

Kurnell Terminal Demolition Project

Demolition Waste and Resource Management Plan

CALTEX AUSTRALIA PETROLEUM PTY LTD

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Revision History

Revision No.	Date of Revision	Description of Revision	Section / Page No.
A	July 2015	Draft for consultation	-
B	September 2015	Final for approval	-
C	September 2015	Approved	-
D	January 2018	Updated to include SSD 5544 MOD2 and SSD 5544 MOD3. Provided to Department of Planning and Environment for approval.	Whole document

1. INTRODUCTION

Caltex are in the process of converting the petroleum refinery in Kurnell (the 'Site') to a finished fuel terminal facility (the 'Project').

The Project is divided into three phases:

- Converting infrastructure to allow the Site to operate as a terminal and shut down the refinery (the conversion works).
- Demolition and removal of redundant infrastructure, including Tank 101 (the demolition works).
- Construction, filling and closure of the asbestos containment cell (the ACS Management works).

The Demolition Waste and Resource Management Plan (DWRMP) has been prepared in relation to the demolition works and ACS Management works.

The objective of the Project is to ensure that Caltex's operations within Australia remain viable and can provide a safe, reliable and sustainable supply of petroleum fuels to NSW and the ACT.

As such the Project will allow the Site to continue to be utilised as a terminal where finished products can be received by ship, stored in tanks before leaving the Site by pipeline to other terminals.

The demolition works and ACS Management works are being undertaken in accordance with Development Consent from the Department of Environment and Planning, Approval Number: SSD 5544 MOD1, SSD 5544 MOD2, SSD 5544 MOD3 and the Consolidated Management and Mitigation Measures (MMM) (refer to Approval: SSD 5544 MOD3)).

This DWRMP has been prepared in response to Development Consent SSD 5544 MOD1, Condition C40A outlined in **Table 1-1**.

Table 1-1 – Development Consent conditions addressed in this Management Plan

Condition Requirement	Reference Section
<p><i>C40A: Demolition Waste and Resource Management Plan</i></p> <p><i>The Applicant shall prepare and implement a Demolition Waste and Resource Management Plan for the demolition works to the satisfaction of the Secretary. This plan is to update the plan approved under condition C40 and shall also:</i></p>	
<p><i>(a) be prepared in consultation with the EPA;</i></p>	Section 1.1
<p><i>(b) be approved by the Secretary (refer to condition D1a for timing);</i></p>	Section 1.1
<p><i>(c) outline the measures for the removal, storage and disposal of all waste materials generated during the demolition works; and</i></p>	Section 4
<p><i>(d) outline the waste reuse and recovery strategy for the demolition works.</i></p>	Section 4

This DWRMP has also been prepared in accordance with the following:

- SSD 5544 conditions: B1, B2, B21, C38, C39, 39A, 39B, 39C, C40, C40, C41, and D3; and
- MMM: E1 – E14, and E16-E22.

1.1 Legislative and Other Requirements

The demolition works and ACS Management works will be carried out in accordance with the requirements of the:

- Protection of the Environment Operations Act 1997
- Protection of the Environment Operations (Waste) Regulation 2014
- Waste Avoidance and Resource Recovery Act 2001
- EPA's Waste Classification Guidelines 2009

Environment Protection Licence

The terminal currently operates in accordance with an Environment Protection Licence (EPL 837) issued by the NSW Environment Protection Authority (EPA). EPL 837 contains numerous operational conditions and Pollution Reduction Programs (PRPs). All work undertaken during this Project will comply with the conditions within EPL 837.

The following EPL conditions relating to waste apply for demolition works:

- O5.1 The licensee must ensure that any liquid and/or non-liquid waste generated and/or stored at the premises is assessed and classified in accordance with the NSW (2009) Waste Classification Guidelines as in force from time to time.
- O5.2 The licensee must ensure that waste identified for recycling is stored separately from other waste.

Under Section 142A of the POEO Act it is an offence to cause or permit the pollution of land.

Protection of the Environment Operations (Waste) Regulation 2014

The *Protection of the Environment Operations (Waste) Regulation 2014* (PoEO Waste Regulation) sets out provisions that cover the way waste is managed in terms of storage and transportation as well as reporting and record keeping requirements for waste facilities. It also makes special requirements relating to asbestos and clinical waste.

The PoEO Waste Regulation also enables the EPA to issue 'resource recovery orders and exemptions' that allow for the beneficial 'reuse' of wastes via land application or for use as a fuel. These orders/exemptions may be used by anyone, without seeking approval from EPA, provided generators, processors and consumers fully comply with the conditions they impose.

Where practical, Caltex will re-use and recycle wastes generated from the demolition works and acknowledges the potential need to apply for a resource recovery order/exemption if a specific waste, to be re-used on-site, is not listed under the list of general orders/exemptions.

The general orders/exemptions potentially applicable to the demolition works include:

- Cement fibre board;
- Reclaimed asphalt pavement;
- Recovered aggregate;
- Recovered fines from construction and demolition waste - two exemptions; one based on 'batch' processing and another on 'continuous' processing; and
- Stormwater.

2. OBJECTIVES

The objectives of the DWRMP are to:

- Minimise the waste generated throughout the demolition works and ACS Management works and maximise the reuse and recycling of waste materials produced; and
- Store, handle, transport, and dispose of waste in an environmentally responsible manner that does not cause harm or contamination to soil, air or water.

To address this objective, the DWRMP documents:

- The management measures, actions and associated performance indicators, that will be implemented throughout the demolition works and ACS Management works;
- The proposed monitoring program that will be implemented to record waste reuse, recycling and disposal; and
- Key project management roles and responsibilities and reporting requirements.

3. PROJECT OVERVIEW

The key waste generating activities associated with the demolition works and ACS Management works include:

- Demolition of redundant refinery infrastructure/structures to be pushed over and cut-up to allow for transport by truck;
- Demolition of redundant storage tanks - cut-up to allow for transport by truck;
- Removal of redundant above ground pipelines- cut-up to allow for transport by truck;
- Removal of redundant below ground pipelines including pipelines in the Western ROW, Eastern ROW, road reserves, Silver Beach, Botany Bay, Kurnell Wharf and the Continental Carbon Pipeline. Pipes will be dug up, cut-up to allow for transport by truck;
- Removal of sections of sewer systems, cabling and underground services - pipes will be dug up, cut-up to allow for transport by truck;
- Removal of buildings and foundations associated with redundant infrastructure; and
- Construction, filling and closure of the asbestos containment cell (referred to as the ACS Management works under SSD 5544 MOD2).

Caltex aim to recycle 90% of the generated material streams and where possible reuse this on-site.

Refer to the Demolition Environmental Management Plan (DEMP) for **Site Location, Site Layout and Demolition Works Area** and **Site Layout and ACS Management Works Area Figures**.

3.1 Works Program

Caltex commenced the demolition works during the second half of 2015. The ACS Management works will commence in early 2018.

A schedule for demolition works and the ACS Management works is shown in **Table 3-1** below.

Table 3-1 Proposed Works Schedule

Task	Indicative Date
Demolition works	
Demolition of Refinery Process Units	Mid 2015 – Mid 2017
Demolition of Tanks	Mid 2016 – Mid 2018
Pipeline Removal	Start 2016 – Mid 2018
Demolition of Buildings	Mid 2016 – End 2017
Concrete Crushing	Q3 2017
ACS management works	
Containment Cell Construction	Late 2017 – Q1 2018
Excavation of ACS from Pipeways and Filling of Containment Cell	Q2 2018 – Q4 2018
Closure of Containment Cell	Q1 2019

Demolition works associated with the Project will not extend beyond three years from the date of consent of SSD 5544 MOD 1 (i.e. 10 August 2018). The ACS Management works will be complete by 30 April 2019 in accordance with SSD 5544 MOD 2 condition B7B.

3.2 Potential Impacts from Waste

If not managed responsibly, waste generated by the demolition works and ACS Management works has the potential to cause the following impacts:

- Land and water (surface and groundwater) contamination as a result of spills or inappropriate storage, handling, transportation and disposal of solid and liquid wastes;
- Increased population of vermin and spread of disease from inappropriate storage and handling of wastes;
- Visual amenity impacts caused by inappropriate storage of waste;
- Inefficient and careless use of resources;
- Land and water (surface and groundwater) contamination as a result of the use of incorrectly verified soils from the CSRF at the containment cell; and
- Human health impacts from the exposure and incorrect handling of asbestos fibres and/or small fragments found in contaminated soils

Management strategies developed for each waste stream have been designed to be consistent with the waste management hierarchy, meet relevant legislation and policy, and to achieve the environmental objectives of the demolition works.

3.3 Waste Generation

The estimated quantity, classification, and primary source of major waste streams generated during the demolition works are summarised in **Table 3-2**.

New waste streams would be addressed as they arise and assessed to determine the most suitable management measures to use when handling, storing, transporting and disposing of the waste.

Table 3-2 Estimated quantity, classification and source of primary waste streams from the demolition works

Waste Type	Estimated Approximate Quantity	Classification ¹	Primary Source
Steel and alloys	40,000 t	General Solid (Non-Putrescible)	Demolition of redundant refinery infrastructure, tanks and product pipelines
Other mixed building and demolition waste	1,000 t	General Solid (Non-Putrescible)	Demolition of redundant refinery infrastructure, buildings and pipelines
Concrete	3,600 t	General Solid (Non-Putrescible)	Demolition of redundant refinery infrastructure and tanks in particular removal of concrete foundations. Removal of the cooling water intakes and outlet in the Eastern and Western ROWs.
Uncontaminated Soil	148,000 t	General Solid (Non-Putrescible)	Removal of foundations and underground pipelines
Contaminated soil	2,000 t	To be determined	Removal of foundations and underground pipelines
Asbestos (including Synthetic Mineral Fibres)	2,000 t	Special Waste	The asbestos removal program will include asbestos waste (and synthetic mineral fibres waste) from all insulation on lines and vessels, internal materials, corrosion protection materials on lines, refractory and building materials.

Notes: 1) Waste classification will be confirmed prior to disposal in accordance with the *Waste Classification Guidelines* (EPA, 2014)

Other waste streams that will be generated in relatively minor quantities include:

- General solid waste (Non-putrescible) including packaging waste, and asphalt waste;
- General solid waste (Putrescible) food waste from demolition workers;
- Liquid waste including wastewater from dewatered groundwater (contaminated and uncontaminated) from demolition activities (refer to Soil and Water Management Plan); and
- Synthetic mineral fibres, such as insulation from the buildings which cannot be mixed with general waste.

Other waste streams that may potentially be generated in relatively minor quantities include:

- Acid sulfate soils (ASS); and
- liquid waste (including sediment and scale) from tank and pipe cleaning.

The estimated quantity, classification, and primary source of major waste streams generated during the ACS Management works are summarised in **Table 3-3**.

New waste streams would be addressed as they arise and assessed to determine the most suitable management measures to use when handling, storing, transporting and disposing of the waste.

Table 3-3 Estimated quantity, classification and source of primary waste streams from the ACS Management works

Waste Type	Estimated Approximate Quantity	Classification ¹	Primary Source
Construction (the works to excavate the ACS soils, to construct, fill and close the cell)			
General Municipal Waste	26 Kgs /day ²	General Solid Waste (Putrescible) Food Waste	General day-to-day waste from on-site staff / contractors.
	8 Kgs/day ²	General Solid Waste (Non-Putrescible) Paper Cardboard Glass Plastic	
Sewerage Effluent	3 Kgs /day ²	Liquid Waste	On-site staff / contractors.
Residual Materials (e.g. geosynthetic liner)	Minor	General Solid Waste (Non-Putrescible)	Containment cell construction.
Leachate	30 m ³ /day	Liquid Waste	Stormwater from within the containment cell area.
Stormwater	Minor	Liquid Waste	Stormwater from outside of the bunds and is considered clean or uncontaminated.

4. WASTE MANAGEMENT PROCEDURES

4.1 Existing Waste Management Measures

Wastes generated from Caltex’s existing operations in Kurnell are generally recycled or sent to landfill for appropriate treatment and disposal in accordance with the existing certified environmental management system (EMS) for the Site.

Waste generated from demolition works will be recycled and if possible, reused on-site. Some wastes generated from the demolition works such as general solid waste, stormwater, oily water and

¹ Waste classification would be confirmed prior to disposal in accordance with the *Waste Classification Guidelines (EPA, 2014)*

² Based on 30 construction staff per day (worst-case) (with the assumed working hours of 10 hours per day)

sewerage will be managed in general accordance with the existing EMS and WMS and associated procedures, in particular:

- PROC 5.06.11.001 Kurnell Waste Management;
- PROC 5.06.11.002 Use of Sludge Lagoons;
- PROC 5.06.11.003 Management of Used and Empty Drums;
- STD 2.05.03.018 Hazard Control of Equipment & Material Leaving Site; and
- STD 2.05.03.019 Recyclable Materials Handling.

4.2 Waste Management Strategy

The waste management hierarchy is a framework for prioritising waste management practices to achieve the best environmental outcome.

The preferred order of adoption for demolition waste is:

- **Avoid** waste by identifying appropriate materials and effective procurement
- **Reduction** of waste by optimising demolition methods
- **Reuse** waste by identifying sources that can utilise the waste
- **Recycle** waste by identifying facilities that are able to recycle waste
- **Recover** energy from waste, where feasible to do so
- **Dispose** of waste at an appropriate licensed facility

Contractors used for waste management will implement the waste hierarchy when implementing waste management practices during demolition works.

To deliver waste management across the Site, the following strategies will be implemented:

1. **Cleaner Production** – involves identifying and reducing environmental impacts along the entire life cycle of a demolition works by conserving resources (raw materials, energy and water), eliminating toxic raw materials and reducing the quantity and toxicity of all emissions and wastes. The following cleaner production techniques should be considered by the demolition contractor:
 - a. the adoption of demolition techniques that help ensure that minimum waste volumes are generated during demolition works;
 - b. application of efficient demolition processes to ensure resourcefulness in the use of energy, water, and natural resources;
 - c. provision of resource efficiency and waste minimisation procedures in contracts to encourage demolition contractors consider environmental management objectives;
 - d. the re-use of formwork and scaffolding where feasible;

- e. provision of separate waste containers/skips to ensure waste material segregation and maximise the opportunities for re-use and recycling; and
 - f. safe storage and disposal of residual demolition waste ensuring least amount of harm to surrounding environment.
2. **Source Separation** – identification and separation of solid waste will be carried out at the point of generation to aid the maximum re-use and recycling of materials. Where practical, appropriate containers and bins will be provided in designated locations for the source separation of materials and to aid the separation of re-useable and recyclable materials. If it is not practical to provide containers and bins at the point of generation, a designated area on the Site would be identified and communicated to the relevant personnel.

4.3 Waste Storage and Handling

4.3.1 On-site Waste Management Facilities

The following key on-site waste management facilities will be utilised for management of waste generated from demolition activities:

- **Empty Drum Storage Area:** The Empty Drum Storage Area will be used for the storage of empty drums prior to sending them for recycling.
- **Waste Water Treatment Plant (WWTP):** Water treatment involves three stages of treatment from physical to chemical and biological. The unit allows on-site treatment of all effluent, spent caustic waste, second and third flush water.
- **Landfarm:** This is used to degrade the hydrocarbon content of oily sludge's, tank bottoms or highly contaminated sand/soil. Access to the Landfarm is controlled through the use of a Waste Disposal Permit. No material will be placed on the Landfarm or hard stand adjacent to it without the authorisation of an approved Waste Disposal Permit.
- **Slop Troughs:** The Site operates a trough for the recovery of clean oils for reprocessing.
- **Metal Recycling Area:** This is used to store only uncontaminated metal pieces, which are suitable for on-site reuse, or off-site recycling. The current metal recycling area is not capable of housing all the metal that requires disposal off-site. Other areas on site have been designated for storage of the metal until it goes off-site.
- **ACS containment cell:** This area will be used to store ACS from the Site.

The demolition works area, ACS Management works area and designated waste storage areas will be maintained in a clean and tidy state. Where waste cannot be treated or stored on-site it will be sent to an appropriately licenced waste facility.

Table 4-1 outlines the management strategy for each of the primary waste streams to be generated from the demolition works.

Table 4-2 outlines the management strategy for each of the primary waste streams to be generated from the demolition works.

The demolition contractor will establish and maintain a waste collection and storage area within their work area. All waste containers will have secure lids in place to prevent water ingress and access to animals.

4-1 Waste Storage and Handling for Demolition Works

Waste Type	Classification ¹	Management Strategy
Steel and alloys	General Solid (Non-Putrescible)	Collected in dedicated scrap metal stockpiles and bins on-site. Re-use on-site or off-site recycling by a licenced waste contractor. Metal cannot be re-use on site.
Other mixed Building materials	General Solid (Non-Putrescible)	Collected in dedicated stockpiles on-site. Re-use on-site, off-site recycling and/or disposal by a licenced waste contractor.
Concrete	General Solid (Non-Putrescible)	Collected in dedicated stockpiles on-site. Concrete that is suspected to have been contaminated will be segregated. Contaminated waste concrete will be appropriately tested and classified prior to recycling or disposal off-site. Contamination free concrete will be reprocessed and reused on-site or sent off-site for recycling.
Uncontaminated Soil	General Solid (Non-Putrescible)	As the works progress, the soil removed during the excavation work will be stockpiled and, where appropriate, reused as backfill. Refer to the Soil and Water Management Plan for further details.
Contaminated soil	To be determined	Managed in accordance with methodology outlined in the Soil and Water Management Plan or, where appropriate, ACS will be disposed of in the ACS containment cell.
Asbestos	Special Waste	The asbestos removal program will include asbestos waste from all insulation on line and vessels, internals materials, corrosion protection materials on lines, refractory and building materials. This asbestos waste stream will be prepared for off-site disposal to a licenced facility in line with the Caltex producer ' <i>Management of Asbestos, Asbestos Containing Materials and Synthetic Mineral Fibres</i> ' (April, 2014).
Mineral Fibres	Special Waste	The asbestos removal program will include synthetic mineral fibres waste from all insulation from building materials which cannot be mixed with general waste. This asbestos waste stream will be prepared for off-site disposal to a licenced facility in line with the Caltex producer ' <i>Management of Asbestos, Asbestos Containing Materials and Synthetic Mineral Fibres</i> ' (April, 2014).

Soils generated by the demolition works that are not required in the short term for backfilling excavations will be stored in dedicated areas for subsequent re-use, recycling or disposal (refer to Soil and Water Management Plan for storage and testing for contamination requirements).

4-2 Waste Storage and Handling for ACS Management works

Waste Type	Classification	Management Strategies
Cell Construction, Filling and Closure (Construction)		
General Municipal Waste	General Solid Waste Putrescible (Food Waste)	Food waste would be collected on-site in designated waste collection bins. No recyclable or contaminated materials are to be placed in this bin. A waste contractor would pick up the bin(s) and take it off-site as required to a licensed off-site waste facility.
	General Solid Waste Non-Putrescible (Paper, Cardboard, Glass, Plastic)	Paper, cardboard, glass and plastic waste would be collected on-site in designated recycling collection bins. A waste contractor would pick up the bin(s) and take it off-site to a licensed recycling facility.
Sewerage Effluent	Liquid Waste	Sewage would be sent to existing sewerage infrastructure.
Residual Materials (e.g. geosynthetic liner)	General Solid Waste (Non-Putrescible)	The containment cell would be designed to minimise the volume of residual material. Where appropriate the contractor would identify options for reuse or recycling and/or disposal by a licensed waste contractor.
Leachate	Liquid Waste	The biopile works area and containment cell works area would be designed so that runoff from these areas is directed through the oily water sewer system (OWSS) and treated at the wastewater treatment plant (WWTP), in accordance with EPL 837. Refer to SWMP for further information.
Stormwater	Liquid Waste	Clean stormwater, from outside the bunded areas would be diverted to the on-site stormwater system. Refer to SWMP for further information.
ACS (from with the pipeways)	Restricted and Hazardous Special Waste	Disposed of into the ACS containment Cell.
ACS (from other areas of the Site)	Restricted Special Waste	Disposed of into the ACS containment Cell, if space is available before reaching the final landform design.

4.4 Management of Hazardous Materials

Caltex have undertaken an investigation of redundant structures and understands their broad composition. This information has been used to generate the expected waste generation information in **Table 4-1**. Following the decommissioning process, structures will be re-examined to confirm the best method for demolition and to develop waste management details of be contained in the Demolition Management Plans (DMP) for each structure.

The removal, storage and disposal of hazardous materials from structures will be detailed in the DMP. All hazardous materials identified in the structures to be demolished will be removed prior to demolition where it is safe and practical to do so. Waste oil, solvents and toxic material will be collected in appropriate, labelled containers for reuse, recycling, treatment or disposal at approved EPA licensed locations.

ACS from the pipeways classified as hazardous will be placed within the containment cell in line with the measures and processes detailed within the Containment Cell Management Plan.

4.4.1 Asbestos

The asbestos removal program will include asbestos waste from all insulation on line and vessels, internals materials, corrosion protection materials on lines, refractory and building materials. This asbestos waste stream will be prepared for off-site disposal to a licenced facility in line with the Caltex procedure '*Management of Asbestos, Asbestos Containing Materials and Synthetic Mineral Fibres*' (April, 2014).

Asbestos removed from structures will be disposed of off-site by a licensed contractor and comply with NSW WorkCover requirements. And EPA waste management's guidelines.

ACS from the pipeways and other parts of the Site as appropriate will be placed within the containment cell in line with the measures and processes detailed within the Containment Cell Management Plan.

4.4.2 Liquid Waste

Any residual aqueous waste from tank and pipe cleaning will be disposed of through the oily water sewer system to the WWTP.

Sediment and scale will be separated from the aqueous waste and disposed of to a licensed landfill or to the landfarm. Where reasonably practical, Caltex will minimise the quantity of material placed in the landfarm.

Following periods of extended heavy rainfall, Caltex will undertake a visual inspection to confirm that pumps within the containment cell sumps are directing leachate to the Site's WWTP.

Other management of contaminated stormwater and oily water is discussed in the Soil and Water Management Plan.

4.4.3 Contaminated Soil

Acid sulfate soils

The probability of encountering ASS across the majority of the demolition works area (Potential Acid Sulfate Soils (PASS) Class Area 4) is considered to be low, as excavations will only be to approximately 2 mbgl. Details of where ASS may be encountered, and how they will be managed is discussed in detail in the Soil and Water Management Plan. Where possible ASS encountered during the works will be managed on-site. Where on-site management is not possible the ASS will be disposed off-site at an appropriately licenced waste facility.

Hydrocarbon contaminated excavated soils

Soils excavated during demolition which are thought to be contaminated will be stored in accordance with the requirements detailed in the Soil and Water Management Plan. Stockpiled contaminated soils not able to be treated and/or re-used on-site will either be managed/stored on-site or classified in accordance with the NSW (2009) *Waste Classification Guidelines*, and disposed of to an appropriately licensed facility.

Asbestos contaminated soil

Asbestos impacted soil will be managed in situ, placed in the ACS containment cell or disposed off-site. In the event that:

1. The capacity of the containment cell is reached; or
2. ACS is identified on-site (outside of the pipeways) which is classified as hazardous;

these soils will be removed from the Site as soon as practicable by a licenced contractor. If these soils need to be temporarily stockpiled they will be stored at a defined location, covered and labelled as asbestos waste. If asbestos impacted soil is to be disposed off-site it will be classified in accordance with NSW EPA guidelines for transport and disposal at a licensed landfill (and in accordance with Caltex procedure '*Management of Asbestos, Asbestos Containing Materials and Synthetic Mineral Fibres*'). The excavation, transport and disposal of asbestos impacted soil will be undertaken by a licenced contractor and comply with SafeWork NSW requirements. The placement of ACS within the containment cell will be completed in line with the Containment Cell Management Plan.

Additional sampling will be undertaken in the pipeways to further delineate the areas classified as asbestos contaminated in order to confirm the volume of soil classified as Special Waste and disposed of in the containment cell.

4.5 Waste Re-use

Waste re-use will be achieved by identifying re-use opportunities on-site and subsequently identifying market demands for waste items. The following reuse options will be investigated for implementation for the demolition works and ASC Management works:

- Caltex put a large number of redundant process units up for sale. Selling functioning units to other facilities locally and around the world will reduce the total volume of demolition waste sent to a licensed landfill facility. The units sold for re-use will be recorded in the Waste Register as re-used items.
- Clean concrete and asphalt – Caltex will investigate reuse of clean concrete and asphalt as a crushed aggregate to use in re-grading the former refinery process area following the completion of demolition works. The crushed aggregate produced from demolition waste will meet the commercial and industrial criteria as defined by Schedule B1 Guidelines, Investigation Levels for Soil and Groundwater, National Environmental Protection Measure ((Assessment of Site Contamination) Amendment Measure 2013), and reviewed in accordance with the PoEO Waste Regulation exemptions.
- Caltex will use soils from the CSRF where appropriate for the construction of the containment cell in accordance with the conditions of the Caltex treated soil exemption 2016.

Throughout the demolition works, investigations will continue looking into re-use opportunities, both on-site and with local businesses/industries. Additionally, the marketability of wastes will be regularly reviewed to ensure potential new and emerging opportunities for waste re-use are identified and maximised.

To maximise re-use opportunities wastes will be segregated. Where feasible, Caltex will work with suppliers and investigate the opportunities for the re-use of packaging materials and surplus materials, such as timber pallets and scrap metal.

4.6 Waste Recycling

Wastes will be collected, segregated on-site and stored before being transported to approved licensed facilities.

The market demand for recyclables will be investigated as volumes of waste materials are generated and an assessment will be undertaken to assess the opportunities for these waste streams. This assessment will consider the availability and capacity of local recycling facilities.

Caltex will consult with local industries to encourage them to take advantage of opportunities for re-use and recycling where feasible.

4.7 Waste Disposal

The disposal of waste materials to landfill is considered as the last resort where all other avenues have been investigated. Where no other option is available, waste will be handled and disposed of in a manner that causes the least environmental harm.

General waste will be transported to a local licensed landfill for disposal in line with regulatory requirements. Regulated wastes will be handled by a licensed waste contractor and transported to an appropriate regulated waste facility.

Caltex will utilise existing local waste management facilities and will employ licenced waste management companies to manage the identified waste streams arising from the demolition works that require disposal.

Unidentifiable waste streams would be analysed and sent for testing in an accredited laboratory to assess the risks associated with handling and disposal of the waste.

5. CALTEX MANAGEMENT

5.1 Roles and Responsibilities

Overall responsibility for the implementation of this Management Plan rests with Caltex. All employees and Contractors will meet the requirements of this Management Plan and associated procedures. Management actions set out in this Management Plan may be delegated in writing by Caltex to the specific Contractor.

Key Project personnel including the Caltex Demolition Project Lead (and their delegates), Caltex ER, Contractor Project Manager and each Contractor's Environment / HSE Representative, will ensure that all management actions are undertaken to a satisfactory standard and that all personnel are aware of their responsibilities with respect to environmental matters. There will be dedicated staff to manage environmental issues (or integrated HSE matters) during the demolition works. A general outline of responsibilities in relation to environmental management is provided below:

Demolition Project Lead / Demolition Execution Superintendent / Demolition Support Services Superintendent

- Overall accountability for the environmental management of the demolition works.
- Implementation of the Caltex Environmental Policy with respect to the demolition works.
- Overall responsibility for development, implementation, maintenance and compliance with this Management Plan.

Caltex Environmental Representative (ER)

- Accountable for environmental matters on the demolition works.
- Provide support to Caltex personnel and the Contractor as required to ensure this Management Plan is implemented and complied with.
- Review effectiveness and implementation of this Management Plan following a regulatory non-compliance or incident, or at a minimum of every 12 months during the demolition works.
- Monitor the implementation of all required environmental management actions and compliance with legislation.
- Undertake environmental auditing as required.

- Implement *Protection of the Environment Operations Act 1997* (POEO Act) notification requirements in the event of a pollution incident (these requirements can be delegated to appropriate personnel by the ER).
- All Personnel (Caltex and the Contractor)
- Comply with the requirements of this Management Plan.
- Report all environmental incidents as they occur.
- Attend environmental inductions or any other training as required.

All Personnel (Caltex and the Contractor)

- Comply with the requirements of this Management Plan.
- Report all environmental incidents as they occur.
- Attend environmental inductions or any other training as required.

5.2 Induction

Caltex has a Site induction program that all contractors and employees are required to complete prior to undertaking any work.

All Caltex employees and the Contractors are required to undertake the Caltex Project Induction before they can commence work on the demolition works.

5.3 Training

All demolition works personnel will have the experience and necessary training to carry out their required tasks, including in the use of equipment and the implementation of this Management Plan.

Caltex and the Contractor will each maintain a Training Register that records all environmental training completed by its personnel, including records of attendance at awareness training and toolbox talks, as well as competency assessments.

5.4 Incident Management

Caltex will continue to implement its existing incident management procedures, including for response to, investigation and reporting of incidents.

A comprehensive Emergency Management System is currently implemented at the Kurnell Terminal, with associated response and safety equipment held on site. Key personnel are trained to support the implementation of the system. Regular training exercises are carried out by Caltex.

In the event of an incident causing environmental harm occurs as a result of demolition works, the Kurnell Pollution Incident Response Management Plan (PIRMP) will be implemented. The PIRMP is designed to manage environmental incidents which may occur on site.

5.5 Complaints Management

Caltex has a complaint management procedure for the investigation, response and reporting of complaints.

Caltex manages all community complaints in accordance with the requirements of EPL 837, including:

- Reporting complaints in the Annual Return for EPL 837
- Keeping a legible record of all complaints made to Caltex and its Contractors, including:
 - The date and time of the complaint
 - The method by which the complaint was made
 - Any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect
 - The nature of the complaint
 - The action taken by Caltex in relation to the complaint, including any follow-up contact with the complainant
- If no action was taken by Caltex, the reasons why no action was taken

Caltex will continue to operate its 24-hour hotline number (1800 802 385 toll free) to receive feedback and complaints associated with the Project. All feedback and complaints will be relayed to the ER and relayed to the Caltex Project Manager, Demolition Project Lead (or their delegates), Terminal Manager and the Senior Environmental Specialist (Licensing), as relevant depending on their nature.

Any feedback and complaint records will be logged in the Complaints Register, tracked and where relevant, responded to. Responses to complaints will be made, where reasonably possible, within 48 hours of receiving the complaint.

5.6 Performance Indicators

The following performance indicators will be implemented during the demolition works:

- No litter present on or around work areas.
- Appropriate segregation, storage and management of all waste, stockpiles and recyclable material.
- 90% diversion of waste produced during demolition activities from landfill.

5.7 Monitoring

The key monitoring requirements for the demolition works are:

- The Contractor will record the types, volumes and management measures (i.e. reuse / recycling / disposal etc.) for wastes generated from its activities in the Waste Register.
- The Caltex, or a nominated representative, will record the type and volume of ACS excavated from the pipeways and other parts of the Site and placed into the containment cell.
- The Contractor will carry out weekly inspections of its works areas to ensure wastes, chemicals and hazardous materials are appropriately separated, stored and labelled and that required procedures are being implemented.

New waste streams will be addressed as they arise and assessed to determine the most suitable management measures to use when handling, labelling, storing, transporting and disposing of the waste. Unidentifiable waste streams will be analysed and sent for testing in an accredited laboratory (i.e. NATA) to assess the risks associated with handling and disposal of the waste.

Existing waste management processes will be used for types of waste streams and volumes produced.

The objectives of these procedures will be to provide:

- An assessment of the actual waste, quantities and their classification;
- Monitor the potential environmental impacts;
- Review the waste transportation records and disposal routes;
- Enable positive actions to be taken in the event of incidents or accidents occurring on-site;
- Recommend future actions to improve waste management practices; and
- Monitor the implementation of the principles of waste management hierarchy.

5.8 Reporting

The reporting requirements for waste management include:

- A Waste Register will be maintained by the Demolition Contractor to track all wastes generated from demolition works.

The 'Waste Register' database will be used to record:

- type of waste streams generated;
- volume of waste generated;
- volume of waste re-used (off-site) and recycled;
- waste reused on Site, the location, type of waste and classification.

- This database will be available to inform internal and external stakeholders, and government agencies on the types and volumes of waste being generated, re-use and recycling rates, and the types and quality of substances emitted to land, water and air.
- The Contractor will report monthly to the Caltex ER on the types, volumes and management measures (i.e. reuse / recycling / disposal etc.) for wastes generated from its activities via the Waste Register and how it is managing the performance target of 90% diversion from landfill.
- Caltex will report on the waste emissions for the demolition works in accordance with EPL 837 (Annual Return) and National Pollutant Inventory (NPI) reporting requirements.
- Waste emissions for the demolition works will be reported in accordance with EPL and NPI requirements.
- Any spills of waste material must be recorded and reported to the Caltex ER.
- The Demolition Contractor will retain records of Controlled Waste Receipts and Tracking Numbers as evidence of waste disposal, these records will be maintained on Site.

5.9 Corrective Action

The corrective actions to be implemented during the demolition works include:

- Any spills of waste material must be cleaned up and the waste removed in accordance with the requirements set out in **Section 4**.
- Waste education will be undertaken if excessive volumes of waste are generated, waste is not managed appropriately or housekeeping issues are identified (as noted through weekly inspections and monthly review of the Waste Register).