

# **Terminals Pty Ltd**

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## **Melbourne Bulk Liquid Storage Terminal**

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### **Environmental Improvement Plan No 3**

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2009 to 2012

The Environment Improvement Plan has been developed by Terminals West Melbourne in consultation with the Terminals Coode Island Community Consultative Committee (CICCC) and the Environment Protection Authority (EPA). Terminals Pty Ltd wishes to acknowledge those contributions, and undertakes to use its best endeavours to complete the EIP actions contained within.

Signatories to the Terminals West Melbourne 2009 Environment Improvement Plan are:

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### ***1. Summary of Targets***

## Overview

### 1. Introduction

This Environmental Improvement Plan (EIP) is the third EIP for Terminals Pty Ltd (Terminals) West Melbourne bulk liquid storage facility. The first EIP was in response to EPA licence conditions. Since that EIP was developed Terminals has achieved accredited licence status for the Coode Island facility. One of the cornerstones of an accredited licence is to have a current EIP, therefore the requirement to replace the current EIP which ended at end of 2008. This EIP has again been developed by Terminals in consultation with EPA, other Agencies and the Coode Island Community Consultative Committee.

This EIP will continue the work commenced in the first EIP of improving the West Side Facility through the long term upgrading of the sites:

- Upgrading the environmental systems (air, soil and groundwater);
- Upgrading the existing storage and handling equipment;
- Removing redundant equipment and pipelines;
- Segregating storm and waste water streams;
- Protection of ground water.

Terminals now has long term tenure for its West Side sites which will remain in ongoing bulk liquid service to at least 2022. The upgrading of these sites will be continued through the next four years.

Terminals East Side sites were remediated and handed back to PoMC in January 2006. Those sites are now leased by DP World (formerly P&O Ports).

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## 1.1 EIP Objective

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With the discontinuation of the existing eastern sites, Terminals' operation is now consolidated to the west side of Mackenzie Road. Terminals will continue to handle the same chemicals it stored after the closure of the East Side in January 2006 except for the Acrylonitrile (discontinued in bulk) and the return of Benzene via Pygas.

Terminals has been undertaking a staged multi million dollar investment over the period from 2002 to 2012. Staging is necessary to:

- Minimise the safety risks in performing major works within an operating major hazards facility i.e. the scale of the work must be kept manageable.
- Minimise the economic impact on the existing client base and contribute to their commercial competitiveness.
- Avoid disruption to existing business;

The upgrade has been prioritised so the key safety and environmental considerations were mostly addressed in the first stage. The second stage involved installing the new infrastructure like truck fill, pumps and exchange pits while continued upgrade of the tanks. The third stage involves the continued upgrade of the tanks, drainage and bunds which are longer time frame items

The facilities and operations will comply with the requirements of the Environment Protection Authority (EPA), Worksafe and the Metropolitan Fire Brigade (MFB) as well as ISO Standards 9001 and 14001.

This EIP (No 3) will cover the final stage of the redevelopment till the end of 2012.

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## 1.2 Terminals Pty Ltd

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Terminals is a wholly owned subsidiary of the ANZ Terminals Pty Ltd. It provides terminaling services to its clients at four operating locations throughout Australia. These sites are located at Coode Island in Melbourne, Corio in Geelong, Port Botany in Sydney and Osborne in South Australia.

An associated company, Bulk Storage Terminals Limited, is also the leading terminal operator in New Zealand with facilities in Auckland, Wellington, New Plymouth and Mount Maunganui.

In addition to operating its own sites, Terminals has extensive experience in managing and operating cryogenic liquefied petroleum gas storing facilities on behalf of Orica at Port Botany, adjacent to Terminals Bulk Liquids Storage Facility.

Total capacity owned and operated by Terminals in Australia is 160,000 m<sup>3</sup>. Terminals' commitment to the industry it serves began in Victoria in 1961 with the construction of its first facility on Coode Island. Since then it has provided continuous services to its clients in a professional manner.

In the past fifteen years, Terminals has improved its operating practices and procedures to rival world standards. This has been principally through the recruitment of storage and process engineering expertise from the chemical and oil industry, and the use of highly specialised consultants in risk management, loss prevention and occupational health and safety. An extensive capital works program has been undertaken on all sites to address the issues of the Major Hazards Facilities legislation and addresses the lessons learned from the fire in the Site A Coode Island facility in 1991.

## 2. Existing Facility – Recent Improvements

The Coode Island Bulk Liquids Storage Facility consists of two terminals commonly referred to as Plant B (54-62 Mackenzie Road) and Plant C (70-78 Mackenzie Road). The terminals were initially developed as two independently owned and operated facilities. Site C was acquired by Terminals from Powell Duffryn in 1992 and the operations of the facilities integrated under a common management and operating workforce. The combined facility comprises a total of 72 tanks generally divided into the two sites on the west side of Mackenzie Road. Approximately 30 tanks are used for the storage of flammable liquids. These are dispersed across both sites.

Before this round of upgrading capital expenditure in excess of \$20 million has been invested since the fire in 1991. Features of this expenditure include:

- A fire system which exceeds regulatory requirements;
- Nitrogen blanketing to all flammable liquids (where suitable);
- Sealed loading of toxic products (TDI, PO, ACN, PHENOL);
- CCTV control security access systems;
- Dedicated tanks for high throughput products or the more hazardous products;
- Redeveloped Benzene handling facilities;
- Ground water control systems;
- Upgraded spill control systems.

In the past 7 years, the major upgrade has been in the replacement of the Vapour Emission Control (VEC) systems to improve emissions and odour performance. This investment has totalled in excess of \$20 million and has included:

- Two new combustors to replace the carbon beds;
- New stainless steel vapour collection systems;
- Control valves on top of tanks to control tank pressures;
- Connection of all flammable storage tanks to the new Vapour Emission Control System which includes Acrylates and Pygas;
- High pressure alarms to control tank pressures during ship unloading & pigging for all tanks connected to VECS;
- Sealed truck loading of all products with vapours being treated by new VECS;
- Acrylate tanks upgraded with new fill and draw off pipe work, new foundations, impermeable liner under floor and independent high high level alarms;

- New hard piped exchange areas at Plant C and Plant B;
- Twenty six flammable tanks upgraded with new fill & draw off pipe work, internal waste minimisation pipe work, new foundations, impermeable liner under floor;
- Segregation of site stormwater at truck fills;
- Roofs over all truck loading gantries, pump bays, and exchange areas;
- Site wide emergency alarm alerting system;
- Back up power supply for new VECS and emergency equipment;

The upgrading of the sites has been and will continue to be complex, as it is a hazardous facility with ongoing commitments to customers. Despite the difficulties, it is intended to continue upgrading the facility. This upgrading will continue the work from the previous 7 years to meet regulatory compliance with EPA and WorkSafe (MHF) requirements as well as improving the operation and integrity of the facility throughout the life of the lease.

### 3. Improvement Description

#### Broad Description of the Works

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##### 3.1.1 Introduction

The improvements described in this section are to be completed by 31 December 2012. A summary of target dates is listed in Appendix 1.

This EIP is to continue the work commenced in the previous EIP's in particular the upgrading of the existing tanks in flammable/hazardous service. The other major focus is energy saving and waste minimisation.

##### 3.1.2 Upgrade Remaining 11 Flammable/Hazardous Storage Tanks

The 11 remaining existing storage tanks still need to be upgraded. The tanks will be raised, inspected underneath and repaired if necessary. The tank foundation will be repaired or replaced as the tanks are raised and impermeable liner placed under the tank. This will provide improved groundwater protection and tank leak detection. It will allow detection of very slow leaks that may not otherwise be detected. New features include:

- Under tank liner for leak detection;
- New pipe work to and from tank;
- New internal sumps and stripping pipe work that will minimise product left in tank
- Sealed truck loading systems;
- High pressure alarm;
- Cast steel pumps with mechanical seal.

##### 3.1.3 Hard Piped Exchange Areas

New hard piped exchange areas have already been installed at both sites. The hard piped exchange areas are such that the lines can be completely cleaned by pigging past all connection/disconnection points to prevent minor spillage and odours. The design also includes VECS connection to ensure disconnection points will be swept to VECS eliminating fugitive emissions. VECS connection include knock out pots with shutdown and alarms to ensure liquid cannot enter the system. The only remaining item is to connect the above 11 tanks to new exchange area at Plant B.

### **3.1.4 Sealed Truck Loading**

All new sealed truck loading gantries have been installed and are operational. The only requirement is to connect the above 11 tanks to the new loading gantry at Plant B. The sealed truck loading provides improved safety features with meter loading, overfill protection, drive away protection and removing the need to access the top of road tankers. It also provides improved environmental performance with dry break couplings, overfill protection and capture of vapours from truck compartments

### **3.1.5 Groundwater Protection**

Soil contamination issues will be addressed on the western sites by remediating hot spots where able. Intervention product recovery trenches will be installed when opportunities arise and if required to manage separate phase product findings. These trenches will have automatic systems to recover any separate phase product from the groundwater. The sparge curtain will be extended if required to prevent any contamination migration to the Maribyrnong River.

A clay bund liner will also be installed at Plant B as currently installed in Plant C. This will prevent any spills in the bunded areas entering the groundwater under the site by providing an impermeable membrane on the floor and walls of the bund.

The existing program of 10 yearly internal and external inspections of tanks will be maintained to ensure there is no corrosion of tanks which could lead to possible soil contamination.

### **3.1.6 East Side Groundwater Monitoring**

Continue the 6 monthly groundwater monitoring program as per Groundwater Quality Management Plan to manage any residual contamination on East Side. Also produce an annual assessment report to cover previous 12 months monitoring.

Sampling will be conducted by an appropriately qualified environmental consultant and will be conducted in accordance with EPA “Groundwater Sampling Guidelines” (Vic EPA 2000).

Samples will be submitted to a NATA certified laboratory for the following analyses:

- TPH;
- VOC Scan including BTEX and Chlorinated Compounds;
- PAH;
- TDS;
- Fe<sup>2+</sup>;
- Manganese; and
- Cations and Anions.

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The results will then be compared to target criteria based on previous modeling to ensure that sources of contamination are assessed and groundwater contamination is trending down.

### **3.1.7 Vapour Emission Control System**

As all tanks which contain materials which meet one or more of the following criteria:

- a) are classified as Group 1, 2A or 2B carcinogens by the International Agency for Research into Cancer; or
- b) are classified as a Group B1 carcinogen by USEPA; or
- c) are highly odorous; or
- d) are hazardous; or
- e) have a vapour pressure higher than 1 kilopascal absolute at a temperature of 20 degrees Celsius

are already connected to the new Vapour Emission Control system.

The only remaining work now is to decommission the remaining regenerable activated carbon bed at Plant B which is only used as a backup to the main VECS and replace it with a static carbon bed arrangement. This will lower energy usage as the current fans can be removed and there will be no provision for steam regeneration.

We will also investigate the feasibility of turning the combustors off at night when the site is shutdown when there is no load on the combustors to reduce energy and gas usage.

### **3.1.8 Water Reuse and Reduction**

The major water uses on site are the testing of fire water deluges and the hydrostatic testing of tanks as part of their 10 year inspection regime. A number of steps have been taken to reduce water usage by:

- reducing frequency of testing of sphere deluges from monthly to yearly.
- testing of foam to gantries with water instead of foam.

Now that the majority of the tanks have been lifted, floors inspected and repaired (where required), Terminals will investigate increasing the time between the internal inspections from 10 yrs to 12 yrs or longer. This will lead to a decrease in water use and waste generation due to tanks being cleaned less often.

Terminals will also investigate other opportunities to recycle stormwater for use in toilets etc or provide stormwater to other industries and council if viable. Some options proposed are:

- capturing stormwater in bunds.
- providing off site pumping system for council to pick up water for watering gardens etc.
- installing rainwater tanks on roofed areas.

### **3.1.9 Waste Minimisation**

The burning of flammable wastes in combustors has been successful with amount of hazardous waste sent interstate for treatment has been eliminated and there has been no discernible increase in gas usage in the combustors.

It is now proposed to increase treatment of wastes in the combustor to include all streams containing hydrocarbons including combustible materials. This will mean the only wastes sent off site for treatment will be further reduced and will only consist of wastes containing inorganic materials like potassium hydroxide. Due to the high temperature in the combustor and mixing it with the current flammable wastes the increase in gas usage will be kept to a minimum.

### **3.1.10 Energy Saving**

Due to the installation of new roofs over the truck fills and pump bays there is a large area which could be used for installation of solar panels.

Terminals will investigate the feasibility of installing solar panels to offset the electricity currently used on site.

### **3.1.11 Annual Report to Community**

An Annual report to the community will be prepared at the end of each calendar year. Copies will be placed on the CICC Web site.

The report will look at Terminals performance over the previous 12 months in the following areas:

- Community Complaints
- EPA, WorkSafe and Company Audits
- Major Changes to Site Plant, Equipment and Controls
- Safety and Environmental Performance
- Safety and Environmental Incidents
- EPA Waste Discharges
- Waste Management Performance
- Energy Efficiency and Greenhouse Gases
- Ground Water Management Plan
- Environment Improvement Plan (EIP) Status

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## 3.2 Future Works

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This is the third and last EIP covering the redevelopment of the facility and most of the work outlined will be complete.

Future EIP's therefore will be less focussed on redevelopment except for work not complete but more on minor performance improvements such as

- Waste minimisation;
- Energy savings;
- Water reuse;
- Ground water protection.

### 3.3 Other Issues

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#### 3.3.1 *Community Consultation*

Terminals is committed to local community and other stakeholder consultation through various arrangements including CICCC, Maribyrnong Council etc. and will facilitate the involvement of the community into the future. Progress towards goals, targets and objectives will be shared regularly with the community. This will be done by producing an Improvement Action Report which will be updated regularly by Terminals and commented on by relevant regulators. The report will be maintained on the CICCC web site and discussed at community meetings if required. The community will be given information and access to verify progress themselves as they see fit. This will ensure that the local and broader community is kept abreast of proposed developments on the site, including enhanced safety measures and environmental controls. Ongoing consultation with the community will also provide opportunity for positive input as well as providing a forum to raise concerns. Terminals will carefully consider all inputs, and will accommodate these wherever practicable. Where the inputs are not accommodated in full, Terminals will provide explanations and written reasons for their decision. An environmental report detailing its health, safety and environmental performance will be posted on Terminals website and updated annually.

#### 3.3.2 *Landscape Management*

The existing landscaped areas will be retained as far as practical on the west side sites. New fences will be black PVC, coated or painted enamel chain wire with black coated posts.

#### 3.3.3 *Emergency Procedures*

Notwithstanding EPA related matters, the Metropolitan Fire and Brigade (MFB) is the principal emergency response group likely to be involved in any events that occur on site. Considering the nature of the materials stored and managed within the site it is likely that the MFB would attend any significant event that occurred.

The MFB will be consulted at all relevant stages during the design of the upgrades to ensure that all active and passive fire systems, product handling and tank storage control systems are adequate. The MFB will be kept aware of changes even if temporary.

The significant improvement in emergency procedures will be realised by the provision of new and revised product handling systems and equipment as the upgrades are implemented. This will ensure that the inherent safety of the terminal is improved reducing the likelihood of any incident.

### **3.3.4 Health, Safety & Environment Management**

The existing health, safety and environment management plans will also encompass the upgraded facility. The new features and systems incorporated into the terminal would be implemented and incorporated into the systems that already exist.

Terminals currently have ISO 14001 Environmental management systems accreditation for their Melbourne, Geelong and Botany facilities.

All work (including Hot Work and Confined Space Work) will be in accordance with the Safety Management Manual and will conform to MHF requirements.

### **3.3.5 Security**

With the adoption of the new terminal arrangement, the overall number of operational areas is reduced from four to two. This reduction, combined with vehicular traffic accessing Terminals' Bulk Liquid Storage Facility and other terminal operators on only the west side of Mackenzie Road and the reduced level of pedestrian traffic, will allow improved security arrangements to be made.

The existing security system has been recently upgraded with installation of CCTV and motion detection surveillance systems on all external fences with remote monitoring. Access to the site is still controlled by automatic truck and pedestrian gates with full fencing around perimeter.

Wharf security would remain as is, under the control of the MPC.

### **3.3.6 Noise**

The existing terminal operations are not generally considered to be a significant noise source, particularly when the surrounding and unrelated heavy industrial uses are taken into consideration. The predominant noise sources within the current facility are generated primarily by truck movements within the site and operating equipment such as pumps, fans, etc.

It is anticipated that there will be no overall increase in noise generation as a result of the upgrades. It is noted that even with a change to 24 hour operations, the nature of the surrounding industrial uses and the location of the site being remote from any sensitive uses, it is unlikely that noise emission would be an issue. Therefore no reduction targets are proposed.

Noting the above comments, any noise considerations would be incorporated into a detailed design and be able to comply with relevant Environment Protection Authority, (EPA), State Environment Protection Policy (SEPP), N-1 and N-2 noise levels which apply to such facilities operating over a 24 hour period.

## 4. Management and Operations

### 4.1 Philosophy and Procedures

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Terminals is a major operator within the Australian Petrochemical Industry, providing storage and handling services for bulk liquids, chemicals, petroleum, solvents, vegetable oils, tallow and liquefied gas. The current philosophy of providing a high standard, cost effective service to clients with a commitment to health, safety and environment issues will be applied to the upgraded West Melbourne facility.

### 4.2 Current Operations

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#### 4.2.1 *Product Stewardship*

Terminals regards one of its prime contractual roles is to ensure the quality and quantity of our clients products is maintained as it passes through the terminal.

To this end the redeveloped terminal is being appropriately engineered to operate as a multi-product import/export terminal.

#### 4.2.2 *EPA Accredited Licence*

In 2004, EPA granted Terminals West Melbourne site an accredited EPA licence in recognition of the significant environmental improvements that have occurred in the last few years.

An accredited licence gives the licence holder a slight reduction in annual fees and the ability to do minor works on site without the need to obtain a works approval.

The three major requirements for an accredited licence are:

- An environmental management preferably to an environmental standard such as ISO 14001;
- An EPA approved external auditing program;
- A community endorsed EIP (such as this one).

#### **4.2.3 Major Hazard Facility Licence**

In 2000, Victoria introduced new legislation titled the Occupational Health and Safety (Major Hazard Facilities) Regulations 2000. This legislation requires facilities storing certain materials (flammable, explosive or toxic substances called Schedule 1 materials) above specified quantities to be registered as Major Hazard Facilities (MHF) and to submit a Safety Case to the Government to obtain a MHF licence. This facility is one of 48 sites that are currently designated MHFs in Victoria.

In December 2007 we obtained a renewal of our original licence to operate as an MHF for further five-years.

One condition of being an MHF is any proposed changes to the facility, which can impact on its safety requires the safety case to be updated and submitted to Worksafe.

#### **4.2.4 Quality Assurance**

Quality certification to ISO 9001 through Lloyd's Register for all of Terminals facilities has been achieved. In addition, ISO 14001 accreditation for the environmental management systems has been achieved at Melbourne, Botany and Geelong. It acknowledges a high standard of consistent operations and safety in supplying our services. The following key safety and environment areas are included:

- Occupational Health and Safety;
- Operating Procedures;
- Training;
- Modification Form changes;
- Incident Reporting and Investigation;
- Contractor and Driver Inductions;
- Licence/Regulations/Standards Control;
- Maintenance;
- Contract Review;
- Purchasing.

#### **4.2.5 Responsible Care**

Terminals has been a long standing associate member of the Plastics and Chemical Industry Association (PACIA). As such, it has been an active participant in the Responsible Care program and has supported this industry movement for improved performance through this program. Terminals' West Melbourne facility have achieved 100% compliance with the responsible care guidelines.

Terminals also supported the Community Right to Know Code of Practice, by active participation in the chemical industry "Open Door" program. Safety and operating statistics have been provided to PACIA for the preparation of annual industry statistics on safety performance.

To ensure the long term maintenance of high standards, that the community is adequately informed about the facility and its operations and to provide an opportunity for the community to express any concerns, Terminals will continue to support the Coode Island Consultative Committee. Terminals takes a significant role in the committee and provides all relevant operating statistics and details of incident occurrences, injuries etc. as requested.

#### **4.2.6 Maintenance**

Terminals operators are multi-skilled. Consequently they undertake routine maintenance inspections to meet the following objectives:

- Regulatory requirements;
- Achieve maximum serviceable life from the company's assets;
- Maintain an acceptable level of customer service through the minimisation of plant and equipment down-time;
- Maintain plant and equipment in such a way that the risk of personnel injury is minimised;
- Standardise the maintenance system throughout the company's terminals;
- Develop and maintain a reliable system for the recording of maintenance work.

These maintenance procedures and checks are documented and form part of the ISO9001 Quality System.

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## 4.3 Health, Safety and Environment Management

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### 4.3.1 Overview

Health, safety and environmental (HS&E) performance is Terminals' highest priority.

Terminals are committed to ensuring the health and safety of its staff and the community, to preserve the environment and to protect property and materials stored.

Performance in these areas is achieved through a comprehensive and systematic management system, called Process Safety Management, to ensure barriers are in place, in use, demonstrable and effective to prevent significant incidents, and minimise consequences from the inherent hazards of the business.

The following four sections provide an introduction to this subject and then cover the HS&E management systems current performance and trends and achievement steps over the last five years.

#### **4.3.2 Safety, Health and Environment Management**

Terminals is the largest independent bulk liquid chemical storage and handling company in Australia, providing product handling and storage services for over 90 companies in as many different chemicals for many diverse industries.

From a HS&E perspective, the range of chemicals handled differs greatly and involves the following types of hazards:

- Flammable;
- Poisonous;
- Toxic;
- Known and suspected human carcinogens;
- Corrosive;
- Polymerisable;
- Combustible;
- Oxidising agent;
- Highly volatile.

It is the corporate objective of Terminals to be the acknowledged leader within its industry in the quality of services provided and in its safety, health and environmental performance.

In order to operate safely and effectively, the company has a defined management structure, which implements policies set by senior management. These policies are detailed in comprehensive management systems that comprise manuals, programs, procedures and plans on activities such as Occupational Health and Safety, Operations, Maintenance, Engineering, Training, Quality, Safety Audits, Environmental Management and Emergency Procedures.

#### **4.3.3 Safety Management Systems**

Process Safety Management is a systematic approach to the identification, understanding, assessment and ultimately control of process hazards. The major focus is to minimise, if not prevent, incidents and accidents.

The system is based on the "Technical Management of Chemical Process Safety" developed by the centre for Chemical Process Safety of the American Institute of Chemical Engineers.

#### **4.3.4 Environment Management Plan**

An Environment Management Manual (EMM) has been developed for Terminals' facilities in Australia. Terminals has ISO 14001 accreditation for its Melbourne, Geelong and Port Botany facilities. Its purpose is to cover the requirements for environmental protection, and management of the operations of Terminals in relation to routine on-site and off-site activities. This plan will continue to be applied to the redeveloped facility and will include the setting of emission and environmental goals and the ongoing audit of the site environmental and operating systems.

#### **4.3.5 Safety Performance**

The "continued improvement" philosophy is entrenched in the Process Safety Management Model. It is essential to Terminals' business success to monitor parameters for performance, set objectives then develop and implement plans to achieve nominated targets.

Action plans developed from incidents and audits are monitored to completion using a computer based management follow up system.

Terminals encourages investigation of near misses as well as minor and significant incidents. This "root cause" analysis ensures the greater number of lessons can be learned and improvements made. Severity and frequency of incidents are reduced using this method.

An active Occupational Hygiene and Health Program is in place. Annual medical checks are conducted on all operating personnel. Noise, and asbestos assessments, have been independently carried out by external professional occupational hygienists, and all recommendations have been implemented.

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#### 4.4 Manuals

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The following Terminals' manuals are available for review.

- Safety Management Manual
- Quality Manual
- Training Manual
- Emergency Plan
- Environmental Management Manual
- Operations Procedures Manual
- Maintenance Inspections and Procedures Manual
- Engineering Procedures and Policies Manual.
- Critical Control Performance Manual
- Safety Case

**Appendix 1**

**Summary of Targets**

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**SUMMARY OF TARGETS 2009 - 2012**

<b>Element</b>	<b>Target Objective</b>	<b>Due</b>
<b>Upgrade 11 Flammable/Hazardous Storage Tanks</b>	- Refurbish tanks and upgrade foundations	4 <sup>th</sup> Qtr 2012
	- Install HDPE or impermeable liners under tank floors	4 <sup>th</sup> Qtr 2012
	- Install new piping systems including internal tank pipe work to minimise waste	4 <sup>th</sup> Qtr 2012
	- Connect new pipe work to sealed truck loading system	4 <sup>th</sup> Qtr 2012
<b>Hard Piped Exchange Areas</b>	- Connect remaining 11 tanks to new exchange area Plant B	4 <sup>th</sup> Qtr 2012
<b>Sealed Truck Loading</b>	- Connect remaining 11 upgraded tanks to new seal truck loading system	4 <sup>th</sup> Qtr 2012
	- Automatic shutdown of dilute system after ten minutes inactive	1 <sup>st</sup> Qtr 2009
	- Investigate fine tuning of vapour collection at truck fill to minimise volume of air collected	4 <sup>th</sup> Qtr 2010
<b>Groundwater Protection</b>	- Remediate hotspots by install recovery trenches if required	TBA
	- Continue 10 yr tank inspection program	Ongoing
	- Install clay bund liner at Plant B	4 <sup>th</sup> Qtr 2012
<b>East Side</b>	- Continue 6 monthly groundwater monitoring & annual assessment reports to meet S of EA	1 <sup>st</sup> Qtr 2010
	- Total assessment review of East Side monitoring program	3 <sup>rd</sup> Qtr 2010
<b>Vapour Emission Control System</b>	- Replace existing regenerable backup carbon beds with static carbon bed.	4 <sup>th</sup> Qtr 2009
	- Investigate turning combustor off at night	4 <sup>th</sup> Qtr 2009
<b>Water Reuse and Reduction</b>	- Investigate increasing tank internal inspections from 10 yrs to 12 yrs.	4 <sup>th</sup> Qtr 2011
	- Investigate opportunities to recycle stormwater and fire system test water.	4 <sup>th</sup> Qtr 2012

<b>Element</b>	<b>Target Objective</b>	<b>Due</b>
<b>Waste Minimisation</b>	- Extend burning of wastes on site include all hydrocarbons not just flammables.	3rd Qtr 2009
<b>Energy Saving</b>	- Investigate installing solar panels on truckfill/pump bay roofs	4 <sup>th</sup> QTR 2011
<b>Annual Report to Community</b>	- Prepare annual report to the community outlining environmental and safety performance for previous financial year	3rd Qtr
	-	