . . . . . . . . . . 5831 8260
Traralgon . . . . . . . . . . . . . . . . 5174 8900
Wangaratta . . . . . . . . . . . . . . . 5721 8588
Warrnambool . . . . . . . . . . . . . 5562 5600

PUBLICATIONS

Phone . . . . . . . . . . . . . . . . . . . 9641 1333
Fax . . . . . . . . . . . . . . . . . . . . . . 9641 1390

WEBSITE

www.workcover.vic.gov.au

EMAIL

info@workcover.vic.gov.au

VICTORIAN WORKCOVER ADVISORY SERVICE

24th Floor
222 Exhibition Street
Melbourne Victoria 3000
Phone . . . . . . . . . . . . . . . . . . . 9641 1444
Fax . . . . . . . . . . . . . . . . . . . . . . 9641 1353
Toll-free . . . . . . . . . . . . . . . . . . 1800 136 089

EMAIL

advisory_service@workcover.vic.gov.au