



Our ref: DOC25/557257-12

14 August 2025

Pamela Morales
Department of Planning, Housing and Infrastructure

Via: Major Projects Portal

EPA Advice on Modification Report – Kurnell Terminal – SSD-5544 MOD-7

Dear Pamela

I am writing in response to your request for the NSW Environment Protection Authority (EPA) to review the Modification report for the proposed Kurnell terminal (Application SSD-5544-MOD-7) at 2 Solander Street Kurnell.

The EPA has reviewed the following documents:

- *Kurnell Terminal SSD-5544 MOD-7 Modification report* – AECOM Australia Pty Ltd – 12 May 2025
- *Kurnell Terminal SSD-5544 MOD-7 Appendix N - Air Quality Impact Assessment* – AECOM Australia Pty Ltd – 12 May 2025
- *Kurnell Terminal SSD-5544 MOD-7 Appendix M - Noise and Vibration Impact Assessment (Version F)* – AECOM Australia Pty Ltd – 12 May 2025
- *Kurnell Terminal SSD-5544 MOD-7 Appendix H - Conceptual Remedial Action Plan* – AECOM Australia Pty Ltd – 12 May 2025
- *Kurnell Terminal SSD-5544 MOD-7 Appendix I - Surface Water, Wastewater and flooding* – AECOM Australia Pty Ltd – 12 May 2025

The EPA understands the proposal is for five stages consisting of:

Stage 1 Preparing the project area for proposed modification works.

Stage 2 Removal, relocation and augmentation of infrastructure, including:

- Relocation and/or augmentation of freshwater sewer and oily water sewer systems and construction of new operational facilities, including replacement warehouses.

Stage 3 Remediation of the site addressing legacy ground contamination, including asbestos containing soil.

Stage 4 Land forming the project area following removal of infrastructure and ground remediation activities.

Stage 5 Demobilisation of construction and remediation equipment.

NSW Environment Protection Authority

As the environmental steward and regulator of our State we are committed to a sustainable future. Join us on our mission to protect tomorrow together.

Phone:
131 555

Email:
info@epa.nsw.gov.au

Website:
epa.nsw.gov.au

Visit:
6 Parramatta Square
10 Darcy Street
Parramatta NSW 2150

Mail:
Locked Bag 5022
Parramatta NSW 2124



Based on the information provided, the proposal is subject to an environment protection licence under section 43 of the *Protection of the Environment Operations Act 1997* (POEO Act) for chemical storage clause 9 of Schedule 1 of the POEO Act.

The EPA has reviewed the Modification Report and notes that it does not provide the information required to allow us to complete our assessment. The EPA provides the following comments and recommendations to the Department of Planning, Housing and Infrastructure (DPHI) for consideration:

1. Matters to be addressed prior to determination (Attachment A)

a. Noise

2. EPA comments on Contaminated Land Remediation

The EPA has provided comments for DPHI's consideration in relation to the proposed remediation of the premises in Attachment B.

3. Matters to be addressed with conditions

The EPA recommends that DPHI considers the conditions to address air quality matters in Attachment C. **Additional conditions may be provided following review of the additional information requested in Attachment A for Noise.**

4. Minor matters

The EPA recommends that the proponent addresses the potential for sediment and dust to be tracked onto public roads. Mitigation measures should be considered and implemented that will prevent the tracking of sediment onto public roads.

If you have any questions about this request, please contact Nick Vlasoff via email at environmentprotection.planning@epa.nsw.gov.au.

Yours sincerely



CHRISTIE JACKSON
Unit Head – Environment Protection Planning
NSW Environment Protection Authority

ATTACHMENT A – MATTERS TO BE ADDRESSED PRIOR TO DETERMINATION

The EPA recommends that DPHI consider addressing the matters in this attachment prior to determination of the application and provisions of recommended conditions.

Noise and vibration

The EPA recommends additional information is provided to enable the EPA to complete its assessment of Noise and vibration impacts.

Operational Noise

1. Application of Noise policy for Industry

The noise assessment does not appear to have appropriately applied the Noise Policy for Industry (NPfl) (EPA, 2017), including the NPfl Transitional Arrangements as applicable. It appears to have only considered existing consent conditions for residential receivers and does not appear to have developed appropriate Project Noise Trigger Levels for residential receivers for the proposed modification.

The EPA understands from reviewing the documentation related to the original SSD-5544 application that the existing noise limits considered the previous refinery's operation and maintenance conditions to manage the proposed demolition and conversion works. The EPA considers that it may not be appropriate to apply these limits to ongoing terminal operations. This appears to have also been considered in Table 5 of the Director General's Assessment Report for SSD-5544 and the SSD-5544 EIS which states in Section 12.8: "Prior to the operation of the new terminal, Caltex would agree appropriate noise limits (if required) for the Site with the EPA."

The noise assessment submitted for SSD-5544 (Kurnell Refinery Conversion into a finished Product Terminal Noise and Vibration Assessment, Wilkinson Murray Pty Ltd, Version 12315 F, dated May 2013) (SSD-5544 noise assessment) assessed noise emissions from the converted premises according to the Industrial Noise Policy (INP) (EPA, 2000), including the development of Project Specific Noise Levels based on background noise monitoring. The SSD-5544 noise assessment states that after the conversion is completed, ongoing operational noise levels would meet the project specific noise levels developed using the INP.

The EPA considers that the NPfl should be used to assess Modification 7 to enable the EPA to develop appropriate noise limits for the ongoing operation of the terminal.

The EPA recommends the following information is provided for review:

- The modified premises is assessed according to the Noise Policy for Industry (EPA, 2017) which includes but is not limited to:
 - Project Noise Trigger Levels (PNTLs) are developed for the premises consistent with the NPfl.
 - The noise emissions from the modified premises are assessed against appropriate PNTLs.
 - Where noise levels are predicted to be above the PNTLs, an assessment of feasible and reasonable mitigation is presented with reference to Section 3 of the NPfl.
 - Where relevant, the NPfl Transitional Arrangements should be considered.

2. Assessed noise sources

The premises is defined in EPL 837 to include the terminal and the shipping berth. However, it's not clear how the assessment has considered noise impacts from the entire premises as it is defined.

A review of Table 9-2 of the SSD-5544 noise assessment indicates predicted noise levels of up to $L_{eq,15min}$ 39 dBA at residential receivers from the final converted premises including noise from the shipping berth. Section 8.5 of the SSD-5544 noise assessment also indicates different noise sources to the modification 7 noise assessment. The noise sources stated as assessed for each application are presented in Table 1.

Table 1 – Comparison of noise sources assessed for SSD-5544 and SSD-5544 Modification 7.

| SSD-5544 | SSD 5544 Mod 7 |
|---|---|
| Ship at berth | |
| Slop pumps (1x pump) | |
| New Product Pumps area (5x pumps) | |
| 1x Diesel Additives Injection System | |
| Compressor area (2x compressors) | |
| Chemical Drum and dosing pump (1x pump) | |
| | Jet Fuel pumps (no amount given) |
| | Gasoline transfer pumps (no amount given) |
| | Wastewater treatment air blower |
| | Wastewater pumping area |
| | Southern firewater system pumphouse (3x diesel powered pumps) |
| | Electric OWS pump |
| | Relocated diesel FWS pump |

The EPA is also aware of several other noise sources that have been installed on site that do not appear to be considered in the Modification 7 assessment including:

- B1A basin pumping station
- Pit A and B pumps
- Intermediate Seps pumping station

Therefore, it's not clear if all relevant noise sources have been considered. The Modification 7 noise assessment also does not provide an explanation or justification why different noise sources have been assessed compared to the SSD-5544 noise assessment.

The EPA recommends the following information is provided for review:

- Clarification of the noise sources associated with the modified premises and that will operate as part of the finalised terminal.
- All noise sources associated with the proposed modified premises are appropriately included in the assessment.

3. Assessment of annoying characteristics

The NPfl requires the assessment of annoying characteristics as defined in Fact Sheet C of the NPfl, including any equipment routinely used such as testing or maintenance of pumps or generators. The assessment has not provided an assessment of these characteristics including tonal, intermittency and low frequency noise.

The noise assessment states on page 32:

No penalties have been added to the pump noise levels at this stage. Despite pumps generally producing tonal noise, the total noise level at noise sensitive receivers is unlikely to be tonal due to existing background noise and environmental attenuation. If noise penalties were to be applied to the proposed new OWS pump equipment, noise levels are predicted to still be compliant with the relevant noise criteria.

Project Noise Trigger Levels for the premises do not appear to have been developed therefore it's not possible to understand how any applicable penalty would affect the outcome of the assessment. The assessment has also not demonstrated that penalties do or do not apply to the proposed noise sources including the diesel powered pumps. The potential for penalties to apply should be assessed according to the methods stated in Fact Sheet C of the NPfl.

The EPA recommends an assessment of annoying characteristics consistent with Fact Sheet C of the NPfl, is provided for review.

4. Assessment of mitigation

Notes to Table 5-6 of the noise assessment state:

In accordance with the EPA Noise Policy for Industry, exceedances of up to 2 dB are considered negligible. They would not be discernible to the average listener and therefore would not warrant receiver-based treatments or controls.

This statement is not in accordance with the NPfl. The NPfl provides a framework for assessing residual exceedances after all feasible and reasonable mitigation has been applied in certain circumstances. The noise report has not provided this assessment. All exceedances of PNTLs at sensitive receivers should be assessed for feasible and reasonable mitigation according to Section 3 of the NPfl.

The EPA recommends all exceedances of PNTLs are assessed for reasonable and feasible mitigation using the framework in the NPfl and are provided for review.

5. Presentation of noise contour maps

The noise contour maps in Appendix B only show noise levels between 50 and 60 dBA up to 80 dBA. This presentation makes it difficult to understand how noise propagates through the residential areas.

The EPA recommends the operational noise contours are presented to a minimum level of Leq,15min 35 dBA and are provided for review.

6. Receiver locations

Section 5.2.2 of the noise assessment states that all predictions were conducted at 1.5m above ground level. However, it appears that there are double storey dwellings in the vicinity of the premises on Tasman Street, Bridges Street, Reserve Road and Cook Street. These double storey receivers do not appear to have been considered in the assessment.

The EPA recommends that the noise assessment considers appropriate receiver heights for potentially affected receivers and is provided for review.

Construction Noise

The noise assessment appears to have applied the working hours from Condition C18 of the approval, however has disregarded the noise limits which apply to those working hours in Condition C16. Condition C16 of the approval states that "*the Applicant shall ensure that the construction noise generated by the Development does not exceed the criteria...*" Therefore it does not appear reasonable to apply the existing approval's working hours without also applying the construction noise limits in the same approval. In particular, the modification's predicted construction noise levels appear to exceed the limits in condition C16 at over 550 receivers during the day and evening periods in addition to more than 20 receivers experiencing noise levels above 75 dBA which is more than 25 dBA above the limits in Condition C16.

The EPA understands these historical conditions may have been for previous construction work carried out over the extended working hours of the refinery and would not exceed the noise limits in the approval. These construction works may have been carried out during periods when the refinery was still operational and/or in accordance with historic consent conditions for the maintenance of the refinery. It's not clear how these aspects are still relevant to the proposed works, given the activities relevant to these conditions have ceased.

The EPA considers an assessment of impacts and mitigation measures should be provided in accordance with the Interim Construction Noise Guideline (ICNG). This includes a justification for works outside of standard hours in accordance with the framework within the ICNG.

The EPA recommends the assessment is revised and conducted according to the ICNG, including but not limited to:

- Development of Noise Management Levels in accordance with the ICNG.
- Statement of proposed working hours and justification for any works proposed outside of the ICNG's standard working hours.
- Assessment of impacts and mitigation measures using the framework within the ICNG.

ATTACHMENT B – EPA COMMENTS ON CONTAMINATED LAND REMEDIATION

The EPA understands the conceptual remedial action plan provided by the proponent considers a combination of remediation technologies to manage the soil and groundwater contamination at the premises. The EPA has the following comments that DPHI may wish to consider when reviewing the proposal.

1. In addressing the contamination at the site, the proponent must assess and demonstrate that the area within the project footprint is suitable or can be made suitable for the proposed use through remediation/management in accordance with the process outlined in State Environmental Planning Policy (Resilience and Hazards) 2021.
2. Site investigations and subsequent reports must be conducted and prepared in accordance with the guidelines made or approved under section 105 of the *Contaminated Land Management Act 1997* including:
 - a. Guidelines for Consultants Reporting on Contaminated Land (EPA, 2020)
 - b. Guidelines for the NSW Site Auditor Scheme – 3rd edition (EPA, 2017)
 - c. Sampling Design Guidelines Part 1- Application (EPA,2022)
 - d. Sampling Design Guidelines Part 2 – Interpretation (EPA, 2022)
 - e. Guidelines for the Assessment and Management of Groundwater Contamination (EPA, 2007), and
 - f. National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013).
3. The detailed remediation action plan to be developed by the proponent must address:
 - a. How the site contamination will be remediated and/or managed to address risks to human health and/or the environment either on-site or off-site.
 - b. Remediation of identified source zones to reduce groundwater impacts in the medium to long term and prevent future off-site migration of contamination via groundwater.
 - c. Remediation of the oil water sewer within the footprint of the project area.
4. The EPA recommends that an EPA-accredited site auditor be engaged at the earliest stages of the proposal to review the detailed remedial action plan and oversee the contamination assessment and remediation works.
5. The hierarchy of options for site clean-up under the *National Environment Protection (Assessment of Site Contamination) Measures 1999* (NEPM) is to be considered when the proponent prepares the detailed remedial action plan. The preferred hierarchy of options for site clean-up and/or management is outlined as the following:
 - On-site treatment of the contamination so that it is destroyed or the associated risk is reduced to an acceptable level; and
 - Off-site treatment of excavated soil, so that the contamination is destroyed or the associated risk is reduced to an acceptable level after which soil is returned to the site; orIf the above are not practicable:
 - Consolidation and isolation of the soil on site by containment with a properly designed barrier; and
 - Removal of contaminated material to an approved site or facility, followed, where necessary, by replacement with appropriate material.
6. The proponent is to provide details on the post-remediation management strategy for residual contamination including groundwater monitoring. The EPA and EPA-accredited Site Auditor

should be consulted about any proposed mechanisms to capture the long-term management and awareness of the residual contamination.

ATTACHMENT C – RECOMMENDED CONDITIONS

The EPA recommends that DPHI consider the following conditions as part of their determination of the application, should the project be approved.

Air Quality

The proposed conditions are recommended for the monitoring and implementation of a Trigger Action Response Plan to ensure sensitive receivers are protected from dust during construction due to the scale of earth moving and exposed land.

1. Real-time PM10 monitoring providing coverage for sensitive receivers during the entire construction phase must be undertaken by the proponent. The monitors should inform a Trigger Action Response Plan which lists appropriate actions in response to elevated dust levels.