Caltex Australia

2019 ANNUAL REVIEW

ENVIRONMENTAL PERFORMANCE

DEVELOPMENT APPLICATION SSD 5544

CALTEX AUSTRALIA PETROLEUM PTY LTD
2 SOLANDER STREET
KURNELL NSW 2231

Reporting Period: *1 January 2019 to 31 December 2019*

Report Complied by:

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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. This report is divided in three parts:

- Part 1 – Environmental performance of the Terminal and site development activities
- Part 2 – Environmental performance of Terminal operations activities
- Part 3 – Improvement plan and summary
- Appendix 1 – Status of Caltex actions arising from Independent Environmental Audits - SSD 5544 and SSD 5353 (IEA 2 September 2017 and IEA 1 April 2016)
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- Figure A - Regional Context and Development Consent Boundaries
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Part 1 of this report will also include a description of the activities carried as part of the demolition of the refinery.

PART 1 - ENVIRONMENTAL PERFORMANCE OF THE TERMINAL AND SITE DEVELOPMENT ACTIVITIES

1.1 DEVELOPMENT SUMMARY

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

TABLE 1- Overview of Activities in Development to Date

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

Tank 633 – Diesel Conversion	October 2014	June 2016	Completed
Demolition of Refinery Infrastructure	September 2015	January 2020	In Progress

1.2 DEVELOPMENT ACTIVITIES DURING THE LAST TWELVE MONTHS

The Development activities conducted over the 2019 calendar year is summarised on Table 2 with descriptions of the activities, the associated potential environmental impacts with 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 - Development Activities in 2019

Activity	Potential Environmental Impacts	Number of incidents
Demolition of Refinery Infrastructure	Noise, Air Quality, Water, Biodiversity, Waste	Nil
Construction of Asbestos Contaminated Soil Containment Cell	Soils, Groundwater and Contamination, Water (Surface), Air Quality and Asbestos, Waste, Traffic	5

1.2.1 Tank Conversion

All remaining refinery conversion related works (tanks and infrastructure) were completed by June 2016.

At the completion of the conversion related works, the above-mentioned plans were superseded by the DPE approved Demolition Management Plans. Refer to 1.4 for Management Plans details.

Note: All approved and named Management Plans are published on the Caltex Public Website, in accordance with the Development Approval requirements.

1.2.2 Demolition of Refinery Infrastructure Status

Demolition of the refinery infrastructure commenced in September 2015. Approved demolition activities included the dismantling and removal of the aboveground redundant refinery process units, tanks, pipelines, buildings, and other structures including vessels/heat-exchangers, piping and valve, pumps and compressors and underground pipes and services. This required the felling of structures, cutting of vessels, piping and support structures and the excavation of underground pipework. Pipelines from the refinery to the old Continental Carbon site and Tabbigai Gap were also removed, along with sections of pipeline from the Caltex wharf, Rights of Way and at Silver Beach.

The following table shows progress for the approved demolition scope of works:

TABLE 3 – Detailed Demolition Activities in 2019

Activity	% complete
Civil Work & Buildings	99%
Tank Cleaning	100%
Demo Tanks & Pipeways	100%
Pipeway Contaminated Soil Removal to Cell	100%
Process Plant Demolition	100%
Overall % Completed against Demolition Scope	**114.5%***

*Additional Scope = 115%

Details of demolition activities completed in 2019 are as follows;

Refinery Process Units and Associated Infrastructure

- Regrading of all Process Unit plots post demolition
- Crushing of concrete from process plants ~ 80,000T which was recycled on site.

Tanks and associated Infrastructure

- Removal from service, cleaning & disconnection for final tanks in Project scope
- Demolition of 3 tanks completed this year, nil remain
- Removal of redundant infrastructure associated with the tanks – i.e. water draw equipment and pipelines.
- Regrade all compound areas

Pipelines/Pipeways

- Removal/covered contaminated soil from refinery pipeways to make safe

Buildings

- Demolished 100% of in-scope buildings across the site

Asbestos Contaminated Soils (ACS) Containment Cell & Pipeway Contamination Removal:

- Operated a containment cell to house asbestos contaminated soil from pipeways and removal of asbestos contaminated soils from pipeways for storage in new cell. Approx. 22,000T removed by end of 2019 into cell, completing the removal process. The cell in the final process of being capped, with subbase (clay layer), plastic liners, sub grade material and topsoil. The cell will then by seeded/planted with native grasses

1.3 DEVELOPMENT ACTIVITIES FOR NEXT (2020) CALENDAR YEAR

The approved demolition scope of works that will be continued into January 2020 is summarised on Table 4. Included on this table is a summary of the potential environmental impacts which relate to the management plans prepared for the Development.

TABLE 4 - Development Activities Planned for Ist Quarter 2020

Activity	Potential Environmental Impacts
Complete the capping of ACS Contaminated Cell (expected completion mid-January 2020)	Soil & Water, Air Quality (Dust), Traffic

The following provides an overview of the demolition activities planned to be carried out in the 2020 calendar year against approved demolition scope of works;

Tanks and Associated Infrastructure

- Nil

Pipeways / Soil Cell

- Complete capping ACS Containment Cell by installation of multi-layer linings to protect material, as per approved Containment Cell construction drawings

Buildings

- Nil

1.4 ENVIRONMENTAL MANAGEMENT CONTROLS

The activities completed during the calendar year involved the implementation of the controls and performance indicators documented in the following approved Demolition environmental management plans:

- Air Quality Management Plan
- Noise (and Vibration) Management Plan
- Waste (and Resource) Management Plan
- Soil and Water Management Plan
- Biodiversity (and Weed) Management Plan
- Traffic Management Plan

Note that **nil** amendments to the above-mentioned Management Plans were required during the 2019 reporting period as part of the Contaminated Soil Containment Cell approval (SSD5544 MOD 2).

These Management Plans will remain in place for the duration of the remaining demolition activities i.e. the closure of the ACS Containment Cell. Included in these management plans are performance indicators and monitoring requirements.

1.4.1 Air Quality Management Plans

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

- No air quality complaints

  Note: refer to Section 1.6 for comments regarding odour concerns during this reporting period
- No visible emissions of dust from the premises
- No exceedances of exposure or control limits for asbestos

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

- Odour screening of excavated material
- Contractor will carry out regular visual monitoring to identify equipment producing excessive visible emissions
- Contractors will carry out regular visual monitoring to identify any area/s generating dust
- In the event of an odour complaint, an evaluation will be undertaken to confirm that Project works are not 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
- Daily asbestos monitoring around area of demolition activity
- Continued dust monitoring around areas of demolition activity

1.4.2 Noise (and Vibration) Management Plans

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

- No exceedances of the Noise Affected Management Level of LAeq (15min).
- No exceedances of the Structural Damage Vibration Criteria
- No community complaints received regarding demolition project related nuisance noise.
- Works only carried out within the required hours and noise complaints managed in accordance with the Noise Management Plan requirements.

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 are:

- At the beginning of undertaking any high noise generating activities (i.e. paint removal, demolition or metal fabrication) in close proximity (100m) to a specified receptor (R1-R8), measures 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). These additional mitigations measures include:
- 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 determined to be not associated with high noise generating work but do relate to the Project, additional mitigation measures should be undertaken, or noise monitoring undertaken.
- Noise monitoring must be undertaken at the nearest residential sensitive receiver to the source of noise and at the nearest residential sensitive receiver downwind from the source. Thus monitoring locations will vary dependent of any source of noise and the wind direction.
- Vibration monitoring will be conducted in the event that demolition is carried out within 20 m of any Site buildings to be retained.

1.4.3 Waste (and Resource) Management Plans

The following performance indicators within the Waste Management Plans 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.
- 90% diversion of waste produced during demolition activities from landfill

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 any wastes, chemicals and hazardous materials are appropriately stored and all required procedures are being implemented.

1.4.4 Soil and Water Management Plans

The following performance indicators within the Soil and Water Management Plans are required to be implemented during the Development are:

- 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.
- No significant increase in COPC levels in groundwater.
- No impacts to the environment from ASS or PASS.
- No environmental pollution incidents.

The key monitoring requirements for this Development:

- Sampling of all excavations for asbestos and visual and olfactory screening for hydrocarbons, using a PID where appropriate.
- Quarterly groundwater monitoring.
- Inspection of all stockpiles for erosion.
- Inspection of stormwater drains down gradient of work areas if erosion of stockpiles is observed.
- Any collected water within the bunded areas will be field tested for pH (to monitor for ASS).Treatment will be required if less than pH 6.5.

1.4.5 Biodiversity (and Weed) Management Plans

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

- Limited removal of vegetation.
- No disturbance to ‘tall tower’ structures used as perches.
- No disturbance to nesting shorebirds

Minimise potential disturbance to frog populations or habitats.The key monitoring requirements for this Development:

- The Contractor will undertake pre-works inspections for frogs in excavations or work areas and take appropriate actions if observed.
- The Contractor will undertake pre-works inspections for nesting shorebirds in work areas and take appropriate actions if observed.
- The Contractor will undertake regular (weekly or as required) inspections of demolition areas as well as stockpiles for the presence of noxious and problematic weeds on site and in the surrounding areas and take appropriate actions if observed.

1.4.6 Pest, Vermin & Noxious Weed Management Monitoring

The effectiveness of the management plan in place to detect and eradicate pest, vermin & noxious weed is measured by:

- Contractor and Caltex employees undertake regular (weekly or as required) inspections of demolition areas as well as stockpiles for the presence of noxious and problematic weeds on site and in the surrounding areas and take appropriate actions if observed.

- Caltex Permit to Work Issuers inspect work areas prior to permits being issued. This inspection also provides an opportunity to check the work area for the presence of noxious and problematic weeds, pests and vermin. If found, the Issuer will inform the Demolition Environment Team (areas under Demolition project control) or the Kurnell Terminal Maintenance Manager to arrange corrective action.

- Demolition Environment Team undertaking monthly site inspections of all demolition work areas to ensure that management plan measures are working effectively, and that pests, vermin or noxious weeds are not present on site in sufficient numbers to pose an environmental hazard or cause the loss of amenity in surrounding area. The Inspection checklist used includes requirements to check for noxious and problematic weeds, pests and vermin. If found, the Environment Team arranges for the affected area/s to be treated by approved contractors. All chemicals used are on the Caltex approved list.

1.4.7 Traffic Management

The following performance indicators within the Traffic Management Plans are required to be implemented during the Development are:

- No collisions caused by Demolition vehicles
- No vehicles incidents associated with Site access
- No non-compliances with SSC Road Opening Permits

The key traffic monitoring requirements for this Development by the Demolition Project Lead (or their delegate) are:

- Monitor vehicle access to the site
- Monitor vehicle observance to the speed limits within the site boundaries
- Ensure that traffic control plans (TCP) are implemented, as detailed

1.4.8 Asbestos Contaminated Soil Containment Cell (ACSCC)

The Asbestos Contaminated Soil Containment Cell (ACSCC) has specific management plans that were developed in 2019, as part of MOD2 requirements. They are:

- Construction Quality Assurance Plan
- Remedial Action Plan
- Containment Cell Management Plan
- Long Term Environmental Management Plan (draft only)

In line with the requirements of SSD5544, D5 ‘Revision of Strategies, Plans and Resources’, the Demolition EMP and Sub Plans were reviewed in 2018 and updated where needed to account for works associated with the Asbestos Contaminated Soil Containment Cell, specifically:

- Soil and Water Management Plan
- Air Quality Management Plan

- Waste Management Plan
- Traffic Management Plan

No changes were required to the above-mentioned Sub-Plans in 2019.

1.5 ENVIRONMENTAL PERFORMANCE AND MONITORING

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

A summary of the relevant management plan for each activity undertaken in the last twelve months, with potential environmental impacts, is presented in Table 5.

TABLE 5 - Performance against Performance Indicators per Activity

Activity	Environment Aspect	Environment Impact	Performance Indicator	Monitoring Results	Non-Conformances
Demolition Activities	Pipeway Asbestos contaminated soil removal	Air Quality management	Plant removal undertaken with no visible emission of dust or odours from the premises	14 individual spot measurements of dust in air were taken using the Dust track™ monitor. Nil exceedances of the 50ug/m^3 standard were detected. 720 individual samples taken for fibres in air. Nil air samples returned a result of >10% of the time weighted average (TWA) Exposure Standard (ES) for fibres in air. i.e. >10 fibres.	No non-conformances and no complaints
	Pipeway Asbestos contaminated soil removal	Soil and Water management	Excavated material stockpile with silt control to minimise sediment erosion. Stormwater and groundwater managed during excavations and infrastructure removals	No erosion, Stormwater and groundwater managed on-site without off-site impact	No non-conformances and no complaints

Activity	Environment Aspect	Environment Impact	Performance Indicator	Monitoring Results	Non-Conformances
Demolition Activities (continued)	Pipeway Asbestos contaminated soil removal	Noise management	Plant removal completed in designated working hours and without noise or vibration impact	14 attended noise assessments were conducted at several different receptor locations. The LAeq 15min readings (dBA) ranged from 40dB to 66.1dB and peak noise was mainly attributed to passing cars, overhead planes and residential construction noise.	No non-conformances and no complaints
	Pipeway Asbestos contaminated soil removal	Waste management	All plants and all excavations inspected for hydrocarbons and tested for asbestos. All waste streams classified for disposal	Records of waste volume in the waste database and asbestos waste removed and disposed. 270 individual samples were taken for proactive identification of asbestos containing materials (ACM). 15% of samples positively identified the presence of ACM's.	No non-conformances and no complaints
	Pipeway Asbestos contaminated soil removal	Biodiversity management	No vegetation removed and excavations inspected for frogs and other fauna. Pests and noxious weeds managed	No frogs observed in excavations	No non-conformances

Activity	Environment Aspect	Environment Impact	Performance Indicator	Monitoring Results	Non-Conformances
Demolition Activities (continued)	Pipeway Asbestos contaminated soil removal	Traffic Management	No collisions caused by Demolition vehicles No vehicles incidents associated with Site access No non-compliances with TCP's and SSC Road Opening Permits	Nil speed limit exceedence notes issued by Demolition team leads or Caltex Security team All construction traffic control plans implemented without incident in Kurnell residential roads during ROW demolition works	No non-conformances
Demolition Activities	ACS Containment Cell Construction and Fill includes ACS Removal - Pipeways	Air Quality management	No air quality complaints received pertaining to the Cell. No visible emissions of dust from the premises Compliance to Asbestos fibres (TWA) Exposure Standard Compliance to air particulate limit of 4.0g/m2/month	Site perimeter Dust deposition monitoring during: • soil removal from Tanks Farm, • Tank 101 demolition a • pipeway soil removal and ACS Containment Cell area construction and fill activity. 44 sample collected year to date. One events where the results were above the agreed trigger level, as follows. • Jan 19 Sample Point 5 – 5.1g/m2/month	1 non-conformances Ref Section 1.6 for event details

Activity	Environment Aspect	Environment Impact	Performance Indicator	Monitoring Results	Non-Conformances
Demolition Activities – Mod 2 ACS Cell Project	ACS Containment Cell Construction and Fill includes ACS Removal - Pipeways	Air Quality management	No air quality complaints received pertaining to the Cell. No visible emissions of dust from the premises Compliance to Asbestos fibres (TWA) Exposure Standard Compliance to air particulate limit of 4.0g/m2/month	Daily air monitoring for asbestos fibres – 574 in 3 locations per day Individual samples taken for fibres in air. Nil air samples returned a result of >10% of the time weighted average (TWA) Exposure Standard (ES) for fibres in air. i.e. >10 fibres. Regular visual monitoring to identify any area/s generating dust. Weekly work area inspections and monthly environmental inspections undertaken – nil non-conformances identified Dust deposition monitoring around ACS Cell area construction and fill activity. 60 sample collected year to date. Four events where the results were above the agreed trigger level, as follows. • Jan 19 Sample Point 4 – 5.7g/m2/month • Feb 19 Sample Point 2 – 4.6g/m2/month • Mar 19 Sample Point 3 – 5.9g/m2/month • Jul 19 Sample Point 4 - 4.9g/m2/month All events were subject to investigation	4 non-conformances Ref Section 1.6 for event details

Activity	Environment Aspect	Environment Impact	Performance Indicator	Monitoring Results	Non-Conformances
Demolition Activities - continued– Mod 2 ACS Cell Project	ACS Containment Cell Construction and Fill includes ACS Removal - Pipeways (continued)	Soil and Water management	All plants and all excavations inspected for hydrocarbons and tested for asbestos. All waste streams classified for disposal to ASC Cell	Only complying ASC materials entered the ASC Cell – records maintained of all soils receipted to ASC Cell Stormwater and groundwater managed on-site without off-site impact	No non-conformances
		Waste management	All plants and all excavations inspected for hydrocarbons and tested for asbestos. All soil waste excavated from pipe ways classified correctly for disposal into the Cell	Waste receipt records maintained for all ASC prior to acceptance into the Cell Truck decontamination process prior to exiting the Cell Nil pollution events Weekly work area inspections and monthly environmental inspections undertaken – nil non-conformances identified	No non-conformances
		Traffic Management	No collisions caused by demolition work vehicles No vehicle incidents associated with site access No non-compliances with SSC Road Opening Permits	No motor vehicle incidents reported on site or off site in 2019 Nil speed limit exceedence notes issued by Demolition team leads or Caltex Security team	No non-conformances

1.6 DEMOLITION PROJECT - ENVIRONMENTAL NON-COMPLIANCE AND CORRECTIVE ACTION

The activities undertaken during the last twelve months had relatively low potential for the generation of environmental impacts. The activities with the highest potential for impacts were:

- construction of the ACS Containment Cell
- excavation of ACS from the pipe ways
- placement of ACS in the Cell
- preparation of tanks for demolition

Five (5) dust deposition monitoring units (DDU) recorded results were found to be above the agreed trigger level against the EPA Licence limits for the:

- four events pertaining to the ACS Containment Cell monitoring points
- one event pertaining to the site boundary DPU monitoring points

ACS Containment Cell Monitoring - DDU Above Agreed Trigger Levels

1. INC-0016837 January 2019

The recorded result for Asbestos Cell dust deposition sampler at Location 4 (located north of the Land Farm) for the January period was found to be above the agreed trigger level of 4.0g / m2 over 30 days. Test result was 5.7g / m2 over 30 days

On Feb 13th 2019 a naturally occurring red dust event impacted the site. This is unusual but a natural occurrence and red dust was deposited unevenly around the site. When collecting sample, it was noted that there was some red dust residue around / outside of the bottle. Due to its location at a perimeter dirt road at CLOR, it is expected that vehicles driving past to the ACS Cell also contributed to the very local dust generation & hence impacted deposition into this sample point. The prolonged absence of rain in the Kurnell is a contributing factor.

At the time of the event, the usual cell attendant was also absent on leave and it was noted that the dirt roads around the ACS Containment Cell were not as consistently wet down thus increasing dust potential.

The nature of the red dust event & fallout seems not to have been consistent and it is worth noting that all other Asbestos Cell dust deposition sampler units at ACS Cell recorded below the agreed trigger level for the same period. While one site perimeter DDU sample location (No.5 – Road Q, South Flare Area) also tested above the agreed trigger level during this period, the other site perimeter DDU samplers results remained below the agreed trigger level. The PM_{10} and $PM_{2.5}$ particulate matter results at the Terminal's Ambient Air Monitoring Station were also below the action level, confirming nil off site impacts – refer to INC-16555 commentary below for perimeter DDU sample No.5.

Corrective Actions:

Giovenco supervisor was made aware of this event and coached regards ensuring good work activity turnover when regular personnel go on leave as well as the need for consistent / regular wet down of roads in this area every day. Ongoing monitoring of these surrounding roads to be continued with daily housekeeping and wetting down of access road areas.

2. INC-0016838 - February 2019

The recorded result for Asbestos Cell dust deposition sampler at Location 2 (located south of the Cell near Site boundary fence) for the February-March period was found to be above the agreed trigger level of 4.0g / m2 over 30 days. Test result was 4.6g/m2 over 30 days.

During this sample period, it was noted that there was very heavy period of vehicle traffic both into & out of the cell, as well as larger truck movements up to the land farm area & back, compounding the potential for dust generation from dirt road. One of the regular ACS Cell attendants who normally does the road wet downs continued to be on leave during this period & it is believed that the timing & quality of wet down may not have been as effective during this continued very dry spell.

It was noted that all other Asbestos Cell dust deposition sampler units at ACS Cell recorded results below the agreed trigger level for the same period. The site perimeter DDU samplers remained below the agreed trigger level. The PM_{10} and $PM_{2.5}$ particulate matter results at the Terminal's Ambient Air Monitoring Station were also below the action level, confirming nil off site impacts.

Corrective Action/s:

Giovenco supervisor reminded of the need to ensure clear expectations are set on turning over duties from one worker to another to ensure consistent / regular wet down of roads in this area every day. Ongoing monitoring of these surrounding roads to be continued with daily housekeeping and wetting down of access road areas.

3. INC-0017435 March 2019

The recorded result for Asbestos Cell dust deposition sampler at Location 3 (located south of the recycling laydown area) for March period was found to be above the agreed trigger level of 4.0g / m2 over 30 days. Test result was 5.9g/m2 over 30 days.

Due to higher than normal traffic associated with the demolition of Tank 415 (scrap trucks, demolition vehicles & large machinery), the dust levels were higher at Road Q. It is worth noting that these vehicles often went down Road Q before the day's wetting down had commenced. The prolonged absence of rain in the Kurnell remained a significant contributing factor.

It was noted that all other Asbestos Cell dust deposition sampler units at ACS Cell recorded results below the agreed trigger level for the same period. The site perimeter DDU samplers remained below the agreed trigger level. The PM_{10} and $PM_{2.5}$ particulate

matter results at the Terminal's Ambient Air Monitoring Station were also below the action level, confirming nil off site impacts.

Corrective Action/s:

Demolition operations requested increased wetting of the access roads in the area. The Giovenco and Manns contract workers involved in maintaining the roads were advised of the consequences of ineffective road wetting by the Occupational Hygienist for the project (G. Ward). The Tank 415 demolition was completed shortly before the investigation was concluded which resulted in less vehicles using the access roads. Subsequent DDU sampler results remained below the agreed trigger level of 4.0g / m2 over 30 days.

4. INC-0018348 July 2019

The recorded result for Asbestos Cell dust deposition sampler at Location 4 (located north of the Land Farm) for the July period was found to be above the agreed trigger level of 4.0g / m2 over 30 days. Test result was 4.9g/m2 over 30 days.

Road Q is not fully sealed. During this sample period, it was noted that there was very heavy period of vehicle traffic both into & out of the cell, as well as continued truck movement to and from the land farm which compounded the potential for dust generation from the unsealed road. The prolonged absence of rain in the Kurnell remained a significant contributing factor.

It was noted that all other Asbestos Cell dust deposition sampler units at ACS Cell recorded below the agreed trigger level for the same period. The site perimeter DDU samplers remained below the agreed trigger level. The PM_{10} and $PM_{2.5}$ particulate matter results at the Terminal's Ambient Air Monitoring Station were also below the action level, confirming nil off site impacts.

Corrective Action/s: Check Cintellate tomorrow

Dust suppression by increased wetting down of the access roads More regular watering commenced and will be continued for as long as this road is accessed

Site Perimeter Monitoring Point - DDU Above Agreed Trigger Levels

1. INC-0016555 January 2019

The recorded result for site perimeter Location 5 DDU sampler (located at Road Q South Flare Area) for the January period was found to be above the agreed trigger level of 4.0g / m2 over 30 days. Test result was 5.1g/m2 over 30 days.

On Feb 13th 2019 a naturally occurring red dust event impacted the site. This is unusual but a natural occurrence and red dust was deposited unevenly around the site. When collecting sample, it was noted that there was some red dust residue around / outside of the bottle. Due to its location at a perimeter dirt road at CLOR, it is expected that vehicles driving past to the ACS Cell also contributed to the very local dust generation &

hence impacted deposition into this sample point. The prolonged absence of rain in the Kurnell is also a contributing factor.

It was noted that other than the Asbestos Cell dust deposition unit sampler at Location 4 (located north of the Land Farm), all other Asbestos Cell dust deposition sampler units at ACS Cell recorded below the agreed trigger level for the same period. The site perimeter DDU samplers remained below the agreed trigger level. The PM_{10} and $PM_{2.5}$ particulate matter results at the Terminal's Ambient Air Monitoring Station were also below the action level, confirming nil off site impacts.

Corrective Action/s:

1. Increased wetting of access roads was instituted
2. Relocate the site perimeter Location No 5 DDU sampler closer to the western boundary fence (closer to industrial neighbours such as Desal plant) & an appropriate distance away from unsealed road as some workers were using the unsealed road as a short cut and contaminating the DDU.

No other environmental exceedances or consent condition non-compliances associated with demolition activities occurred during the 2019 reporting period.

1.7 DATA TREND ANALYSIS

A review of the available data shows that:

- All working hours have been in line with the conditions of consent (C18)
- All high noise generating construction works have been confined to less sensitive times of the day in accordance with conditions of consent (C17)
- Dust monitoring during this reporting period indicates that the development works have nil observable impact on the air quality in the surrounding Kurnell community

1.8 DATA DISCREPANCIES

The management actions within the management plans were developed from the mitigation measures in the EIS for Conversion and SEE for Demolition. Based on the performance of the development activities over the last twelve months, the management actions appear to be appropriate for this project. There were no discrepancies identified over the past year.

1.9 SURRENDER OF EXISTING DEVELOPMENT CONSENTS

In accordance with the requirements of Application No. SSD5544 and Clause 97 of the NSW EPA Regulation, the existing Development Consents were surrendered in 2016 to the issuing Authority, as detailed in conditions:

- B9 and Appendix B;
- B10

The issuing Authorities of the DAs in question were:

- Department of Planning and Environment
- Sutherland Shire Council

PART 2 - ENVIRONMENTAL PERFORMANCE OF TERMINAL OPERATIONS ACTIVITIES

2.1 TERMINAL OPERATIONS DURING THE PREVIOUS CALENDAR YEAR

The Terminal continues to be a major supplier of transport fuel to NSW. In 2016 the operational control of the pipeline between Kurnell and Newcastle transferred from Banksmeadow Terminal to Kurnell Terminal. The Sydney to Newcastle Pipeline continues to operation without incident. The Terminal continues to operate the site's Wastewater Treatment Plant "as is" (pending an agreed 'future state' design).

There were two treated injury attributed to Terminal operations in 2019. Details are:

1. INC-0017780 - June 2019

The Wastewater Treatment Plant Operator was in the process of completing the daily operational checks. He had just finished checking a pump and was moving to his next location by taking a short cut. Whilst stepping over some large hoses used in the operation of the WWTP, his foot clipped the top of the hose causing him to twist his ankle. The Operator returned to the control room to report the incident. Caltex Injury Assist was contacted, and the operator received first aid. Modified duties were required.

Corrective Action/s:

Safe access improvements made to area near the Sykes pump so personnel are not required to step over the Sykes pump hoses.

2. INC-0018450 – September 2019

Forehead laceration caused by collision with a sign requiring medical treatment (2 sutures) Terminal Operations Coordinator went to Tank 127 to turn on the mixer. When exiting the vehicle, the person stopped in front of the vehicle to read a check list and bent down to access the light coming from the headlights. When standing up to move towards the tank his head struck a sign causing a laceration to the right side of the forehead. Lighting in the local area found to be inadequate as there are nil lights near the tank mixers.

Corrective Action/s:

1. A Safety Alert was sent out to all Terminals to share incident learning's with teams and highlight importance of SPSA and planning how we set up to carry out a task and how we get to/from a task as these are high risk areas with regards to personal injury from slips/trips/falls and other movement related injuries.
2. As an interim measure, Terminal Operations Coordinators were provided with intrinsically safe head lamps such that they can move around safely in poorly lit areas while still having hands available to carry out tasks.
3. Investigated alternatives for more cost effective options for replacement of failed fixed lighting at Kurnell Terminal and determine feasibility of implementation.

2.2 TERMINAL ENVIRONMENTAL MANAGEMENT CONTROLS

The Terminal operations are governed by a comprehensive Environment Management System which is also ISO14001:2015 certified.

The site achieved certification against ISO9001:2015 QMS and 14001:2015 EMS in 2017 (certified by Lloyds Register). The last of the three surveillance visits in this certification period was conducted by Lloyds Register in September 19 with nil non-compliances identified.

Details of the three surveillance visits carried out by Lloyds Register are as follows:

2017-19 Audit Dates	**Findings**	
	No. of Non-Conformance (NC)	**Opportunities for Improvement Identified (OFI)**
SV1 - 16 to 8 May 2018	One minor NC	Five
SV2 - 20 to 22 November 2018	Nil	Nil
SV3 – 03 to 03 September 2019	Nil	Nil

Notes:

1. The minor NC identified in the May 18 audit has been actioned and closed out.
2. The Lloyds Register reports are available on request.

The Terminal's *Stage 1 Interim* Operational Environment Management Plan (OEMP) is supported by Process 16. Environmental Management elements of Caltex's Operational Excellence Management System (OEMS), ISO14001:2015 and the Caltex Environment Policy. The Kurnell Terminal OEMP documents the relevant environmental information, legal requirements and risk controls pertaining to the terminal operations, as well as the demolition project.

Key to the site's OEMP is the Environment Protection Licence (Lic №: 837). This licence describes the scheduled activities that are performed on the site, as well as the required controls and monitoring activities. The monitoring section of the site licence describes six Monitoring or Discharge Points. For details, see Table 6 below:

TABLE 6 – Description of Kurnell Terminal EPL 837 Monitoring and Discharge Points

EPA Identification No	**Type of Monitoring or Discharge Point**	**Location Description**
2	Discharge to waters	Submerged ocean outfall at Yena Gap labelled "2" on drawing No. 18588 titled "Environment Protection Licence EPA Identification Points" Note: Monitoring is undertaken at Point 27 for EPA ID No.2

EPA Identification No	Type of Monitoring or Discharge Point	Location Description
15	Groundwater quality monitoring	Bioremediation plot (landfarm) – permanent monitoring well PWM 8 labelled “15” on drawing No. 18588 titled “Environment Protection Licence EPA Identification Points”
16	Groundwater quality monitoring	Bioremediation plot – (landfarm) permanent monitoring well (PMW) 33 labelled “16” on drawing No. 18588 titled “Environment Protection Licence EPA Identification Points”
27	Effluent quality and volume monitoring	Sampling point in wastewater treatment plant labelled “27” on drawing No. 18588 titled “Environment Protection Licence EPA Identification Points” Note: Discharge from wastewater treatment plant at Point 2. (submerged ocean outfall at Yena Gap)
28	Groundwater quality monitoring	Pipe track 1- Asbestos Containment Cell – Permanent monitoring well labelled “28” on drawing No. 18588 titled “Environment Protection Licence EPA Identification Points”
29	Groundwater quality monitoring	Causeway - Asbestos Containment Cell – Permanent monitoring well labelled “29” on drawing No. 18588 titled “Environment Protection Licence EPA Identification Points”

Note: All monitoring points are indicated on Plot Plan A1-18588 titled “ Environment Protection Licence Identification Points”, Version 6, dated 21 June 2018. Monitoring Points - refer to Appendix 3, Figure D.

Summaries of the monitoring results for each monitoring point are included in this Annual Review.

The pollutants monitored at these points; their licence concentration limits and monitoring results are presented in Section 2.3. The prevention of off-site noise, dust and offensive odours are licence and consent condition requirements. The site’s performance against these requirements will also be discussed as part of the overview of the calls made to the 24 Hour Community Hotline in Section 2.3.

2.3 TERMINAL ENVIRONMENTAL PERFORMANCE AND MONITORING

In this section, a summary is provided of the environmental performance of the Terminal against its Environmental Protection Licence No 837 and the Conditions of Consent for SSD 5544:

- Table 7A-F shows the summary of monitoring results for the licenced monitoring points 15, 16, 28 and 29 for the calendar years 2015 -2019.

- Some of the data from Tables 7A-F has also been shown in Figures 1 to 4

Please note:
Monitoring Points 28 and 29 were created during 2018 and therefore only 2 years of data are available and depicted in Figures 3 and 4 respectively.

- Table 8 contains the annual summary of the monitoring results for Monitoring Point 27

- Table 9 contains a summary of the asbestos monitoring (air) results during asbestos removal activities during the period 2015-19. Airborne asbestos monitoring during soil removal from the pipe ways and subsequent placement into the Asbestos Contaminated Soil Containment Cell (ASC C/Cell) was an integral part of this air monitoring program. The air monitoring program ceased in December, following the closure of the ASC C/Cell

- Table 10 (A, B, C, D) contains a summary of asbestos monitoring, dust monitoring during high dust potential during demolition activities, as well as dust deposition monitoring at designated locations on site. Dust deposition monitoring was started in August 2015, with addition dust deposition units placed around the Asbestos Contaminated Soil (ACS) Contaminant Cell in 2018, during its construction period. The units specific to the ACS Containment were removed at the end of September 2019 once the placement of contaminated soils ceased and the ACS C/Cell was closed

- Table 11 and Figure 7 provide an overview of the calls made to the 24 Hour Kurnell Community Hotline

TABLE 7A – Licenced Monitoring/Discharge Points: 2019

Monitoring Period	**2019**								
Pollutant	**Benzene**	**Ethyl Benzene**	**Lead**	**pH**	**Standing Water Level**	**Toluene**	**Total Petroleum Hydrocarbons**	**Total Phenolics**	**Xylene**
Unit of Measure	mg/L	mg/L	mg/L	pH units	m	mg/L	mg/L	mg/L	mg/L
Licence Limit	None	None	None	None	None	None	None	None	None
Monitoring Frequency Required by Licence	Quarterly								
EPA Point	Point 15, PMW08								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.001	<0.001	5.11	4.100	<0.001	<0.100	<0.050	<0.002
Highest	<0.001	<0.002	<0.001	5.70	4.937	<0.002	<0.100	<0.050	<0.003
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EPA Point	Point 16, PMW33								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.001	<0.001	5.59	1.905	<0.001	0.040	<0.050	<0.002
Highest	<0.001	<0.002	<0.001	6.50	2.360	<0.002	0.290	<0.050	<0.003
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TABLE 7A – Continue

Monitoring Period	**2019**								
Pollutant	**Benzene**	**Ethyl Benzene**	**Lead**	**pH**	**Standing Water Level**	**Toluene**	**Total Petroleum Hydrocarbons**	**Total Phenolics**	**Xylene**
Unit of Measure	mg/L	mg/L	mg/L	pH units	m	mg/L	mg/L	mg/L	mg/L
Licence Limit	None	None	None	None	None	None	None	None	None
Monitoring Frequency Required by Licence	Quarterly								
	Point 28, ACMW01								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.001	<0.001	5.92	0.200	<0.001	0.700	<0.002	<0.002
Highest	<0.001	<0.002	<0.001	7.17	0.552	<0.002	1.500	<0.050	<0.003
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Point 29, ACMW03								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	1.700	6.710	<0.001	6.12	2.284	15.00	1.600	<0.050	34.40
Highest	3.700	9.200	0.002	6.56	2.392	16.00	106.3	0.120	43.00
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TABLE 7B – Licenced Monitoring Points: 2018

Monitoring Period	**2018**								
Pollutant	**Benzene**	**Ethyl Benzene**	**Lead**	**pH**	**Standing Water Level**	**Toluene**	**Total Petroleum Hydrocarbons**	**Total Phenolics**	**Xylene**
Unit of Measure	mg/L	mg/L	mg/L	pH units	m	mg/L	mg/L	mg/L	mg/L
Licence Limit	None	None	None	None	None	None	None	None	None
Monitoring Frequency Required by Licence	Quarterly								
EPA Point	Point 15, PMW08								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.002	<0.001	5.29	3.56	<0.002	<0.05	<0.05	<0.002
Highest	<0.001	<0.002	<0.001	6.75	4.66	<0.002	<0.05	<0.05	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EPA Point	Point 16, PMW33								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.002	<0.001	5.8	1.74	<0.002	0.04	<0.05	<0.002
Highest	<0.001	<0.002	<0.001	6.03	2.15	<0.002	0.18	<0.05	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TABLE 7B – Continue

Monitoring Period	**2018**								
Pollutant	**Benzene**	**Ethyl Benzene**	**Lead**	**pH**	**Standing Water Level**	**Toluene**	**Total Petroleum Hydrocarbons**	**Total Phenolics**	**Xylene**
Unit of Measure	mg/L	mg/L	mg/L	pH units	m	mg/L	mg/L	mg/L	mg/L
Licence Limit	None	None	None	None	None	None	None	None	None
Monitoring Frequency Required by Licence	Quarterly								
	Point 28, ACMW01								
No. Samples Collected	3	3	3	3	3	3	3	3	3
Lowest	<0.001	<0.002	<0.001	5.30	0.300	<0.002	<0.100	<0.002	<0.002
Highest	<0.001	<0.002	<0.001	5.80	0.896	<0.002	<0.100	<0.002	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Point 29, ACMW03								
No. Samples Collected	3	3	3	3	3	3	3	3	3
Lowest	0.776	4.220	<0.001	6.05	2.178	11.100	2.690	<0.050	24.600
Highest	2.000	8.570	<0.001	6.46	2.202	18.100	49.890	0.120	41.500
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TABLE 7C – Licenced Monitoring Points: 2017

Monitoring Period	**2017**								
Pollutant	**Benzene**	**Ethyl Benzene**	**Lead**	**pH**	**Standing Water Level**	**Toluene**	**Total Petroleum Hydrocarbons**	**Total Phenolics**	**Xylene**
Unit of Measure	mg/L	mg/L	mg/L	pH units	m	mg/L	mg/L	mg/L	mg/L
Licence Limit	None	None	None	None	None	None	None	None	None
Monitoring Frequency Required by Licence	Quarterly								
EPA Point	Point 15, PMW08								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.002	<0.001	5.36	3.555	<0.002	<0.050	<0.05	<0.002
Highest	<0.001	<0.002	<0.001	6.75	4.173	<0.002	<0.050	<0.05	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EPA Point	Point 16, PMW33								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.002	<0.001	5.8	1.742	<0.002	0.04	<0.05	<0.002
Highest	<0.001	<0.002	<0.001	6.03	1.885	<0.002	0.18	<0.05	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TABLE 7D – Licenced Monitoring Points: 2016

Monitoring Period	**2016**								
Pollutant	**Benzene**	**Ethyl Benzene**	**Lead**	**pH**	**Standing Water Level**	**Toluene**	**Total Petroleum Hydrocarbons**	**Total Phenolics**	**Xylene**
Unit of Measure	mg/L	mg/L	mg/L	pH units	m	mg/L	mg/L	mg/L	mg/L
Licence Limit	None	None	None	None	None	None	None	None	None
Monitoring Frequency Required by Licence	Quarterly								
EPA Point	Point 15, PMW08								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.002	<0.001	4.54	3.169	<0.002	<0.050	<0.05	<0.002
Highest	<0.001	<0.002	<0.001	5.31	3.895	<0.002	<0.050	<0.05	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EPA Point	Point 16, PMW33								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.002	<0.001	5.22	1.500	<0.002	<0.050	<0.05	<0.002
Highest	<0.001	<0.002	<0.001	5.85	1.845	<0.002	0.140	<0.05	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TABLE 7E – Licenced Monitoring Points: 2015

Monitoring Period	**2015**								
Pollutant	**Benzene**	**Ethyl Benzene**	**Lead**	**pH**	**Standing Water Level**	**Toluene**	**Total Petroleum Hydrocarbons**	**Total Phenolics**	**Xylene**
Unit of Measure	mg/L	mg/L	mg/L	pH units	m	mg/L	mg/L	mg/L	mg/L
Licence Limit	None	None	None	None	None	None	None	None	None
Monitoring Frequency Required by Licence	Quarterly								
EPA Point	Point 15, PMW08								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.002	<0.001	4.83	3.236	<0.002	<0.050	<0.05	<0.002
Highest	<0.001	<0.002	<0.001	5.57	3.932	<0.002	0.055	<0.05	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EPA Point	Point 16, PMW33								
No. Samples Collected	4	4	4	4	4	4	4	4	4
Lowest	<0.001	<0.002	<0.001	5.548	1.555	<0.002	<0.050	<0.05	<0.002
Highest	<0.001	<0.002	<0.001	5.900	1.814	<0.002	0.017	<0.05	<0.002
Exceedance (yes/no)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Lowest and highest pH, Standing Water Levels and Total Recoverable Hydrocarbon levels have been depicted in Figures 1 to 4 for Monitoring Points 15, 16, 28 and 29 respectively. Results below the detection limit of the lab's analytical tests have not been depicted in a graph.

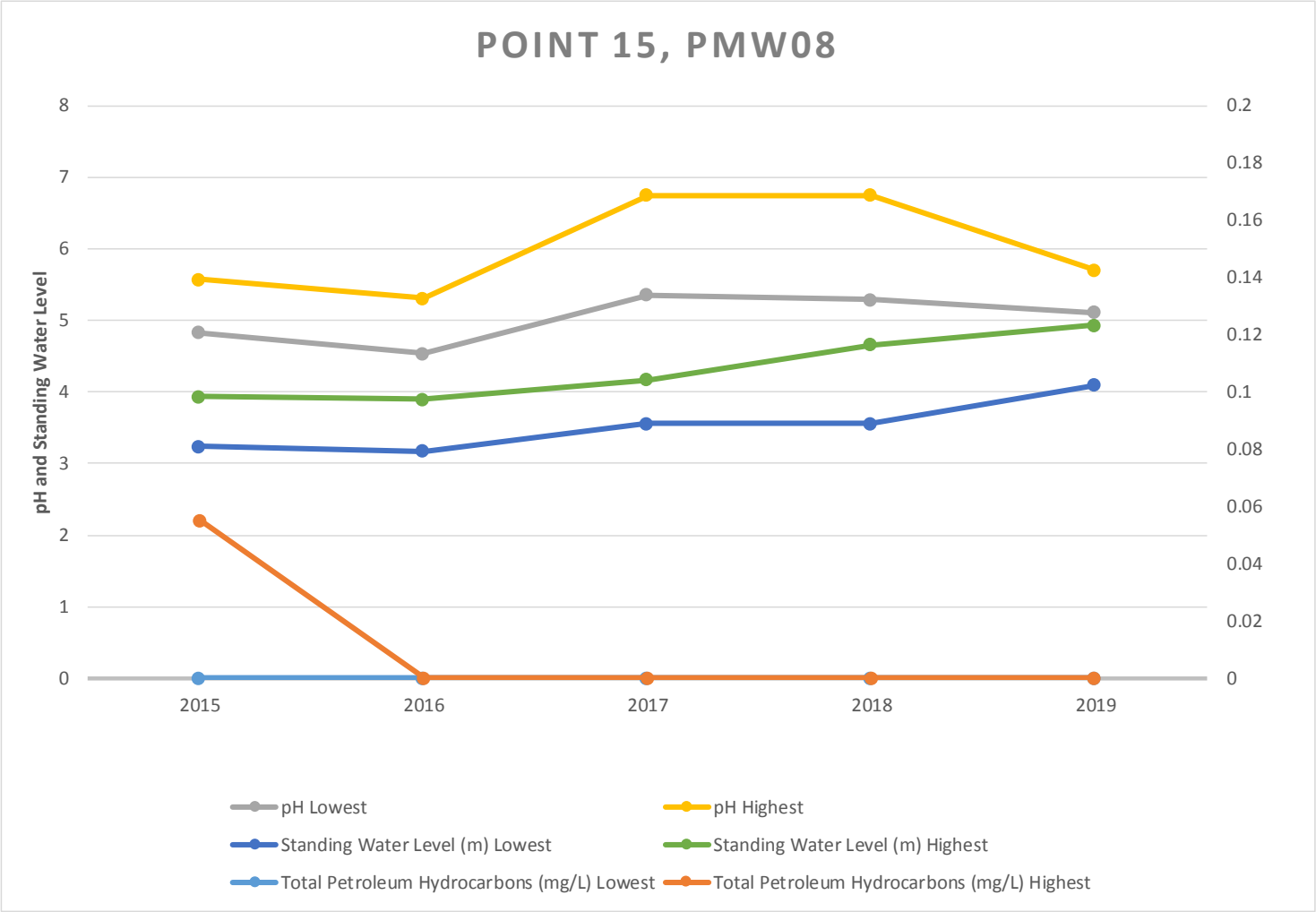


Figure 1. Monitoring Point 15 Data – 2015 to 2019

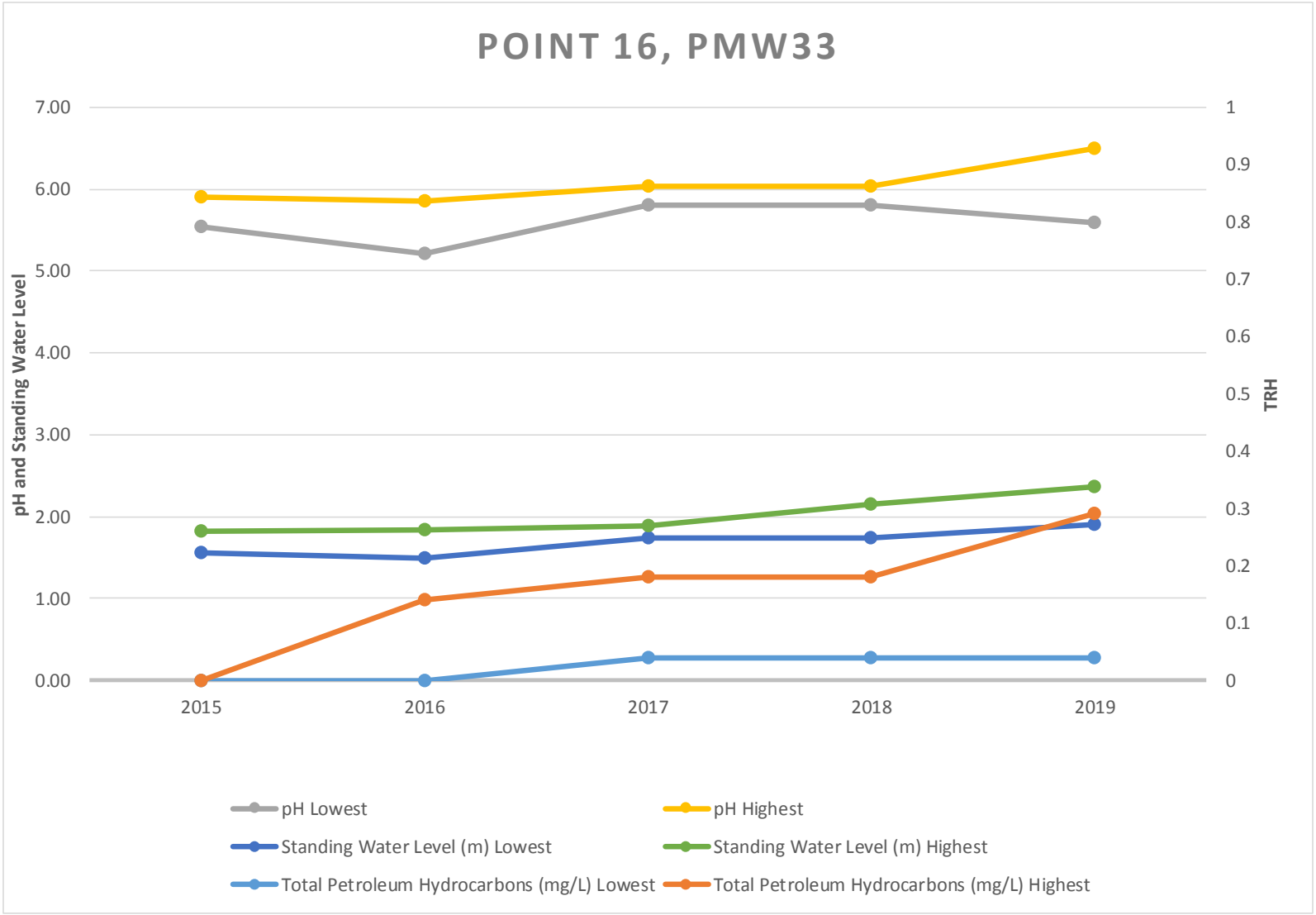


Figure 2. Monitoring Point 16 Data – 2015 to 2019

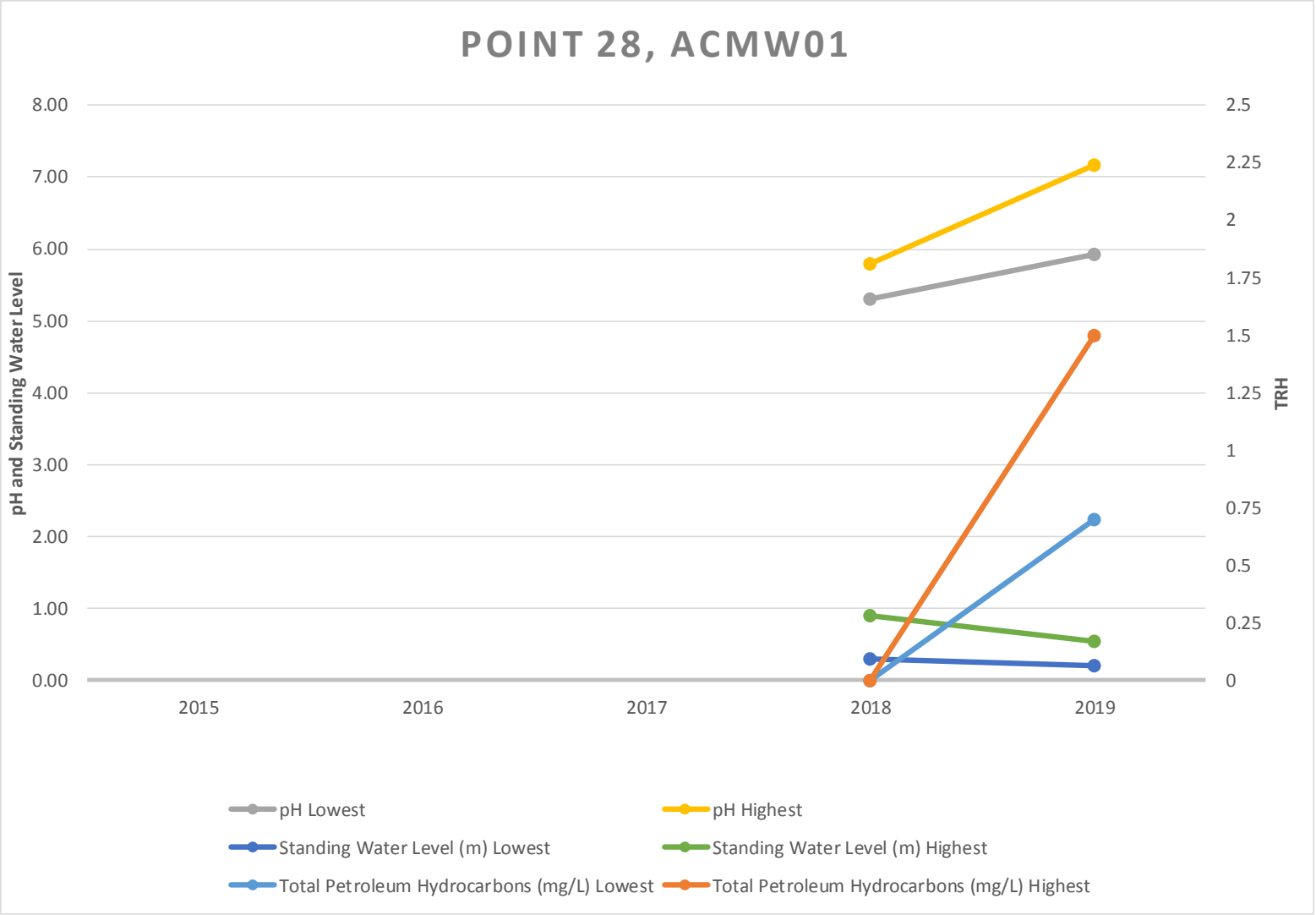


Figure 3. Monitoring Point 28 Data – 2015 to 2019

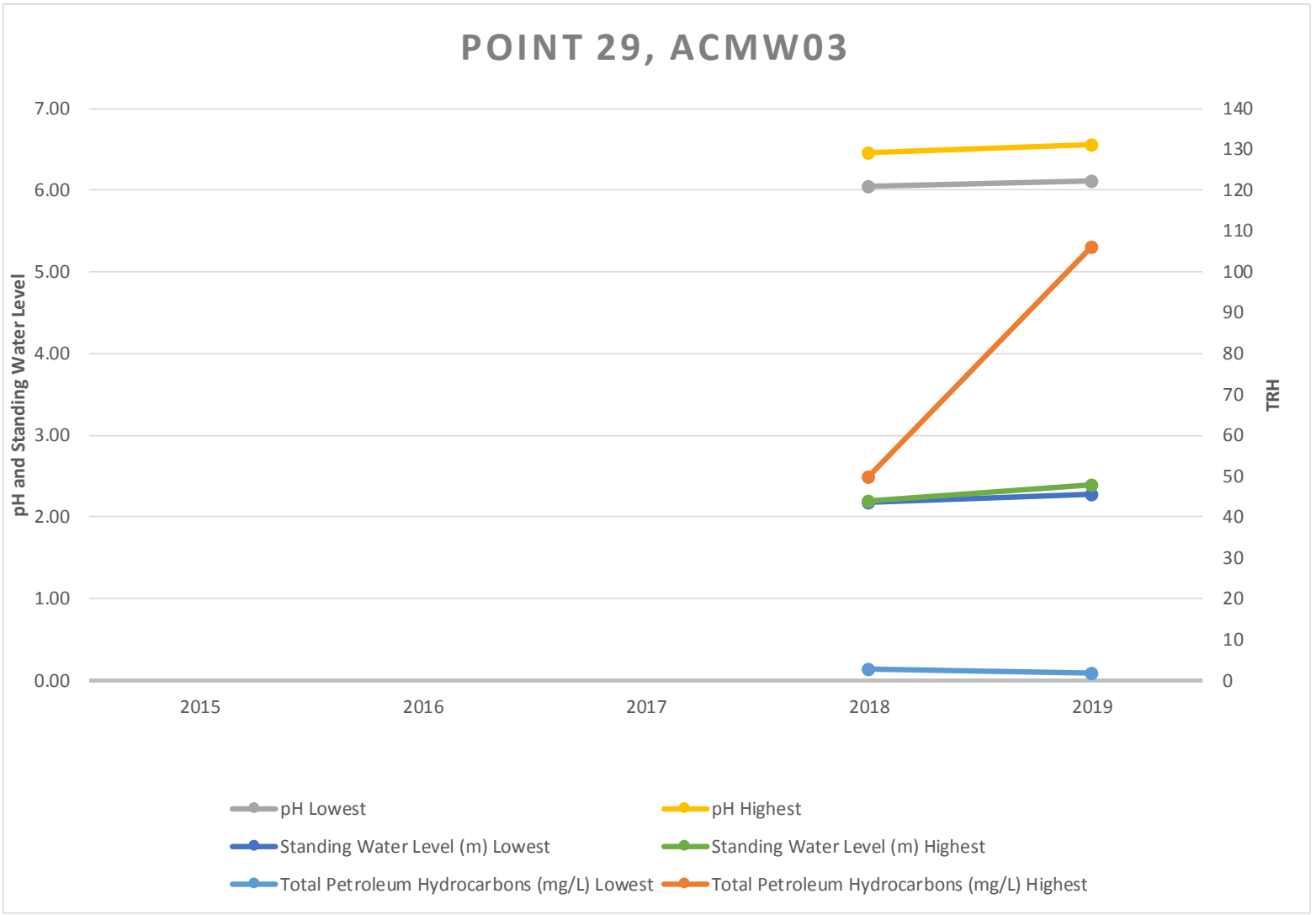


Figure 4. Monitoring Point 29 Data – 2015 to 2019

Table 8A – Point 27: Normal Operation Conditions

Monitoring Period	**2019**									
EPA Point	Point 27, Yena Gap Effluent, Normal Operating Conditions									
Pollutant	**Temperature**	**pH**	**Volumetric Flowrate**	**Oil and Grease**	**Phenols**	**Sulfide (un-ionised hydrogen sulfide)**	**Nitrogen (ammonia)**	**Total Suspended Solids**	**Biochemical Oxygen Demand**	Reason for Missing Data
Unit of Measure	°C	pH units	kl/day	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Licence Limit	40	6.0 - 9.0	None		2.7	None				
Monitoring Frequency Required by Licence	Continuous			6 Day						
Averaging Period	1 Hour Block	6 Minute Rolling	1 Day Block	Grab Sample						
No. Samples Collected	8760	525600	365	45	45	45	45	45	45	No Missing Data
Lowest	15.1	6.4	0	<5	<0.05	<0.1	<0.01	<1	<2	
Highest	28.3	7.5	13126	5	0.08	<0.1	0.12	25	8	
Exceedance (yes/no)	No	No	N/A	No	No	No	No	No	No	

Table 8B – Point 27: Normal Operation Conditions

Monitoring Period	**2019**										
EPA Point	Point 27, Yena Gap Effluent, Normal Operating Conditions										
Pollutant	**Arsenic**	**Ethyl Benzene**	**Lead**	**Naphtha-lene**	**Nickel**	**Phenan-threne**	**Benzene**	**Toluene**	**Polycyclic Aromatic Hydrocarbons**	**2,4-Dimethyl-phenol**	Reason for Missing Data
Licence Limit		None		None		None	None	None	0.5	None	
Unit of Measure	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Monitoring Frequency Required by Licence	Monthly										
Averaging Period	24 Hour Composite Sample										
No. Samples Collected	12	12	12	12	12	12	12	12	12	12	No Missing Data
Lowest	<0.001	<0.002	<0.001	<0.0002	0.004	<0.0002	<0.001	<0.002	<0.0001	<0.0002	
Highest	0.004	<0.002	0.002	<0.0005	0.008	<0.0005	0.002	<0.002	<0.0005	<0.0005	
Exceedance (yes/no)	No	N/A	No	N/A	No	N/A	N/A	N/A	N/A	N/A	

Table 8C – Point 27: Wet Weather Bypass Conditions

Monitoring Period	2019				Reason for Missing Data
EPA Point	Point 27, Yena Gap Effluent, Wet Weather Bypass Conditions				
Pollutant	**Oil and Grease (Wet)**	**Phenols (Wet)**	**Total Suspended Solids (Wet)**	**Biochemical oxygen demand (Wet)**	
Unit of Measure	mg/l	mg/l	mg/l	mg/l	
Licence Limit	70	5	100	350	
Monitoring Frequency Required by Licence	Daily during Wet Weather Bypass				
Averaging Period	Grab Sample				
No. Samples Collected	0	0	0	0	Wet Weather Bypass was not used at all during the year.
Lowest	N/A	N/A	N/A	N/A	
Highest	N/A	N/A	N/A	N/A	
Exceedance (yes/no)	No	No	No	No	

Table 9: Asbestos Monitoring Results: 2015 – YE 2019

Location	No. of Samples Collected 2015-19 Period	NSW SafeWork >0.02 Fibres/millilitre of air sampled	NSW Depart Health & Caltex Action Level >0.01 Fibres/millilitre of air sampled (new in 2015)
General Areas	2,289 4-14 sample events per day	Nil	Nil
ACS Cell (started June 2018)	1,083 3 locations per day	nil	nil

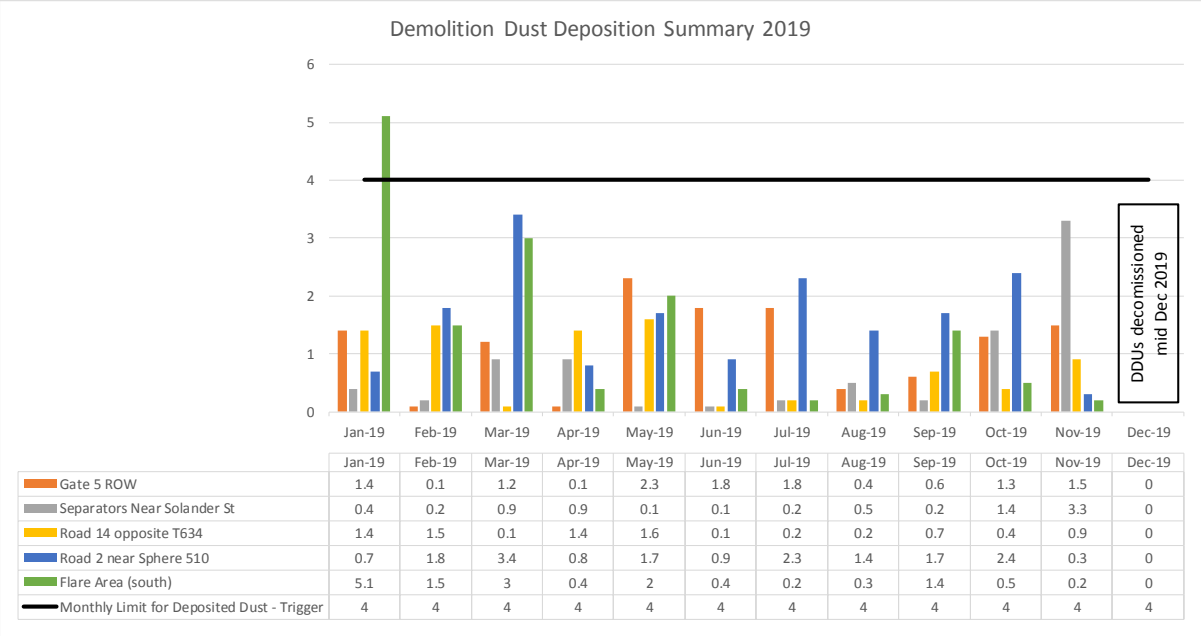
Table 10: Dust Monitoring Results

Table 10 (A) Dust Tracker (Unit used <u>during</u> felling of structures**)**

Period	No. Dust Samples	No. of Exceedances	Threshold Limit
2019	NA	*All remaining structures felled during 2017*	
2018	NA		
2017	91	Nil	50 µg/m^3
2016	405	Nil	50 µg/m^3
2015	268	Nil	50 µg/m^3

Table 10 (B) General Demolition Dust Deposition Units (5 pre-determined locations on site)

Period	No. Dust Samples	No. Above Trigger Level	Threshold Limit
2019	44	1	4g/m2/month
2018	48	Nil	4g/m2/month
2017	60	nil	4g/m2/month



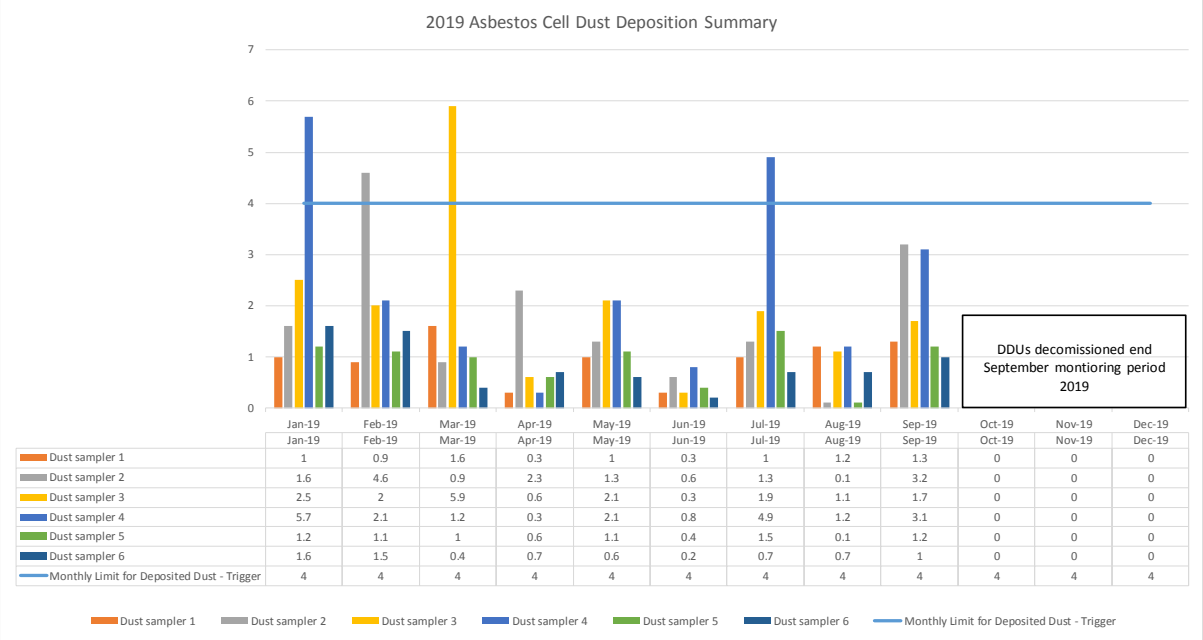
	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
Gate 5 ROW	1.4	0.1	1.2	0.1	2.3	1.8	1.8	0.4	0.6	1.3	1.5	0
Separators Near Solander St	0.4	0.2	0.9	0.9	0.1	0.1	0.2	0.5	0.2	1.4	3.3	0
Road 14 opposite T634	1.4	1.5	0.1	1.4	1.6	0.1	0.2	0.2	0.7	0.4	0.9	0
Road 2 near Sphere 510	0.7	1.8	3.4	0.8	1.7	0.9	2.3	1.4	1.7	2.4	0.3	0
Flare Area (south)	5.1	1.5	3	0.4	2	0.4	0.2	0.3	1.4	0.5	0.2	0
Monthly Limit for Deposited Dust - Trigger	4	4	4	4	4	4	4	4	4	4	4	4

Figure 5. Dust Deposition Monitoring for 2019

Note: In line with the closure of the ACS Containment Cell and completion of dust generating activities, the five site perimeter DDU's were removed in mid-December. The last 30 day monitoring period is November 2019.

Table 10 (C) ASC Cell - Dust Deposition (commenced June 15 2018)

Period	No. Dust Samples	No. Above Trigger Level	Threshold Limit
2019	60	4	4g/m2/month
2018	42	2	4g/m2/month



	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
Dust sampler 1	1	0.9	1.6	0.3	1	0.3	1	1.2	1.3	0	0	0
Dust sampler 2	1.6	4.6	0.9	2.3	1.3	0.6	1.3	0.1	3.2	0	0	0
Dust sampler 3	2.5	2	5.9	0.6	2.1	0.3	1.9	1.1	1.7	0	0	0
Dust sampler 4	5.7	2.1	1.2	0.3	2.1	0.8	4.9	1.2	3.1	0	0	0
Dust sampler 5	1.2	1.1	1	0.6	1.1	0.4	1.5	0.1	1.2	0	0	0
Dust sampler 6	1.6	1.5	0.4	0.7	0.6	0.2	0.7	0.7	1	0	0	0
Monthly Limit for Deposited Dust - Trigger	4	4	4	4	4	4	4	4	4	4	4	4

Figure 6. Asbestos Contaminated Soil (ACS) Containment Cell - Dust Deposition Monitoring for 2019 (monitoring commenced June 2018)

Note 1: In line with the closure of the ACS Containment Cell and completion of dust generating activities, the six sentinel DPU's were removed in mid-September. The last 30 day monitoring period is September 2019.

Refer to Section 1.6 for details of the five sample results found to be above the action trigger level

Table 10 (D) Concrete Crushing - Dust Tracker

Period	No. Dust Samples	No. Above Trigger Level	Threshold Limit
Aug 2017 to 30 Aug 18	210	Nil	50 µg/m^3

Note: Concreting crushing operations ceased 30 August 2018

2.3.1 24 Hour Kurnell Community Hotline

During the reporting period 40 calls to the 24 Hour Kurnell Community Hotline were received. Table 11 shows the breakdown of these calls, based on the category of the complaint. Complaints are followed up immediately with an investigation into the potential cause of the complaint and corrective actions initiated where required. All investigations are tracking in the Caltex LPS-Database to conclusion. The outcome of the investigation and the actions taken is provided either be a face to face meeting or during a phone call to the complainant.

Figure 7 shows the breakdown of the complaints by month over the reporting period.

Compared to the previous year (2018), the number of calls regarding odour concerns has notably increased and the number of calls regarding noise concerns has decreased.

A total of 30 calls regarding odour concerns were received through the Community Hotline or by the EPA. Early in 2019 the number of calls regarding odour concerns increased due to repeated calls (24 during the reporting period) from one resident in Cronulla (about 6 km away from the Caltex site).

Site Operations and the Demolition and Environment Teams have worked with the EPA; reviewing site activities and conditions around each call. Feedback was provided to the resident through the EPA. So far, no link has been established between the perceived odour concerns and the activities on Site. In working with the EPA, the Air Quality Management Plan was reviewed, with small additions included to ensure the effectiveness of odour prevention and mitigation measures, particularly for those activities with a greater potential to generate odours.

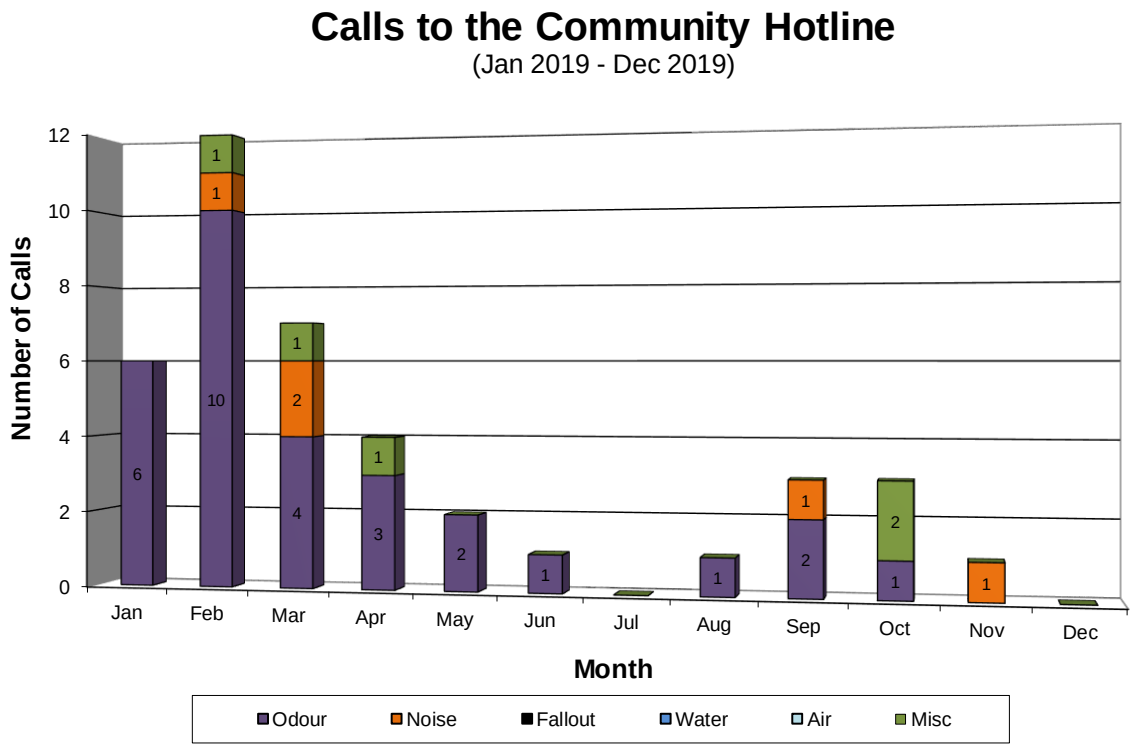
With regards to the reduced number of noise concerns, particularly relating to shipping activities, the noise monitoring program described in Paragraph 2.4.2 is clearly delivering benefits to the community and the business.

Table 11A 2019 Community Hotline Monitoring – Nature of Calls

Number of Call Recorded During the Last Twelve Months	
Pollution Complaint Category	Number of Calls
Odour & Air	30
Water	0
Noise	5
Fallout & Waste	0
Miscellaneous	5
Total	40

Note: Miscellaneous calls related to enquiries and concerns that did not fall into the main categories above.

Table 11B 2019 Community Hotline Monitoring – By Month



2.4 TERMINAL ENVIRONMENTAL NON-COMPLIANCE AND CORRECTIVE ACTIONS

Based on the data presented in the previous section, specifically Table 10 (C), four apparent dust deposition unit (DDU) monitoring sample results found to be above the action trigger level were recorded against the EPA Licence limits for the ACS Containment Cell monitoring points during the 2019 period, as well as one for one site perimeter DDU in the January 19 period.

All such events are considered to be part of Demolition project activities and have been investigated with associated actions tracked to completion. As stated previously, details of these events are provided in 1.6 of the Part , Demolition Project, as well as summaries provided in Table 12.

There were sixteen (16) tanker ship exceedances against the Kurnell Terminal EPL837 night-time noise limits identified during the 2019 period. Each exceedance event was investigated, and reported to the Ampol Marine Assurance and Vetting teams, in line with the agreed shipping performance process. via agreed email proforma to the DPIE and NSW EPA. Summaries of the ships reported to the DPIE and NSW EPA. Details of the Kurnell Terminal reportable events are provided in Table 12.

There were no other non-compliance events pertaining to Terminal operations reported in the 2019 period.

2.4.1 Event Reporting to Regulators:

In relations to Terminal operations, sixteen (16) tanker ship exceedances against the Kurnell Terminal EPL837 night-time noise limits were reported via agreed email proforma to the DPIE and NSW EPA during the 2019 period. Summaries of the ships reported to the DPIE and NSW EPA are provided in Table 12.

On the basis of the five Dust Deposition (DDU) samplers event findings, and in line with Section 03.1 & 03.2 of the site's EPL and D6 of SSD5544, the ACS Cell DDU results above the trigger levels of 4.0g / m2 over 30 days were in themselves singular events. In all cases, there was supporting monitoring evidence such as the other DDU's at the ASC Cell and at the site perimeter, as well as the Ambient Monitoring Station monthly PM_{10} and $PM_{2.5}$ particulate matter results that confirmed there were nil emissions of dust from the Caltex Terminal premises.

In addition, the individual DDU events were not deemed to be *reportable* to the EPA as the other dust monitoring results in that month confirmed that each event did not cause, or was likely to have caused, *material harm* to the environment – refer to section R2 of the site's EPL.

Similarly, D6 of SSD5544 only require reporting to the DPE in cases where an incident has *actual or potential significant off-site impacts* on people, or the biophysical environment associated with the development.

Both the Demolition Air Quality Management Plan and the Kurnell ACS Management Works Containment Cell Management Plan do not require the reporting of unsubstantiated events to the DPE or the EPA.

As can be seen from Table 11 above, the main potential impact on the community in this reporting period is odour with the primary source of complaints (80%) being undefined. As mentioned earlier, the number of calls regarding odour concerns increased due to repeated calls (24 during the reporting period) from one resident in Cronulla (about 6 km away from the Caltex site). Unfortunately, this resident opted to call the EPA instead of using the Kurnell Terminal Hotline, thus delaying the investigation of possible odour sources by Terminal operations.

As with previous practice, all odour complaints are investigated immediately by Terminal operational personnel. It is important to note that not all community odour complaints can be verified and following investigation, others found to be not attributed to the Kurnell Terminal operations. Where odours have been verified and the source identified, immediate actions have been taken to eliminate or reduce the source of the odour. Following an investigation into the cause/s, all findings and actions are recorded in the Loss Prevention System, as well as communicated to the complainant.

All community complaints were investigated immediately and appropriate actions were implemented. Feedback was provided to the complainant regarding the cause of the potential

impact and the actions taken to prevent it from happening again. Generally, the community has been appreciative of the way any complaints were handled.

2.4.2 SoundScience 'Smartadata' Unattended Continuous Noise Monitoring System - Kurnell Wharf

As mentioned in Section 2.3, noise was reported as the second highest potential impact on the community. In particular, members of the community complained mainly about noise generated by the tanker ships during product discharge activities at the wharf. Our response to managing potential shipping noise and community complaints is described in more detail below.

The SoundScience monitoring system continues to be a critical component in the management of shipping noise and is now viewed as a permanent operational tool for the Shore Officers at the Wharf. It comprises a bespoke system utilising proprietary acoustical components, customised power and communications hardware and the SoundScience SmataData software. The system has been configured to monitor and record single channel 1/3 octave noise levels, audio and coinciding meteorological data (precipitation, wind speed and wind direction). This takes noise monitoring information gathered from the wharf, together with the meteorological information, and calculations performed using the ENM algorithm to predict noise levels at six receivers along the shoreline on Prince Charles Parade.

The results of this process are presented on the SmartaData website and made available to provide Shore Officers (SO) and other key personnel at the Terminal with real time feedback about the noise output from tanker ships berthed at the fixed berths (KUR1 and KUR2).

Using the noise limits (day and night) set by the site EPL, this system alerted Kurnell SO's (and other operational team members) to any event of elevated noise output coming from the tanker ships during their time berthed at the Kurnell wharf and during product discharge activities. The SO was then able to instruct the Ship Captain to take all additional mitigation measures to further reduce the noise output.

To confirm, the current Caltex Marine Assurance / Ampol Ship Vetting for Chartering process now is:

1. During initial ship vetting, the ship representative is informed of the Kurnell Terminal ELP noise level limitations and of the requirement to submit a ship specific noise reduction/ control plan.

2. The noise reduction/ control plan is supplied to Kurnell Terminal Shipping Specialist by the Marine Assurance Specialist to confirm if acceptable.

3. If noise level limits are exceeded during the Kurnell ship berthing event, the ship agent/owner is asked to investigate and confirm what additional noise mitigation measures will be employed to ensure compliance should the ship be chartered for Kurnell again. The noise reduction/control plan must be resubmitted (while Ampol Vetting cannot compel ship representative to engage the services of a noise engineer, they may decide to do this).

4. Any additional noise mitigation measures are shared with Kurnell Terminal Shipping Specialist to confirm if acceptable.

5. If the ship exceeds the EPL noise level limit on the subsequent chartering event ,the ship is deemed unacceptable to return and removed from the Chartering Approval List for Kurnell. There may be occasions which this position may be reviewed in conjunction with Ampol Marine Assurance and Vetting teams and the Terminal. To initiate this review, the ship agent/owner would need to supply/provide substantial evidence that actions have been taken to correct or mitigate the ship's operational noise output.

In terms of ongoing notifications, Caltex reports non-compliant ships to both the NSW EPA and NSW DPE. Reporting is undertaken when:

- A ship/s noise is assessed via the monitoring system to be above the EPL noise level limit

as well as when;

- Kurnell Community Hotline calls are received, relating to shipping activities

The total number of tanker ships reported to exceed the night-time noise limit was sixteen (16) year to date.

2.5 TERMINAL DATA TREND ANALYSIS

During 2019, there were sixteen (16) tanker ship exceedances against the Kurnell Terminal EPL837 night-time noise limits identified and reported during the 2019 period – refer to Table 12 for details. There were no other non-compliance events pertaining to Terminal operations reported in the 2019 period. Analysis of the available data show continued sound operation of the Terminal within licence and consent requirements, other with shipping noise level exceedances. Leaving aside continued issues with some shipping noise elevations events, none of the compliance and monitoring data reveals a trend that could potentially lead to non-compliance with any other licence and/or Terminal operations specific consent conditions.

Five Demolition non-compliances were identified. The details of these non-compliances and a summary of the actions taken can be found in Table 12 below.

2.6 TERMINAL DATA DISCREPANCIES

The Terminal EMS used to manage and monitor the environmental aspects and impacts associated with the development is considered to be appropriate – as indicated by the comments made in the 2019 ISO14001:2015 surveillance audit report (LR) and the Caltex OEMS audit for Kurnell. The environmental stewardship processes under the Caltex EMS ensures that relevant monitoring data is generated, assessed and reported. This also allows for any potential gaps to be identified early with corrective and preventative action plans being developed and implemented.

The details of the sixteen (16) tanker ship noise level exceedances against the Kurnell Terminal EPL837 night-time noise limits identified during the 2019 period and the five (5) Demolition Project related Dust Deposition (DDU) samplers results above the trigger levels of 4.0g / m2 over 30 days and a summary of the corrective/preventative actions taken are summarised in Table 12 below:

Table 12 - Summary of 2019 Non-Compliances

Date	Description of Non-Compliance	Cause of Non-Compliance	Corrective/Preventative Action/s
Terminal Operations - Shipping Noise Exceedances against the Kurnell Terminal EPL837 Night-time Noise lLmits			
January 2019	Tanker ship/s exceedances against the Kurnell Terminal EPL837 night-time noise limits	Vessel named Neptun D reported to have exceeded the EPL837 night-time noise limits at 05:00hrs on 29 Jan 19	• Pumping rates reduced with nil effect on noise output • Letter of Protest issued to Captain • Caltex Marine Assurance / Ampol Ship Vetting notified
February 2019	Tanker ship/s exceedances against the Kurnell Terminal EPL837 night-time noise limits	Three Vessels in this period: Vessel named FPMC 19 reported to have exceeded the EPL837 night-time noise limits at 20:45 on 14 Feb 19 Vessel named NS Africa reported to have exceeded the EPL837 night-time noise limits at 20:45 on 14 Feb 19 **Note: both vessels at the fixed berth during time of exceedance**	• Pumping rates reduced with nil effect on noise output • Letter of Protest issued to each Captain • Caltex Marine Assurance / Ampol Ship Vetting notified

February 2019 **continued**	Tanker ship/s exceedances against the Kurnell Terminal EPL837 night-time noise limits	Vessel named Alpine Maria reported to have exceeded the EPL837 night-time noise limits at 05:45 on 19 Feb 19	• Pumping rates reduced with nil effect on noise output • Letter of Protest issued to each Captain • Caltex Marine Assurance / Ampol Ship Vetting notified
March 2019	Tanker ship/s exceedances against the Kurnell Terminal EPL837 night-time noise limits	Three Vessels in this period: Vessel named STI Pontiac reported to have exceeded the EPL837 night-time noise limits at 21:00 on 7 Mar 19 Vessel named Nord Lavender reported to have exceeded the EPL837 night-time noise limits at 21:00 on 10 Mar 19 Vessel named STI Oxford reported to have exceeded the EPL837 night-time noise limits at 23:40 on 14 Mar 19 **Note:** Thunderstorms and lightening around at the time of the exceedance	• Pumping rates reduced with minimal effect on noise output • Letter of Protest issued to each Captain • Caltex Marine Assurance / Ampol Ship Vetting notified
April 2019	Tanker ship/s exceedances against the Kurnell Terminal EPL837 night-time noise limits	Two Vessels in this period: Vessel named Zaliv Vostok reported to have exceeded the EPL837 night-time noise limits at 22:15 on 6 Apr 19 Vessel named Atlantic Pieces reported to have exceeded the EPL837 night-time noise limits at 20:15 on 24 Apr 19	• Pumping rates reduced with nil effect on noise output • Letter of Protest issued to each Captain • Caltex Marine Assurance / Ampol Ship Vetting notified

May 2019	Tanker ship/s exceedances against the Kurnell Terminal EPL837 night-time noise limits	Vessel named Yang Li Hu reported to have exceeded the EPL837 night-time noise limits at 20:15 on 15 May 19	• Pumping rates reduced with nil effect on noise output • Letter of Protest issued to Captain • Caltex Marine Assurance / Ampol Ship Vetting notified
July 2019	Tanker ship/s exceedances against the Kurnell Terminal EPL837 night-time noise limits	Vessel named Lian Yang Hu reported to have exceeded the EPL837 night-time noise limits at 18:15 on 25 Jul 19	• Pumping rates reduced with good effect on noise output • Starboard blowers also turned off • Noise level reduce to below limit for remaining night-time period • Letter of Protest issued to Captain • Caltex Marine Assurance / Ampol Ship Vetting notified
August 2019	Tanker ship/s exceedances against the Kurnell Terminal EPL837 night-time noise limits	Vessel named SCF Pioneer reported to have exceeded the EPL837 night-time noise limits at 19:15 on 5 Aug 19	• Non-essential machinery (blowers, fans) turned off with nil effect on noise output • Letter of Protest issued to Captain • Caltex Marine Assurance / Ampol Ship Vetting notified

September 2019	Tanker ship/s exceedances against the Kurnell Terminal EPL837 night-time noise limits	Three Vessels in this period: Vessel named Nord Dolphin reported to have exceeded the EPL837 night-time noise limits at 21:00 on 5 Sept 19 Vessel named Front Lion reported to have exceeded the EPL837 night-time noise limits at 23:15 on 21 Sept 19 Vessel named Ardmore Seawolf reported to have exceeded the EPL837 night-time noise limits at 23:15 on 21 Sept 19 **Note: both vessels at the fixed berth during time of exceedance**	• Non-essential machinery (fans) turned off with some effect on noise output • Noise level reduce to below limit for remaining night-time period (Nord Dolphin only) • Letter of Protest issued to each Captain • Caltex Marine Assurance / Ampol Ship Vetting notified

Note:

Ship noise EPA Licence limit exceedances events occurring in 2019 have been reported to NSW EPA and DPE as they occurred.

An “Exceedance Alert” email proforma established at the conclusion of the six month trial (Oct 2017-May 18) trial is sent to NSW EPA and DPE when a ship noise exceedence event is observed to have occurred.

Demolition Project	**Dust Deposition Units Results Above Agreed Trigger Point – ASC Containment Cell**		
Date	**Description of Non-Compliance**	**Cause of Non-Compliance**	**Corrective/Preventative Action/s**
January 19	The recorded result for ACS Containment Cell dust deposition sampler at Location 4. (located north of the Landfarm) for Jan period exceeded the agreed level of 4.0g / m2 over 30 days. Test result was 5.7 / m2 over 30 days.	On Feb 13th 2019 a naturally occurring red dust event impacted the site. This is unusual but a natural occurrence and red dust was deposited unevenly around the site. Also noted that there was some red dust residue around / outside of the bottle . Due to DDU location at a perimeter dirt road at CLOR, it is expected that vehicles driving past to the ACS Cell also contributed to the very local dust generation & hence impacted deposition into this sample point. The prolonged absence of rain in the Kurnell is a contributing factor. All other Asbestos Cell dust deposition sampler units at ACS Cell recorded below the agreed trigger level for the same period. While one site perimeter DDU sample location (No.5 – Road Q, South Flare Area) also tested above the agreed trigger level during this period, the other site perimeter DDU samplers results remained below the agreed trigger level. The PM_{10} and $PM_{2.5}$ particulate matter results at the Terminal's Ambient Air Monitoring Station were also below the action level, confirming nil off site impacts – refer to INC-16555 commentary below for perimeter DDU sample No.5.	Contractor supervisor was made aware of this event and coached regards ensuring good work activity turnover when regular personnel go on leave as well as the need for consistent / regular wet down of roads in this area every day. Ongoing monitoring of these surrounding roads to be continued with daily housekeeping and wetting down of access road areas. Refer to Caltex's Loss Prevention System – **INC-0016837**

February 19	The recorded result for Asbestos Cell dust deposition Sampler at Location 3. (located south of the soil cell near the site boundary) for Feb period exceeded the agreed level of 4.0g / m2 over 30 days. Test result was 5.9g/m2 over 30 days.	During this sample period, it was noted that there was very heavy period of vehicle traffic both into & out of the cell, as well as larger truck movements up to the land farm area & back, compounding the potential for dust generation from dirt road. One of the regular ACS Cell attendants who normally does the road wet downs continued to be on leave during this period & it is believed that the timing & quality of wet down may not have been as effective during this continued very dry spell. It was noted that all other Asbestos Cell dust deposition sampler units at ACS Cell recorded results below the agreed trigger level for the same period. The site perimeter DDU samplers remained below the agreed trigger level. The PM_{10} and $PM_{2.5}$ particulate matter results at the Terminal's Ambient Air Monitoring Station were also below the action level, confirming nil off site impacts.	Contractor supervisor reminded of the need to ensure clear expectations are set on turning over duties from one worker to another to ensure consistent / regular wet down of roads in this area every day. Ongoing monitoring of these surrounding roads to be continued with daily housekeeping and wetting down of access road areas. Refer to Caltex's Loss Prevention System – **INC-0016838**

March 19	The recorded result for Asbestos Cell dust deposition Sampler at Location 3. (located south of the recycling area) for Mar period exceeded the agreed level of 4.0g / m2 over 30 days. Test result was 5.9g/m2 over 30 days	Due to higher than normal traffic associated with the demolition of Tank 415 (scrap trucks, demolition vehicles & large machinery), the dust levels were higher at Road Q. It is worth noting that these vehicles often went down Road Q before the day's wetting down had commenced. The prolonged absence of rain in the Kurnell remained a significant contributing factor. It was noted that all other Asbestos Cell dust deposition sampler units at ACS Cell recorded results below the agreed trigger level for the same period. The site perimeter DDU samplers remained below the agreed trigger level. The PM_{10} and $PM_{2.5}$ particulate matter results at the Terminal's Ambient Air Monitoring Station were also below the action level, confirming nil off site impacts.	Demolition operations requested increased wetting of the access roads in the area. The Giovenco and Manns contract workers involved in maintaining the roads were advised of the consequences of ineffective road wetting by the Occupational Hygienist for the project (G. Ward). The Tank 415 demolition was completed shortly before the investigation was concluded which resulted in less vehicles using the access roads. Subsequent DDU sampler results remained below the agreed trigger level of 4.0g / m2 over 30 days. Refer to Caltex's Loss Prevention System – **INC-0017435**

July 19	The recorded result for Asbestos Cell dust deposition Sampler at Location 4. (located north of the Landfarm) for July period exceeded the agreed level of 4.0g / m2 over 30 days. Test result was 4.9g/m2 over 30 days	Road Q is not fully sealed. During this sample period, it was noted that there was very heavy period of vehicle traffic both into & out of the cell, as well as continued truck movement to and from the land farm which compounded the potential for dust generation from the unsealed road. The prolonged absence of rain in the Kurnell remained a significant contributing factor. It was noted that all other Asbestos Cell dust deposition sampler units at ACS Cell recorded below the agreed trigger level for the same period. The site perimeter DDU samplers remained below the agreed trigger level. The PM_{10} and $PM_{2.5}$ particulate matter results at the Terminal's Ambient Air Monitoring Station were also below the action level, confirming nil off site impacts.	Dust suppression by increased wetting down of the access roads More regular watering commenced and will be continued for as long as this road is accessed Refer to Caltex's Loss Prevention System – **INC-0018348**

Demolition Project	**Site Perimeter Dust Deposition Unit Results Above the Agreed Trigger Point**		
Date	**Description of Non-Compliance**	**Cause of Non-Compliance**	**Corrective Actions to Prevent Non-Compliance**
January 2019	The recorded result for site perimeter Location 5 DDU sampler (located at Road Q South Flare Area) for the January period was found to be above the agreed trigger level of 4.0g / m2 over 30 days. Test result was 5.1g/m2 over 30 days.	On Feb 13th 2019 a naturally occurring red dust event impacted the site. This is unusual but a natural occurrence and red dust was deposited unevenly around the site. When collecting sample, it was noted that there was some red dust residue around / outside of the bottle. Due to its location at a perimeter dirt road at CLOR, it is expected that vehicles driving past to the ACS Cell also contributed to the very local dust generation & hence impacted deposition into this sample point. The prolonged absence of rain in the Kurnell is also a contributing factor. It was noted that other than the Asbestos Cell dust deposition unit sampler at Location 4 (located north of the Land Farm), all other Asbestos Cell dust deposition sampler units at ACS Cell recorded below the agreed trigger level for the same period. The site perimeter DDU samplers remained below the agreed trigger level. The PM_{10} and $PM_{2.5}$ particulate matter results at the Terminal's Ambient Air Monitoring Station were also below the action level, confirming nil off site impacts.	1. Increased wetting of access roads was instituted 2. Relocate the site perimeter Location No 5 DDU sampler closer to the western boundary fence (closer to industrial neighbours such as Desal plant) & an appropriate distance away from unsealed road as some workers were using the unsealed road as a short cut and contaminating the DDU. Refer to Caltex's Loss Prevention System – **INC-0018348**

PART 3 – 2019 ENVIRONMENTAL IMPROVEMENT PLAN AND SUMMARY

This section of the report provides an overview of the environmental improvement works that have been carried out during the reporting period. This includes works carried out as part of the EPL's Pollution Reduction Program, development of the Terminal's OEMP, Phytoremediation works. An overview of the improvement works planned for 2019 will be provided as well.

3.1 CHANGES MADE TO ENHANCE THE ENVIRONMENTAL PERFORMANCE OF THE DEMOLITION ACTIVITIES.

3.1.1 Demolition Noise Management Plan

Audits of the Demolition Noise Management Plan were also conducted in January, May, August and November. A gap was identified during the internal audit in September (also documented in the Noise Management Plan November Audit). This gap concerns the communication and response plan following the detection of high noise. The procedure has been updated such that in addition to reporting high noise to the EMR, noise exceeding the Terminal Operating License Limit is communicated in writing to the Terminals Manager and where multiple noise readings are recorded above the Demolition Consent Conditions (Mods 1), even where these noise levels are not attributed to demolition activity, independent monitoring and verification is recommended and to be coordinated by the site EMR.

Enhancement of the local asbestos removal procedure per discussions with demolition contractor - Industrial Demolition Services.

3.1.2 ACS Containment Cell

No amendments to the following Demolition Management Plans were required during the 2019 reporting period as part of the ACS Containment Cell approval (SSD5544 MOD 2), namely:

- Air Quality Management Plan
- Noise (and Vibration) Management Plan
- Waste (and Resource) Management Plan
- Soil and Water Management Plan
- Biodiversity (and Weed) Management Plan
- Traffic Management Plan

These Management Plans will remain in place for the duration of the remaining demolition activities i.e. the ACS Containment Cell. Included in these management plans are performance indicators and monitoring requirements. In addition to the above mentioned Management Plans, a number of specific processes and documents were required to ensure the environmental performance of the ACS Containment Cell. They are:

- Long Term Environmental Management Plan
- Pipeway Validation Report

These documents have been developed by AECOM and will be reviewed and finalised by the ACS Containment Cell Site auditor. The ACS Containment Cell Long Term Environmental Management Plan will be incorporated into the Final Stage 2 Kurnell Terminal OEMP.

3.2 NSW EPA EPL 837: POLLUTION STUDIES AND REDUCTION PROGRAMS (PRPS) ACTIVITIES IN 2018

This section provides an overview of the PRP projects U2.1 and U4.2. During the last twelve months work has been carried out on both projects.

3.2.1 U2.1 PRP U16.2: Implementation of the Tank Sleeve Program

Caltex has committed to the installation of Tank sleeves on slotted guide poles on twelve External Floating Roof Tanks (EFRT) after the transition from a Refinery to a Terminal. The NSW EPA have agreed to three part implementation program. Part 1 has been completed and reported on in the 2015 Annual Return. Part 2 has also been completed and reported on in the 2017 Annual Review.

Part 3 included Tk408, Tk409, Tk318, Tk513 and Tk204 and is currently underway.

3.3 KURNELL TERMINAL OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN (OEMP) REVIEW

In line with the requirements of Obligation D2 of SSD 5544 and B19, a Stage 1 Interim Kurnell Terminal Operational Environmental Management (OEMP) was developed and submitted to DPE. The Plan includes all the stated elements in the sub text of D2 and D3, with a number of Management Plans in common with the Demolition Project. The Interim Kurnell Terminal OEMP has since been approved by the DPE in July 2017. A final Stage 2 Kurnell Terminal OEMP will be finalised and submitted for review and approval prior to the end of the Demolition project (now scheduled to conclude in March 2020). All Management Plans currently shared with Demolition will be updated to reflect terminal operations only. They will be submitted as part of the Final OEMP.

A number of process improvements have been identified as a result of the six month shipping noise monitoring trial – refer back to Section 2.4.1 and 3.6.2 for details. They have been implemented in full by the Terminal, Caltex Marine Assurance and Ampol Vetting.

The process improvements identified in the Trial report were incorporated into a revised Terminal Noise Management Sub-Plan, along with the updated Stage 1, Kurnell Terminal Interim OEMP . The updated OEMP was submitted to the DPIE on 18 February 2019 and subsequently approved.

The internal Environment Stewardship Audit tool previously developed to assist with monitoring compliance and the effectiveness of the OEMP has been reviewed again in 2018. This audit tool has since been incorporated into the Caltex Operational Excellence Management System (OEMS) Health Check audit tool and endorsed by key stakeholders.

3.4 INDEPENDENT ENVIRONMENTAL AUDIT (IEA) OUTCOMES

Independent environmental audits were conducted in April 2016 and September 2017, in accordance with the auditing requirements (D7) of SSD 5544 Conversion of Refinery to Finished Product Import and Distribution Terminal and SSD 5353 (F1) Ports and Berthing Upgrade. The reports, along with the Caltex responses to the non-conformances, have been submitted to the DP&E.

Discussions with the DP&E in relation to the 2016 non-conformances relating to SSD 5544 and SSD 5353 have concluded. The full 2016 IEA reports, including the Caltex responses have been published on the Caltex Public Webpage under Kurnell Conversion.

The 2017 IEA report for SSD 5544 Conversion of Refinery to Finished Product Import and Distribution Terminal SSD5544 MOD1 Demolition and SSD 5353 (F1) Ports and Berthing Upgrade was submitted to the DP&E, along with Caltex responses. The Department has informed us that the report generally satisfies the requirements of Schedule D, Condition 7 for the IEA. The full 2017 IEA reports, including the Caltex responses have been published on the Caltex Public Webpage within the *Sustainability* Section, under *Kurnell Site Conversion*.

The next IEA is planned for September 2020 (at 3 yearly intervals).

Refer to Appendix 1 for the status of the Caltex actions arising from the above mentioned Independent Environmental Audits (IEA) - SSD 5544 and SSD 5353.

3.6 PLANNED 2019 IMPROVEMENT MEASURES

3.6.1 U2.1 PRP U16.2: Implementation of the Tank Sleeve Program

Caltex has committed to the installation of Tank sleeves on slotted guide poles on thirteen External Floating Roof Tanks (EFRT) after the transition from a Refinery to a Terminal. The NSW EPA have agreed to three part implementation program - refer to Section 3.2.1 for details of the completed tank installations. Part 3 involves the upgrade of the remaining 5 EFRT's by 31 December 2022.

The project is being managed by the Tank Program Team. The five remaining EFRT's in the Part 3 program are Tk408, Tk409, Tk318, Tk513 and Tk204.

3.6.2. Smartadata' Unattended Continuous Noise Monitoring System

The six month continuous shipping noise monitoring trial, in consultation with the NSW EPA and DP&E, concluded in May 2018. A number of process improvements were made to the mitigation measures for which Caltex has control over. Refer back to Section 2.4.1 for details of the trial findings and recommendations. The process improvements have all been implemented in full. A reporting mechanism has been established to report to the EPA and DPE when a ship/s noise is assessed via the monitoring system to be above the EPL noise level limit, as well as when any ship noise complaints are made.

The SoundScience *Smartadata* noise monitoring system will continue to be an important operational aid for the Wharf based Shore Officers in 2020 and beyond. The Ampol Marine

Assurance and Ampol Vetting teams are also committed to sourcing international tanker vessels capable of meeting the strict noise level limits set out in EPL837. Vessels shown to not meet the set limits will continue to be removed from the vessel chartering list until they show evidence that effective engineering solutions have been implemented. These changes must also be acceptable to the Kurnell Terminal Marine Operations Specialist and the Sydney Terminal Operations Manager before they can be chartered again.

3.6.3 Progress "Future State" Redesign of Kurnell Terminal Wastewater Treatment Plant (WWTP)

At the time of submitting this report, a decision on the "future state" design for the WWTP has not been finalised. Caltex is currently assessing the design options for modifying the existing plant infrastructure to better meet the current and predicted future wastewater treatment needs of the site.

Further work will need be done to implement the redesign of the WWTP when funds become available.

4 SUMMARY

Over the previous year, Terminal and Demolition activities associated with the development have complied with the Development Consent for Application SSD 5544 (dated 7 January 2014) and the subsequent Development Consent for Modifications 1,2, 3, 4 and 5 (Demolition) associated with SSD 5544.

It was regrettable that the Demolition project recorded five events in 2019 where the DDU's recorded dust results where above the agreed trigger point of 4.0g/m^2/30days. Otherwise, the environmental management systems and activities developed from the EIS, SEE and the EPL (and incorporating the consent conditions requirements), have been effective and will be continued for the remaining period of the works associated with the capping of the ASC Containment Cell and continuing Terminal operations (land and wharf).

APPENDIX 1.

PART 1. STATUS OF THE CALTEX ACTIONS ARISING FROM THE 2017 INDEPENDENT ENVIRONMENTAL AUDIT (IEA)

a) SSD 5544 Conversion of Refinery to Import and Distribution Terminal (including MOD 1 – Demolition Works)

Non-Compliance	Auditor Recommendation (Options)	Caltex Response	2019 Update and Commentary
1. Odour There were potentially offensive odours emitted from the operations at the Kurnell Terminal. This was shown in the Caltex complaints records which indicate that there were 17 odour issues (in this audit period) reported by neighbours to the Kurnell facility. Caltex reported this as a non-compliance in the annual EPA return 2016 -2017. *Applicable Consent Condition D2 and EPL 837 Condition L7* Not caused by the direct development activities but related to Condition D2 requiring the establishment and implementation of an Operational Environmental Management. Note: Caltex Loss Prevention procedures were followed.	Continue investigations in odour complaints and design odour monitoring programs to determine severity / causes. Most odour investigations are post event, so consider a more pro-active approach to internally recording odours before they become potentially offensive to neighbours.	Caltex accepted the audit team's findings and comments. We will continue investigations into any odour complaints received (internal and external). Potential odours sources are already known. Any operation and/or maintenance works in these areas take odour mitigation measures into consideration as a proactive step in preventing offensive odours in the surrounding neighbourhood.	Corrective and preventative actions continue to be applied in Terminal and demolition operations.
2. Operational Controls – loss of containment Caltex loss prevention records and the annual EPA Return 2016 – 2017 recorded a non-compliance for release of slops (wharf), a spill of 86,000L of hydrocarbon water (land), loss of gasoline from pipeline "Gasoline 1" (land) *Applicable Consent Condition D2 and EPL 837 Conditions L1 and O1* Not caused by the direct demolition activities but related to Condition D2 requiring the establishment and implementation of an Operational Environmental Management. Note: Caltex Loss Prevention procedures were followed. Reported to DPE (Annual Review Report December 2016).	Loss Prevention investigations and subsequent actions were satisfactory.	Caltex accepted the audit team's findings and comments. Gasoline 1 Pipeline: • Checks were completed on all PSV valves to ensure they are operating as intended • All isolating valves for PSVs to be secured open • An internal memorandum (Loss Prevention System Alert) was issued to raise awareness of working around PSVs.	Corrective and preventative actions continue to be applied in Terminal and demolition operations.

Non-Compliance	Auditor Recommendation (Options)	Caltex Response	2019 Update and Commentary
3. Late Submission of Demolition Studies (prior to commencement of Demolition) The following studies were required to be submitted (for approval) to the Secretary at least one month prior to the commencement of demolition works: Firewater System Review Demolition Safety Study Demolition had started prior to submission and approval. *Applicable Consent Condition C3A*	Sighted subsequent approval and associated communications between Caltex and DPE Noted that other Plans sampled (including sub-plans) have been submitted and approved within required timeframes. Better diligence demonstrated	Caltex accepted the audit team's findings and comments. As stated by the Auditor, better diligence has been applied to the tracking of Consent Condition requirements, DPE submission dates and the use of the Caltex action tracking system to demonstrate compliance. The additional consent conditions arising from SSD5544 MOD2 and 3 are tracked in the Caltex action tracking system to demonstrate compliance.	Corrective and preventative actions continue to be applied in Terminal and demolition operations.

b) SSD 5353 Berthing and Ports Upgrade

Non-compliance	Recommendation (Options)	Caltex Response	2019 Update and Commentary
1. Odour There were potentially offensive odours emitted through the operations at the Kurnell Terminal. This was shown in the Caltex complaints records which indicate that there were 17 odour issues (in this audit period) reported by neighbours to the Kurnell facility. Caltex reported this as a non-compliance in the annual EPA return 2016 -2017.9 *Applicable Condition EPL 837 Condition L7* Note 1: Not caused by the direct development activities, determined by Caltex to be land operations related (not wharf) but nonetheless related to EPL conditions for the whole terminal. Note 2: Caltex Loss Prevention procedures were followed.	Continue investigations into odour complaints and design odour monitoring programs to determine severity / causes. Most odour investigations are post event, so consider a more pro-active approach to internally recording odours before they become potentially offensive to neighbours.	Caltex accepted the audit team's findings and comments. We will continue investigations into any odour complaints received (internal and external). Potential odours sources are already known. Any operation and/or maintenance works in these areas take odour mitigation measures into consideration as a proactive step in preventing offensive odours in the surrounding neighbourhood.	Corrective and preventative actions continue to be applied in Terminal and demolition operations.

Non-compliance	Recommendation (Options)	Caltex Response	2019 Update and Commentary
2. Operational Controls – loss of containment Caltex loss prevention records and the annual EPA Return 2016 – 2017 recorded a non-compliance for release of slops from a concrete tank (wharf related), a spill of 86,000L of hydrocarbon water (land activities), loss of gasoline from pipeline "Gasoline 1" (land activities).*Applicable Conditions EPL 837 Conditions L1 and O1* Note 1: Not caused by the direct development activities but related to Conditions of the EPL (for the whole terminal) Note 2: Caltex Loss Prevention procedures were followed.	Loss Prevention investigations and subsequent actions were satisfactory.	Caltex accepted the audit team's findings and comments. Caltex and its principal maintenance contractor have reviewed project planning, drilling controls, personnel controls and procedures for undertaking repairs. A Safety Alert was shared with all sections of Caltex and their Contracting groups that emphasised: An extra degree of responsibility and situational awareness is demanded of staff when working on infrastructure around water and when undertaking seemingly relatively routine activities. Targeted Loss Prevention Observations (LPO) will continue with these tasks. As a testament to the site's commitment to spills prevention, there have been NIL reportable spills in this review period	Corrective and preventative actions continue to be applied in Terminal and demolition operations.

PART 2. STATUS OF THE CALTEX ACTIONS ARISING FROM THE 2016 INDEPENDENT ENVIRONMENTAL AUDIT (IEA)

a) SSD 5544 Conversion of Refinery to Import and Distribution Terminal

Non-Compliance	Caltex Response (Summary)	Status	2017 IEA – Auditor Review of 2016 Actions	2019 Update and Commentary
1, **Noise Management Plan** Noise monitoring, indicating a high level of Leq > 60, at the boundary (Road 7) on 4th November 2014 was not further investigated / monitored to determine causes and resolution. It was not entered in the Caltex Loss Prevention System (or equivalent). Note: based on evidence sampled, this was an isolated example. Applicable Consent Conditions: C22	Ensure LPS (or equivalent) is used to capture high noise readings to facilitate (and have a record) of cause analysis and reporting to the	Communication of requirements to document all such events in LPS and Lessons Learnt session to Terminal and Demolition Project Team completed. Ensured effective recording and use of LPS for various issues e.g. odour, dust etc.	IEA Team Comments: Sighted communication of requirements and Lessons Learnt session. Sighted effective recording and use of LPS for various issues e.g. odour, dust etc. From environmental data sampled on this audit, no examples sighted where LPS was not used when applicable.	Corrective and preventative actions continue to be applied in Terminal and demolition operations.
2. **Air Quality Management Plan** Air Quality Management Plan (Jan. 2014) requires that fortnightly reports (dust, odour observations / inspections) are submitted to the Caltex EMR by relevant contractors. There were no records available. Applicable Consent Condition: C28	Ensure specified monitoring activities (in Management Plans) are complied with. Include more information in the Management Plan as what the format of such reporting will be rather than a general reference. CEMP and sub-plan audits can be used to verify specified activities are being complied with and records are available to demonstrate it.	Lessons Learnt being carried forward into the demolition works phase. Consistent records now exist of regular audits and inspections conducted by contractor (IDES) and the Caltex Project Audit Schedule – all plans and sub-plans audited (each plan at least bi-monthly) as specified in each plan.	IEA Team Comments: Sighted evidence of Lessons Learnt being carried forward into the demolition phase. Sighted records of regular audits and inspections conducted by contractor (IDS) and the Caltex Project Audit Schedule – all plans and sub-plans audited (each plan at least bi-monthly) to ensure all inspections and monitoring is conducted as specified in each plan.	Corrective and preventative actions continue to be applied in Terminal and demolition operations.

3. Construction Environment Management Plan (CEMP) Audits The CEMP (Jan. 2014) section 4.1 requires the following: • Implementation of the CEMP will be audited by Caltex within 6 weeks of the commencement of site construction works • Contractor will submit copies of completed monthly HSE audits The CEMP audit was not done; only one contractor monthly HSE audit was in evidence. Applicable Consent Condition: D1	Improve prominence of specified CEMP audits and use them as intended. Feature as a critical milestone to be tracked. Establish a better long-term record keeping system for information (e.g. HSE audits) from contractors.	Communication of requirements and Lessons Learnt session to Terminal and Demolition Project Team completed. DEMP audits. Project Audit Schedule covers all management plans (including sub-plans) on a regular basis. Internal audit status (Caltex and IDES) reviewed at weekly team meetings	IEA Team Comments: Sighted application of Lessons Learnt in the DEMP audits. Project Audit Schedule covers all management plans (including sub-plans) on a regular basis. Sighted audit reports and subsequent actions on findings. Contactor audit reports (IDES) were readily available.	Corrective and preventative actions continue to be applied in Terminal and demolition operations.
4. Independent Environmental Audit This IEA was conducted past the approved extension date of October 2015. Applicable Consent Condition: D7	Clarify IEA timeframes with other / future Development Consents.	Proactively scheduled 2017 IEA to occur before the Demolition Project wind downs in late 2017 and the Project members start to leave Caltex. – 4th Qtr. 2017 Engaged with DPE representatives to discuss scope of the next IEA early.	IEA Team Comments: IEAs for SSD 5544 and SSD 5353 back on track with required timeframes.	Corrective and preventative actions continue to be applied in Terminal and demolition operations.

SSD 5353 Berthing and Ports Upgrade Note: Project completed in 2015

Non-Compliance	Caltex Response (Summary)	Status	2017 IEA – Auditor Review of 2016 Actions	2019 Update and Commentary
1. **Compliance Tracking Program** Although the Compliance Tracking Program has been submitted and approved by the DG, there was no evidence available to demonstrate implementation of some elements of it.: • Compliance status report within 6 weeks of the commencement. Pre-construction compliance, construction, pre-operation compliance reports were not available • Regular compliance audit frequency was not defined ("will be based on risk" but no further information) • No evidence of compliance audits sighted (daily inspections were seen during dredging, further inspections were sighted for piling). Applicable Consent Condition D7	Future Compliance Tracking Programs will contain clearly defined requirements for compliance audits including frequency (based on defined risk approach).	Application of Lessons Learnt by: Compliance against audit frequencies and reports for the demolition project (SSD 5544) Compliance audit frequencies and reports for the Kurnell Operational Management Plan (OEMP) assessed as effective during ISO 14001:2015 audits by LRQA (May 2017).	IEA Team Comments: Evidence of application of Lessons Learnt was observed in: • Compliance audit frequencies and reports for the demolition project (SSD 5544) were observed as effective during the IEA of that Development Consent Compliance audit frequencies and reports for the Kurnell Operational Management Plan (OEMP) assessed as effective during ISO 14001:2015 audits by LRQA (May 2017).	Corrective and preventative actions continue to be applied in Terminal and demolition operations.
2. Vibration Measurement and Evaluation Vibration measurement and evaluation methods specified in DIN 4150-3 were not used to determine whether the construction vibration goals would be achieved in accordance with limits in this Standard. Applicable Consent Condition C19	Caltex accepted the need to clarify the non-applicability of Consent Conditions with the Lead Regulator formally. It is noted that this issue resulted in an official caution letter from the Department (January 2017) as the Department considered that some form of vibrational monitoring should have been conducted.	To demonstrate the application of Lessons Learnt, there has been vibrational monitoring done during the demolition project (SSD 5544 Mods 1) e.g. during felling of tall structures in 2016. Vibration monitoring planned for removal of Cooling Water Line in 2017.	IEA Team Comments: Obviously, it is not possible to retrospectively take actions for vibration measurements. It is noted, although in a different context, there has been vibrational monitoring done during the demolition project (SSD 5544) during the felling of large structure as an example of Lessons Learnt.	Corrective and preventative actions continue to be applied in Terminal and demolition operations.

3. Inconsistency between Consent Condition and CEMP Plan The Sediment & Water Quality Management Plan (SWQMP) contained a variation to method of monitoring Tributyltin (TBT) – the variation was clearly identified and formally approved by the DPE. However, this variation (from real-time monitoring of TBT to grab sampling) was inconsistent with Consent Condition C3 and C35f states that a Consent Condition shall prevail over a CEMP (irrespective of whether it is approved). The change was relatively minor and communicated transparently and consistent with the Environment Protection License. Thus the IEA team assessed this as an administrative non-compliance – not using correct variation protocols. Applicable Consent Conditions C3, C35f	In future projects, where there is a need to seek a waiver or variation to requirements within a Development Consent, Caltex will use correct variation protocols described in the Development Consent.	Lessons Learnt taken forward into other projects and the demolition project (SSD 5544 Mods1); Early engagement of DPE	IEA Team Comments: Retrospective issue; Lessons Learnt taken forward into other projects and the demolition project (SSD 5544 MOD 1); no recurrence of this issue observed by the IEA Team on the SSD audit.	Corrective and preventative actions continue to be applied in Terminal and demolition operations.
4. Submission of documents to external parties The Development Consent specifies that certain documents must be submitted to various authorities e.g. Director-General, EPA, DPI (Fisheries), SPC as applicable. There was no direct evidence available that some of the required documents had been submitted. Applicable Consent Conditions C4 – Post Dredging Water Quality Report C12 – Coastal and Hydrodynamic Processes C28 – Post Construction Road Dilapidation Report D7 – Compliance Tracking Reports	Future such projects will establish a central repository for registering all document submissions and any Regulatory approvals associated with the project, any communications with the authorities and other external interested parties.	Internal audit completed to confirm remaining submission requirements (Mods 1) Making better use of Caltex tools (Cintellate) to track document submissions, due dates and responsibilities, etc.	IEA Team Comments: Sighted effective application of the Lessons Learnt on the IEA of SSD 5544 demolition project. No recurrence of the issue from records sampled. Records kept of interactions with Regulators via Caltex tools (Cintellate)	Corrective and preventative actions continue to be applied in Terminal and demolition operations.

5. **Public Communications** Although Caltex has shown evidence of various means of communication with interested parties and stakeholders, communication on the current implementation status of the project was not available on the public website. Applicable Consent Condition D6	The Kurnell Site Conversion page within the Caltex Public website was previously updated to confirm that the SSD5353 had been completed. An improved process has been put in place to monitor the status of the current Refinery Demolition project on a quarterly basis. The Kurnell Site Conversion page within the Caltex Public website is now updated when the status changes.	In addition to the comments made previously, an additional Cintellate action is in place to undertake a quarterly review of the Public website to ensure that all data is current.	IEA Team Comments: Caltex Website reviewed this audit – up-to-date. Action effective. **2018 Comments**: ISO auditor checked the Caltex Public website to see if MOD2 & 3 documents had been uploaded – all OK.	Corrective and preventative actions continue to be applied in Terminal and demolition operations.

APPENDIX 2.

ENVIRONMENTAL PERFORMANCE AGAINST ACTIVE SSD5544 CONSENT CONDITIONS (includes MODS 1, 2, 3 ; 4 and 5 Demolition Works)

1. SSD5544

	CONDITIONS	**Applicable Phase:** Conversion (C) Demolition (D) Terminal Ops (T) or General (applies to all phases) (G)	**Activity Status:** Completed Active/ongoing Inactive Statement	**Compliance Status:** Compliant Non-Compliant Not Triggered	**Comments/Actions**
	OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT				
B1	The Applicant shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction or operation of the development.	G	Active/ongoing	Compliant	
	TERMS OF CONSENT				
B2	The Applicant shall carry out the Development generally in accordance with the: (a) EIS; (b) RTS; (c) site layout plans and drawings in the EIS (see Appendix A); (d) MOD 1; and (e) conditions of this consent	G	Active/ongoing	Compliant	
B3	If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this Consent shall prevail to the extent of any inconsistency.	G	Statement	Compliant	
B4	The Applicant shall comply with any reasonable requirement(s) of the Secretary arising from the Department's assessment of:	G	Active/ongoing	Compliant	

	(a) any reports, plans or correspondence that are submitted in accordance with this consent; and (b) the implementation of any actions or measures contained within these reports, plans or correspondence.				
B5	Subject to confidentiality, the Applicant shall make all documents required under this consent available for public inspection on request.	G	Statement	Compliant	
	LIMITS OF CONSENT				
B6	The Applicant shall not store in excess of 925 mega litres (ML) of refined product on the Site at any one time, unless otherwise agreed to in writing by the Secretary.	G	Active/ongoing	Compliant	
B7	The construction works associated with the Development shall not extend beyond five (5) years from the date of approval.	G	Active/ongoing	Compliant	**Dec 2019 Update:** Under the approved MOD 5, the Demolition project end date was extended to 30 November 2019. A further extension to March 2020 has been submitted and is pending approval by DPIE
B7A	The demolition works associated with the development shall not extend beyond three (3) years from the date of consent of MOD 1.	D	Active/ongoing	Compliant	Refer to comment against B7
	LAPSING OF CONSENT				
B8	This consent shall lapse on 1 December 2018 unless any part of the Project is physically commenced (within the meaning of section 95 of the EP&A Act) on or before that day, in accordance with any consent or development consent, on the Land to which the consent or consent relates.	G	Active/ongoing	Compliant	Refer to comment against B7
	SURRENDER OF EXISTING DEVELOPMENT CONSENTS				
B9	Within six (6) months of ceasing refining operations, or as otherwise agreed in writing by the Secretary, the Applicant shall surrender all existing development consents for the site listed in Appendix B in accordance with Clause 97 of the EP&A Regulation.	G	Completed	Compliant	

B10	Within six (6) months of the issue of a Compliance Certificate or Occupation Certificate for the following development consents, or as otherwise agreed in writing by the Secretary, the Applicant shall surrender these consents in accordance with Clause 97 of the EP&A Regulation. (a) DA 13/0195 – Stormwater Drainage Upgrade; and (b) DA 12/0238 – Construction of a switch room.	G	Completed	Compliant	
B11	Nothing in this consent alters or modifies the following development consents: (a) SSD 5353 – Port and Berthing Works; (b) DA 13/0335 – Construction and operation of a Bio-Pile Pilot Trial to treat Hydrocarbon impacted soils; (c) DA 09/840 – Jet Fuel Remediation; and (d) DA 11/1090 – Remediation of Limestone Pits."	G	Statement	Statement	
	STATUTORY REQUIREMENTS				
B12	The Applicant shall ensure that all licences, permits and approval/consents are obtained as required by law and maintained as required throughout the life of the Development. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits or approval/consents.	G	Active/ongoing	Compliant	
	AMENDED ENVIRONMENT PROTECTION LICENCE (EPL) REQUIREMENT				
B13	Prior to the commencement of construction, the Applicant must apply to the EPA to vary the Environment Protection Licence (EPL) for the Kurnell Refinery (Licence No. 837) to permit the Development.	G	Completed	Compliant	
B13 A	The Applicant shall apply to the EPA to vary the EPL if additional scheduled activities are required to be undertaken as result of the demolition works.	G	Active/Ongoing	Compliant	Notes: **A3 Ancillary activity**: Concrete crushing and onsite reuse of contamination free concrete **E3 Special Conditions** Continuous noise monitoring system on Wharf for 6 month trial Dec 17 – May 18. Dec

					Dec 2019 Update: System became a permanent operational tool at the end of the trial.
	STRUCTURAL ADEQUACY				
B14	The Applicant shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures are constructed in accordance with the relevant requirements of the BCA. Notes: Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.	C	Completed	Compliant	
B15	The Applicant shall ensure that all demolition work is carried out in accordance with Australian Standard AS 2601:2001: The Demolition of Structures, or its latest version.	D	Completed	Compliant	**Dec 2019 Update** All demolition works (structures) completed mid 2919
	OPERATION OF PLANT AND EQUIPMENT				
B16	The Applicant shall ensure that all plant and equipment used for the Development is: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	G	Active/ongoing	Compliant	
B16 A	The cooling water outlet pipeline shall be removed from beneath Silver Beach north of Prince Charles Parade and up to 20 metres seaward from the low tide mark in Botany Bay as shown in Appendix A of this consent.	D	Completed	Compliant	**Dec 2019 Update** Refer to MOD5 comments
	PROTECTION OF PUBLIC INFRASTRUCTURE				
B17	Prior to the commencement of construction, the Applicant shall: (a) prepare a dilapidation report of the public infrastructure in the vicinity of the site (including roads,	C	Completed	Compliant	

	gutters and footpaths); and (b) submit a copy of this report to the Secretary and Council.				
B17 A	Prior to the commencement of <u>demolition</u> works, the Applicant shall: (a) prepare a dilapidation report of the public infrastructure in the vicinity of the site (including roads, gutters and footpaths); and (b) submit a copy of this report to the Secretary and Council.	D/T	Completed	Compliant	
B18	The Applicant shall: (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.	G	Active/ongoing	Compliant	
	STAGED SUBMISSION OF PLANS OR PROGRAMS				
B19	With the approval of the Secretary, the Applicant may: (a) submit any strategy, plan or program required by this consent on a progressive basis; and/or (b) combine any strategy, plan or program required by this consent. Notes: If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program shall clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages and the trigger for updating the strategy, plan or program. There must be a clear relationship between the strategy, plan or program that are to be combined."	G	Active/ongoing	Compliant	Approval for Staged Submission of Terminal OEMP & Management Plans Plan to stage Cooling Water Line Removal (B16A) – three stages proposed for 2017/18.
	DISPUTE RESOLUTION				
B20	In the event that a dispute arises between the Applicant and Council or a public authority other than the Department, in relation to a specification or requirement applicable under this consent, the matter must be referred by either party to the Secretary, or if not resolved, to the Minister, whose determination of the dispute shall be final and binding to all parties. For the purpose of this condition, 'public authority' has the same meaning as provided under Section 4 of the Act.	G	Statement	Not triggered	
B21	The Applicant shall ensure that employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent relevant to their respective activities.	G	Statement	Compliant	

B22	The Applicant shall be responsible for environmental impacts resulting from the actions of all persons that it invites onto the site, including contractors, sub-contractors and visitors.	G	Active/ongoing	Compliant	
	HAZARDS AND RISKS				
	Terms of Approval				
C1	The Applicant shall: (a) carry out the Development in accordance with the PHA; (b) implement all control measures proposed in the PHA; (c) implement all actions proposed by Caltex in response to the recommendations from the Buncefield incident investigation report (Kurnell Buncefield Review - Final, submitted to the Department May 2013). (d) implement all proposed actions listed in Caltex's response to the Department's requests for additional information and clarifications (Caltex Response to D&I Queries of Caltex Submitted QRA – August 2013).	G	Completed	Compliant	
C1A	The Applicant shall implement the recommendations in section 6 of the document titled *Hazard and Risk Analysis* of the proposed *Caltex Kurnell Refinery Demolition Works* (HRA), prepared by Planager Pty Ltd and enclosed in Appendix B of the SEE.	G	Completed	Compliant	
	Demolition				
C1B	The Applicant shall ensure that relevant demolition work associated with the development is carried out in accordance with Australian Standard AS 2601:2001: The Demolition of Structures, or its latest version and the requirements of the *Work Health and safety Regulation 2011.*	D	Completed	Compliant	
C1C	The Applicant shall ensure that major demolition works as defined under the *Work Health and safety Regulation 2011* are undertaken by licensed demolition experts.	D	Completed	Compliant	

<table>
<tr><td></td><td>Commissioning</td><td></td><td></td><td></td><td></td></tr>
<tr><td>C2</td><td>The Applicant shall commission the development in accordance with Table 1 below:

<table><tr><td>System Description</td><td>Estimated Commencement of Commissioning</td><td>Estimated Commencement of Operation of System</td></tr><tr><td>Jet</td><td>1 March 2014</td><td>1 June 2014</td></tr><tr><td>Diesel</td><td>1 April 2014</td><td>1 July 2014</td></tr><tr><td>Gasoline</td><td>1 May 2014</td><td>1 August 2014</td></tr><tr><td>Slop</td><td>1 May 2014</td><td>1 August 2014</td></tr></table></td><td>C</td><td>Completed</td><td>Compliant</td><td></td></tr>
<tr><td></td><td>Pre-construction</td><td></td><td></td><td></td><td></td></tr>
<tr><td>C3</td><td>At least one month prior to the commencement of construction of the proposed Development (except for construction of those preliminary works that are outside the scope of the hazard studies), or within such further period as the Secretary may agree, the Applicant shall prepare, in consultation with WorkCover NSW, and submit for the approval of the Secretary, the studies set out under subsections (a) to (d) (the pre-construction studies) of this Condition. Construction, other than for preliminary works, shall not commence until approval has been given by the Secretary and, with respect to the Fire Safety Study, approval has also been given by Fire and Rescue NSW.

(a) <u>Construction Safety Study</u>

A Construction Safety Study, consistent with the Department of Planning’s Hazardous Industry Planning Advisory Paper No. 7, ‘Construction Safety’. For developments in which the construction period exceeds six (6) months, the commissioning portion of the Construction Safety Study may be submitted two months prior to the commencement of commissioning.

(b) <u>Fire Safety Study</u>

A Fire Safety Study for the proposed Development. This study shall cover the relevant aspects of the Department of Planning’s Hazardous Industry Planning Advisory Paper No. 2, ‘Fire Safety Study Guidelines’ and the New South Wales Government’s ‘Best Practice Guidelines for Contaminated</td><td>C</td><td>Completed</td><td>Compliant</td><td></td></tr>
</table>

	Water Retention and Treatment Systems'. The study shall also be submitted for approval to Fire and Rescue NSW. (c) Hazard and Operability Study A Hazard and Operability Study for the proposed Development, chaired by an independent qualified person. The study shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 8, 'HAZOP Guidelines'. The study report must be accompanied by a program for the implementation of all recommendations made in the report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented. (d) Final Hazard Analysis A Final Hazard Analysis of the proposed Development, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'. The FHA shall re-evaluate and confirm all relevant data and assumptions from the Preliminary Hazard Analysis.				**Dec 2019 Update:** Completed and submitted 4th Qrt 2019. Subsequent approval by Regulator

	Pre-Demolition				
C3A	At least one month prior to the commencement of demolition works (except for those preliminary works that are outside the scope of the hazard studies), or within such further period as the Secretary may agree, the Applicant shall prepare and submit for the approval of the Secretary the studies set out under subsections (a) to (b). Demolition, other than of preliminary works, shall not commence until approval has been given by the Secretary. (a) FIRE WATER SYSTEM REVIEW A review of the Firewater System to detail which parts of the system will be removed and/or retained. This review shall include a list of measures that will be implemented to ensure that the firefighting capabilities of the Caltex Terminal will not be compromised during or as a result of the demolition works. (b) DEMOLITION SAFETY STUDY The study shall report on the status of implementation of the recommendation outlined in the HRA for the demolition works, enclosed as Appendix B of the SEE. The study shall include examples of the hazards control plans developed for high risk activities and task based risk assessments of the process safety related hazards.	D	Completed	Non-compliant Administrative NC Refer to 2016 IEA Report and comments in Appendix 1, Part 2(a)	Note: demolition had already started prior to submission and approval. Thus non-compliant with the timeframe required; all plans subsequently approved. Subsequent submissions of management plans has been within timeframes
	Pre-commissioning				
C4	The Applicant shall develop, in consultation with WorkCover NSW, and implement the plans and systems set out under subsections (a) to (b) of this Condition. No later than two months prior to the commencement of commissioning of the proposed Development, or within such further period as the Secretary may agree, the Applicant shall submit, for the approval of the Secretary, documentation describing those plans and systems. Commissioning shall not commence until approval has been given by the Secretary. (a) Emergency Plan A comprehensive Emergency Plan and detailed emergency procedures for the proposed Development. This plan shall include consideration of the safety of all people outside of the Development who may be at risk from the Development. The plan shall be consistent with the Department of	G	Completed	Compliant	

	Planning's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'. (b) Safety Management System A document setting out a comprehensive Safety Management System, covering all on-site operations and associated transport activities involving hazardous materials. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. Records shall be kept on-site and shall be available for inspection by the Secretary upon request. The Safety Management System shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'. An inspection, testing and preventive maintenance program should be developed, implemented and maintained to ensure the reliability and availability of the key safety critical equipment is, at a minimum, consistent with the data estimated in the PHA.				
C4A	No later than one month prior to the commencement of the demolition works, or within such a further period as the Secretary may agree, the Applicant shall submit for the approval of the Secretary an updated Emergency Plan and detailed emergency procedures. The plan shall be in accordance with the Department of Planning's Hazardous Industry Planning Advisory Paper No.1 'Industry Emergency Planning Guidelines' and shall provide information of the emergency arrangements during the demolition works.	D	Completed	Compliant	
C5	Prior to the Commencement of commissioning the first asset within each system (see Condition C2), the Applicant shall submit a Pre-Commissioning Plan and Pre-Startup Safety Review Checklists to the Secretary.	C	Completed	Compliant	

	Pre-Startup				
C6	Pre-Startup Compliance Report One month prior to the commencement of operation of the first asset in each of the four systems (see Condition C2), the Applicant shall submit to the Secretary, a report detailing compliance with Conditions C3, C4 and C5 of this consent. The report shall be prepared in consultation with WorkCover NSW, and shall include: (a) dates of study/plan/system submission, approval, commencement of construction and commissioning; (b) actions taken or proposed, to implement the recommendations and safety-related control measures in the studies/plans/systems; and (c) responses to each requirement imposed by the Secretary under Condition C7 of this consent. Note: Compliance with Condition C4 may not be achievable until after such time as the documentation describing the plans and systems required under that condition have been developed. A subsequent report may therefore be required to be prepared and submitted after the documentation required by Condition C4 has been developed.	T	Completed	Compliant	
	Post-Startup				
C7	Post-Startup Compliance Report Three months after the refinery process units shut down, the Applicant shall submit to the Secretary, a report that has been prepared in consultation with WorkCover NSW verifying that: (a) the Emergency Plan required under Condition C4(a) is effectively in place and that at least one emergency exercise has been conducted; and (b) the Safety Management System required under Condition C4 (b) has been fully implemented and that records required by the system are being kept. The report shall be prepared in consultation with WorkCover NSW.	T	Completed	Compliant	

C7A	Fire Safety Study Review One month prior to the completion of demolition works, or within such further period as the Secretary may agree, the Applicant shall submit for the approval of the Secretary, a revised Fire Safety Study for the Caltex Terminal. This study shall cover the relevant aspects of the Department's *Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study Guidelines' and the New South Wales Government's Best Practice Guidelines for Contaminated Water Retention and Treatment Systems.'* The study shall also be submitted to NSW Fire and Rescue for approval.	D	Inactive	Not triggered.	Demolition still in progress. Has been scheduled for May 2019.
C8	Hazard Audit Twelve months after all four systems being fully operational and every three years thereafter, or at such intervals as the Secretary may agree, the Applicant shall carry out a comprehensive Hazard Audit of the proposed Development and within one month of each audit submit a report to the Secretary. The audits shall be carried out at the Applicant's expense by a qualified person or team, independent of the Development, approved by the Secretary prior to commencement of each audit. Hazard Audits shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 5, 'Hazard Audit Guidelines' (HIPAP No. 5). The audit reports shall, in addition to the requirements provided in HIPAP No 5: (a) verify implementation of all actions proposed by Caltex in response to the recommendations from the Buncefield incident investigation report (Kurnell Buncefield Review - Final, submitted to the Department May 2013). (b) verify implementation of all actions listed in Caltex's response to the Department's requests for additional information and clarifications (Caltex Response to DP&I Queries of Caltex Submitted QRA – August 2013) (c) confirm that the throughput and storage quantities of potentially hazardous materials are consistent with the PHA. (d) verify that an inspection, testing and preventative maintenance program has been developed, implemented and maintained to ensure the reliability and availability of the key safety critical equipment.	T	Completed	Compliant	Ist Hazard Audit (October 2015) Audit report and proposed actions submitted to DPE and DPE Response (Jan. 2016). 2rd Hazard Audit (October 2018) Audit report and proposed actions submitted to DPE on 15 Oct 2018 Actions tracked in MEET-002465 DPE Response Letter (15 Nov 2018)

	(e) verify implementation of any measures arising from the reports submitted in respect of Conditions C2 to C5 of this consent. The audit report must be accompanied by a program for the implementation of all recommendations made in the audit report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.				
C9	Further Requirements The Applicant shall comply with all reasonable requirements of the Secretary in respect of the implementation of any measures arising from the reports submitted in respect of Conditions C2 to C8 of this consent inclusive, within such time as the Secretary may agree.	G	Statement	Compliant	
	Fire Risk Management During Demolition				
C9A	The Applicant shall: a) ensure the emergency procedures detailed in condition 9A, address and mitigate, as far as reasonably practical, the consequences of potential fire and hazmat incidents during demolition works and the potential health risks to firefighters undertaking emergency operations in relation to foreseeable fire/hazmat scenarios; b) ensure two copies of the emergency procedures detailed in condition a) above are located in demolition areas; c) ensure appropriate first aid firefighting equipment is provided on site; d) ensure that plant operators and demolition contractors are trained to undertake first aid firefighting in the event of an incident; and e) ensure that comprehensive and specific risk control measures are developed and implemented for Scenario 5 detailed in Table 3, Section 4 of the HAZDEM. The control measures developed must incorporate comprehensive training of demolition contractors in regard to the requirements for the control of ignition sources at the site.	D	Active/ongoing	Compliant	

	SOIL AND WATER				
	Discharge of Water				
C10	The Development shall comply with section 120 of the Protection of the Environment Operations Act 1997, which prohibits the pollution of waters, except as expressly provided in an EPL.	G	Active/ongoing	Compliant	
	Erosion and Sediment Control				
C11	During the construction and demolition works associated with the Development, the Applicant shall implement suitable erosion and sediment control measures on-site, in accordance with the relevant requirements in the latest version of the Managing Urban Stormwater: Soils and Construction Guideline and the relevant Management and Mitigation measures contained within Appendix C of this consent.	T & D	Active/ongoing	Compliant	
	Imported Soil				
C11 A	The Applicant shall: a) ensure that only VENM or any other material approved in writing by the EPA issued as fill in the Eastern ROW and Western ROW; b) ensure that the material used as backfill for Solver Beach is of similar grain size and colour characteristics; c) be permitted to use only VENM or any other material that meets all of the conditions of a Resource Recovery Order issued by the EPA under the *Protection of the Environment Operations (Waste) Regulation 2014* for use in the Caltex Terminal. d) ensure that any VENM or other materials used by the Applicant are fit for purpose and are only used as specified by the relevant Resource Recovery Exemption issued by the EPA. e) keep accurate records of the volume and type of fill to be used; and f) make these records available to the Department upon request.	G	Active/ongoing	Compliant	

C11 B	During demolition works, the Applicant shall implement erosion and sediment control measures for managing temporary stockpiles, in accordance with the relevant requirements in the latest version of the *Managing Urban Stormwater: Soils and Construction – Volume 1* and the relevant Management and Mitigation measures contained within Appendix C of this consent.	D	Statement	Compliant	Refer to Soil & Water Management Plan
	Water Management Plan				
C12	The Applicant shall prepare and implement a Water Management Plan for the Development to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with the EPA; (b) be approved by the Secretary (refer to Conditions D1 and D2 for timing); (c) In addition to the standard requirements for management plans (see Condition D3), this plan must include a Surface Water Management Plan, that: · includes a description of the water management system on site, including the: • stormwater system; and, • oily water / wastewater system. • includes plans for the above two components of the systems: • Demonstrates compliance with any requirements of the EPL and/or the EPA.	T & D	Plan Completed & Approved Active/ongoing	Compliant	
C12 A	The Applicant shall update and implement the Soil and Water Management Plan for demolition works to the satisfaction of the Secretary. This plan is to update the plan approved under condition C12 and shall also: (a) be submitted to the Secretary for approval (See condition D1A for timing); (b) include a description of soil and water issues associated with the demolition works; (c) include measures for managing soils that are excavated and stockpiled on site including erosion and sediment control measures for stockpiles and disturbed areas; (d) include details of water management and monitoring requirements during demolition works; and	D	Plan Completed & Approved Active/ongoing	Compliant	

	(e) include procedures for corrective action in the event that potential contaminants of concern are identified in the groundwater from the quarterly groundwater monitoring program.				
	Groundwater				
C13	In the event that groundwater is intersected during construction and demolition works the Applicant shall: (a) obtain the necessary water related approvals from NOW; (b) develop a Groundwater Management Plan for the testing, dewatering, storage, movement and treatment of any groundwater in consultation with the NOW, to the satisfaction of the Secretary.	C , D& T	Completed Active/ongoing	Compliant	
	Acid Sulphate Soils (ASS) Management Plan				
C14	If Acid Sulfate Soils (ASS) are encountered during construction and demolition works, the Applicant shall take steps to prevent further oxidation of exposed ASS and will cease all work until an ASS Management Plan is prepared for the Development to the satisfaction of the Secretary. This Plan must: (a) be prepared in consultation with the EPA and Council by a suitably qualified and experienced expert; (b) be approved by the Secretary prior to the continuation of any excavation works; (c) outline the investigations that have be undertaken to test for the presence of ASS in accordance the NSW State Government's Acid Sulphate Soils Manual (ASSMAC 1998); (d) detail the protocols to be put in place and followed; (e) detail how the ASS will be tested, handled and stockpiled; (f) detail measures to prevent erosion and sedimentation of ASS; and, if necessary (g) outline how the ASS will be disposed of off-site (e.g. at a licensed facility).	G	Active/ongoing	Not triggered.	

	Contamination Management				
C15	The Applicant shall prepare and implement a Contamination Management Plan for the Development prior to commencement of construction. The Plan shall: (a) be prepared in consultation with the EPA and NSW Health; (b) be to the satisfaction of the Secretary (refer to Condition D1 for timing); (c) outline measures for managing potentially contaminated soil and groundwater, including soil testing, classification, handling, storing and disposal; (d) detail the measures that will be employed to prevent erosion and sedimentation of contaminated soil; (e) detail measures for periodically testing surface water run-off that may accumulate during excavation works for elevated levels of contamination, with any water that is found to have elevated levels of contaminants being disposed of via the on-site Wastewater Treatment Plant. (f) detail measures for managing asbestos encountered during works, including disturbances of soil and release of asbestos into the air; *(g)* outline how contaminated soil and water would be classified and disposed of in accordance with the *Protection of the Environment Operations Act 1997* and associated regulations and characterised in accordance with the *EPA's Waste Classification Guidelines.* g) Detail how the storage ,disposal and transport of asbestos waste would be undertaken in with the Protection of the Environment Operations (Waste) regulations ; and h) assess any likely impact on existing remediation projects and, if any impacts are identified, provide details as to the measure that shall be taken to reduce or avoid that impact.	G	Plan Completed & Approved Completed	Compliant	
C15 A	The Applicant shall update and implement the Contamination Management Plan for the demolition works to the satisfaction of the Secretary. This plan is to update the plan approved under condition C15 and shall also: a) be submitted to the Secretary for approval (See condition D1A for timing); b) detail measures for the identification and monitoring of potentially contaminated soils and groundwater including the use of excavation visual and olfactory indicators; and	D	Completed	Compliant	

<table>
<tr><td></td><td>c) include measures for managing potentially contaminated soils and groundwater during ground disturbance and excavation works.</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>Asbestos Management</td><td></td><td></td><td></td><td></td></tr>
<tr><td>C15 B</td><td>The Applicant shall ensure that any asbestos encountered during the demolition works is monitored, handled, transported and disposed of by appropriately qualified and licensed contractors in accordance with requirements of Workcover and relevant guidelines, including:

a) Work Health and Safety Regulation 2011;
b) Model Code of Practice – How to Manage and Control Asbestos in the Workplace, 2011 Safe Work Australia
c) Model Code of Practice – How to Safely Remove Asbestos, 2011 Safe Work Australia; and
d) Protection of the Environment (Waste) Regulation 2005.</td><td>D</td><td>Active/ongoing</td><td>Compliant</td><td></td></tr>
<tr><td></td><td>NOISE AND VIBRATION</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>Construction Noise Limits</td><td></td><td></td><td></td><td></td></tr>
<tr><td>C16</td><td>The Applicant shall ensure that the construction noise generated by the development does not exceed the criteria in Table 2 below.

Table 2: Construction Noise Criteria (dB(A))

<table>
<tr><th>Location</th><th>Day
LA_{eq} (15min)</th><th>Evening
LA_{eq} (15 min)</th></tr>
<tr><td>R2-30D Cook Street</td><td>46</td><td>40</td></tr>
<tr><td>At any other residence or other noise sensitive receiver</td><td>50</td><td>45</td></tr>
<tr><td></td><td></td><td></td></tr>
</table>
</td><td>C, D</td><td>Active/ongoing</td><td>Compliant</td><td></td></tr>
</table>

<table>
<tr><th></th><th>Operational Noise Limits</th><th></th><th></th><th></th><th></th></tr>
<tr><td>C17</td><td>The Applicant shall ensure that the operational noise generated by the Development does not exceed the Criteria for residential receivers are summarised in Table 3 below:
Table 3: Operational Noise Limits dB(A)
<table>
<tr><th>Location</th><th>Day L_{Aeq} (15min)</th><th>Evening L_{Aeq} (15min)</th><th>Night L_{Aeq} (15min)</th><th>Night $L_{A}max$</th></tr>
<tr><td>At any private residential receiver</td><td>60</td><td>50</td><td>50</td><td>55</td></tr>
</table>
Notes:
• To identify a residential receiver location, refer to Appendix F of the EIS
• Noise generated by the Development is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy
• These criteria have been developed for this specific Development, however it is recognised that the site is zoned for heavy industrial purpose and that ultimately the amenity of the area should be controlled by the criteria contained in Table 2.1 of the Industrial Noise Policy.</td><td>G</td><td>Active/ongoing</td><td>Compliant for Terminal (Land) and Demolition

Non-Compliant for shipping noise</td><td>no community noise complaints have been attributed to the demolition activities or land based Terminal operations – all were allocated otherwise by the Terminal Operations. EPA and DPE aware of these monitoring results.

Note:
Continuous Shipping Noise Monitoring Six Month Trial commenced 1 Dec 17 and concluded 31 May 18.
System is now a permanent operational tool

Refer to Section 2.4.1 for commentary on system in 2019</td></tr>
</table>

NOTE: In 2017 An external noise consultant (Wilkinson Murray) had been engaged to undertake attended noise measurements during demolition works and evaluate compliance with the approved noise limits. The conclusion in the report was that, in most instances, levels were controlled by extraneous noise sources and “therefore these levels do not represent noise generated by the Caltex demolition activities”.

<table>
<tr><td></td><td>Hours of Construction and Operation</td><td></td><td></td><td></td><td></td></tr>
<tr><td>C18</td><td>With exception of the works identified in conditions C19 and C20, the Applicant shall comply with the hours detailed in table 4.

Table 4: Construction, Demolition & Operation Hours

<table><tr><th>Activity</th><th>Day</th><th>Time</th></tr><tr><td>Construction</td><td>Monday - Sunday</td><td>7.00am – 10.00pm</td></tr><tr><td>Demolition</td><td>Monday - Sunday</td><td>7.00am – 10.00pm</td></tr><tr><td>Operation</td><td>Monday - Sunday</td><td>7.00am – 10.00pm</td></tr><tr><td></td><td></td><td></td></tr></table></td><td>G</td><td>Active/ongoing</td><td>Compliant.</td><td></td></tr>
<tr><td>C19</td><td>High noise generating construction and demolition works, including the pipeline removal works within the Eastern and Western Right of Ways, shall be confined to less sensitive times of the day, and shall not be undertaken on Sundays or public holidays or outside of the hours 7.00am and 6.00pm Monday to Saturday.</td><td>C & D</td><td>Active/ongoing</td><td>Compliant</td><td></td></tr>
<tr><td>C20</td><td>Construction works outside of the work hours identified in condition C18 above may be undertaken in the following circumstances:

(a) works that are inaudible at nearest sensitive land receivers;
(b) works that are consistent with Caltex's existing maintenance procedures and are in accordance with the existing EPL;
(c) works agreed to in writing by the EPA or the Department;
(d) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or
(e) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.</td><td>C & D</td><td>Completed</td><td>Compliant</td><td></td></tr>
</table>

	Operating Conditions				
C21	The Applicant shall: (a) implement best management practice, including all reasonable and feasible noise management and mitigation measures to prevent and minimise operational, low frequency and traffic noise generated by the proposal; (b) minimise the noise impacts of the development during adverse meteorological conditions when noise criteria do not apply; (c) maintain the effectiveness of any noise suppression equipment on plant at all times and ensure defective plant is not used operationally until fully repaired; and **(d)** regularly assess noise monitoring data and relocate, modify and/or stop operations to ensure compliance with the relevant conditions of this consent.	T	Active/ongoing	Compliant	**Dec 2019 Update:** Wilkinson Murray were commissioned in November 19 to undertake a noise monitoring survey to redetermine the baseline ambient noise levels following the completion of the demolition works and the capping of the ACS Cell
	Noise Management Plan				
C22	The Applicant shall prepare and implement a Noise Management Plan for construction works and site operations. The plan (s) shall: (a) be prepared and implemented by a suitably qualified and experienced person, in consultation with the EPA; (b) be approved by the Secretary (refer to Conditions D1 and D2 for timing); (c) describe the measures that will be implemented to minimise noise from the construction and operation of the development including: · all reasonable and feasible measures being employed on site; · maintain equipment to ensure that it is in good order; · traffic noise is effectively managed; and · the noise impacts of the development are minimised during any meteorological conditions when the noise criteria in this consent do not apply; · identification of high noise generating construction activities, including proposed times when these works will be carried out (including respite periods if required) and mitigation measures to minimise adverse impacts from these activities; · compliance with the relevant conditions of this consent. (d) includes a noise monitoring program that: · shall be carried out until otherwise agreed to in writing by the Secretary; · is capable of evaluating the performance of the Development; and · includes a protocol for determining exceedances of the relevant conditions of this consent and responding to complaints.	C & T	Plan Completed & Approved Active/ongoing	Compliant for Plan but non-compliant for recording events. Refer to Appendix 1: Status of Caltex Actions Arising from 2016 IEA.	Note: Site wide approach to noise management with special measure in place for shipping noise. All maintenance and demolition work covered by PTW requirements. Both Demolition and the Terminal Noise Management Plans have been approved by DPE Terminal Noise Mgmt. Plan was further amended at the end of the shipping noise trial to incorporate identified process improvements. DPE

					approved the plan in Feb 2019
C22 A	The Applicant shall update and implement the Noise Management Plan for the demolition works to the satisfaction of the Secretary. This plan is to update the plan approved under condition C22 and shall also: a) be approved by the Secretary (refer to conditions D1A and D2 for timing); b) outline the procedures for the notification of all potentially affected persons at least one week prior to and during high noise generating works; c) implement reasonable and feasible noise and vibration management and mitigation measures during demolition activities within the Caltex Terminal; d) implement reasonable and feasible noise and vibration monitoring and management measures during removal of pipelines from the Eastern and Western ROW to minimise noise and vibration impacts generated by the pipeline removal works; and e) include strategies for monitoring vibration impacts on buildings with medium to high heritage significance proposed to be retained within the Caltex Terminal. f)	D	Plan Completed & Approved Active/ongoing	Compliant	
	Construction Vibration				
C23	The Applicant shall aim to achieve the following construction and demolition vibration goals: (a) for structural damage, the vibration limits set out in the *German Standard DIN 4150-3: Structural Vibration - effects of vibration on structures*; and (b) (b) for human exposure, the acceptable vibration values set out in the *Environmental Noise Management Assessing Vibration: A Technical Guideline (Department of Environment and Conservation, 2006*).	C & D	Active/ongoing	Compliant (for land based works) Refer to b) SSD5533 for details	

	AIR QUALITY MANAGEMENT				
	Dust Generation During Construction				
C24	The Applicant shall carry out all reasonable and feasible measures to minimise dust generated during construction works and demolition works.	C & D	Active/ongoing	Compliant	
C25	During construction and demolition works, the Applicant shall ensure that: (a) all trucks entering or leaving the site have their loads covered; (b) trucks associated with the Development do not track dirt onto the public road network; and (c) any dirt on public roads as a result of the development is promptly removed.	C & D	Active/ongoing	Compliant	
	Offensive Odour				
C26	The Applicant shall not cause or permit the emission of offensive odours from the site, as defined under Section 129 of the POEO Act.	G	Active/ongoing	Compliant	
	Operating Conditions				
C27	The Applicant shall: (a) implement all reasonable and feasible dust and odour mitigation measures to prevent and minimise odour and dust emissions from operations; (b) prevent and minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events; (c) minimise any visible off-site air pollution; and **(d)** minimise surface disturbance of the site, other than as permitted under this consent.	G	Active/ongoing	Compliant	

	Air Quality Management Plan				
C28	The Applicant shall prepare and implement an Air Quality Management Plan for the proposed construction works. The plan shall: (a) be prepared and implemented by a suitably qualified and experienced expert in consultation with the EPA and NSW Health; (b) be approved by the Secretary (refer to Condition D1 for timing); (c) describe the measures that would be implemented on site to ensure: i. the control of air quality and odour impacts of the Development; ii. that these controls remain effective over time; iii. that all reasonable and feasible air quality management practices is employed; iv. the air quality impacts are minimised during adverse meteorological conditions and extraordinary events; and v. compliance with the relevant conditions of this consent. (d) describes the air quality & odour management system; (e) includes an air quality monitoring program that: i. is capable of evaluating the performance of the proposal; ii. includes a protocol for determining any exceedances of the relevant conditions of consent and responding to complaints; iii. adequately supports the air quality management system; and iv. evaluates and reports on the effectiveness of the air quality management system.	C	Plan Completed & Approved Active/ongoing	Compliant for Conversion works and Terminals	
28A	The Applicant shall update and implement the Air Quality Management Plan for the demolition works to the satisfaction of the Secretary. This plan is to update the plan approved under condition C28 and shall also: (a) be approved by the Secretary (refer to conditions D1a and D2 for timing); (b) outline procedures for VOC, odour and dust deposition monitoring and suppression methods during excavation works and where potential hydrocarbon contamination is present; and (c) include dust suppression measures and procedures for dust monitoring during operation of the concrete crusher.	D	Plan Completed & Approved Active/ongoing	Compliant	Identified as a low risk Non-Compliance in 2016 IEA The Demolition Air Quality Management Plan was subsequently approved by DPE and verified by IEA Auditor in 2017. **2018 update:** Further amendments to the Plan were made in 2018 to account for the ACS Containment Cell. Revised

					and approved Plan posted to Caltex Public website.
	Air Quality Verification				
C29	The Applicant shall carry out an air quality verification study for the development. The study shall: (a) be prepared by a suitably qualified expert; (b) be completed within 24 months of the commencement of operations or as otherwise agreed to by the Secretary; (c) be based on the average of emissions over a continuous 12 month period after commencement of operations, taking into account the throughput and type of fuel; (d) include a validation of the accuracy of the modelling predictions in the EIS; (e) verify that compliance with any limits or conditions in the EPL are achieved; (f) verify, using reasonable means, the effectiveness of any emission control measures that have been implemented to minimise air quality impacts; and (g) demonstrate compliance with the relevant regulatory criteria.	T	Active	Compliant	**2018 Update:** The 24 month trigger point has been taken as after the removal of crude oil (related to refinery activities and included in NPI calculations for air emissions) in May 2016. All air quality assessments have been completed and currently finalising the report, in readiness for submission to the DPE.
	HERITAGE MANAGEMENT				
	Archival Record				
C30	The Applicant shall commission an appropriately qualified heritage expert to undertake an archival photographic recording of the existing fabric and operation of the Kurnell Refinery while the plant is still operational and during the decommissioning process. The recording should include a range of media and shall be undertaken in accordance with the current Heritage Council Guidelines on Photographic Recording of Heritage Items Using Film or Digital Capture (2006). The archival recording shall be submitted to the Heritage Council of NSW, Sutherland Shire Library and the NSW State Library within 12 months of the closure of the refinery and prior to the removal or demolition of any existing elements.	C	Completed	Compliant	**2018 Update**: Further changes to the approved Heritage Strategy – DPE notified 26 Jul 18 Amended report sent 27 Aug 18 Refer to Section 3.1.3 of this report for details of changes and the amended report.

	Heritage Management Strategy				
C31	The Applicant shall prepare and implement a Heritage Management Strategy for the Australian Oil Refinery site prior to shut-down of the refinery plant. The Strategy must: (a) be prepared by a suitably qualified person in consultation with Council and the Heritage Council of NSW; (b) be submitted to the Secretary for approval at least 2 months prior to the shut-down of the refinery plant; (c) review the heritage significance of the Australian Oil Refinery site; and (d) set out a framework to minimise or mitigate the loss of heritage value during the decommissioning process, and for the ongoing management of the Site's heritage during present and future works.	C	Completed	Compliant	
31A	The Applicant shall: (a) continue to implement the Heritage Management Strategy prior to and during the demolition works; and **(b)** implement the recommendations stated in Chapter 4 and 5 of the document titled: *Caltex Kurnell Refinery Demolition: Heritage Impact Statement by Australian Museum Consulting for URS Australia Pty Ltd, October 2014.* **(c)**	D	Active/ongoing	Compliant	
	Other Heritage Management and Mitigation Measures				
32	The Applicant shall, prior to shut-down of the refinery: (a) form an in- house team to manage documentation and interpretation of the history of the refinery, including the production of a colour book; (b) liaise with the Mitchell Library to prepare a photographic record of the site and people associated with the refinery for inclusion in the library's archives; and (c) engage a professional photographer to prepare a photographic exhibition of the refinery. The location(s) and duration of the exhibition shall be to the satisfaction of Council and the NSW Heritage Council.	C	Completed	Compliant	

32A	Within two months of its scheduled demolition, the Applicant shall undertake a final review of the adaptive reuse capabilities of highly significant buildings which are proposed to be demolished as per the recommendations of the Heritage Management Strategy.	D	Completed	Compliant	There were 7 buildings identified in this category (Demolition Heritage Impact Assessment pg. 105). **2018 Update:** Refer to C30 for comments re amendments to the Strategy
32B	Within two months of its scheduled demolition, the Applicant shall complete appropriate archival records of items to be demolished as per the recommendations of the Heritage Management Strategy and other initiatives supported by the Heritage Division of the OEH.	D	Completed	Compliant	
32C	The Applicant shall implement the recommendations in section 5.2 of the document titled Caltex Kurnell Refinery Demolition: Heritage Impact Assessment, prepared by Australian Museum Consulting and enclosed in Appendix F of the SEE, for the pipeline removal works on Silver Beach to the satisfaction of Council.	D	Completed	Compliant	
	Potential for Discovery of Aboriginal and Non-Aboriginal Heritage Objects				
C33	If during the course of construction and demolition the Applicant becomes aware of any previously unidentified heritage object(s), all work likely to affect the object(s) shall cease immediately and the Heritage Council of New South Wales shall be notified immediately in accordance with section 146 of the Heritage Act 1977. Relevant works shall not recommence until written authorisation from the Heritage Council of NSW is received by the Applicant.	C & D	Active/ongoing	Compliant	
C34	If during the course of construction and demolition the Applicant becomes aware of any previously unidentified Aboriginal object(s), all work likely to affect the object(s) shall cease immediately and the OEH informed in accordance with section 89A of the National Parks and Wildlife Act 1974.	C & D	Active/ongoing	Compliant	

	Relevant works shall not recommence until written authorisation from OEH is received by the Applicant.				
	Energy Efficiency And Greenhouse Gas Emission				
	Managing Energy Efficiency & Greenhouse Gas Emissions				
C35	The Applicant shall implement all reasonable and feasible measures to minimise: (a) energy use; and (b) greenhouse gas emissions, throughout the life of the development, to the satisfaction of the Secretary.	G	Active/ongoing	Compliant	
	TRANSPORT AND ACCESS				
	Traffic Management Plan				
C36	The Applicant shall prepare and implement a Traffic Management Plan for the Development, to the satisfaction of the Secretary. The plan must: (a) be prepared and implemented by a suitably qualified and experienced person; (b) be approved by the Secretary (refer to Conditions D1 and D2 for timing); (c) detail the measures that would be implemented to ensure road safety and network efficiency during construction and operation including (but not limited to): . installation of signage and implementation of maximum speeds limits on internal roads; and · final details of the proposed traffic control measures. . details for rationalisation of the entry and exit to the site, particularly if the weigh bridge is no longer required, to improve the management of traffic and parking for members of the general public in this area (d) include a plan showing the route to be used by heavy vehicles during construction and operation; (e) detail the access and parking arrangements for the site during construction and operation; (f) include a Driver Code of Conduct that details the traffic management measures to be implemented during construction and operation to: · minimise the impacts of the development on the local and regional road network; · minimise conflicts with other road users; and · ensure truck drivers use specified routes.	G	Completed	Compliant	**2018 Update**: Plan reviewed to account for traffic movement between pipeways and the new ACS Containment Cell . Plan submitted to DPE and approved along with other Plans impacted by MOD2 **Dec 2019 Update:** Traffic Management Plan has been reviewed and updated at the end of the demolition works. The revised plan will be submitted as part of Stage 2. Final Terminal OEMP:

	(g) describe the measures that will be implemented to ensure: · the nominated heavy vehicle route is used; · drivers adhere to the code of conduct; and · compliance with the relevant conditions of this consent. (h) include a program to monitor the effectiveness of these measures; and **(i)** (i) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.				
C36 A	The Applicant shall update and implement the Traffic Management Plan for the demolition works to the satisfaction of the Secretary. This plan is to update the plan approved under condition C36 and shall also: (a) be prepared in consultation with Council; (b) be approved by the Secretary (refer to conditions D1A for timing); (c) include the designated routes for demolition traffic to the demolition areas within the site; (d) include details of traffic management arrangements for the cooling water outlet and intake pipeline removal works within the road reserves; and (e) outline the procedures for the notification of all potentially affected persons prior to and during the pipeline removal works within the road reserves.	D	Completed	Compliant	Note: currently shared with Terminal operations See comments made in C36
C36 B	The Applicant shall ensure that the pipeline removal works along the road reserves on Captain Cook Drive, Prince Charles Parade and Cook Street are undertaken in consultation with Council and do not take place during public events or public holidays in Kurnell.	D	Completed	Compliant	These works have been completed with NIL incidents
	Car Parking				
C37	The Applicant shall provide sufficient parking facilities on-site for construction, demolition and operational personnel, and heavy vehicles, to ensure that construction and operational traffic associated with the Development do not utilise public and residential streets or public parking facilities for parking.	G	Active/ongoing	Compliant	

C37 A	Within 18 months after commencement of the demolition works, the Applicant shall: (a) complete a review, in consultation with Council, of the Cook Street approach to the Caltex Terminal site considering issues relating to signage, car parking arrangements, vehicle flows and the future of the weighbridge; and (b) include a timetable of implementation of the findings of this review. Note: The implementations of the findings of this review may require further approval under the EP&A Act.	D	Inactive	Not triggered	DPE Letter approving a staged submission of revised traffic management plans until after completion of demolition works in mid-2019.
	WASTE MANAGEMENT				
	Waste Management On-Site				
C38	The Applicant shall (a) minimise the waste generated on site; and (b) ensure that the waste generated by the development is appropriately stored, handled and disposed of, to the satisfaction of the Secretary.	G	Active/ongoing	Compliant	
C39	The Applicant shall ensure that any waste generated on the site during construction and demolition is classified in accordance with the EPA's Waste Classification Guidelines and disposed of to a facility that may lawfully accept the waste.	C & D	Active/ongoing	Compliant	
C39 A	The Applicant shall ensure that all hazardous materials identified in the structures to be demolished are removed prior to demolition where it is safe and practical to do so.	D	Completed	Compliant	
C39 B	The Applicant shall ensure that the reuse of any materials (including soil, scrap metal or building materials) on site must be fit for purpose and must not result in any adverse impacts to the environment.	D & T	Active/ongoing	Compliant	
C39 C	Where it is safe and practical to do so, the Applicant should as far as practicable sort all waste materials generated during demolition works to maximise opportunities for the beneficial reuse and recycling of such waste materials.	D	Completed	Compliant	**Dec 2019 Update:** All waste materials generated during demolition works have been removed from site

	Waste Management Plan				
C40	The Applicant shall prepare and implement a Waste Management Plan for the development to the satisfaction of the Secretary. This Plan shall: (a) be prepared in consultation with the EPA; (b) be approved by the Secretary (refer to timing in Conditions D1 and D2) (c) detail the type and quantity of waste to be generated by construction and operational phases of the development; (d) detail the materials to be reused or recycled, either on or off site; and (e) detail the procedures for handling, storage, collection of recycling and disposal of waste."	G	Plan Completed & Approved Active/ongoing	Compliant	**2018 Update**: Plan reviewed to account for ACS movement between pipeways and the new ACS Containment Cell . Plan submitted to DPE and approved along with other Plans impacted by MOD2
	Demolition Waste and Resource Management Plan				
C40 A	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: (a) be prepared in consultation with the EPA; (b) be approved by the Secretary (refer to condition D1a for timing); (c) outline the measures for the removal, storage and disposal of all waste materials generated during the demolition works; and (d) outline the waste reuse and recovery strategy for the demolition works.	D	Plan Completed & Approved	Compliant	See above comments
	Waste Received from Off-Site				
C41	The Applicant shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997, if such a licence is required in relation to that waste.	D	Completed	Compliant	
C41 A	The Applicant shall ensure that the removal of the cooling water outlet pipeline 20 metres seaward from the low tide mark in Botany Bay is carried out in a manner that minimises the potential for disturbance and/or spread of Caulerpa taxifolia.	D	Completed	Compliant	**2018 Update**: Outlet line successfully removed with nil observable environmental effect

	BIODIVERSITY & ECOLOGY				
	Biodiversity Management Plan				
C42	The Applicant shall prepare and implement a Biodiversity Management Plan for the development to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with the EPA; (b) be approved by the Secretary (refer to Conditions D1 and D2 for timing);; (c) include measures to be taken to minimise impacts on flora and fauna; (d) include a program with timeframes for implementation of the relevant recommendations contained in the Ecology Impact Assessment in Appendix I of the EIS, and the Management and Mitigation Measures contained in Chapter 19 of the EIS to minimise impacts on flora and fauna and maintain the biodiversity value of the site and surrounding environment.	G	Plan Completed & Approved	Compliant	
	Pest, Vermin & Noxious Weed Management				
C43	The Applicant shall: (a) implement suitable measures to manage pests, vermin and declared noxious weeds on site; (b) measures to be taken to prevent the spread of any identified noxious/exotic weeds off site; and (c) inspect the site on a regular basis to ensure that these measures are working effectively, and that pests, vermin or noxious weeds are not present on site in sufficient numbers to pose an environmental hazard, or cause the loss of amenity in surrounding area. *Note: For the purposes of this condition, noxious weeds are those species subject to an order declared under the Noxious Weed Act 1993.*	G	Active/ongoing	Compliant	

C43 A	The Applicant shall update and implement the Biodiversity and Weed Management Plan for the demolition works to the satisfaction of the Secretary. This plan is to consolidate the plans approved under conditions C42 and C43 and shall also: (a) be prepared in consultation with the OEH; (b) be approved by the Secretary (Refer to condition D1A for timing); and NSW Government 9 Department of Planning and Environment (c) include details of pre-clearing inspections and frog exclusion measures to be undertaken prior to excavation along the Continental Carbon Pipeway Right of Way.	G	Plan Completed & Approved	Compliant	
	Continental Carbon Pipeline				
C43 B	Within three months after the removal of the Continental Carbon Pipeline, the Applicant shall prepare a strategy, in consultation with the OEH, for the active management of the former pipeline route including a program for weed management and removal as outlined in Management and Mitigation Measure K6 in Appendix C of this consent. The Applicant shall have commenced implementation of this strategy six months after the removal of the Continental Carbon Pipeline.	D & T	Completed	Compliant	

	Cooling Water Outlet Management Plan				
C43 C	The Applicant shall prepare and implement a Cooling Water Outlet Management Plan for the demolition works. The plan must: (a) be prepared in consultation with Council; (b) be approved by the Secretary (see condition D1A for timing); (c) include details of the timing and excavation program for pipeline removal, demolition methods, details of stockpiling, removal or reuse of excavated materials and the use of imported soils; (d) outline the measures to be taken to minimise potential marine ecology impacts including measures to: • minimise sediment plumes particularly during backfilling activities; • minimise the potential for hydrocarbon contamination from the pipeline; • minimise disturbance and impact on any seagrass communities; and • maintain machinery and equipment; and • exclude people and animals from the works both landward and seaward; (e) include details of the odour suppression measures during the pipeline removal works; and (f) include details of the works on Silver Beach including: • measures to minimise impacts to the affected sand dunes on Silver Beach including dune erosion and damage to vegetation; and • strategies for stabilising and restoring the affected sand dunes including exclusion measures and revegetation strategies.	D	Completed	Compliant	**2018 Update**: Stage 2 Cooling Water Outlet Management Plan approved Cooling Water Outlet line successfully removed with nil observable environmental effect SSC provided favourable feedback on execution of Plan and the restoration works completed. **Dec 2019 Update:** Foreshore regeneration completed at end of the pipeline removal and replanted vegetation is now well established
	Protection of Marton Park Wetlands				
C44	To ensure that the measures implemented to protect Marton Park Wetland from sedimentation, erosion and possible contaminants related to the stormwater drainage upgrade works approved by Sutherland Shire Council (DA 13/0195) are successful, monitoring of Marton park Wetland must be undertaken after completion of the stormwater upgrade works, until otherwise agreed with Council, to ensure there are no detrimental impacts on the wetland. Caltex is to prepare a monitoring plan and submit it to Council for approval prior to completion of stormwater drainage upgrade works.	G	Completed	Compliant	Caltex has surrendered the DA (March 2016).

	VISUAL				
	Lighting				
C45	The Applicant shall ensure that the lighting associated with the development: (a) complies with the latest version of AS 4282(INT) – *Control of Obtrusive Effects of Outdoor Lighting*; and (b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.	G	Statement	Compliant	
	Signage and Fencing				
C46	The Applicant shall not install any advertising on site without the written approval of the Secretary.	G	Statement	Compliant	
	SITE SECURITY				
	Site Security				
C47	The Applicant shall ensure that: (a) site fencing and security gates are installed to the satisfaction of the Secretary; and (b) the security gates on site are locked whenever the site is unattended.	G	Statement	Compliant	

	ENVIRONMENTAL MANAGEMENT				
	Construction Environment Management Plan				
D1	The Applicant shall prepare and implement a Construction Environmental Management Plan for the Development to the satisfaction of the Secretary. The Plan must: (a) be prepared in consultation with Sutherland Shire Council and the EPA; (b) be submitted to the Secretary for approval no later than four (4) weeks prior to the commencement of construction or demolition, or within such period otherwise agreed by the Secretary; (c) identify the statutory Consents that apply to the Development; (d) consolidate all relevant management plans and monitoring programs required in the conditions of this Consent; (e) outline all environmental management practices and procedures to be followed during construction and demolition works associated with the Development; (f) describe all activities to be undertaken on the site during construction of the Development, including a clear indication of construction stages; (g) incorporate all relevant management and mitigation measures contained in the EIS and RTS; (h) detail how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts. In particular, the following environmental performance issues shall be addressed in the Plan: (i) Human Health and Ecological Risk management - which shall be mitigated and managed in accordance with Section 6.2 of the "Human Health and Ecological Qualitative Risk Assessment" report prepared by URS, dated 28 February 2013 and the relevant Management and Mitigation Measures contained in Appendix C of this consent; (ii) Biodiversity and Weed management; (iii) Soils and Erosion management; (iv) Contamination management; (v) Noise and Vibration management; vi) Air Quality management; (vii) Stormwater and Wastewater management; (viii) Traffic management;	C	Plan Completed & Approved	Non- Compliant against (h) in 2016 IEA	Identified as an Administrative Non-Compliance in 2016 IEA Refer to Appendix 1: Status of Caltex Actions Arising from IEA. Note: Conversion works now completed

	(ix) Heritage management (Aboriginal and non-Aboriginal); (x) Waste and Resource management; (xi) Groundwater management; (xii) Acid Sulfate Soils management – if required; (xiii) Emergency (including spill) management; (xiv) means for assessing (and where identified) for managing interactions and cumulative impacts from the concurrent construction of other development works in the area should these coincide with the Development (e.g. the Caltex Ports and Berthing upgrade, remediation projects); (i) describe the roles and responsibilities for all relevant employees involved in construction and demolition works associated with the Development; (j) include arrangements for community consultation, including consultation with the NSW Department of Education and local schools at key stages of the development that may affect school operations, to identify issues and mitigate impacts throughout the course of the Development. (k) Include a complaints handling procedure during construction and demolition and operation; and, (l) include appropriate procedures to allow the regular review of the requirements of each plan to ensure that they are effective and allow for adaptive management to address contingencies that may arise over the life of the development. The approval of a Construction Environmental Management Plan does not relieve the Applicant of any requirement associated with this development consent. If there is an inconsistency with an approved Construction Environmental Management Plan and the conditions of this development consent, the requirements of this development consent prevail Construction of the development shall not commence until written consent of this plan has been received from the Secretary.				

	Demolition Environmental Management Plan				
D1A	The Applicant shall prepare and implement a Demolition Environmental Management Plan for the demolition works to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with Council, EPA and NSW Health; (b) be submitted to the Secretary for approval no later than four (4) weeks prior to the commencement of the demolition works, or within such period otherwise agreed by the Secretary; (c) identify the statutory approvals and consents that apply to the development; NSW Government 10 Department of Planning and Environment (d) consolidate all relevant management plans and monitoring programs required in the conditions of this Consent; (e) outline all environmental management practices and procedures to be followed during demolition works associated with the development; (f) describe all activities to be undertaken on the site during demolition works associated with the development, including a clear indication of demolition stages; (g) incorporate all relevant management and mitigation measures contained in the SEE; (h) detail how the environmental performance of the demolition works will be monitored, and what actions will be taken to address potentially adverse environmental impacts. In particular, the following environmental performance issues shall be addressed in the Plan: i. Biodiversity and weed management(See Condition C43A); ii. Soils and water management (See Condition C12A); iii. Contamination management (See Condition C15A); iv. Noise and vibration management (See Condition C22A); v. Air quality management (See Condition C28A); vi. Stormwater and wastewater management (See Condition C12A); vii. Traffic management (See Condition C36A); viii. Demolition waste and resource management (See Condition C40A); ix. Groundwater management, including measures which are consistent with the relevant Management and Mitigation Measures contained in Appendix C of this consent; x. Acid sulphate soils management (See Condition C14); xi. Heritage management strategy (See Condition C31);	D	Plan Completed & Approved	Compliant	**2018 Update**: Plan reviewed to account for the new ACS Containment Cell. Plan submitted to DPE and approved along with other Plans impacted by MOD2

	xii. Cooling water outlet management (see Condition C42B); xiii. pipeline removal works on Kurnell Wharf, including details of the timing and program of works, demolition and removal techniques, and the measures to manage traffic and access to the wharf. xiv. means for assessing (and where identified) for managing interactions and cumulative impacts from the concurrent construction of other development works within the site should these coincide with the Development (e.g. the Caltex Ports and Berthing upgrade, remediation projects). (i) describe the roles and responsibilities for all relevant employees involved in the demolition works associated with the Development; (j) include details of a community notification protocol to notify potentially affected persons (including the local community and surrounding industries) of works which are likely to cause significant adverse impacts to the environment; (k) include a complaints handling procedure; and (l) include appropriate procedures to allow the regular review of the requirements of each plan to ensure that they are effective and allow for adaptive management to address issues that may arise over the life of the development. The approval of a Demolition Environmental Management Plan does not relieve the Applicant of any requirement associated with this development consent. If there is an inconsistency with an approved Demolition Environmental Management Plan and the conditions of this development consent, the requirements of this development consent prevail. Demolition works shall not commence until written approval of this plan has been received from the Secretary.				

	Operational Environmental Management Plan				
D2	The Applicant shall prepare and implement an Operational Environmental Management Plan for the project to the satisfaction of the Secretary. This Plan must: (a) be approved by the Secretary prior to the completion of the Development; (b) provide the strategic framework for environmental management of the project; (c) identify the statutory approvals that apply to the project; (d) include a copy of all relevant management plans and monitoring programs relevant under this consent; (e) outline all environmental management practices and procedures to be followed during operation; (f) describe all activities to be undertaken on the site during operation; (g) detail how the environmental performance of the operation of the project will be monitored, and what actions will be taken to address identified adverse environmental impacts; (h) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project; (i) describe the procedures that will be implemented to: · keep the local community and relevant agencies informed about the operation and environmental performance of the project; · receive, handle, respond to, and record complaints; · resolve any disputes that may arise during the course of the project; · respond to any non-compliance; and · respond to emergencies; and (j) include: · copies of any strategies, plans and programs approved under the conditions of this consent; and · a clear plan depicting all the monitoring required to be carried out under the conditions of this consent.	T	Plan Completed & Approved	2018 Not Compliant	**2018 Update**: Refer to **Section 1.6 Non-Compliance and Corrective Action** for details of the two ACS Containment Cell Dust Deposition sample unit results

	Management Plan Requirements				
D3	The Applicant shall ensure that the Management Plans required under this consent are prepared in accordance with any relevant guidelines, and include: (a) detailed baseline data; (b) a description of: · the relevant statutory requirements (including any relevant approval, licence or lease conditions); · any relevant limits or performance measures/criteria; and · the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures; (c) a description of the measures that will be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria; (d) a program to monitor and report on the: · impacts and environmental performance of the development; and · effectiveness of any management measures (see (c) above); (e) a contingency plan to manage any unpredicted impacts and their consequences; (f) a program to investigate and implement ways to improve the environmental performance of the development over time; (g) a protocol for managing and reporting any: · incidents; ·complaints; · non-compliances with statutory requirements; and · exceedances of the impact assessment criteria and/or performance criteria; and (h) a protocol for periodic review of the plan. *Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.*	G	Completed	Compliant	

	Annual Review				
D4	By 31 December 2014, or as otherwise agreed in writing by the Secretary, the Applicant shall review the environmental performance of the Development to the satisfaction of the Secretary. 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.	G	Now completed for years : • 2014, • 2015, • 2016, • 2018, and • 2019 Active/ongoing	Compliant	**Dec 2019 Note:** This is the 2019 Annual Review report

	Revision of Strategies, Plans & Programs				
D5	Within 3 months of the submission of an: (a) annual review under Condition D4 of this schedule; (b) incident report under Condition D6 of this schedule; (c) audit report under Condition D8 of this schedule; and (d) any modifications to this consent, the Applicant shall review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Secretary. *Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development.*	G	Active/ongoing	Compliant	
	REPORTING				
	Incident Reporting				
D6	The Applicant shall notify the Secretary and any other relevant agencies of any incident or potential incident with actual or potential significant off-site impacts on people or the biophysical environment associated with the development as soon as practicable after the Applicant becomes aware of the incident. Within 7 days of the date of this incident, the Applicant shall provide the Secretary and any relevant agencies with a detailed report on the incident.	G	Active/ongoing	Compliant	**Dec 2019 Update:** The DPIE and EPA receive email notifications of any ship that exceeds the EPL night time noise limit
	INDEPENDENT ENVIRONMENTAL AUDIT				
D7	Within a year of the date of this consent, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development. This audit must: (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary; (b) include consultation with the relevant agencies; (c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL and/or Water License (including any assessment, plan or program required under these approvals); (d) review the adequacy of any approved strategy, plan or program required under these approvals; and	G	Active/ongoing	Compliant Non- Complaint in 2016 – refer to Appendix 1 for details	Next IEA due Sept 2020

	(e) recommend measures or actions to improve the environmental performance of the development, and/or any assessment, plan or program required under these approvals. *Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.*				
D8	Within 3 months of commissioning this audit, or as otherwise agreed by the Secretary, the Applicant shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.	G	Active/ongoing	Compliant	Submitted for each IEA event
	ACCESS TO INFORMATION				
D9	The Applicant shall, to the satisfaction of the Secretary: (a) make the following information publicly available on its website: · the EIS; SEE and MOD 1; · current statutory approvals for the Development; · approved strategies, plans or programs; · a summary of the monitoring results of the Development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent; · a complaints register, updated on a quarterly basis; · copies of any annual reviews (over the last 5 years); · any independent environmental audit, and the Applicant's response to the recommendations in any audit; and · any other matter required by the Secretary; and (b) keep this information up-to-date, *Note: This requirement does not require any confidential information to be made available to the public*	G	Active/ongoing	Compliant	

SSD 5544 MOD2 2018 - Asbestos Contaminated Soils (ACS) Management Works

	SCHEDULE B – ADMINISTRATIVE CONDITIONS				
	Conditions	**Applicable Phase:** Conversion (C) Demolition Terminal Operations (D/T) or General (applies to all phases) (G)	**Activity Status:** Completed Active/ongoing Inactive	**Compliance Status** Compliant Not Compliant Not Triggered	**Comments/Actions**
	LIMITS OF CONSENT				
B7B	Notwithstanding Condition B7A, the ACS Management Works shall not extend beyond 30 April 2019	D	Active/ongoing	Compliant	**Dec 2019 Update:** Refer to MOD 4 and 5 regards changed to project end date
	ACS MANAGEMENT WORKS				
	Site Auditor				
C48	Prior to commencement of the ACS management works, the Applicant shall provide evidence that an EPA accredited Site Auditor has been appointed to review and approve the RAP and long-term environmental management plan (LTEMP) (see Conditions C54 and C55, respectively).	D	Completed	Compliant	
	Remedial Action Plan				
C49	Prior to commencement of the ACS management works, the Applicant shall ensure the RAP is reviewed and approved by the Site Auditor. The Site Auditor shall be satisfied the design and construction methods outlined in the CQAP will achieve a level of containment which meets the remedial objectives described in the RAP. A copy of the Site Audit Report, Site Audit Statement shall be provided to the EPA and Secretary, which demonstrates the appropriateness of the RAP. ***Note: The Site Auditor should consider the Construction Quality Assurance Procedures in relation to the Environmental Guidelines: Solid Waste Landfills (EPA, 2nd Edition, 2016)***	D	Completed	Compliant	

	Containment Cell				
C50	Prior to commencement of the ACS management works, the Applicant shall prepare a Containment Cell Management Plan (CCMP) for the ACS management works. The plan shall be prepared in accordance with Condition D3 and shall: (a) be prepared by a suitably qualified and experienced person(s), in consultation with the EPA; (b) be approved by the Secretary; (c) describe details of the cell construction and filling activities including soil acceptance criteria for the containment cell; (d) describe the measures that will be implemented to ensure the control of soil, surface water, groundwater, air quality and noise impacts associated with the ACS management works; (e) include a register to detail the type and volume of material excavated and disposed of as part of the ACS management works; and (f) include details of dust, asbestos, waste and groundwater monitoring requirements.	D	Completed	Compliant	
C51	The Applicant shall only place ACS sourced from within the site in the containment cell.	D	Active/Ongoing	Compliant	
C52	Upon completion of the construction aspects associated with the ACS management works (which includes closure of the containment cell), the Applicant shall prepare a Containment Cell Final Report. The report shall: (a) be submitted to the EPA; (b) confirm the containment cell has been constructed in accordance with the CQAP; and (c) include a summary of the waste classification data (including characterisation and tracking) and monitoring data required under Condition C50 (e) and (f).	D	Active/Ongoing	Compliant	
	Long Term Environmental Management Plan				
C53	Prior to the completion of the construction aspects associated with the ACS management works, the Applicant in consultation with the EPA, shall prepare a LTEMP for the containment cell, to the satisfaction of the Site Auditor. A copy of the Site Audit Report and Site Audit Statement shall be provided to the EPA and Secretary, which demonstrates the appropriateness of the LTEMP	D	Active/Ongoing	Compliant	
C54	Upon completion of the construction aspects associated with the ACS management works (which includes closure of the containment cell) closure of the containment cell, the Applicant shall:	D/T	Inactive	Not Triggered	

	(a) implement the approved LTEMP and manage the containment cell in accordance with the approved LTEMP; and (b) ensure the containment cell is listed on the relevant planning certificate for the land, issued under Section 149(5) of the EP&A Act, for the site.				
	Pipeway Validation				
C55	Upon completion of the construction aspects associated with the ACS management works, the Applicant shall prepare a Validation Report of the pipeways. The report shall: (a) be submitted to the EPA and the Secretary for review; (b) be prepared in accordance with the RAP and the *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites* (OEH 2011); (c) include details of the following: (i) sampling and analysis plan and sampling methodology; and (ii) results of any validation sampling compared to relevant guidelines/criteria.	D	Inactive	Not Triggered	
	Operational Environmental Management Plan				
D2	The Applicant shall prepare and implement an Operational Environmental Management Plan for the project to the satisfaction of the Secretary. This Plan must: (a) be approved by the Secretary prior to the commencement of operations; (b) provide the strategic framework for environmental management of the Development; (c) identify the statutory approvals that apply to the Development; (d) include a copy of all relevant management plans and monitoring programs relevant under this consent, including: (i) Water Management Plan (See Condition C12); (ii) Noise Management Plan (See Condition C22; (iii) Traffic Management Plan (See Condition C36); (iv) Waste Management Plan (See Condition C40); (v) Biodiversity Management Plan (See Condition 42); and, (vi) Pest, Vermin & Noxious Weed Management (See Condition C43). (e) outline all environmental management practices and procedures to be followed during operation; (f) describe all activities to be undertaken on the site during operation;	D/T	Active/Ongoing - points (a) to (j) inclusive Inactive for (k)	Compliant – points (a) to (j) inclusive Not Triggered for (k)	Noted that the Kurnell Terminal Stage 1 Interim OEMP does not currently reference the ACS Containment Cell In line with the requirements of D2 (k), the Kurnell Terminal Final Stage 2 OEMP will be updated to include the LT EMP for the ACS Containment Cell

	(g) detail how the environmental performance of the operation of the project will be monitored, and what actions will be taken to address identified adverse environmental impacts; (h) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project; (i) describe the procedures that will be implemented to: • keep the local community and relevant agencies informed about the operation and environmental performance of the project; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise during the course of the project; • respond to any non-compliance; and • respond to emergencies; and (j) include: • copies of any strategies, plans and programs approved under the conditions of this consent; and • a clear plan depicting all the monitoring required to be carried out under the conditions of this consent. *(k)* a copy of the Long-Term Environmental Management Plan (see Condition 53) for the ACS management works.				
	Revision of Strategies, Plans & Program				
D5	Within three months of: (a) an approval of a modification; (b) a submission of an incident report under Condition D6; (c) an approval of an Annual Review under Condition D4; or (d) a completion of an audit under Condition D7. the Applicant must review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Secretary. *Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development*	D/T	Active/Ongoing	Not Triggered (with regards the ASC Containment Cell)	

	Access to Information				
D9	The Applicant shall, to the satisfaction of the Secretary: (a) make the following information publicly available on its website: • the EIS; • SEE and MOD 1; • *MOD 2 and its accompanying documents*; • current statutory approvals for the Development; • approved strategies plans or programs; • a summary of the monitoring results of the Development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent; • a complaints register, updated on a quarterly basis; • copies of any annual reviews (over the last 5 years); • any independent environmental audit, and the Applicant's response to the recommendations in any audit; and • any other matter required by the Secretary; and (b) keep this information up-to-date, *Note: This requirement does not require any confidential information to be made available to the public.*	G	Active/Ongoing	Compliant	Recurrent actions assigned in Cintellate to review the Caltex Public Website every 3 months for currency and accuracy of content

SSD 5544 MOD3 2018 – Tank 101 Demolition Works

	SCHEDULE B – ADMINISTRATIVE CONDITIONS				
	Conditions	**Applicable Phase:** Conversion (C) Demolition Terminal Operations (D/T) or General (applies to all phases) (G)	**Activity Status:** Completed Active/ongoing Inactive	**Compliance Status** Compliant Not Compliant Not Triggered	**Comments/Actions**
	Pre-Commissioning				`
D9	The Applicant shall, to the satisfaction of the Secretary: (c) make the following information publicly available on its website: • the EIS; • SEE and MOD 1; • MOD 2 and its accompanying documents; • MOD 3 and its accompanying documents • current statutory approvals for the Development; • approved strategies plans or programs; • a summary of the monitoring results of the Development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent; • a complaints register, updated on a quarterly basis; • copies of any annual reviews (over the last 5 years); • any independent environmental audit, and the Applicant's response to the recommendations in any audit; and • any other matter required by the Secretary; and (d) keep this information up-to-date, Note: This requirement does not require any confidential information to be made available to the public.	G	Active/Ongoing	Compliant	Recurrent actions assigned in Cintellate to review the Caltex Public Website every 3 months for currency and accuracy of content
C4A	Prior to commencement of the Tank 101 demolition works described in MOD 3, the Applicant shall update and implement the Emergency Plan required under Condition C4(a) to incorporate the Tank 101 demolition works. The plan shall include information of the emergency arrangements	D	Completed	Compliant	

	during the tank demolition works and a copy of the plan shall be submitted to the Secretary.				
	Hours of Construction and Operation				
C19	High noise generation construction and demolition works including the pipeline removal works within the Eastern and Western Right of Ways, and the Tank 101 demolition works described in MOD 3, shall be confined to less sensitive times of the day, and shall not be undertaken on Sundays or public holidays or outside of the hours 7:00am and 6:00pm Monday to Saturday	D	Completed	Compliant	

SSD 5544 MOD 4 2018 - Extension of Demolition Works Period

	SCHEDULE B – ADMINISTRATIVE CONDITIONS				
	Conditions	**Applicable Phase:** Conversion (C) Demolition Terminal Operations (D/T) or General (applies to all phases) (G)	**Activity Status:** Completed Active/ongoing Inactive	**Compliance Status** Compliant Not Compliant Not Triggered	**Comments/Actions**
	Pre-Commissioning				`
B2	The Applicant shall carry out the Development generally in accordance with the: (a) EIS; (b) RTS; (c) site layout plans and drawings in the EIS (see Appendix A); (d) MOD 1; (e) MOD 2 (f) MOD 3 (g) MOD 4	G	Active/ongoing	Compliant	**Refer to notes under MOD 5**
B7A	The Demolition works associated with the development must not extend beyond 10 June 2019	D	Active/Ongoing	Compliant	

D9	The Applicant shall, to the satisfaction of the Secretary: (e) make the following information publicly available on its website: • the EIS; • SEE and MOD 1; • MOD 2 and its accompanying documents; • MOD 3 and its accompanying documents • MOD 4 and its accompanying documents • current statutory approvals for the Development; • approved strategies plans or programs; • a summary of the monitoring results of the Development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent; • a complaints register, updated on a quarterly basis; • copies of any annual reviews (over the last 5 years); • any independent environmental audit, and the Applicant's response to the recommendations in any audit; and • any other matter required by the Secretary; and (f) keep this information up-to-date, Note: This requirement does not require any confidential info to be made available to the public	G	Active/Ongoing	Compliant	Recurrent actions assigned in Cintellate to review the Caltex Public Website every 3 months for currency and accuracy of content

SSD 5544 MOD5 July 2019 -

Asbestos contaminated soils containment cell, cooling water outlet pipeline and administrative amendments

	SCHEDULE B – ADMINISTRATIVE CONDITIONS				
	Conditions	**Applicable Phase:** Conversion (C) Demolition Terminal Operations (D/T) or General (applies to all phases) (G)	**Activity Status:** Completed Active/ongoing Inactive	**Compliance Status** Compliant Not Compliant Not Triggered	**Comments/Actions**
	Pre-Commissioning				`
B2	The Applicant shall carry out the Development generally in accordance with the: (a) EIS; (b) RTS; (c) site layout plans and drawings in the EIS (see Appendix A); (d) MOD 1; (e) MOD 2 (f) MOD 3 (g) MOD 4 and (h) MOD 5 (i) conditions of this consent	G	Active/ongoing	Compliant	**Dec 2019 Update:** The project is nearing the final end date but the capping of the ACS Containment Cell has delayed by adverse weather conditions and the availability of specialist contractor services associated with the laying of the HDPE liner on the Cell. **Dec 2019 Note regards the Kurnell Terminal Final Stage 2 OEMP** : This plan was to be submitted 6 weeks prior to the project ending on 30 November and updated to include the LT EMP for the ACS Containment Cell.

					With delays foreseen in the completion of the ACS Containment Cell, approval was obtained from the DPIE to extend the submission date for the OEMP to 14 February 2020.
B7B	Notwithstanding Condition B7A, the ACS Management works must not extend beyond 30 November 2019	D	Active/Ongoing	Compliant	**Re MOD6 Submission**: A further extension to the project end date (March 2020) has been submitted to the DPIE and is pending approval in early Jan 2020

C43C	The Applicant shall prepare and implement a Cooling Water Outlet Management Plan for the demolition works. The plan must: (a) be prepared in consultation with Council; (b) be approved by the Secretary (see condition D1A for timing); (c) include details of the timing and excavation program for pipeline removal, demolition methods, details of stockpiling, removal or reuse of excavated materials and the use of imported soils; and (d) include details of the odour suppression measures during the pipeline removal works; .	D	Completed	Compliant	**Dec 2019 Update:** Cooling Water Outlet line successfully removed with nil observable environmental effect SSC provided favourable feedback on execution of Plan and the restoration works completed. Foreshore regeneration completed and replanted vegetation is now well established

SSD5353 PORTS AND BERTHING UPGRADE Note: Project completed in 2015

	SCHEDULE B – ADMINISTRATIVE CONDITIONS				
	Conditions	**Applicable Phase:** Conversion (C) Demolition Terminal Operations (D/T) or General (applies to all phases) (G)	**Activity Status:** Completed Active/ongoing Inactive	**Compliance Status** Compliant Not Compliant Not Triggered	**Comments/Actions**
	TERMS OF CONSENT				
B1	The Applicant shall carry out the development generally in accordance with the: (a) State Significant Development Application No_5353; (b) Environmental Impact Statement, Kurnell Ports and Berthing Facility (URS, February 2013); (c) Response to Submissions, Kurnell Ports and Berthing Facility (URS, June 2013); (d) Proposed Change to the Kurnell Port and Berthing Facility Upgrade (SSD: 5353) (URS, 30 August 2013); and (e) conditions of this consent.	C	Completed	Not triggered	
B2	In the event of an inconsistency between: (a) the conditions of this consent and any document listed from condition B1(a) to B1(d) inclusive, the conditions of this consent shall prevail to the extent of the inconsistency; and (b) any document listed from condition B1(a) to B1(d) inclusive, and any other document listed from condition B1(a) to B1(d) inclusive, the most recent document shall prevail to the extent of the inconsistency.	G	Completed	Compliant	
B3	The Applicant shall comply with any reasonable requirement(s) of the Director General arising from the Department's assessment of: (a) any reports, plans or correspondence that are submitted in accordance with this consent; and (b) the implementation of any actions or measures contained within these reports, plans or correspondence.	G	Completed	Compliant	Since the IEA (April 2016), the non-compliances have been responded to by Caltex to the satisfaction of the DPE
B4	Subject to confidentiality, the Applicant shall make all documents required under this consent available for public inspection on request.	G	Completed	Compliant	

	LIMITS OF CONSENT				
B5	The Applicant may carry out dredging for a period of no more than six (6) months, unless otherwise agreed to in writing by the Director-General.	C	Completed	Compliant	
	LAPSING OF CONSENT				
B6	This consent shall lapse five (5) years from the date of this approval unless the works associated with the development have physically commenced.	C	Completed	Compliant	
	STATUTORY REQUIREMENTS				
B7	The Applicant shall ensure that all licences, permits and approval/consents are obtained as required by law and maintained as required throughout the life of the Development. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits or approval/consents.	G	Completed	Compliant	
	STAGING				
B8	The Applicant may elect to construct and/ or operate the Development in stages. Where staging is proposed, the Applicant shall submit a Staging Report to the Director General prior to the commencement of the first proposed stage. The Staging Report shall provide details of: (a) how the Development would be staged, including general details of work activities associated with each stage and the general timing of when each stage would commence; and (b) details of the relevant conditions of consent, which would apply to each stage and how these shall be complied with across and between the stages of the Development.	C	Inactive	Not triggered.	
B9	Where staging of the Development is proposed, these conditions of consent are only required to be complied with at the relevant time and to the extent that they are relevant to the specific stage(s).	C	Inactive	Not triggered.	
B10	The Applicant shall ensure that an updated Staging Report (or advice that no changes to staging are proposed) is submitted to the Director General prior to the commencement of each stage, identifying any changes to the proposed staging or applicable conditions.	C	Inactive	Not triggered.	
B11	The Applicant shall ensure that all plans, sub-plans and other management documents required by the conditions of this consent and relevant to each stage (as identified in the Staging Report) are submitted to the Director	C	Plan Completed & Approved	Compliant	

	General no later than one month prior to the commencement of the relevant stages, unless otherwise agreed by the Director General. Note: Conditions B8 to B11 do not relate to staged development within the meaning of section 83B of the Act.				
B12	The Applicant shall ensure that employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent relevant to their respective activities.	C	Completed	Compliant	
B13	The Applicant shall be responsible for environmental impacts resulting from the actions of all persons that it invites onto the site, including contractors, sub-contractors and visitors.	G	Completed	Compliant	
B14	In the event of a dispute between the Applicant and a public authority, in relation to an applicable requirement in this consent or relevant matter relating to the Development, either party may refer the matter to the Director General for resolution. The Director General's determination of any such dispute shall be final and binding on the parties.	G	Statement	Compliant	
	SCHEDULE C – ENVIRONMENTAL PERFORMANCE AND MANAGEMENT				
	SEDIMENT, WATER QUALITY AND HYDROLOGY				
C1	The Development shall comply with section 120 of the Protection of the Environment Operations Act 1997, which prohibits the pollution of waters, except as expressly provided in an EPL.	G	Statement	Not triggered.	
C2	The Applicant shall implement all feasible and reasonable mitigation and management measures for the duration of dredging to minimise the dispersion of dissolved and sediment-bound TBT and suspended sediment concentrations outside the Development site during construction, including: (a) no overflow dredging within the fixed berths and in the front of the submarine berths; and(b) installing and maintaining a silt boom around the dredger head to capture sediment that falls into the water across the slewing zone.	C	Completed	Compliant	
	Sediment and Water Quality Management Plan				

C3	Prior to commencement of construction, or as otherwise agreed by the Director-General, the Applicant shall prepare (and implement following approval) a Sediment and Water Quality Management Plan in consultation with the EPA and DPI (Fisheries). The Plan must: (a) be prepared by a suitably qualified expert and be approved in writing by the Director-General; (b) identify representative monitoring locations which can be used to determine the extent to which TBT in the water column (dissolved) and sediment-bound TBT, suspended sediment concentrations, pH and Dissolved Oxygen generated and dispersed by dredging has affected the distribution and condition of sensitive marine receivers; (c) identify specific measures to minimise the generation and dispersion of these sediments outside the Development site during dredging in addition to those identified in Condition C2; (d) include dry weather baseline water quality monitoring data at these locations, including dissolved and sediment-bound TBT and suspended sediment concentrations against which levels during construction can be compared; (e) include a sediment and water quality monitoring program to be followed during and post dredging including the frequency and procedures for water quality monitoring (including in real-time) of dissolved and sediment bound TBT and suspended sediment concentrations, and other water quality parameters at the identified water quality monitoring locations; and (f)establish upper threshold water quality performance criteria and interim threshold water quality performance criteria and identify contingency measures to be implemented where these water quality performance criteria are triggered at sensitive marine receivers, including temporarily ceasing and reducing the rate of dredging (including overflow dredging) operations.	C	Completed	Compliant	Identified as an Administrative Non-Compliance in 2016 IEA Refer to Appendix 1: Status of Caltex Actions Arising from IEA.

C4	Within three (3) months of completing the post-dredging water quality monitoring required by Condition C3(e),the Applicant shall submit a report to the Director-General, the EPA, DPI (Fisheries) and SPC documenting the results of the baseline water quality monitoring undertaken before construction and the sediment and water quality monitoring program to be followed during and post dredging, to confirm that residual sediment and water quality is consistent with the predictions made in the EIS, with particular consideration to dissolved and sediment-bound TBT concentrations and impacts to the aquatic health of sensitive marine receivers (condition C8	C	Completed	Compliant	Identified as an Administrative Non-Compliance in 2016 IEA Refer to Appendix 1: Status of Caltex Actions Arising from IEA.
	BIODIVERSITY				
	Aquatic Weeds				
C5	The Applicant shall implement all mitigation and management measures during construction to avoid the introduction or spreading of pest flora and fauna species including Caulerpa taxifolia consistent with the NSW Control Plan for the Noxious Marine Alga Caulerpa taxifolia (DII, 2009).	G	Statement	Compliant	
	Marine Fauna				
C6	The Applicant shall implement measures and management to minimise the risk of ship collision and minimise underwater noise generation with marine fauna with particular consideration of cetaceans, pinnipeds, marine turtles and dugongs. This shall include (but not necessarily be limited to): (a) carrying out observations for cetaceans, pinnipeds, marine turtles and dugongs within 420 metres of dredging, piling or rock revetment works; (b) temporary cessation of dredging and dredger tugboat reduced to a speed of 4 knots if the marine fauna comes within the 420 metres of dredging; (c) the temporary cessation of underwater noise generating activities associated with piling and rock revetment where marine fauna comes within the 250 metres of these activities. Noise generating activities shall not recommence until 30 minutes after the fauna has left the zone; and (d) the temporary cessation of dredging where marine fauna comes within the 150 metres of dredging. Dredging shall only recommence when marine fauna has moved out of this zone. Noise generating activities would not commence until 30 minutes following the fauna leaving the zone.	C	Completed	Compliant	

	Ausgrid Seagrass Rehabilitation Plan				
C7	Prior to commencement of construction, the Applicant shall notify DPI (Fisheries) and Ausgrid of the commencement date and schedule of dredging operations and keep them informed during dredging operations.	C	Completed	Compliant	
	Aquatic Health Management Plan				
C8	Prior to commencement of construction, or as otherwise agreed by the Director-General, the Applicant shall prepare (and implement following approval) an Aquatic Health Management Plan in consultation with OEH and DPI (Fisheries). The Plan must: (a) be prepared by a person who has been approved in writing by the Director-General; (b) include baseline aquatic surveys and data to confirm the distribution and condition of sensitive marine receivers, with appropriate consideration of seasonal variations, and identification of potential no-go areas; (c) identify representative monitoring locations which can be used to determine the distribution and condition of sensitive marine receivers, taking into account the Ausgrid seagrass rehabilitation project; (d) identify performance measures to assess the distribution and condition of the sensitive marine receivers during dredging; and (e) include an aquatic health monitoring program to be to be followed for the duration of dredging including the frequency and procedures for surveys, monitoring and visual observations.	C	Completed	Compliant	
C9	Within twelve (12) months of completing the post dredging water quality monitoring required by Condition C3(e), unless otherwise agreed to in writing by the Director-General, the Applicant shall submit a report to the Director-General, EPA, OEH, DPI (Fisheries) and SPC setting out whether dissolved and sediment-bound TBT and suspended sediment concentrations generated and dispersed by dredging are likely to have affected the distribution and condition of the sensitive marine receivers compared to baseline conditions drawing on all sediment and water quality and aquatic health monitoring data required to be collected by conditions C3 and C8.	C	Completed	Compliant	

C10	If considered necessary by the Director-General, the Applicant shall identify rehabilitation (and monitoring) or offset measures to be implemented to compensate for any adverse impacts to sensitive marine receivers identified in the report required by condition C9 attributable to the Development to the written satisfaction of the Director-General.	C	Completed	Compliant	
	COASTAL AND HYDRODYNAMICS				
C11	Pre, during and post dredging, the Applicant shall (unless otherwise agreed to in writing by the Director General) undertake monitoring of coastal and hydrodynamic processes on Silver Beach.	C	Completed	Compliant	
C12	Within three (3) months of completing the post dredging monitoring, the Applicant shall submit a report to the Director General and SPC documenting the results of this monitoring to confirm that impacts to coastal and hydrodynamic processes on Silver Beach are no greater than those predicted in the EIS and will not result in significant ongoing residual impacts to the beach (including impacts to associated aquatic habitat such as intertidal habitat at Silver Beach).	C	Completed	Compliant	Identified as an Administrative Non-Compliance in 2016 IEA Refer to Appendix 1: Status of Caltex Actions Arising from 2016 IEA.
C13	Where Development related impacts are identified to be significantly higher than those predicted, the Applicant shall identify measures to counteract any beach depletion impacts at Silver Beach and identify whether monitoring of other locations in Botany Bay are warranted and/or require rehabilitation.	C	Statement	Not Triggered	
C14	If considered necessary by the Director-General, the Applicant shall identify rehabilitation (and monitoring) or offset measures to be implemented to compensate for any adverse impacts to coastal and hydrodynamic processes identified in the report required by condition C13 attributable to the Development to the written satisfaction of the Director-General.	C	Completed	Compliant	

	NOISE AND VIBRATION				
	Construction Hours				
C15	With the exception of dredging and sub berth upgrade works, all construction works including all high noise generating works (such as piling and rock revetment) shall be confined to standard working hours: (a) 7:00am to 6:00pm Mondays to Fridays, inclusive; and (b) 8:00am to 1:00pm Saturdays; and (c) at no time on Sundays or public holidays. The upgrade of the sub berth may be undertaken during the additional hours of 1.00 pm and 6.00 pm on Saturdays and 8.00 am and 6.00 pm on Sundays. Dredging associated with the Development may be undertaken on a 24 hour basis, 7 days a week.	C	Completed	Compliant	
C16	Construction works outside of the work hours identified in condition C15 may be undertaken in the following circumstances: (a) works that are inaudible at nearest sensitive land receivers; (b) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; (c) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm; (d) works approved through an approved EPL; or (e) works as approved through the out-of-hours work protocol outlined in the Construction Noise and Vibration Management Plan required under condition C36(b).	C	Completed	Compliant	
	Construction Noise and Vibration				
C17	The Development shall be constructed with the aim of achieving the construction noise management levels detailed in the Interim Construction Noise Guideline (DECC, 2009). All feasible and reasonable noise mitigation measures shall be implemented and any activities that could exceed the construction noise management levels shall be identified and managed in accordance with the Construction Noise and Vibration Management Plan required under condition C36(b). This shall include the implementation of respite periods in response to noise complaints, particularly in relation to high noise generating activities (including piling and rock revetment).	C	Completed	Compliant	

C18	The Applicant shall undertake attended monitoring on a monthly basis during construction works outside of standard construction hours and at the commencement of and during high noise generating works (including piling and rock revetment) to confirm noise levels at residences along Prince Charles Parade and at the Ranger's residence at Kamay Botany Bay National Park.	C	Completed	Compliant	
C19	The Development shall be constructed with the aim of achieving the following construction vibration goals: (a) for structural damage, the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration - effects of vibration on structures; and (b) for human exposure, the acceptable vibration values set out in the Environmental Noise Management Assessing Vibration: A Technical Guideline (Department of Environment and Conservation, 2006).	C	Statement	Not triggered	Identified as a Low Risk Non-Compliance in 2016 IEA. Refer to Appendix 1: Status of Caltex Actions Arising from IEA. Learnings from this non-compliance have been applied to the Demolition project. Vibration monitoring was employed for felling of large structures and all other activities where vibration is seen as a potential risk. As part of land based demolition activities.
	HERITAGE MANAGEMENT				
	Maritime Management				
C20	Prior to the commencement of construction, the Applicant shall commission an appropriately qualified maritime archaeologist to: (a) undertake magnetic or side sonar scans of the Development site to determine the presence of any previously unidentified items of maritime heritage (including ship wrecks) to the satisfaction of the Heritage Council of NSW; and (b) should any items be identified, develop a management strategy for the items during the	C	Completed	Compliant	

	construction and operation of the Development in consultation with the Heritage Council of NSW.				
C21	The management strategy shall be submitted for the Director General's approval providing written evidence of consultation and agreement with the recommendations from the Heritage Council of NSW. Construction must not commence in the area where items have been uncovered until written approval has been received from the Director General for the management strategy.	C	Completed	Compliant	
	Archival Record				
C22	Prior to the commencement of construction, the Applicant shall commission an appropriately qualified heritage expert to undertake archival recording of the existing fabric and operation of the Kurnell Wharf, in particular the existing infrastructure at Fixed Berth 1, which would be replaced as part of the Development. The archival recording shall be submitted to the Heritage Council of NSW Library prior to the removal or demolition of any existing elements.	C	Completed	Compliant	Undertaken in combination with the equivalent actions in SSD5544
	Potential for Discovery of Aboriginal and Non-Aboriginal Heritage Objects				
C23	If during the course of construction the Applicant becomes aware of any previously unidentified heritage object(s), all work likely to affect the object(s) shall cease immediately and the Heritage Council of New South Wales shall be notified immediately in accordance with section 146 of the Heritage Act 1977. Relevant works shall not recommence until written authorisation from the Heritage Council of NSW is received by the Applicant.	C	Statement	Not triggered	
C24	If during the course of construction the Applicant becomes aware of any previously unidentified Aboriginal object(s), all work likely to affect the object(s) shall cease immediately and the OEH informed in accordance with section 89A of the National Parks and Wildlife Act 1974. Relevant works shall not recommence until written authorisation from OEH is received by the Applicant.	C	Statement	Not triggered	

	AIR QUALITY MANAGEMENT				
	Odour Impacts				
C25	The Applicant shall implement an odour screening protocol for sediments excavated during dredging and implement all feasible and reasonable mitigation measures to ensure that odour generation during dredging do not exceed an odour limit of 2 odour units at the nearest residential receivers during the construction works.	C	Statement	Not triggered	
	Dust Generation				
C26	The Applicant shall implement all feasible and reasonable mitigation measures to ensure that the Development is constructed in a manner that minimises dust emissions from the site, including wind-blown and traffic-generated dust and tracking of material onto public roads. All works shall be undertaken with the objective of preventing visible emissions of dust from the site. Should such visible dust emissions occur at any time, the Applicant shall identify and implement all feasible and reasonable dust mitigation measures, including cessation of relevant works, as appropriate, such that emissions of visible dust cease	C	Project Completed	Compliant	
	TRANSPORT AND ACCESS				
	Construction Access				
C27	The designated construction access route for the delivery of materials for construction purposes shall be via Captain Cook Drive, Prince Charles Parade and Solander Street. Unless otherwise agreed to by the Director General (supported by appropriate traffic and transport justification), at no time shall construction vehicles use residential streets in Kurnell for construction access. Should any additional roads be agreed to by the Director General for construction access, these roads would be subject to the requirement for a road dilapidation survey and report to be prepared prior to their use as identified in condition C28.	C	Project Completed	Compliant	

	Road Dilapidation				
C28	Prior to the commencement of construction, The Applicant shall commission an independent and qualified person or team to undertake a road dilapidation survey of all roads proposed to be used for construction material haulage as specified in condition C27 and prepare a Road Dilapidation Report. The report shall assess the current condition of the road and describe mechanisms to restore any damage that may result due to traffic and transport related to the construction of the Development. The Report shall be submitted to the relevant road authority for review prior to the commencement of construction vehicle haulage. Following completion of construction, a subsequent report shall be prepared to assess any damage that may have resulted from the construction of the Development. Measures undertaken to restore or reinstate roads affected by the Development shall be undertaken in a timely manner, in accordance with the reasonable requirements of the relevant road authority, and at the full expense of the Applicant.	C	Completed	Compliant	Identified as an Administrative Non-Compliance in 2016 IEA Refer to Appendix 1: Status of Caltex Actions Arising from IEA.
C29	The Applicant shall provide sufficient parking facilities at its temporary laydown facility for construction personnel and heavy vehicles to ensure that construction traffic associated with the Development does not utilise public and residential streets or public parking facilities for parking.	C	Statement	Not triggered	
	PROPERTY IMPACTS				
C30	Any damage caused to property or public infrastructure as a result of the Development shall be rectified or the property or asset owner appropriately compensated, within a reasonable timeframe, with the costs borne by the Applicant.	C	Statement	Not triggered	
	WASTE MANAGEMENT				
	Waste Management On-site				
C31	The Applicant shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997, if such a licence is required in relation to that waste.	C	Statement	Not triggered	

C32	The Applicant shall maximise the reuse and/or recycling of waste materials generated on site, to minimise the need for treatment or disposal of those materials outside the site.	C	Statement	Not triggered	
C33	The Applicant shall ensure that all liquid and/or non-liquid waste generated on the site is assessed and classified in accordance with Waste Classification Guidelines (DECC, 2008), or any future guideline that may supersede that document and where removed from the site is only directed to a waste management facility lawfully permitted to accept the materials.	C	Statement	Not triggered	
	ENVIRONMENTAL REPRESENTATIVE				
C34	Prior to the commencement of construction, or as otherwise agreed by the Director General, the Applicant shall nominate for the approval of the Director General a suitably qualified and experienced Environmental Representative(s) that is independent of the design, construction and operational personnel. The Applicant shall employ the Environmental Representative(s) for the duration of construction, or as otherwise agreed by the Director General. The Environmental Representative(s) shall: (a) be the principal point of advice in relation to the environmental performance of the Development; (b) monitor the implementation of environmental management plans and monitoring programs required under this consent and advise the Applicant upon the achievement of these plans/ programs; (c) have responsibility for considering and advising the Applicant on matters specified in the conditions of this consent, and other licences and consents related to the environmental performance and impacts of the Development; (d) be given the authority to review and confirm whether works associated with the Development are classified as Construction (or not) under this development consent, and if classified as Construction, advise on the relevant pre-Construction and Construction requirements that the works would be subject to under this consent; (e) be given the authority to approve/ reject minor amendments to the Construction Environment Management Plan. What constitutes a “minor”	C	Completed	Compliant	

	amendment shall be clearly explained in the Construction Environmental Management Plan required under condition C35; (f) be given the authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, to direct that relevant actions be ceased immediately should an adverse impact on the environment be likely to occur; and (g) be consulted in responding to the community concerning the environmental performance of the Development where the resolution of points of conflict between the Applicant and the community is required.				
	CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN				
C35	Prior to the commencement of construction, or as otherwise agreed by the Director General, the Applicant shall prepare and implement (following approval) a Construction Environmental Management Plan for the Development. The Plan shall outline the environmental management practices and procedures that are to be followed during construction, and shall be prepared in consultation with the relevant government agencies and in accordance with the Guideline for the Preparation of Environmental Management Plans (Department of Infrastructure, Planning and Natural Resources, 2004). The Plan shall include, but not necessarily be limited to: (a) a description of activities to be undertaken during construction of the Development (including staging and scheduling); (b) statutory and other obligations that the Applicant is required to fulfil during construction, including approval/consents, consultations and agreements required from authorities and other stakeholders under key legislation and policies; (c) a description of the roles and responsibilities for relevant employees involved in the construction of the Development, including relevant training and induction provisions for ensuring that employees, including contractors and sub-contractors are aware of their environmental and compliance obligations under these conditions of consent;	C	Completed	Compliant	Identified as an Administrative Non-Compliance in 2016 IEA Refer to Appendix 1: Status of Caltex Actions Arising from IEA.

	(d) an environmental risk analysis to identify the key environmental performance issues associated with the construction phase; and (e) details of how environmental performance would be managed and monitored to meet acceptable outcomes, including what actions will be taken to address identified potential adverse environmental impacts (including any impacts arising from the staging of the construction of the Development). In particular, the following environmental performance issues shall be addressed in the Plan: (i) sediment and water quality management within the Bay; (ii) marine ecology management; (iii) noise and vibration; (iv) odour and air quality management; (v) traffic and access (vi) management of Aboriginal and non-Aboriginal heritage; (vii) waste management; (viii) emergency, including spill management; (ix) compounds and ancillary facilities management; (x) operational and navigation safety during construction within the Bay; and (xi) means for assessing (and where identified) for managing interactions and cumulative impacts from the concurrent construction of other development works in the area should these coincide with the Development (e.g. the Caltex Refinery upgrade works). (f) The Plan shall be submitted for the approval of the Director General prior to the commencement of construction. The Plan may be prepared in stages, however, construction works shall not commence until written approval has been received from the Director General. The approval of a Construction Environmental Management Plan does not relieve the Applicant of any requirement associated with this development consent. If there is an inconsistency with an approved Construction Environmental Management Plan and the conditions of this development consent, the requirements of this development consent prevail.				

C36	As part of the **Construction Environmental Management Plan** for the Development required under condition C35 the Applicant shall prepare and implement (but not necessarily be limited to) the following: (a) a **Dredging and Spoil Management Plan** to address the management of sediment and water quality during dredging within the Bay, prepared in consultation with the EPA and including, but not necessarily be limited to: (i) a Sediment and Water Quality Monitoring Program in accordance with the requirements of condition C3; (ii) measures to address the management and monitoring of any potential acid sulphate soils excavated during dredging in the Bay to prevent their oxidation into actual acid sulphate soils prior to: final re-use or disposal, including contingency measures to be implemented in case of acid generation; and (iii) a Spill Control Plan; (b) a **Construction Noise and Vibration Management Plan** to detail how construction noise and vibration impacts will be minimised and managed. The Plan shall be consistent with the guidelines contained in the Interim Construction Noise Guidelines (DECC, 2009) be prepared in consultation with the EPA. The Plan shall include, but not necessarily be limited to: (i) identification of sensitive land receivers and relevant construction noise and vibration goals applicable to the Development stipulated in this consent; (ii) details of construction activities and an indicative schedule for construction works; including the identification of key noise and/or vibration Generating construction activities (based on representative construction scenarios, including at ancillary facilities) that have the potential to generate noise and/or that have the potential to generate noise and/or vibration impacts on surrounding sensitive land receivers, particularly residential areas that have the potential to generate noise and/or vibration impacts on surrounding sensitive land receivers, particularly residential areas; (iii) identification of feasible and reasonable measures proposed to be implemented to minimise and manage construction noise and vibration impacts with particular consideration to works outside of standard construction hours; (iv) a description of how the effectiveness of these actions and measures would be monitored during the proposed works, clearly indicating how often his monitoring would be conducted, the locations where monitoring would	C	Completed	Compliant	

	take place, how the result of this monitoring would be recorded and reported, and, if any exceedance is detected, how any non- compliance would be rectified; and (v) an out-of-hours work (OOHW) protocol for the assessment, management and approval of works outside of standard construction hours (not already allowed under this consent) as defined in condition C16, including a risk assessment process under which an Environmental Representative may approve out-of-hour construction activities deemed to be of environmental risk and refer high risk works for the Director General's approval. The OOHW protocol shall detail standard assessment, mitigation and notification requirements for high and low risk out-of -hour works, and detail a standard protocol for referring applications to the Director General; (c) an **Air Quality Management Plan** outlining procedures to be implemented to monitor and manage odour and dust generation from the Development site in accordance with conditions C25 and C26; and d) a **Construction Traffic and Access Management Plan** to manage and minimise access and traffic impacts associated with the Development particular to residential streets at Kurnell, focusing on those periods (such as the concrete pour period) when peaks in traffic generation are expected to occur. The sub-plan shall include, but not necessarily be limited to: (i) identification of designated construction traffic access routes and periods of high traffic generation; (ii) details of designated vehicle parking, turning areas and ingress and egress points into temporary construction work compounds/ laydown areas; and (iii) how shift changes and delivery times shall be restricted to standard day time hours where practicable; (iv) details of management measures to minimise traffic impacts, including avoiding vehicle queuing and parking on public roads, safe pedestrian access and disruptions to traffic.				

	SCHEDULE D – COMMUNITY INFORMATION AND REPORTING				
	COMMUNITY INFORMATION AND REPORTING				
	COMMUNITY INFORMATION, CONSULTATION AND INVOLVEMENT				
	Community Consultation				
D1	The Applicant shall continue the existing community consultative committee for the life of the Development with the Kurnell community.	C	Active/ongoing	Compliant	
D2	Prior to the commencement of construction the Applicant shall prepare (and following approval) implement a Community Consultation Plan, for the approval of the Director General to identify the consultation and notification procedures that would be undertaken during the construction of the Development to keep the general community and stakeholder groups informed of the construction works and measures to minimise impacts to these groups. The Plan shall include but not be limited to: (a) identification of key stakeholder groups that require notification and engagement on the construction works including (but not necessarily limited to): (i) recreational users of the Bay such as recreational fishing and boating groups and divers; (ii) users of Silver Beach; (iii) residents along Prince Charles Parade; (iv) the local community at Kurnell; (v) DPI (Fisheries) personnel working on the Ausgrid cable laying project seagrass rehabilitation site; and (vi) Local Council; (b) key matters on which these stakeholders groups would be kept informed of including: the commencement of construction works, access restrictions and exclusion zones within the Bay and near Silver Beach, the commencement and location of dredging, high noise generating works, traffic disruptions and means for providing comment or complaints on the Development; (c) procedures for engagement with and notification of these stakeholder groups by means that best targets each stakeholder group (e.g. on site signage, newspaper notifications, letter box drops, website updates, community meetings, notifications in stakeholder specific websites such as recreational fishing posts etc.), including frequency of notification; and	C	Completed	Compliant	**2019 Update**: The Kurnell terminal continues to use the Community Consultation/Engagement Plan. The Plan will be reviewed at the end of the Demolition works and amended, as needed

	(d) the means for ongoing engagement (as required) with relevant public authorities (e.g. EPA, OEH, DPI (Fisheries), Sydney Ports Corporation, Council and the Department) and notification in the case of an environmental incident.				
	Complaints and Enquiries Procedure				
D3	Prior to the commencement of construction, or as otherwise agreed by the Director General, the Applicant shall ensure that the following are available for community enquiries and complaints for the duration of construction: (a) a 24 hour telephone number(s) on which complaints and enquiries about the Development may be registered; (b) a postal address to which written complaints and enquires may be sent; (c) an email address to which electronic complaints and enquiries may be transmitted; and (d) a mediation system for complaints unable to be resolved.	G	Active/ongoing	Compliant	
D4	The telephone number, the postal address and the email address shall be published in newspaper(s) circulating in the local area prior to the commencement of construction and prior to the commencement of operation. This information shall also be provided on the website (or dedicated pages) required by this consent.	G	Completed	Compliant	
D5	Prior to the commencement of construction, or as otherwise agreed by the Director General, the Applicant shall prepare and implement a Construction Complaints Management System consistent with AS 4269: Complaints Handling and maintain the System for the duration of construction and up to 12 months following completion of the Development. Information on all complaints received, including the means by which they were addressed and whether resolution was reached, with or without mediation, shall be maintained as part of the System and included in the construction compliance reports required by this consent. The information contained within the System shall be made available to the Director General on request.	G	Completed	Compliant	
	Provision of Electronic Information				
D6	Prior to the commencement of construction, or as otherwise agreed by the Director General, the Applicant shall establish and maintain a new website, or dedicated pages within an existing website, for the provision of electronic information associated with the Development, for the duration of construction and for 12 months following completion of the Development. The Applicant	G	Active/ongoing	Compliant	

	shall, subject to confidentiality, publish and maintain up-to-date information on the website or dedicated pages including, but not necessarily limited to: (a) information on the current implementation status of the Development; (b) a copy of the documents referred to under condition B1 of this consent, and any documentation supporting modifications to this consent that may be granted from time to time; (c) a copy of this consent and any future modification to this consent; (d) a copy of each relevant environmental approval/consent, licence or permit required and obtained in relation to the Development; (e) a copy of each current strategy, plan, program or other document required under this consent; (f) the outcomes of compliance tracking in accordance with condition D7 of this consent; and (g) details of contact point(s) to which community complaints and enquiries may be directed, including a telephone number, a postal address and an email address.				

	COMPLIANCE MONITORING AND TRACKING				
	Compliance Tracking program				
D7	The Applicant shall develop and implement a Compliance Tracking Program to track compliance with the requirements of this consent. The Program shall be submitted to the Director General for approval prior to the commencement of construction and operate for a minimum of one year following commencement of operation, subject to the Director General's review of the outcomes of the environmental auditing referred to in condition F1. The Program shall include, but not necessarily be limited to: (a) provisions for the notification of the Director General prior to the commencement of construction and prior to the commencement of operation of the Development (including prior to each stage, where works are being staged); (b) provisions for periodic review of the compliance status of the Development against the requirements of this consent; (c) provisions for periodic reporting of compliance status to the Director General, including a Pre- Construction Compliance Report, construction reporting, and a Pre-Operation Compliance Report; (d) a program for independent environmental auditing in accordance with ISO 19011:2003 - Guidelines for Quality and/ or Environmental Management Systems Auditing during construction; (e) mechanisms for recording environmental incidents during construction and actions taken in response to those incidents; (f) provisions for reporting environmental incidents to the Director General and relevant public authorities during construction; (g) procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management; and (h) provisions for ensuring all employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent relevant to their respective activities.	G	Completed for the project	Currently Compliant	Identified as a Low Risk Non-Compliance in 2016 IEA. Refer to Appendix 1: Status of Caltex Actions Arising from IEA. The Loss prevention system (LPS) is in place which includes Recording complaints and incidents LPS handbook available on the Caltex safety homepage LPS is included in staff training. Sighted training records indicating inductions and environmental awareness training has been completed for staff and contractors. LPS observations (LPO) sighted; 10/7/17 ship unloading 11/7/17 Tank dipping and gauging LPS procedures were verified to be established

	Incident Reporting				
D8	The Applicant shall notify the Director General of any incident with actual or potential significant off-site impacts on people or the biophysical environment within 24 hours of becoming aware of the incident. The Applicant shall provide full written details of the incident to the Director General within seven days of the date on which the incident occurred.	G	Active/ongoing	Compliant	Refer to Sections 1.6 and Table 12 of this report for details of the events reported to the EPA and DPE
D9	The Applicant shall meet the requirements of the Director General to address the cause or impact of any incident, as it relates to this consent, reported in accordance with condition D8 of this consent, within such period as the Director General may require.	G	Project Completed	Compliant	
	SCHEDULE E – OPERATION ENVIRONMENTAL MANAGEMENT				
	HAZARD AND RISK				
	Safety Management System				
E1	At least two months prior to the commencement of commissioning, the Applicant shall update its Safety Management System to include any changes due to the development. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. Records shall be kept on-site and shall be available for inspection by the Director General upon request. The updated Safety Management System shall be developed in accordance with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'.	G	Completed Safety Case was submitted to SafeWork NSW 13/1/17 SafeWork NSW Review undertaken again in 2019	Compliant	**2019 Update**: Terminal continues to hold *Major Hazardous Facility* approval
	OPERATIONAL ENVIRONMENTAL MANAGEMENT				
E2	Prior to the commencement of operation, the Applicant shall incorporate the Development into any existing environmental management systems administered by the Applicant and prepared in accordance with the AS/NZS ISO 14000 Environmental Management System series.	G	Completed	Compliant	

	SCHEDULE F – ENVIRONMENTAL MONITORING AND AUDITING				
	ENVIRONMENTAL MONITORING AND AUDITING				
F1	**Environmental Auditing**				
	Within one year of the commencement of operations and for a period of at least 5 years thereafter (unless otherwise agreed to by the Director General), the Applicant shall fund a full independent environmental audit. The audit shall be undertaken by a suitably qualified person/team approved by the Director General. The audits shall be made publicly available and would: (a) be carried out in accordance with ISO 14010 – Guidelines and General Principles for Environmental Auditing and ISO 14011 –Procedures for Environmental Auditing; (b) assess compliance with the requirements of this consent, and other licences and approvals that apply to the development; (c) assess the construction against the predictions made and conclusions drawn in the development application and EIS; (d) review the effectiveness of the environmental management of the development, including any environmental impact mitigation works and mitigation implemented to address matters identified in pervious audits; and (e) where required identify any additional or ongoing monitoring or mitigation measures to be put in place to manage residual environmental impacts associated with the Development. A copy of the audit report and the measures proposed by the Applicant to respond to matters identified in the audit including timeframe for their implementation shall be submitted for the Director General's approval within three months of the completion of the audit, unless otherwise agreed to by the Director General.	G	Completed First IEA conducted in April 16 Second IEA Sept 2017	Compliant	Next IEA due Sept 2020

APPENDIX 3 Kurnell Site Maps

Figure A – Kurnell Regional Context and SSD5544 Development Consent Boundaries

Figure B - Demolition Work Zones

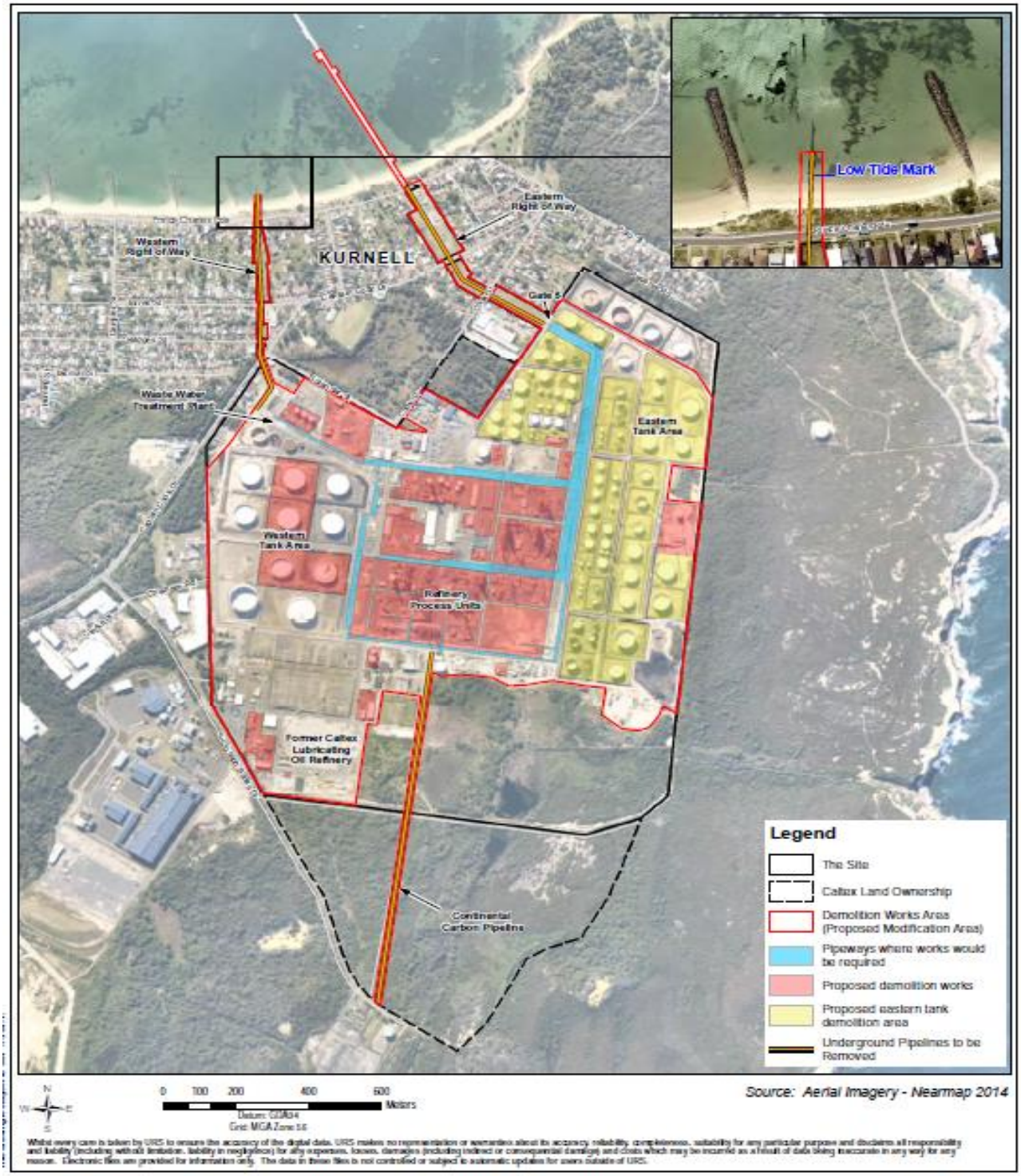


Figure C - Asbestos Contaminated Soil (ACS) Management Works

Figure D - Plot Plan A1-18588 titled " Environment Protection Licence Identification Points", Version 6, dated 21 June 2018.