



terminals pty. ltd.

# West Melbourne Terminal

## 2017 Safety Case

### Summary



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# INTRODUCTION

This Safety Case Summary provides the community with information about the safety at the West Melbourne Terminal. It includes a summary of the potential major incidents that could occur, including the hazards that could cause those incidents and the control measures that are in place to prevent or minimise the consequences of such incidents, should they occur.

## What is a Major Hazard Facility?

Major hazard facilities (MHFs) are industrial sites which store, handle or process large quantities of chemicals and dangerous goods, including petroleum products. This includes those facilities where scheduled materials are present or likely to be present in a quantity exceeding their threshold amounts specified within the Schedule.

The West Melbourne Terminal has been registered as a Major Hazard Facility since 2002.

## What are Scheduled Materials?

The OH&S Regulations define what materials must be considered in the scope of the Safety Case. The scheduled materials at West Melbourne are discussed in the 'Scheduled Materials' section of this document.

## What is a Safety Case?

Major Hazard Facilities are required to demonstrate their operational safety through a Safety Case developed specifically for their unique operations and situation.

The Safety Case sets out the adequacy of the site's safety management system by specifying

prevention measures, as well as strategies for reducing the effects of a major incident if one does occur.

The Safety Case must demonstrate:

- All potential major incidents are identified
- All hazard or threats that could result in a major incident are identified
- A comprehensive and systematic safety assessment has been conducted
- Control measures have been identified to eliminate or reduce the risk so far as reasonably practicable
- An emergency plan is in place to control and minimise any potential major incident
- A robust safety management system is in place

The safety case is conducted with involvement and consultation with employees and safety representatives.

## What is a Major Incident?

A major incident is an uncontrolled incident, including an emission, loss of containment, escape, fire, explosion, or release of energy that involves Schedule 9 materials and poses a serious and immediate risk to health and safety.



# FACILITY DESCRIPTION

ANZ Terminals Pty Ltd provides bulk liquid storage solutions at eight strategic locations throughout Australia and New Zealand. We offer storage and handling services for a range of products including chemicals, petroleum fuels, vegetable and edible oils, base oils and bitumen.

We do not use the products or manufacture anything from them. However, many of the products we store are used in the production of commonly used goods such as paints, plastics, lubricating oils, detergents, pharmaceuticals and building products.

Our customers include major oil and chemicals companies, as well as independent chemical and commodity traders. We are a trusted partner in our customers' supply chains, connecting our customers to their domestic and international markets.

The West Melbourne facility is a chemical storage and transfer facility and commenced operations in the 1950's.

The site receives product from ships berthing at the Maribyrnong No.1 wharf via aboveground pipelines from the unloading points on the berth to the Terminals Pty Ltd site. Imported products are then loaded to truck for deliveries to local and regional markets.

The site also receives product by road transport for storage and later export.

Our focus is to deliver safe, reliable and efficient storage and handling services for our customers. We achieve this through our commitment towards engineering excellence, consistent operating procedures and strong operational leadership.

Terminal's owns and operates the facility however the product is owned by its customers who also arrange all transport.

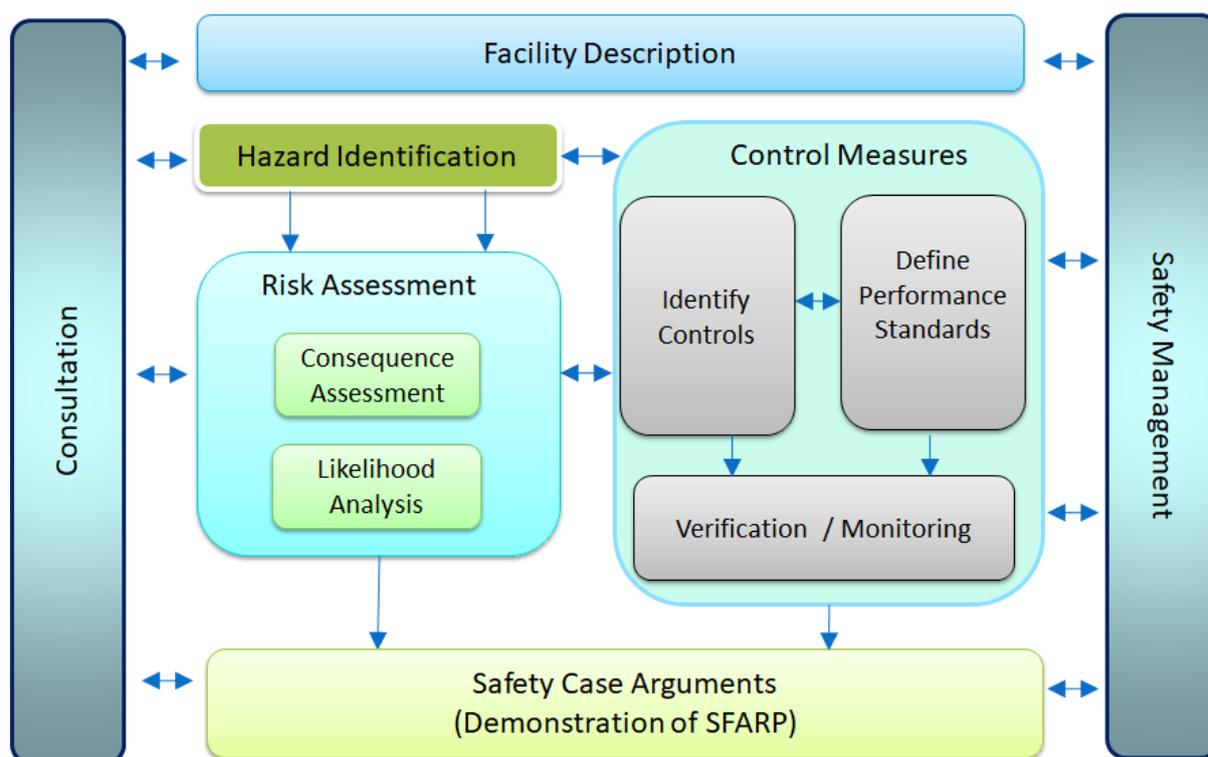
The health and safety of the community and our workforce is our highest priority.



# SAFETY CASE SUMMARY

The West Melbourne Safety Case demonstrates that Terminal's systems and procedures are effective and safe and reliable operations are maintained. This in turn ensures that we protect our people and assets, the environment and the community. The Safety Case describes the potential incidents and demonstrates how they occur and how they are controlled.

A summary of the Safety Case is provided in the diagram below.



## Safety Assessment

The core of the Safety Case is a systematic and comprehensive safety assessment. The safety assessment involves identifying all potential major incidents, involving scheduled chemicals, which pose a serious and immediate risk to health and safety if not effectively controlled.

The safety case then seeks to analyse those incidents such that there is a detailed understanding of how they occur (hazards) and the risk to health and safety from those potential incidents in terms of likelihood and consequence.

This process also involves identifying the control measures that are already in place to eliminate or reduce the risk of each major incident occurring, as well as identify additional controls that could further reduce the risk so far as reasonably practicable.

Our goal was to seek control in depth (multiple barriers) as well as assess and ensure the robustness of the identified controls.

This process was carried out with the involvement of operators, health and safety representatives, engineers and managers.

## Scheduled Materials

The West Melbourne Terminal handles a number of materials that are classified as scheduled materials under the OHS Regulations.

There are no specifically listed chemicals but there are a range of materials falling under the category of flammable liquids which meet the criteria for Class 3 Packaging Group II and III. These include chemicals such as Pyrolysis Gasoline, Ethanol, Acetone and other solvents.

## Potential Major Incidents

The potential major incidents that have been identified for the terminal are associated with liquid hydrocarbon release and escalation through fire and/or explosion.

The infrastructure considered includes the tank farm, wharf facilities, truck loading gantries, pipelines, pumps and emission control equipment.

Most hydrocarbon releases do not ignite, however personnel close to site may be exposed to the health impacts of the release. Controls are in place to prevent or mitigate escalation.

The safety assessment has shown that for most major incidents the impact is expected to be contained within the terminal boundary. However, some high consequence events have the potential for offsite impacts. No toxic, fire or explosion events were identified that impact residential areas.

Events with offsite impacts have a very low probability of occurring. The risk of these incidents occurring is controlled so far as reasonably practicable by comprehensive systems and procedures.

## Control Measures

In the safety assessment we identify all controls that have the potential to prevent and mitigate the risks associated with a potential major incident.

The control measures in place to protect against a major incident include:

- Safety protective systems (pressure relief, level devices)
- Asset integrity inspections
- Testing of protective systems
- Permit to Work system
- Operational procedures
- Management of change process
- Competency assessment

Control measures also include controls to mitigate the escalation of a major incident. These include:

- Ignition controls
- Emergency shutdown systems
- Fire and gas detection
- Fire protection systems
- Personal protective equipment
- Emergency response plan



For the protective measures in place performance requirements and associated performance standards were set. These define the requirements for controls to be effective and allow monitoring of the effectiveness of those controls

## Safety Management System

Terminals' Safety Management Manual describes the health and safety requirements that apply across the Terminal.

The SMS clearly defines the activities required to ensure safe operation including, but not limited to:

- Establishing accountability and responsibility
- Establishing procedures for the management of hazards

- Control of work procedures
- Ensuring that procedures are in place to manage activities safely
- Ensuring personnel are competent
- Change management
- Design, management, inspection and verification of control measures
- The role of workers and consultation.

The management system is subject to an ongoing review process to ensure rigorous control is maintained and to drive continuous improvement.

## Emergency Response

A comprehensive Emergency Response Plan (ERP) has been developed for the West Melbourne Terminal and this has been reviewed with the Metropolitan Fire Brigade (MFB) as the designated control agency.

The plan comprises actions and guidelines to enable Terminals to:

- Utilise available resources (including personnel and equipment) to bring an emergency under control as quickly as possible
- Support any response in the field, providing operational assistance and advice
- Facilitate appropriate notifications and communications with relevant key stakeholders (internal and external)
- Co-ordinate sourcing and deployment of additional resources as required
- Undertake recovery activities

Training exercises, both desktop and simulations of various incident scenarios are also undertaken on a regular basis to ensure readiness. This involves site personnel and emergency services.

A site emergency alarm system is installed to warn personnel of a potential incident so that hazardous areas are evacuated promptly to reduce the risk of harm to personnel. In the unlikely event of an incident impacting beyond the site boundary the neighbouring

industries will be notified by phone or via the Port Emergency communication system.

In the event of a major incident the emergency shutdown system is initiated. This isolates storage tanks and shuts down power to non-essential equipment. This is to mitigate the consequence of a potential major incident.

The site also has an extensive fire protection system to protect and combat fire in any area of the facility.

## Community Response

Sirens at the Terminal are sounded to alert on-site personnel only. In the event of a major incident with offsite impact, emergency services have the responsibility of informing impact communities and neighbours.

If necessary, the police will use the electronic media, including major radio stations 3AW (693AM), ABC (774AM) and local community radio station Stereo 974 (97.4 FM) to broadcast information to the community.

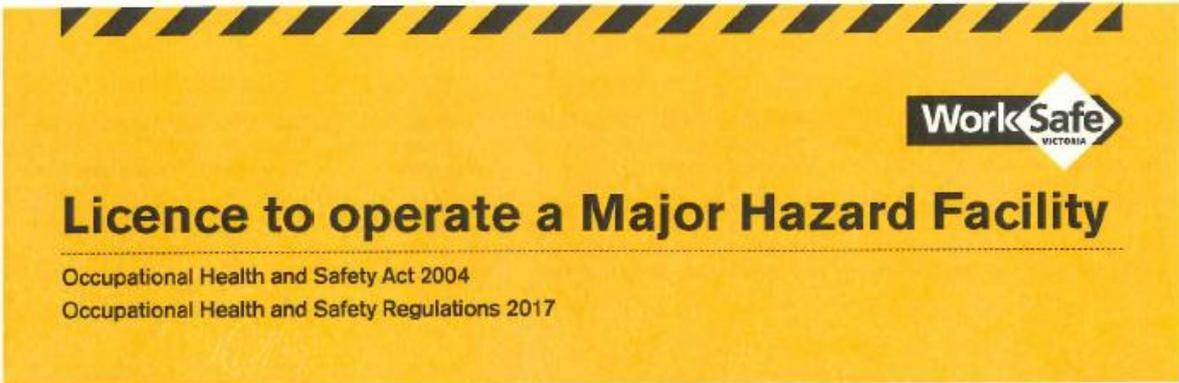
If the wider community needs to respond to an incident relating to odours, low levels of chemicals and smoke, people should stay indoors with windows and doors shut and air conditioners off to prevent entry into the property.

If an evacuation is required Victoria Policy will notify and coordinate with the local community directly.

Both Melbourne City Council and Maribyrnong City councils would be kept informed of such incidents and can provide information.

Community engagement in relation to Terminals' West Melbourne site is facilitated through the Coode Island Community Consultative Committee (CICCC). The CICCC was formed by the Maribyrnong and Melbourne councils with the support of Terminals. The CICCC is actively involved in Terminals with respect to environmental and safety issues and all incidents are communicated.

# APPENDIX A LICENCE TO OPERATE



**Licence to operate a Major Hazard Facility**

Occupational Health and Safety Act 2004  
Occupational Health and Safety Regulations 2017

This licence is issued to the operator

Terminals Pty Ltd  
Level 13, Suite 13.23, 401  
Docklands Drive, Docklands  
Victoria 3008

ACN: 000348407

and authorises the facility located at

70-78 & 54-60 Mackenzie Road,  
West Melbourne  
Victoria 3003

to operate as a Major Hazard Facility.

The Schedule 9 materials present or likely to be present at the facility are specified in Attachment 1.

Licence Number	Date Granted	Effective Date	Expiry Date
MHL 021/04	8 November 2017	19 December 2017	18 December 2022

Conditions:

1. On or before 18 December 2018 and thereafter annually, Terminals Pty Ltd must demonstrate by written report provided to WorkSafe Victoria, and to the satisfaction of WorkSafe Victoria, that:
  - a. performance monitoring and auditing has been undertaken to verify the effectiveness of all aspects of the Safety Management System implemented at the West Melbourne Facility; and
  - b. steps have been taken to address any deficiencies identified and to continually improve all aspects of the Safety Management System.

Michael Coffey



Head of Hazardous Industries & Industry Practice

18 December 2017

# LICENCE TO OPERATE

## Licence to operate a Major Hazard Facility

2. On or before 18 December 2018 and thereafter annually, Terminals Pty Ltd must demonstrate by written report provided to WorkSafe Victoria, and to the satisfaction of WorkSafe Victoria, that it continues to so far as is reasonably practicable reduce risks to health and safety associated with operation of the West Melbourne Facility, by taking all reasonable steps to meet the timelines contained in the document titled "HSEQ-RPT-2017-018 IHHLA Upgrades - Implementation Plan" (TRIM Ref. MH/CI/17/1870) which was provided to WorkSafe on 13 December 2017 and the documents titled "Tank Design and PV ERV Set Pressures" (TRIM Ref. MH/CI/17/1869) and "Tank Critical Operating Parameters – West Melbourne Terminal" (TRIM Ref. MH/CI/17/1871) which were provided to WorkSafe on 10 and 14 December 2017 respectively.

Michael Coffey



Head of Hazardous Industries & Industry Practice

18 December 2017

MH/INT/02/298  
FOR 5.490 / 15 August 17



# LICENCE TO OPERATE

## Licence to operate a Major Hazard Facility

### Attachment 1 to MHL 021/04

#### List of Schedule 9 materials present or likely to be present at the facility

Extracted from Table 1 of Schedule 9  
*Occupational Health and Safety Regulations 2007*

MATERIAL	UN Nos INCLUDED UNDER NAME
Methane or Natural Gas	1971, 1972

Extracted from Table 2 of Schedule 9  
*Occupational Health and Safety Regulations 2007*

MATERIAL	DESCRIPTION
Flammable Liquids	Liquids that meet the criteria for Class 3 Packing Group II or III

#### Note:

The small quantities of other Schedule 9 materials that may be present at the facility are as noted in the Safety Case.

Michael Coffey



Head of Hazardous Industries & Industry Practice

18 December 2017

MP/INT/02/288  
FDR 9.450 / 16 August 17



## MORE INFORMATION

This brochure represents a summary of the Safety Case for the West Melbourne Terminal. If you would like further information, then please contact Terminals:

**West Melbourne Terminal Manager**

Terminals Pty Ltd  
70-78 Mackenzie Road, West Melbourne  
Tel: (03) 8387 1900

**Or  
Head Office**

Tel: (03) 9604 2900

More information regarding the requirements for Major Hazard Facilities is available from the Worksafe Victoria Website [www.worksafe.vic.gov.au](http://www.worksafe.vic.gov.au).

