



Our reference: LIC06/45-31:DOC13/7129:CP
Contact: Craig Patterson (02) 4224 4100

Department of Planning and Infrastructure
(Attention: David White)
GPO Box 39
SYDNEY NSW 2001

Dear Mr White

EXHIBITION OF ENVIRONMENTAL IMPACT STATEMENT (SSD_5353)
CALTEX KURNELL PORT AND BERTHING FACILITY PROJECT, BOTANY BAY

I am writing in response to the above State Significant Development and the exhibition of the Development Application and Environmental Impact Statement (EIS) from 28 February to 5 April 2013.

The Environment Protection Authority (EPA) has reviewed the proposal and has no objection to the proposal proceeding as described in the EIS subject to the comments outline in this letter and attachment.

In assessing the proposal EPA identified a number of broader environmental issues that Department of Planning and Infrastructure (DP&I) should consider and clarify in its overall assessment of the application. These issues are included in **Attachment A** and include the following:

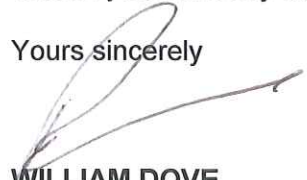
1. Environment Protection Licence
2. Project Description
3. Spoil and Contamination
4. Water and Sediment Quality
5. Noise
6. Environmental Management Plans

EPA attended a meeting with Caltex Refineries (NSW) Pty Ltd ("Caltex") on 18 March 2013 to discuss the majority of the issues identified in Attachment A. Some additional information was provided to Caltex following this meeting to assist the Company in developing its response for the Submissions Report.

EPA would appreciate receiving a copy of Caltex's response to the submissions to ensure that EPA issues have been adequately addressed. EPA also requests an opportunity to review the draft Conditions of Consent for the proposal prior to finalisation, to ensure there are no consistency issues with any future licences for the project.

Should you have any further enquiries, please contact the officer above.

Yours sincerely

for 
WILLIAM DOVE
A/ Manager Illawarra
Environment Protection Authority

10/4/13.

Att:

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ATTACHMENT A

ENVIRONMENT PROTECTION AUTHORITY COMMENTS ON EXHIBITED ENVIRONMENTAL IMPACT STATEMENT

Environment Protection Licence

- Caltex has indicated that it will apply for a non-scheduled activity licence under the *Protection of the Environment and Operations (POEO) Act 1997* for the purposes of regulating water pollution for the dredging activities.
- Should project approval be granted, Caltex will need to make a separate application to EPA to obtain this Licence prior to the dredging operations commencing.
- The conditions of the licence will be developed upon submission of the licence application form by Caltex. The Licence will need to take into consideration the information that will be provided as part of the Construction Environmental Management Plan and Dredging and Spoil Disposal Management Plan and associated sub plans. The conditions of the licence will be developed in consultation with Caltex and will likely involve the requirement to undertake water quality and noise monitoring at various locations in Botany Bay and the Kurnell area.

Project Description

- Section 4.4.4 of the Environmental Impact Statement states that for the Dredging Program there will be two rotational crews each working 12-hour shifts. Section 4.9.7 however states that crews would be working in three 8-hour shifts. Caltex should clarify this issue as more shifts may result in more frequent traffic movements to and from the site which may result in additional noise impacts.
- Figure 4-6 shows the location of the Former Anchor Hole which will be filled with clean material during the dredging operations. Figure 1-1 shows a Former Anchor Point which is in a different location to Figure 4-6. It is unclear from the EIS whether these two points are the same or whether they are two separate reference points. Caltex should clarify this issue as Figure 1-1 has been included in a Caltex Community Information Leaflet in February 2013.
- Section 4.7 outlines the specific environmental control measures that would be required to undertake the proposed works. Pages 4 to 35 describes a number of controls in relation to spill management and states that during an accident or emergency situation, operations would cease immediately with the requirement for the works' contractors to undertake any required repairs, modify their working methods and report the incident. EPA recommends that these requirements also require contractors to implement clean up and/or containment measures in the event of a spill to minimise any potential environmental impacts.
- Section 4.9.1 details the overall work schedule and states that the proposed works would commence in the second quarter of 2013. This does not appear to be consistent with Table 4-4. Whilst EPA understands that Table 4-4 includes only the construction aspect of the works, Caltex should clarify what works will commence in the second quarter.
- Table 4-4 indicates that the rock revetment works and sheet piling works will take seven weeks to complete. Page ES-7 of the Executive Summary states that these works will take 19 weeks. Given that these works will potentially be noisy, Caltex should clarify the actual duration of the works and ensure any associated noise impacts have been assessed.

Spoil and Contamination

- The values provided for Tributyltin (TBT) normalised for the Fixed Berths in Table 9.3 are lower than the values provided in Table 3.2 of Appendix D1 and Table 1 in Appendix D2. The later two tables also contain different values. The values in all three tables will need to be reviewed and updated to reflect the correct values. These values are important as Table 1 of Appendix D2 shows an exceedance of the ISGQ-high threshold where as the other two tables do not. Caltex will also need to provide an explanation as to why these values were different and whether the corrected values affect the conclusions of the assessment.
- The values provided for the elutriate TBT results for the Fixed Berths in Table 9.4 are lower than the values provided in Table 3.3 of Appendix D1. Caltex should provide a similar review of these values as required for Table 9.3 above.
- In addition to the TBT values, the values provided in Table 1 in Appendix D2 for Total Organic Carbon, Arsenic and Vanadium are different to the values provided in Table 3.2 in Appendix D1. Caltex should review the values in the Table and provide the correct values. Caltex should also advise whether the corrected values affect the conclusions of the assessment.

- The last column of Table 9 in Appendix D2 is cut off. Caltex should provide a complete copy of this Table.
- Section 9.5.5 (Page 9-12) of the EIS states that in the southern parts of the fixed berths, the central part of the sub berth, the northern end of the turning circle and the southern part of the approach channel sediment has been shown to contain highly elevated concentrations of TBT. Section 4.4.6 then states that overflow dredging would not be permitted within the fixed berths and in front of the sub berth due to the presence of contaminated sediments. It is unclear why overflow dredging would not be restricted in the other contaminated areas identified 9.5.5. Caltex should provide further explanation around this issue.

Water and Sediment Quality

- It is recognised that the project will remove TBT contaminated sediments to prevent its current and potential redistribution around the Bay due to marine processes and ship movements. However, during dredging, no significant pollution is permitted to occur within a short distance of the operation of the dredge head and split hopper barges. The aim of the project should be to fully minimise the dispersal of TBT around the Bay and minimise TBT being dissolved into the water column, rather than base the decision on acceptable levels of accumulation in other areas. These areas (which have not been tested) may already be affected by TBT from shipping movement over the TBT contaminated areas and additional TBT deposition could lead to an exceedance of the sediment quality guidelines. Further information is requested on the practical measures that could be taken to further mitigate the dispersal of TBT affected sediments and generation of dissolved sediments in the water column.
- The proposal to not use overflow dredging in areas with highly elevated TBT and the fixed berths is supported. However, due to the nature of TBT impacts at very low concentration, further restrictions on overflow dredging should be defined. It is recommended that overflow dredging should only occur in areas uncontaminated by TBT based on ANZECC 2000 sediment quality guidelines (ISQG-low). If overflow dredging is proposed on sediment with levels above the ANZECC (2000) sediment quality low guideline, then further information is requested on the likely concentration of TBT in the water column in the initial (near field) mixing zone of the proposed overflow dredging. ANZECC (2000) water quality guidelines for TBT will need to be achieved at the edge of an initial (near-field) mixing zone during any overflow dredging.
- It is also recommended that further options are assessed to:
 - capture sediment that would otherwise fall into the water across slewing zones
 - use any bucket head options or dredging procedures that minimise the amount of water removed (for example, "clamshell" bucket if different to the currently proposed "closed" bucket)
 - further mitigate TBT and fine sediment dispersal using modified dredging methods, including the method and rate of operating the dredge head and use of outgoing tides
 - use silt curtains around barges used for the proposed local reuse of uncontaminated sediment within the Bay, prior to opening the hopper; and
 - deploy silt curtains around any non dredging activities that may generate sediment including sheet piling activities in the berth works.
- Section 10.4.5 states that modelling the dispersion and deposition of sediment has involved the assessment of three simulation scenarios representing dredging the fixed berths, sub berth and the approaches. However modelling scenario locations provided in Figure 10-1 do not appear to cover the sub berth location. Caltex should clarify this matter.
- Section 10.6.3 (Page 10-16) states that *"It is predicted that only above 15mm of deposition (largely within the dredge footprint, see Figure 10-3) would there be an exceedance of the ISQG-low threshold limit"*. The sediment deposition scale provided in Figure 10-3 does not clearly demonstrate that above 15mm of deposition is largely within the dredge footprint. Figure 10-3 should be revised to reflect the value provided in Table 10-3 so it is clear that the predicted deposition would not result in a sediment bound TBT concentration of less than 5ugSn/kg outside the project site, particularly near the Kurnell Wharf, aquaculture site and Kamay Botany Bay National Park.
- Figures 7.1 to 7.6 of Appendix C show the dispersion of the mean elutriate Tributyltin (TBT) concentrations from each of the dredged areas using the 95 percentile. The plots assume the maximum elutriate TBT concentration being produced at the sea bed and through overflow operations. All of the Figures show no concentration of TBT despite page 10-18 of the EIS stating that *"The elutriate tests conducted on sediments confirm their potential to generate TBT at concentrations exceeding the threshold limits for water quality in Table 10-1"*. Caltex should review the Figure provided in Appendix C and provide an explanation for this discrepancy. If it is determined that the Figure provided are incorrect then a new set of Figures should be developed.

- Sections 10.7.3 and 10.7.4 of the EIS describes the water quality monitoring that will be undertaken to verify the results of the modelling and that will form part of a Sediment and Water Quality Monitoring Program. Caltex has proposed to undertake pH and dissolved oxygen (DO) monitoring in parallel to turbidity monitoring at the limit of the project site. It has been proposed that turbidity monitoring will also be conducted within the aquaculture lease area and at a number of locations within the limits and extent of the seagrass beds close to the project site. The EIS does not mention whether pH and DO will also be monitored at these locations. EPA recommends that pH and DO monitoring be undertaken at the same locations as turbidity.

Noise

- Construction Noise Scenarios 5, 7 and 8 listed in Table 13-1 of the EIS includes additional activities (rock pile (Scenario 5 & 7) and mobile crane (Scenario 8)) to what was modelled in Table 7-3 of Appendix G. The additional activities have the potential to increase the predicted noise levels from the each of these scenarios. Caltex should clarify whether the additional activities will significantly increase the predicted noise levels when these works are being carried out and whether the construction activities still comply with the project specific noise criteria.
- Table 7-2 of Appendix G does not include noise levels for all the identified noise sources/activities identified in the eight construction noise scenarios. The activities that are missing include rig power pack, water jet pump, rock pile and auxiliary boats. It is unclear from the information provided whether the noise levels of these activities have been included in the noise model predictions. It is also unclear whether the predicted noise levels for each noise scenario include all the activities listed. Should it be determined that the predicted noise levels for each scenario do not include the missing activities then the predicted noise levels may have been under estimated. Caltex should clarify this issue to demonstrate that the noise model has included all specified activities and their associated noise levels and that the predicted noise levels for each scenario are correct.
- Table 13-4 identifies the noise management criteria applicable to each sensitive receptor. Kamay Botany Bay National Park has been classed as an Active Recreation Area which is subject to a higher noise criteria than a Passive Recreation Area. Based on the definitions of Active and Passive Recreation Areas provided in Table 13-3, Kamay Botany Bay National Park should be classified as a Passive Recreation Area and be subject to the lower noise criteria. Based on the predicted construction noise levels provided in Tables 13-5 and 13-6, the lower noise criteria is still complied with.
- Section 13.7.1 outlines the noise mitigation measures proposed for the works. On Page 13-22 under General Noise Management it states that for works taking place outside standard working hours, monthly attended noise monitoring would be undertaken to verify levels along Prince Charles Parade. Draft EIS made reference to monitoring at Rangers House. There is no reference to Rangers House in the final EIS. Notwithstanding this, EPA recommends that Caltex undertake attended noise monitoring at both Prince Charles Parade and Rangers House to verify noise levels at these locations.
- Noise Mitigation Measure 4 on Page 13-24 (and G4 in Chapter 19) includes a Noise Monitoring Program that can be used to demonstrate exceedences are limited to 3dB(A). It also states that contingency actions would be taken if noise emissions were found to be approaching or exceeding 3dB(A). EPA does not agree with this mitigation measure as it is not acceptable to implement contingency actions after noise criteria have been exceeded. Any identified mitigation measures and contingency actions should be implemented at all times to minimise the generation of noise to the maximum extent practicable. Noise levels approaching the project specific noise criteria should be used as a guide to determine when additional mitigation measures may need to be implemented. Caltex should review this mitigation and management measure to reflect these comments.
- The following requirements for hours of construction should be considered when developing conditions of approval.
 - All construction works (excluding dredging and sub berth upgrade works) must be undertaken between the hours of 7:00am to 6:00pm Monday to Friday and Saturday 8:00am to 1:00pm, with no construction activity on Sundays and Public Holidays unless inaudible at any residential premises. The sub berth upgrade works may be undertaken between the additional hours of 1:00pm and 6:00pm on Saturday afternoons and 8:00am and 6:00pm Sundays.
 - Dredging works (including the emplacement of spoil and associated activities) may be undertaken continuously for approximately 23 weeks.
 - Appropriate respite periods should be implemented to address any noise complaint(s) associated with any construction noise (including piling and rock revetment activities) and any loud construction works.
 - The above construction hours would not apply to the delivery of material outside the hours of operation, if that delivery is required by police or other authorities for safety reasons; and/or the

operation or personnel or equipment are endangered. In such circumstances, prior notification must be provided to the Department of Planning and Infrastructure (DPI) and affected residents as soon as possible or within a reasonable period in the case of emergency.

Environmental Management Plans

- Section 19 of the EIS outlines the preparation and development of a Construction Environmental Management Plan (CEMP) and a Dredging and Spoil Disposal Management Plan (DSDMP) to manage the proposed works. A number of sub plans have also been identified including but not limited to:
 - Spill Control Plan
 - Sediment and Water Quality Monitoring Program
 - Noise Management Plan
 - Port Operating Procedure and Marine Works Management Plan; and
 - Waste and Resource Management Plan.
- All Management Plans should be completed prior to the commencement of construction activities. Appropriate procedures should also be developed for reviewing and improving the requirements of each plan where considered necessary over the life of the proposed works.
- In addition to the Plans listed in the EIS, EPA recommends that the proponent also develop a Community Consultation Plan (CCP) as a sub plan to the CEMP. The CCP shall include, but not necessarily be limited to:
 - (a) procedures for consulting and notifying nearby residents of the commencement of the construction activities. This should include procedures for providing written notification to residents and include notification to the Kurnell Progress and Precinct Committee
 - (b) procedures for consulting and notifying nearby residents at appropriate stages throughout the construction activities of any specific works that may result in potential noise impacts
 - (c) details of a telephone complaints line (including a daytime and an after hours contact phone number) for the purposes of receiving any complaints or enquiries from members of the public in relation to the construction activities
 - (d) contact details of relevant site persons responsible for following up complaints
 - (e) procedures for handling and monitoring all complaints received by the proponent; and
 - (f) details of proposed contingency measures to be implemented where complaints are received.
- The CCP should be developed in consultation with EPA's Interim Construction Noise Guidelines and ensure that appropriate noise management tools including community engagement have been duly considered.
- The Sediment and Water Quality Monitoring Program should be developed in consultation with EPA and include a Monitoring Program for baseline and ongoing water quality and ecological health assessments. A key requirement of this Plan will be clearly defining the locations where overflow dredging may be permitted and how the dredging operations will be controlled and monitored to minimise the dispersal of sediments and TBT within the waters of Botany Bay. Appropriate management controls should be detailed in the program including limiting or temporarily suspending overflow dredging and controlling the spill rate. Overflow dredging must not occur in areas where the sediment has been shown to contain highly elevated concentrations of TBT.
- The Noise Management Plan should be developed in consultation with EPA to address potential noise impacts associated with the construction activity. The Plan should include the recommended feasible and reasonable noise mitigation measures listed in the Noise Impact Assessment and detail the proposed performance evaluation procedures (including noise monitoring) to assess the effectiveness of these measures and any potential impacts on sensitive receptors.