Our reference: DOC15/191690-23

Mr Andrew Beattie
Infrastructure Projects
Department of Planning and Environment
GPO Box 39
Sydney NSW 2001

Dear Mr Beattie

RE: Request for Review of Response to Submissions for Moorebank Intermodal Terminal (SSD – 5066)

I refer to your invitation to provide comments on the Response to Submissions (RtS) for the proposed Moorebank Intermodal Terminal (MIT) Environmental Impact Statement (EIS) (SSD – 5066).

Please note that in accordance with the *Protection of the Environment Operations Act 1997*, Liverpool City Council is the Appropriate Regulatory Authority for the project, not the Environment Protection Authority (EPA). However, the EPA has agreed to assist Council by providing comments and recommendations in relation to the key environmental issues of noise and air quality.

The EPA has reviewed the RtS for the MIC Project EIS - Volume 1, March 2015 and Appendices provided. The EPA's assessment focussed on the same aspects targeted as part of the EPA's review of the EIS; those relating to noise and air quality including the Noise and Vibration Impact Assessment technical paper and the Local and Regional Air Quality Assessment technical papers. The EPA is also concerned about the proposed routing of the Central and Southern Rail Links through the Glenfield Landfill and has accordingly provided comment.

The EPA's key recommendations are attached to this letter (**Attachment A**).

If you wish to discuss any of the issues raised in this letter, please contact George Orel on 9995 6849.

Yours sincerely

2-7-15

FRANK GAROFALOW
Manager Infrastructure
Environment Protection Authority

Attachment A –The EPA's comments regarding review of the Response to Submissions for the proposed Moorebank Intermodal Terminal Facility EIS (SSD – 5066)

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Attachment A

EPA comments regarding Review of the Response to Submissions for the Moorebank Intermodal Terminal EIS

General

Moorebank Intermodal Company (MIC), a Government Business Enterprise, is seeking to develop the Moorebank Intermodal Terminal (MIT) (the Project) at Moorebank in south-west Sydney. The Project includes commercial infrastructure (warehousing), a rail link connecting the Project site to the Southern Sydney Freight Line (SSFL) and road entry and exit points along Moorebank Avenue.

The EIS for the MIT was exhibited between 8 October 2014 and 8 December 2014. Submissions on the proposal, including a submission from the EPA, have been considered and addressed by MIC in its Response to Submissions (RtS) to the Department of Planning and Environment (DP&E). The response includes a number of amendments and design refinements.

The EPA has reviewed the RtS to determine if it addresses the concerns raised in its review of the EIS. This review has focused on the RtS and has not included a full assessment of the EIS.

The EIS is for Stage 1 SSD approval for the Project concept including a package of 'Early Works'. Subject to Stage 1 SSD approval being received, the Project will be subject to further development applications and environmental assessment under the EP&A Act.

Noise and vibration

The EPA has reviewed the RtS and the included Noise and Vibration Impact Assessment (NVIA) in relation to Noise and Vibration Impacts for the MIT project. Since the original EIS was reviewed the project has been modified to include electric powered plant and automated container handling at the import/export terminal, changes to some source locations, placing of warehousing space between operational areas and Casula, and removal of the internal rail loop. The use of automated container handling will mean that audible movement alarms will usually not be required on rail mounted gantries.

The EPA maintains that the NVIA technical paper, and therefore the EIS, is inadequate. The reasons for this assessment are set out below.

Noise levels from the rail link may have been under-predicted by about 11 to 20 dBA

- The noise contribution of the rail link may have been significantly under-estimated (by up to 20 dBA) due to the difference between modelled and design curve radii.
- Detailed design of the rail link should maximise curve radii where practicable.
- Predicted LAeq(period) noise from the rail link at Casula was predicted to be 11 dB lower for this project than for the SIMTA project, which will have fewer (one fourth) the rail movements of this project. This difference appears to arise from differences in the predictive noise modelling for each project.
- The NVIA relied on predictions for the rail connection from the 2014 NVIA.
- The 2014 Noise and Vibration Impact Assessment predicted rail noise levels using the NORDIC Rail Traffic Noise Prediction Method (Kilde 1984) and assumed that curve radii would be close to 500m and much greater than 300m. The rail link for the project includes a curve with radius less than 300m.
- Predictions in the 2014 Noise and Vibration Impact Assessment were based on up to 40 rail movements, evenly distributed over a 24 hour period.

- The 2014 Noise and Vibration Impact Assessment noted that if the curve radius is about 500m a curve correction of +3 dBA may be required, or if curve radius is at the lower end of the 300-500m range a curve correction of +20 dBA or more may be required.
- The 2014 Noise and Vibration Impact Assessment did not apply curve corrections to noise predictions from the rail connection or on-site rail movements, and predicted:

Location	Locality	$L_{Aeq(period)}$ (dB)	L_{Amax} (dB)
Casula	Casula residential	40 (day and night), 39 (evening)	63
Wattle Grove	Wattle Grove residential	31 (day and night), 30 (evening)	Not provided
Glenfield	Glenfield residential	37 (day, evening and night)	Not provided
Other	Non-residential sensitive receivers	39	Not provided

- Those predictions were significantly different from the SIMTA Noise and Vibration Impact Assessment (2015) which predicted the rail link would contribute LAeq(period) 51 dB and LAmax up to 81 dB at Casula. The difference in predicted noise levels appears to be due to differences in the predictive noise modelling for each project.

Best practise plant should be used in both the import/export and interstate terminals

- The operational noise impacts of the project, excluding rail noise, were assessed using the CONCAWE algorithms. This is consistent with the SIMTA proposal.
- Operational noise was predicted to exceed criteria by up to 4 dB (during neutral meteorology) or 6 dB (during adverse weather) in Casula and Wattle Grove – this was primarily caused by rail mounted gantries at the interstate terminal and truck movements on the internal haul road.
- Using electric plant and automated container handling at the interstate terminal, and installing a 4.5m high barrier along the western side of the haul road, was predicted to reduce operational noise to meet criteria.
- Best practise plant for noise should be required in both the import/export and interstate terminals, to minimise noise impacts, including but not limited to electric automated container handling equipment or plant with equivalent sound power.
- The EPA recommends that a risk assessment be undertaken to determine if non-tonal reversing alarms can be fitted as a condition of site entry. Alternatively site design may include traffic flow that does not require or precludes reversing of vehicles.
- The EPA supports the installation of a 4.5m high noise barrier on the western side of the main internal truck access (haul) road, as proposed in the Response to Submissions Report.

Sleep disturbance impacts should have been assessed in detail during detailed design of the intermodal

- The EPA notes that the Noise and Vibration Impact Assessment did not include a detailed assessment of sleep disturbance impacts, but suggested it be undertaken during the detailed design including: how often noise events occur; the time of day when they occur; and whether there are any times of day when there is a clear change in the noise environment.
- The NVIA predicted maximum LAmax noise levels at residential receiver locations from terminal operations up to 48 dBA, and from the rail access connection up to 63 dBA.
- The predicted maximum noise levels exceed the adopted sleep disturbance screening criteria (47 to 48 dBA).

- Sleep disturbance impacts should be assessed in detail according to the Application Notes – NSW Industrial Noise Policy which can be found at: http://www.epa.nsw.gov.au/noise/applicnotesindustnoise.htm

Noise from the additional traffic generated on the Southern Sydney Freight Line should be quantified

- Environmental Assessment Requirements included assessment of the impacts of project traffic on the Southern Sydney Freight Line, taking into account the Rail Infrastructure Noise Guideline. This has not been done in a quantitative manner.
- The Southern Sydney Freight Line is likely to require upgrades to take project traffic, and future noise mitigation on the line may attenuate noise from traffic generated by the project.
- The impacts of the proposal on network rail noise, including the Southern Sydney Freight Line, should be quantified in accordance with the Rail Infrastructure Noise Guideline.

Mitigation measures should be committed to:

- Over 90%, 33 of the 36, mitigation measures identified for noise and vibration impacts in the Response to Submissions Report were reported as being "subject to review".
- More mitigation measures should be committed to by the proponent, or be required by conditions of approval, if DP&E decide to approve the project. For example, the selection of plant with the lowest practicable noise emissions.
- The EPA recommends that for those locations where it is not possible to meet the required noise level criteria, mitigation measures such as noise walls, or architectural treatments should be implemented.

Construction noise can be managed through a Construction Noise Management Plan and respite

- The assessment of construction noise in the Noise and Vibration Impact Assessment assumed that vibratory piling, not noisier impact piling, would be used to construct the rail access connection.
- Daytime construction noise, including for the rail link, will exceed Noise Management Levels in all residential receiver areas, but will not exceed the 'highly noise affected' Noise Management Level.
- Rail construction is expected to be required outside of standard hours during rail possessions.
- The NVIA recommended a Construction Noise and Vibration Management Plan for the project.
- A Construction Noise and Vibration Management Plan, alone, is appropriate for managing the predicted construction noise impacts during the day time (standard hours).
- The NVIA stated that rail construction outside standard hours would exceed Noise Management Levels and require additional mitigation. DP&E should consider additional mitigation measures for construction noise outside of standard hours, including respite periods.

Recommended Conditions of Concept Approval

The EPA recommends that the proposal should include conditions of consent requiring the following:

1. Best practise plant for both the import/export terminal and interstate terminal, to minimise noise levels, including electric automated container handling equipment or equipment with equivalent sound power levels;

2. A 4.5m high noise barrier on the western side of the on-site haul road;

3. All feasible and reasonable mitigation measures for the rail link, including automatic lubrication and top of rail friction modifiers;

4. Only best practise rolling stock to access the import/export terminal, including locomotives with the lowest practicable noise levels, and steering, permanently-coupled "multi-pack" wagons;

5. A detailed assessment of sleep disturbance impacts, including: how often noise events occur; the time of day when they occur; and whether there are any times of day when there is a clear change in the noise environment;

6. A risk assessment be undertaken to determine if non-tonal reversing alarms can be fitted as a condition of site entry. Alternatively site design may include traffic flow that does not require or precludes reversing of vehicles;

7. For those locations where it is not possible to meet the required noise level criteria, mitigation measures such as noise walls, or architectural treatments should be implemented; and

8. A Construction Noise and Vibration Management Plan.

9. All additional feasible and reasonable mitigation measures for construction works outside standard hours, including providing respite periods where appropriate.

Contaminated land

The EPA acknowledges MIC's response to the EPA in respect to contamination issues, including reference to Section 15.4.1 of Chapter 15 – Contamination and soils, which identifies the need for further testing of soil and groundwater beneath the north-western area of the Project site adjacent to the ABB site. It is understood that MIC is currently undertaking additional contaminated site investigation works and that the results will be made available during the Stage 2 SSD application process.

The EPA notes that a Phase 2 Environmental Site Assessment has been reviewed by an independent site auditor accredited by the NSW EPA under the *Contaminated Land Management Act 1997*(NSW) to provide certainty in the non-statutory sign off of the Phase 2 ESA and conclusions relating to the feasibility of the proposed future use of the IMT site.

The EPA reiterates its previous comments concerning engagement of an accredited site auditor to issue a Section A Site Audit Statement in relation to the proposal. The subject area has had a range of land uses over the years which have resulted in groundwater contamination including the presence of PFOS, TCE and petroleum hydrocarbons. The presence of these contaminants allows for potential off-site migration of contaminated groundwater and vapour intrusion risks for the development.

The comments provided are not strictly targeted at the EIS, but rather comments on process; including the need for a Section A Site Audit Statement as part of the process.

The EPA recommends that the proposal should include conditions of consent requiring the following:
Engagement of an accredited site auditor to issue a Section A Site Audit Statement in relation to the proposal.

Proposed Rail Access - Routing of the rail link through the Glenfield Landfill

In addition to assisting Council by providing comments and recommendations in relation to the key environmental issues of noise and air quality, the EPA has included comments regarding the proposal's impact on landfill infrastructure, pollution control and environmental monitoring associated with the Glenfield Waste Facility operated by Glenfield Waste Services under environment protection licence no. 4614.

The original project concept for site included 3 options available for the project to connect the rail links to the SSFL. The Southern rail access option has now been selected as the preferred option. The EPA has

concerns with the Southern rail access option, as of the three options originally proposed it will have the most impact on the Glenfield Landfill.

The "*Moorebank Intermodal Company Phase 1 Environmental Site Assessment, Moorebank Intermodal Terminal - Southern Rail Access Option*", indicates that there is high potential for contamination to exist at the site including contaminated fill, soils, groundwater, leachate and generation of landfill gases. The key exposure pathways would likely be via direct contact with soils, surface water, groundwater, leachate and landfill gases (via dermal contact, ingestion and inhalation) by construction/utility workers, site users and potentially future land users. The EIS recommends that a targeted intrusive investigation be undertaken within the construction footprint of the southern rail access.

The EPA acknowledges that no detailed investigation of impacts on the landfill have yet been undertaken by the proponent. The EPA will therefore not be in a position to assess the impacts of the rail link on the Glenfield Waste facility until such time as a detailed impact assessment including mitigation strategies has been undertaken and the results of such presented in various sub-plans.
The EPA will not support approval of the southern rail access option until such time as the proponent is able to clearly demonstrate to the EPA that the construction and operation of the rail link will not compromise the effectiveness of the landfill pollution control and monitoring systems (i.e. leachate, landfill gas and surface drainage) at the Glenfield Landfill licensed premises, including future post-closure care measures.

Nevertheless, where the EPA has deduced that impacts on the landfill are likely the EPA has provided suggested conditions of approval for the DP&E to consider placing into any consent that the Department chooses to issue for the proposal.

The EPA understands that MIC are in negotiations to engage SIMTA as their developer and operator of the Moorebank freight precinct and that the MIC is seeking consent for the southern rail connection as the only rail access point to the terminal. If SIMTA builds this connection (which it has concept approval for and is subject of a current development application), MIC will also use this connection to provide rail access to the Moorebank site and will not build a separate rail connection.

Impact on landfill leachate and gas containment

Impacts on leachate and the leachate management and barrier system other than the leachate pond should be considered in the EIS in the event that landfilled waste is excavated during earthworks. If any landfill cap is compromised and water or other liquid is allowed to enter a landfill cell the volume of leachate may increase in a landfill cell. Leachate levels should be kept low in a cell to prevent impacts on surrounding groundwater and gas production. The infiltration of liquid into previously landfilled waste could be experienced in the event that a landfill cap is compromised. Conversely, if any liner is breached during piling or earthworks, leachate may be released into surrounding groundwater.

The EPA cannot support any works that have the potential to disturb the landfill cap or barrier system such as excavation or piling because the proponent has not detailed mitigation strategies to deal with leachate and the leachate management and barrier system. The proponent has committed to routine monitoring of leachate and groundwater levels in a Contamination Management Plan to be included in a Construction Environmental Management Plan which were either not presented nor in "preliminary" form at the time of exhibition of the EIS. Further, the EPA is concerned that there is no commitment to monitor leachate and groundwater into the future to determine if the proposal is having an ongoing impact.

The proponent was required in the Secretary's Environmental Assessment Requirements (SEARS) to assess the impacts of the rail link on the Glenfield Waste facility in consultation with the EPA, yet formal consultation has not yet successfully taken place. Lastly, the proponent has not provided a methodology to ensure the landfill containment system retains its integrity during and after construction, also required by the SEARS.

Gas

Landfill gas management has not been adequately addressed in the EIS. The EPA recognises that impacts on gas management and explosive risks may be incurred as a result of works on or even near landfilled waste. Landfill gas is high in methane and is known to travel in both vertical and lateral directions underground for several hundreds of metres sometimes accumulating in structures and posing an explosive or asphyxiate risk if not managed properly. Methane is also a powerful greenhouse gas and may cause unnecessary environmental damage if vented to the atmosphere uncontrolled. Landfill gas often contains odorous components that can impact on local amenity, generating odour complaints.

The EPA cannot support any works which have the potential to increase, facilitate movement, accumulate or release landfill gas because the proponent has not adequately detailed impacts or mitigation strategies to avoid occupational or environmental impacts. Potential for the release of Greenhouse Gases or for the movement and accumulation in structures resulting from excavations within or near the landfill and have not been considered in the EIS and it is the position of the EPA that these hazards pose a threat to human health, safety and the environment. In addition to field screening and personal monitoring the proponent should address design of any new structures near the landfill and remedial/containment measures should venting of gas be discovered during construction.

Asbestos

Asbestos fibres can pose a serious health risk to humans if inhaled. The EPA notes that Glenfield Waste Services is licenced to receive asbestos waste. The *Protection of the Environment Operations (Waste) Regulation 2014* requires operators of landfills licenced to receive asbestos to bury it in accordance with the regulation. However, operators are not required to record the locations of buried asbestos waste in landfills, therefore there is a reasonable possibility that if earthworks are required within previously landfilled cells, asbestos fibres could be encountered and liberated.

The EPA cannot support any proposal that has the potential to disturb landfilled waste because the proponent has not detailed specific mitigation strategies to prevent the release of asbestos fibres of which there is a reasonable possibility that such fibres are contained within previously landfilled waste. The proponent has committed to producing an Asbestos Management Plan within the Contamination Management Plan which will be included in the Construction Environmental Management Plan which have either not been presented or not been finalised at the time of exhibition of the EIS.

Exhumed waste

Unless approved by the EPA, waste exhumation is specifically prohibited under condition O4.5 of environment protection licence 4614 held by L.A. Kennett Enterprises Pty Ltd. Exhuming waste can lead to amenity, health, soil water and air impacts. The proponent should assess whether waste exhumation is necessary, and if so detail predicted timeframes for exhumation, disposal options and mitigation measures to prevent impacts. The licensee (L.A. Kennett Enterprises Pty Ltd) should be made aware that the licence may need to be varied if waste needs to be exhumed.

The EPA cannot support any activities that involve the disturbance or exhumation of landfilled waste because it is prohibited by Environment Protection Licence 4614 and because the proponent has not provided enough information to make an assessment of the impacts.

Contaminated stockpiles

Bore hole investigations undertaken on site indicate that contamination exists in the form of Lead and Zinc. Data also shows that that other contaminants were present including "rubble, concrete, plastic, glass and wood" in fill material underlying the proposed rail link.

The EPA cannot support any stockpiling of contaminated materials as part of the proposed Rail Link as the proponent has not addressed all potential impacts to the environment from the excavation of potentially contaminated soils in this area.

Integrity of monitoring points

Environment protection licence 4614 requires regular monitoring of environmental pollutants at specific locations. If this monitoring is not undertaken for any reason this may constitute an offence against the licensee. Should the proponent require that monitoring points to be moved the process for undertaking this and the required negotiations with the operator of the Glenfield Waste Facility should be identified in the EIS. This must include proposed impacts on pollution control and monitoring systems including existing groundwater and landfill gas bores and their subsequent repair/replacement.

The EPA cannot support the relocation or removal of any monitoring points associated with the operation of the landfill within the Glenfield Waste Services premises because the proponent has not provided specific detail on points to be relocated or removed.

Access to points for monitoring

The construction of a Rail corridor of 20 metre width and establishment of necessary property rights over the land may impede access to essential landfill monitoring points associated with the landfill.

The EPA cannot support the construction of a 20 metre wide rail corridor within the Glenfield Waste Services premises because the Proponent has not detailed enough information to assess the impacts on the licensee's access to monitoring points, leachate and stormwater controls which are essential for the proper functioning of the landfill.

Proposed Conditions of Consent relating to routing of the rail link through the Glenfield Landfill

Should the DP&E decide to grant approval for the Rail Link as part of the proposal, prior to receipt of this information, the EPA strongly recommends that the following conditions be included as part of the development consent.

1. The proponent must prepare a detailed assessment of the impacts on the Glenfield Landfill licensed premises. The assessment must include, but not be limited to:

   - Targeted intrusive investigations to determine contamination pathways and to develop mitigation, management and/or remediation options based on those investigations.
   - Details of the quantity of landfilled waste to be removed, the location from where it will be removed, the methodology to be utilised and the estimated timeframe for the removal and reburial.
   - Proposed measures to mitigate odour impacts on sensitive receivers, including application of daily cover to any exposed waste in accordance with benchmark technique 33 of the EPA's Environmental Guidelines: Solid Waste Landfills, 1996.
   - Details of impacts on pollution control and monitoring systems including existing groundwater and landfill gas bores and their subsequent repair or replacement.
   - The methodology proposed to ensure that where the landfill barrier system disturbed, it is replaced or repaired to ensure its ongoing performance. The proponent should detail matters such as sub grade preparation and specifications, liner installation/reinstallation procedures and construction quality assurance (CQA) procedures.
   - An overview of any access and materials or equipment storage arrangements with the Glenfield Landfill in relation to the construction of the project, and operation and maintenance of the rail link.

- Details of any other expected or potential impacts to the licensed area and options for management and mitigation of those impacts (i.e. leachate management and surface water runoff, potential impacts on the Georges River during works, dust etc.).
- Details of and proposed mitigation measures for the long term management of the rail link. A permanent rail link across the landfill is likely to have long term impacts that need to be considered and mitigated (e.g. subsidence or gas issues).

2. The proponent must provide the assessment report to the EPA for review and approval at least three months prior to commencement of construction (including early works). No works are permitted to commence within the Glenfield Landfill licensed premises without the EPA's written approval.

3. The proponent must provide the EPA with any construction design plans for review and approval prior to commencement of the Rail Link construction (including early works).

4. The proponent must prepare a construction and operational management plan specific to the management of activities to be undertaken at the Glenfield Landfill licensed premises. The plan must include, but not be limited to:

- Details of the exact location of the rail link in relation to landfill cells and activities.
- Details of land tenure and licence management. Where land is to be excised from the landfill licenced premises the proponent must include a surveyors plan.
- Details of how access during construction and operation will be maintained including access to landfill monitoring and environmental controls.
- Details of material requirements and how landfill levy issues will be managed when bringing construction material through the landfill.
- Details how community interactions will be managed such as notification of operations and a community complaints line including a direct link to an onsite manager.
- Details of the management of environmental issues from construction/haulage/operation, including but not limited to:

    i. Soil and water (including runoff from stockpiles)
    ii. Air
    iii. Odour
    iv. Noise
    v. Waste
    vi. Asbestos
    vii. Contamination / remediation

5. The proponent must provide all management plans to the EPA for review and approval at least two months prior to commencement of construction (including early works). No works are permitted to commence within the Glenfield Landfill licensed premises without the EPA's written approval.

6. The proponent must provide the EPA with a CQA report within 60 days of the completion of the Rail Link project.

Air Quality

The EPA has reviewed the Air Quality Impact Assessment (AQIA) report (Environ, dated 20 April 2015) for the revised MIC Terminal Project. It is considered that not all issues have been comprehensively addressed. However, based on the information provided, it appears that the proposal could be developed in a manner

that does not cause exceedances of EPA's air quality impact assessment criteria. Comments and recommendations are included below.

The Air Quality Impact Assessment (AQIA) outlines:

- A revised assessment based on a revised concept design of the Project, conducted in general accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW;
- Lower estimated emission loads of a majority of pollutants for the full build scenario. The emissions inventory outlines that annual emission loads are in the order of a 2% to 10% decrease, however a small increase in the order of 1 % of PAH's is noted. The change in emission estimates is outlined as being primarily due to the reduction in daily maximum traffic flows from the original EIS, however it is noted a small increase in peak hourly heavy vehicle movements is outlined. The changes in emission loads are considered relatively minor;
- No predicted discernible differences in impacts from the original AQIA at residential receptors; and
- Retained predicted exceedances at Receptor 33. It is noted Receptor 33 is located on the SIMTA Intermodal Site, and is unlikely to be considered a sensitive receptor as the AQIA outlines that this receptor was relocated in 2014.

Issue 1- Inconsistencies in the emission estimates between the regional and local air quality assessments

The response advises that the difference in emission estimates (specifically VOCs) is due to the Local Air Quality Impact Assessment (LAQIA) considering emissions from petrol vehicles (i.e. passenger cars), and the Regional Air Quality Impact Assessment (RAQIA) only considering diesel vehicles. Petrol vehicles were not included in the regional assessment as background growth in petrol vehicles would occur in the future regardless of whether the project proceeds.

The EPA notes that the information provided may partly explain the discrepancy, however the EIA and LAQIA outline that:

- ITVs, sidepicks and forklifts are a significant contributor to VOCs for the site; and
- Passenger vehicles represent an insignificant portion of site emissions.

The additional information doesn't explain the omission of emission sources from one assessment and not the other, if onsite mobile (non-passenger vehicles) are indeed the main contributor to VOCs as per the EIS. Should the project proceed, the EPA recommends that the apparent discrepancy in source allocation should be rectified in any subsequent assessment for project approval.

Issue 2 – Absence of a detailed ozone assessment as part of the EIS

The response advises:

- There is no regional scale ozone model that is sensitive enough to be capable of modelling any discernible effect arising from the changes that may occur due to the Project (for example a reduction of 0.03% in the emissions of NOx from trucks and trains spread across the region);
- The Project would result in only a small differential between the emissions that will occur with or without the Project;
- MIC does not agree with the recommendation to undertake an ozone assessment, and would disagree with the requirement to make this a condition of approval.

Whilst the predicted change in NOx emissions indicates ozone is unlikely to be an issue, the VOC emissions (an ozone precursor) warrants further investigation of potential ozone impacts. As previously advised, the local air quality assessment estimates VOC emissions of approximately 133 tonnes per annum.

The EPA advises that the quantum of VOC emissions estimated as part of the air quality assessment is significant enough to warrant additional consideration in the context of ground level ozone at the project approval stage.

Issue 3 – Insufficient details on the air quality impacts of Early Works

MIC considers that air quality impacts from early works have been sufficiently covered. The EPA understands there are still further investigative works to be undertaken to characterise the extent of the contamination at the site.

The EPA recommends that additional investigation and assessment of remediation options, potential for air emission and emission controls should be undertaken prior to the commencement of earth moving activities at the site.

Recommended Conditions of Concept Approval

The EPA recommends that the proposal should be developed in a manner that does not cause exceedances of EPA's air quality impact assessment criteria. Additional investigation and assessment of remediation options, potential for air emission and emission controls should be undertaken prior to the commencement of earth moving activities at the site.

Recommended Conditions of Concept Approval are provided below. Specifically, prior to each stage of Project Approval, the proponent must:

- Review and commit to best practice process design and emission control;
- Update the air quality impact assessment based on the final project design, operating regime and include best practice emission controls.

Project Application Requirements

The following requirements apply with respect to each stage of project application:

- Best practice process design and emission control; and
- Air quality impact assessment.

Best Practice Process Design and Emission Control

A report that reviews and details best practice process design and emission control applicable to the proposal must be prepared and submitted to Department of Planning and Environment for each stage of the proposal. The report must:

1. Demonstrate that the project has incorporated best practice facility and process design to minimise idling emissions at the terminal; and

2. Demonstrate that the project has incorporated best practice emission control to effectively minimise all air emissions. Consideration must be given, but not limited to:

    a. best practice non-road emission standards, including locomotives;
    b. minimise idling;
    c. fuel switching; and

d. electrification of terminal plant.

Air Quality Impact Assessment

An updated air quality impact assessment must be prepared and submitted to Department of Planning and Environment for each stage of the proposal.

1. The assessment must be undertaken in accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (2005)* (or its later version);

2. Air emissions must be based on final project design with consideration to worst-case meteorological and operating conditions and cumulative impacts from contemporaneous operations of nearby emission sources;

3. The assessment must identify measures to manage and monitor the efficiency and performance of air pollution control techniques; and

4. Particular consideration shall be given to:

- Cumulative air impacts at a local and regional level;
- Assessment of both construction and operational emission scenarios from the proposal;
- Potential for ground level ozone impacts
- Mitigation and management measures that will be implemented to reduce the emission of all air pollutants including (as applicable):

    i. solid particles;
    ii. sulfur oxides,
    iii. nitrogen oxides,
    iv. hydrocarbons; and
    v. other toxic air pollutants