

2 September 2020

Department of Planning, Industry and Environment

Via email: [Susan.Fox@planning.nsw.gov.au](mailto:Susan.Fox@planning.nsw.gov.au), [Nicholas.Hon@planning.nsw.gov.au](mailto:Nicholas.Hon@planning.nsw.gov.au).

CC: [Heidi.Watters@Planning.nsw.gov.au](mailto:Heidi.Watters@Planning.nsw.gov.au); [Joel.Curran@planning.nsw.gov.au](mailto:Joel.Curran@planning.nsw.gov.au);  
[compliance@planning.nsw.gov.au](mailto:compliance@planning.nsw.gov.au)

Dear Susan/Nicholas,

**RE: Orica KI – 2020 Independent Environmental Audit (08\_0129 and SSD\_7831)**

I refer to Condition 52 of Orica's Kooragang Island expansion project Development Consent (08\_0129), and Conditions C15 and C16 of the Arsenic Cell Development Consent (SSD\_7831), that require Orica to undertake an Independent Environmental Audit on a 3 yearly basis. The last IEA was completed in September 2017 for Consent 08\_0129, while the first IEA for Consent SSD7831 is required within one year of commencement of operation (ie. 24 September 2020). Orica completed an integrated IEA of both consents on 5 August 2020 and enclose the final IEA for DPIE approval in accordance with these conditions.

Condition C16 of the Arsenic Cell Development Consent (SSD\_7831) requires a response to the recommendations and a timetable for implementation. Condition 52 of Orica's Kooragang Island expansion project Development Consent (08\_0129) has no equivalent requirement. Given there were no non-compliances or recommendations in relation to the Arsenic Consent this requirement has not been triggered.

Orica would however appreciate the Departments feedback on the auditors' recommendations in relation to the expansion project Development Consent (08\_0129), as noted in the table below

**Table 1 – Non-compliance recommendations for clarification from DPIE in relation to Expansion Consent 08\_0129**

Compliance Requirement	Audit Finding and recommendation	Orica comments (for DPIE feedback)
<p>23</p> <p>The Proponent shall undertake an air quality verification study for each relevant stage of the Project to the satisfaction of the Secretary and the EPA. The study shall:</p> <ul style="list-style-type: none"> <li>a) be prepared by a suitably qualified expert whose appointment has been agreed to in writing by the Secretary;</li> <li>b) be based on a minimum of 12 months of monitoring data and be completed during the initial 18 months of operation or as otherwise agreed to in writing by the Secretary;</li> <li>c) include a verification of actual monitored emissions performance against the assumptions adopted within the EIS, including: <ul style="list-style-type: none"> <li>• point source pollutant concentrations;</li> <li>• point source pollutant mass emission rates; and</li> <li>• point source emission parameters as relevant to plume dispersion.</li> </ul> </li> <li>d) confirm, through direct measurement, that applicable EPL air emission limits are being complied with; and</li> <li>e) confirm, using reasonable means, the effectiveness of the implemented emission controls in minimising air quality impacts.</li> </ul>	<p>Phase 4 of the project involved installation 3 ammonia flares that became operational in 2016/17 (during the previous audit period). The flares generally only activate intermittently for short periods and flare activation reports are submitted annually. EPL 828 does not require monitoring of emissions from the flares, it requires only continuous monitoring of gas flow to the flares. Orica sought clarification from the Department in March 2018 regarding the requirement for an Air Quality Verification Study to be completed for the flares as Orica considers it is not practical from a technical perspective. Orica did not receive a response and is working on the basis that this position is acceptable to the Department. The Auditors consider this condition to be non-compliant as the Department has not formally agreed with Orica's position that an Air Quality Verification Study of the flares is not required. <b>It is recommended that formal acceptance of this position be sought from the Department.</b></p> <p>The Air Quality Verification Study for the new boiler (Phase 6) is not yet due as operation commenced in December.</p>	<p><b>We understand Orica's Antony Taylor corresponded in the past with DPIE's Michael Frankcombe in relation to the technical impracticality of undertaking an AQVS on the Flares, which are an intermittent open flame only used during abnormal operation, but received no response. We would appreciate written confirmation from DPIE that an AQVS was not required for the Flares so we can file it for our records and close the audit finding out.</b></p>
<p>40/41</p> <p>The Proponent shall ensure the Project meets the EPL requirements for stormwater and effluent discharges to the Hunter River</p>	<p>Effluent is discharged to the Hunter River at monitoring point 23 under the EPL. Stormwater is discharged to the Hunter River at six locations (EPL 828 monitoring points 10 to 15). In each year of the Audit Period, Orica has reported non-compliances with conditions relating to effluent and/or stormwater discharges in its Annual Return to the EPA. In some cases, the non-compliance relates to a loss of data or failure to collect a sample.</p>	<p><b>This condition has been interpreted differently in previous IEA's. While Orica KI has had non-compliances with EPL conditions, EPL requirements have been satisfied via subsequent reporting to the EPA. We would appreciate DPIE's guidance in terms of interpreting compliance with this</b></p>

		<p>For example, in August/September 2019 routine monthly calibration of the pH probe at monitoring point 23 did not occur, resulting in data loss due to inaccurate readings (upstream probes showed that the discharge was within EPL limits).</p> <p>In a small number of cases, the non-compliances relate to exceedances of effluent concentration limits. As EPL 828 does not include concentration limits for stormwater discharges, Orica applies guideline values from the ANZECC &amp; ARMCANZ (2000) water quality guidelines as criteria for assessing compliance with condition L1.1 of EPL 828 (comply with section 120 of the Protection of the Environment Operations Act 1997) for monitoring points 10 to 15. As there are regular exceedances of ANZECC &amp; ARMCANZ (2000) guidelines, Orica makes a general statement of non-compliance in the Annual Return.</p> <p>Effluent and stormwater monitoring result are published on Orica's website.</p> <p>As the non-compliances with EPL conditions have been reported to the EPA and are subject to improvement programs under the EPL and/or discussions between the EPA and Orica, the Auditors make no further recommendation.</p>	<p><b>condition (ie. whether an exceedance of a specific condition is considered a non-compliance with the consent, even if the requirements of the EPL have been met in terms of reporting and disclosure to EPA)</b></p>
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**Table 2 – Opportunity for Improvement recommendations for clarification from DPIE**

	<b>Compliance Requirement</b>	<b>Audit Finding and recommendation</b>	<b>Orica comments</b>
	<b>Transport of Hazardous Materials Plan</b>		
15a	Transport of Hazardous Materials Plan – arrangements covering the transport of hazardous materials including details of routes to be used for the movement of vehicles carrying hazardous materials to or from the site (Initial Operations and Project). The routes selected shall be consistent with the Department of Planning’s Hazardous Industry Planning Advisory Paper No 11, ‘Route Selection’. Suitable routes identified in the study shall be used except where departures are necessary for local deliveries or emergencies.	Changes to the Transport of Hazardous Materials Plan were not required as part of Phase 6. The Auditors observe that the Plan has been in place since 2013. Although the additional nitric acid plant and ammonium nitrate plant have not yet been built as part of Phase 3, <b>the Auditors recommend that the Transport of Hazardous Materials Plan be reviewed for any changes that may be required as a result of changes in the road network since 2013.</b>	<b>Orica will review the Transport of Hazardous Materials Plan and assess the need for updates.</b>
	<b>Hazard Analysis Update</b>		
19	Three years after the commencement of operations of the Project, or as otherwise agreed to by the Secretary, the Proponent shall undertake a Hazard Analysis of the Initial Operations and the Project to update the hazard analysis contained in the Preliminary Hazard Analysis and the Final Hazard Analysis.	This requirement was not triggered during the Audit Period. Phase 1 of the Project commence operations in February 2012, meaning the condition would have been triggered during the previous audit period. The previous Independent Audit (Edge, 2018) reported that this condition had not been triggered as final operations had not commenced. The condition does not refer to final operations; however, it appears likely that it is relevant to Phase 3 (expansion of nitric acid and ammonium nitrate capacity), which has not commenced. <b>It is recommended that Orica seek clarification from the Department on the intended application of this condition.</b>	<b>The initial PHA was completed in 2010 for the Ammonia Uprate (Stage 1). An update to the PHA was subsequently submitted in 2015 covering construction of the ammonia flares (Phase 2) and concluded that the final design of Phase 2: Construction of 3 x ammonia flares was consistent with that detailed in the MOD 2 PHA and therefore a Final Hazard Analysis was not required. Orica understand DPIE has previously indicated that preconstruction Condition 14 requirements only apply to Project Phases that represent an expansion of the site's existing infrastructure. Given the boiler (Phase 6) was a “like for like” replacement of the old site boilers, a Hazard Analysis Update was not undertaken.</b>

			Should Phase 3 progress, which involves expansion of nitric acid and ammonium nitrate production facilities further Hazard Analysis Updates would be undertaken.
	<b>Noise and Vibration Management</b>		
32	<p>The Proponent shall prepare and implement a Noise and Vibration Management Plan for the Project to the satisfaction of the Secretary. The Plan shall:</p> <p>a) be prepared by a suitably qualified and experienced expert whose appointment has been agreed to in writing by the Secretary</p> <p>b) be approved by the Secretary (see Conditions 49A and 49B for scope and timing and Condition 49C for management plan requirements);</p> <p>c) include a detailed monitoring program for reporting on ongoing compliance. The monitoring program shall:</p> <ul style="list-style-type: none"> <li>• outline the proposed receiver sites at Stockton and sites on Kooragang Island that would be monitored;</li> <li>• include both attended and unattended noise monitoring;</li> <li>• verify that actual noise levels from the Project are consistent with the predictions made in the EA; and</li> </ul>	<p>No changes were made to the Noise Management Plan during the Audit Period. The previous Independent Audit (Edge, 2018) recommended the Noise Management Plan be updated following installation of the new boiler. Although the new boiler commenced operating in December 2019, it is not yet fully operational and the old boiler has not yet been decommissioned. <b>The Auditors recommend that the Noise Management Plan be updated when the new boiler is fully operational.</b></p>	<p><b>Orica undertake an Annual Noise Survey satisfying Condition 32 that assesses whether the site continues to meet the Noise limits set out in Condition 30. The most recent survey was conducted in May 2020. The outcomes of the noise survey are included annually as part of the AEMR submitted to DPIE. The next survey (due for completion in May 2021) will assess compliance when the boiler is fully operational, and the old boilers have been decommissioned.</b></p> <p><b>As all noise surveys have confirmed compliance with the Noise Limits in Condition 30, and noise complaints have related to abnormal operations (eg. plant startups) there has been no requirement to include recommendations in relation to noise mitigation measures in previous reports.</b></p>

	<ul style="list-style-type: none"><li>• verify that noise levels from the Project are 10dB(A) below the noise levels identified in condition 31 for the Proponents Initial Operations;</li></ul> <p>d) provide details of any complaints received in the preceding year relating to noise generated by the Project, and action taken to respond to those complaints; and</p> <p>e) detail procedures for implementing additional reasonable and feasible noise mitigation measures for the Project in response to exceedances of limits and/or noise complaints;</p> <p>f) be updated annually, unless otherwise agreed to by the Secretary; and</p> <p>g) describe the measures that will be implemented to prevent and minimise potential adverse noise and vibration impacts from the Project, including:</p> <ul style="list-style-type: none"><li>• reasonable and feasible measures being employed on the Project site;</li><li>• plant and equipment being maintained to ensure that it is in good order;</li><li>• how potential noise and vibration impacts will be minimised and managed; and</li><li>• identification of the likely nature and timing of Project-related activities and works that could generate potential elevated noise emissions and a description of the mitigation measures that will be implemented to ensure compliance with the relevant conditions of this approval and the EPL.</li></ul>		
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Should you have any questions in relation to the IEA or the issues raised in the letter feel free to contact me on Mob. 0408 102954 or by e-mail on [nathan.robinson@orica.com](mailto:nathan.robinson@orica.com).

**Kind Regards**

A handwritten signature in blue ink that reads "Nathan Robinson". The signature is written in a cursive style.

**Nathan Robinson**

Senior Specialist Environment – Orica KI

**Attachment A** – Orica KI - IEA Audit - Ramboll