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Caltex Australia

**ANNUAL REVIEW  
ENVIRONMENTAL PERFORMANCE  
DEVELOPMENT APPLICATION SSD 5544**

**CALTEX REFINERIES (NSW) PTY LTD  
2 SOLANDER STREET  
KURNELL NSW 2231**

**DECEMBER 2014**

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## 1 INTRODUCTION

Caltex Refineries (NSW) Pty Ltd (Caltex) has prepared this Progress Report to comply with Condition D4 – Annual Review in accordance with the Development Consent for application SSD 5544 (dated 7 January 2014). Condition D4 of the Consent states:

*By 31 December 2014 and annually thereafter, or as otherwise agreed in writing by the Director-General, the Applicant shall review the environmental performance of the Development to the satisfaction of the Director-General. This review must:*

- a) *Describe the development that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;*
- b) *Include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, which includes a comparison of these results against;*
  - *The relevant statutory requirements, limits or performance measures/criteria;*
  - *The monitoring results of previous years; and*
  - *The relevant predictions in the EIS;*
- c) *Identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;*
- d) *Identify any trends in the monitoring data over the life of the Development;*
- e) *Identify any discrepancies between the predicted and actual impacts of the Development, and analyse the potential cause of any significant discrepancies; and*
- f) *Describe what measures will be implemented over the current calendar year to improve the environmental performance of the Development.*

This Report presents a summary of the activities undertaken over the past twelve months, the proposed works for the next twelve months and the analysis and review required in the Consent condition.

## 2 DEVELOPMENT SUMMARY

The overall works program associated with the Development is summarised on Table 1 below. This table includes the commencement date and completion date for each activity.

**TABLE 1**

Activity	Start	Stop
Tank Farm Automation	July 2012	December 2014
Tank 613 - Jet Conversion	July 2012	December 2013
Tank 603 Jet Conversion	July 2012	May 2014
Slop Recovery, Storage, Transfer & Injection Upgrade	July 2012	December 2014
Fire Water System Modifications	October 2012	December 2014
Conversion Tank Bund Modifications	July 2012	June 2015
Electricity Consolidation For Terminal Operation	October 2012	December 2015
Dye, Stadis & Lubricity System	July 2012	September 2014
Tank 634 Diesel Conversion	July 2012	April 2014
Tank 512 Gasoline Conversion	July 2012	February 2014
Plant and Instrument Air System	October 2012	April 2015
Potable Water Modifications	October 2012	March 2015
Tank Miscellaneous Nozzle Replacement	June 2013	December 2014
A-Line Gasoline Filter	October 2013	December 2014
Tank 633 – Diesel Conversion	October 2014	September 2016
Tank 413 – Gasoline Conversion	October 2014	March 2016
Tank 411 – Gasoline Conversion	October 2014	June 2016

### 3 DEVELOPMENT DURING THE PREVIOUS CALEDAR YEAR

The Development conducted over the previous calendar year is summarised on Table 2 with descriptions of the activities, the associated impacts and the controls provided in the following sub-sections. Included on this table is a summary of the potential environmental impacts which relate to the management plans prepared for the Development. Also included on the table are the actual number of incidents for each activity over the year.

**TABLE 2**

Activity	Potential Environmental Impacts	Number of incidents
Tank Farm Automation	Nil	Nil
Tank 603 Jet Conversion	Noise, air quality, waste	Nil
Slop Recovery, Storage, Transfer & Injection Upgrade	Noise, waste	Nil
Fire Water System Modifications	Water, waste	Nil
Conversion Tank Bund Modifications	Noise, waste	Nil
Electricity Consolidation For Terminal Operation	Water, biodiversity, waste	Nil
Dye, Stadis & Lubricity System	Nil	Nil
Tank 634 Diesel Conversion	Noise, air quality, waste	Nil
Tank 512 Gasoline Conversion	Noise, air quality, waste	Nil
Plant and Instrument Air System	Noise, waste	Nil
Potable Water Modifications	Nil	Nil
Tank Miscellaneous Nozzle Replacement	Nil	Nil
A-Line Gasoline Filter	Noise, waste	Nil
Tank 633 – Diesel Conversion	Noise, air quality, waste	Nil
Tank 413 – Gasoline Conversion	Noise, air quality, waste	Nil
Tank 411 – Gasoline Conversion	Noise, air quality, waste	Nil

#### 3.1 Tank Farm Automation

The tank farm automation involves the connection of electrical instrumentation to control and monitor the tanks within the facility. The works are limited to the modification of existing equipment and do not include the construction of new equipment. There are no potential environmental impacts associated with this work.

#### 3.2 Tank Conversion

The Development conducted over the previous calendar year included the conversion of six tanks. Tank conversion works changes the product that can be stored in the tank. The following tanks were:

- Tank 603: Jet Conversion
- Tank 634: Diesel Conversion
- Tank 512: Gasoline Conversion
- Tank 633: Diesel Conversion

- Tank 413: Gasoline Conversion
- Tank 411: Gasoline Conversion

The activity involves the emptying and cleaning of the tank, internal modifications to the tank and repainting the tank. The potential environmental impacts associated with a tank conversion include the generation of wastes during the emptying and cleaning process and the generation of noise and dust during surface preparatory work before painting.

The controls that have been established to manage the potential environmental impacts associated with tank conversions are documented in the:

- Air Quality Management Plan
- Construction Noise Management Plan
- Construction Waste Management Plan

### **3.3 Slop Recovery, Storage, Transfer & Injection Upgrade**

The slop recovery, storage, transfer & injection upgrade involves the installation of some transfer pumps and piping including the construction of pump slab. Minor shallow excavation work (less than 100mm) which did not require the removal of vegetation was undertaken.

The controls that have been established to manage the potential environmental impacts associated with slop recovery, storage, transfer & injection upgrade are documented in the:

- Construction Noise Management Plan
- Construction Waste Management Plan

### **3.4 Fire Water System Modifications**

The fire water system modification work included the installation of new deluge systems over product transfer pumps and the testing of these systems.

The controls that have been established to manage the potential environmental impacts associated with slop recovery, storage, transfer & injection upgrade are documented in the:

- Water Management Plan
- Construction Waste Management Plan

### **3.5 Conversion Tank Bund Modifications**

The conversion tank bund modifications ensure that bunds around tanks in terminal service meet the relevant Australian Standard. The works included the construction of new earthen bunds within existing multi tank bunds to ensure each tank had its own discrete banded compound. Minor earthworks were required for the handling and placement of new bund material.

The controls that have been established to manage the potential environmental impacts associated with conversion tank bund modifications are documented in the:

- Construction Noise Management Plan
- Construction Waste Management Plan

### **3.6 Electricity Consolidation for Terminal Operation**

The electrical consolidation work required the installation of new power connections in the facility and the laying of cables. This requires construction activities and excavation for footings and cables.

The controls that have been established to manage the potential environmental impacts associated with electrical consolidation work are documented in the:

- Construction Water Management Plan
- Construction Waste Management Plan
- Construction Biodiversity, Pest and Weed Management Plan

### **3.7 Dye, Stadis & Lubricity System**

The dye, stadis and lubricity system work involves the connection of pipes and small pumps to existing infrastructure. Dye stadis and lubricity are all fuel additives. The works are limited to the modification of existing equipment and do not include the construction of new equipment. There are no potential environmental impacts associated with this work.

### **3.8 Plant and Instrument Air System**

The plant and instrument air system works involves the installation of some transfer pumps and piping including the construction of pump-footings. Minor shallow excavation work, (less than 100mm) which does not require the removal of vegetation, is required.

The controls that have been established to manage the potential environmental impacts associated with plant and instrument air system works are documented in the:

- Construction Noise Management Plan
- Construction Waste Management Plan

### **3.9 Potable Water Modifications**

The potable water modifications only require changes to existing plumbing on the site involving the connection of pipes. The works are limited to the modification of existing equipment and do not include the construction of new equipment. There are no potential environmental impacts associated with this work.

### **3.10 Tank Miscellaneous Nozzle Replacement**

Tank nozzle replacement involves the modification of pipes within existing storage tanks. The works are limited to the modification of existing equipment and do not include the construction of new equipment. There are no potential environmental impacts associated with this work.

### **3.11 A-Line Gasoline Filter**

Minor civil work including shallow excavation and construction of small footings is required for the A-line gasoline filter. Minor shallow excavation work (less than 100mm), which does not require the removal of vegetation, is required.

The controls that have been established to manage the potential environmental impacts associated with plant and instrument air system works are documented in the:

- Construction Noise Management Plan
- Construction Waste Management Plan

#### 4 DEVELOPMENT FOR THE CURRENT CALENDAR YEAR

The Development that will be conducted over the current calendar year is summarised on Table 3. Included on this table is a summary of the potential environmental impacts which relate to the management plans prepared for the Development.

**TABLE 3**

Activity	Potential Environmental Impacts
Conversion Tank Bund Modifications	Noise, waste
Electricity Consolidation For Terminal Operation	Water, biodiversity, waste
Dye, Stadis & Lubricity System	Nil
Plant and Instrument Air System	Noise, waste
Potable Water Modifications	Nil
Tank 633 – Diesel Conversion	Noise, air quality, waste
Tank 413 – Gasoline Conversion	Noise, air quality, waste
Tank 411 – Gasoline Conversion	Noise, air quality, waste

#### 5 ENVIRONMENTAL MANAGEMENT CONTROLS

The activities completed during the previous calendar year involved the implementation of the controls and performance indicators documented in the following management plans for the Development:

- Air Quality Management Plan
- Construction Noise Management Plan
- Construction Waste Management Plan
- Water Management Plan
- Construction Biodiversity, Pest and Weed Management Plan

Included in these management plans are performance indicators and monitoring requirements.

##### 5.1 Air Quality Management Plan

The following performance indicators within the Air Quality Management Plan that are required to be implemented during the Development are:

- No air quality complaints received.
- No visible emissions of dust from the premises.

The key monitoring requirements for air quality for the development are:

- Odour screening of excavated material.

- The Contractor will carry out regular visual monitoring to identify equipment producing excessive visible emissions.
- Contractors will carry out regular visual monitoring to identify areas generating dust.
- In the event of an odour complaint, an evaluation will be undertaken to confirm Project works are a potential source of odours. If Project work is confirmed as a potential ongoing odour source additional mitigation measures will be implemented which will include the use of water sprays to suppress odours and, if necessary, the use of odour suppressants. In the event of ongoing odours excavation activities will be stopped.

## 5.2 Construction Noise Management Plan

The following performance indicators within the Construction Noise Management Plan that are required to be implemented during the Development are:

- No exceedances of the Noise Affected Management Level of LAeq(15min).
- Community complaints received regarding conversion project related nuisance noise.
- Works carried out within the required hours and noise complaints managed.

Noise monitoring must be undertaken at the commencement of any work that has the potential to generate noise that could exceed the Noise Criteria Management Levels at the nearest sensitive receiver and the nearest sensitive down-wind receiver.

The key monitoring requirements noise monitoring for this Development:

- At the beginning of undertaking high noise generating activities (i.e paint removal, demolition or metal fabrication) in close proximity (100m) to a specified receptor (R1-R8) noise monitoring will be carried.
- If high noise generating works are shown to exceed the required noise limits, or if noise complaints are received related to the high noise work, additional mitigation will be implemented for these activities (to ensure compliance with the required noise limits to the satisfaction of the Environmental Management Representative), such as:
  - The substitution of equipment or change the work procedure.
  - Acoustic screening.
  - Implement periodic breaks in undertaking high noise generating works. For example, working for 3 hours and stopping for 1 hour.
- If noise complaints are received which are not associated with high noise generating work but do relate to the Project then mitigation actions should be undertaken or noise monitoring undertaken.
- Noise monitoring must be undertaken at the nearest residential property to the source of noise and at the nearest residential property in Kurnell downwind from the source. Thus monitoring locations will vary dependent of any source of noise and the wind direction.

### **5.3 Construction Waste Management Plan**

The following performance indicators within the Construction Waste Management Plan that are required to be implemented during the Development are:

- No litter present on or around work areas.
- Appropriate segregation, storage and management of all waste and recyclable material.
- Environmental requirements included in procurement and subcontract documentation.

The key monitoring requirements for this Development:

- The Contractor will record the types, volumes and management measures (i.e. reuse / recycling / disposal etc) for wastes generated from its activities.
- The Contractor will carry out weekly inspections of its works areas to ensure wastes, chemicals and hazardous materials are appropriately stored and required procedures are being implemented.

### **5.4 Water Management Plan**

The following performance indicators within the Water Management Plan that are required to be implemented during the Development are:

- No asbestos or hydrocarbon impacted soils stockpiled on site.
- All stockpiles managed in accordance with the relevant requirements in the latest version of the Managing Urban Stormwater: Soils and Construction Guideline.
- No silt runoff from stockpiles beyond the silt fencing.

The key monitoring requirements for this Development:

- Sampling of all excavations for asbestos and visual screening for hydrocarbons using a PID where appropriate.
- Inspection of all stockpiles for erosion.
- Inspection of stormwater drains down gradient of work areas if erosion of stockpiles is observed.

### **5.5 Construction Biodiversity, Pest and Weed Management Plan**

The following performance indicators within the Construction Biodiversity, Pest and Weed Management Plan that are required to be implemented during the Development are:

- No removal of vegetation.
- No disturbance to 'tall tower' structures used as perches.
- No disturbance to frog populations or habitats.

The key monitoring requirements for this Development:

- The Contractor will undertake observations of frogs in excavations or work areas.

## **6 ENVIRONMENTAL PERFORMANCE AND MONITORING**

The management plans prepared for this Development incorporate the mitigation measures specified in the EIS. Each management plan contains management actions, performance indicators and monitoring requirements.

A summary of the relevant management plan for each activity undertaken in the previous calendar year, that have potential environmental impacts is presented in Table 4.

**TABLE 4**

Activity	Environmental Aspect	Environmental Impact	Performance Indicator	Monitoring Results	Non-conformances
Tank Conversion	Tank cleaning	Waste management	Waste disposed of liquids to the oily water sewer system and soils to the landfarm	No recorded spills and all waste disposed of to oily water sewer or the landfarm	No non-conformances and no complaints
	Tank painting	Noise management	All paint removal work was completed during designated working hours using routine methodology that does not have the potential to generate significant noise	No out of hours work and no high noise work conducted within 100m of a residential property	No non-conformances and no complaints
	Tank painting	Air quality management	Paint removal undertaken with no visible emission of dust from the premises	No visible dust emissions from the premises. No lead paint removal.	No non-conformances and no complaints
Slop recovery, transfer and injection upgrade	Excavation for concrete slab	Noise management	Work completed in designated working hours and all plant maintained and serviced	No out of hours work and no high noise work conducted within 100m of a residential property	No non-conformances and no complaints
	Excavation for concrete slab	Waste management	Excavated temporarily stockpiled prior to re-use within the Development	Records of waste volume for re-use in the waste database	No non-conformances and no complaints
Fire water system modification	System testing	Water management	All water directed to the oily water sewer with no discharge to stormwater	System test areas bunded to ensure no drainage to stormwater	No non-conformances
	System testing	Waste management	All water directed to the oily water sewer	No recorded spills and all waste disposed of to oily water sewer	No non-conformances
Conversion tank bund modifications	Earthworks	Noise management	Work completed in designated working hours and all plant maintained and serviced	No out of hours work and no high noise work conducted within 100m of a residential property	No non-conformances and no complaints
	Earthworks	Waste management	Reuse of excavated material from the Development to construct the bunds	Records of waste volume for re-use in the waste database	No non-conformances and no complaints
Electrical consolidation	Excavation	Water management	Excavated material stockpile with silt control to minimise sediment erosion	No erosion	No non-conformances
	Excavation	Waste management	All excavations inspected for hydrocarbons and tested for asbestos with wastes classified for disposal	Records of waste volume in the waste database and asbestos waste removed and disposed	No non-conformances and no complaints
	Excavation	Biodiversity management	No vegetation removed and excavations inspected for frogs	No frogs observed in excavations	No non-conformances
Plant and instrument air system	Excavation for concrete slab	Noise management	Work completed in designated working hours and all plant maintained and serviced	No out of hours work and no high noise work conducted within 100m of a residential property	No non-conformances and no complaints
	Excavation for concrete slab	Waste management	Excavated temporarily stockpiled prior to re-use within the Development	Records of waste volume for re-use in the waste database	No non-conformances and no complaints
A-line gasoline filter	Excavation for concrete slab	Noise management	Work completed in designated working hours and all plant maintained and serviced	No out of hours work and no high noise work conducted within 100m of a residential property	No non-conformances and no complaints
	Excavation for concrete slab	Waste management	Excavated temporarily stockpiled prior to re-use within the Development	Records of waste volume for re-use in the waste database	No non-conformances and no complaints

## **7 NON-COMPLIANCE AND CORRECTIVE ACTION**

The activities undertaken during the previous year had relatively low potential for the generation of environmental impacts. The activities with the highest potential for impacts were tank cleaning and painting and excavation associated with the electrical work.

Tank cleaning generates significant volumes of liquid waste including residual hydrocarbons and cleaning fluids. The residual hydrocarbons have, as far as practicable, been collected for recycling in the slop system. Cleaning fluids have been treated at the waste water treatment plant and solids have been disposed of at the on-site landfarm. Tank painting has the potential to generate noise and dust during surface preparation work.

The excavation activities associated with the electrical consolidation project involved the removal of significant quantities of soil for the installation of cables then the backfilling of the excavations. This process resulted in most excavated soil being re-used as backfill. Excavations were generally backfilled promptly minimising the potential for fauna to enter the excavations. Excess material was managed through the site waste management system.

There were no conformance issues associated with any of the activities completed and no community complaints associated with any of the Development. It is noted however, there were community issues with normal refinery operation activities but these were not related to the Development.

## **8 DATA TREND ANALYSIS**

After only one year of the development schedule, there is no compliance or complaint history to undertake data trend analysis.

## **9 DATA DISCREPANCIES**

The management actions within the management plans were developed from the mitigation measures in the EIS. Based on the performance of the development activities over the previous calendar year, being the first year of the development activities, the management actions appear to be appropriate for this project. There were no conformance issues or community complaints were recorded over the previous year.

It is noted however, the activities conducted over the previous year have limited potential for conformance or community issues. For most of the previous year the refinery was operational and thus background noise levels were relatively high thus minimising the potential for noise complaints. In addition most of the work completed has been set-back from the site boundary thus limiting the potential for impact to the community.

## **10 IMPROVEMENT MEASURES**

Although no specific improvement measures have been identified, as there has been no non-conformance or complaints, there is the potential for noise to be a greater potential environmental issue for the current year.

The cessation of refining operations has resulted in a significant reduction in background noise. Development activities now have a greater potential to generate noise that could result in community complaints.

## **11 SUMMARY**

Over the previous year activities associated with the development have not resulted in any community complaints and have complied with the Development Consent for application SSD 5544 (dated 7 January 2014).

The environmental management activities developed from the EIS have been effective and will be continued for the current year.

No data trends have been developed over the previous calendar year.