



## ORICA KURRI KURRI ANE PLANT

# ANNUAL ENVIRONMENTAL MANAGEMENT REPORT

JULY 2017



Revision	Date	Description	Author	Approver
0		2017 Annual Environmental Report	D Horne Kurri ANE Senior Manufacturing Supervisor	F Oberholzer Manufacturing Superintendent Liddell & Kurri ANE Plant

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### ATTACHMENTS:

Pollution Solutions Report – September 2016

Pollution Solutions Sampling Analysis – December 2016

Pollution Solutions Report – March 2017

Pollution Solutions Report – June 2017

Biodiversity Management Plan 2016.17 - Report will be sent once received

**ABBREVIATIONS**

ANE	Ammonium Nitrate Emulsion
ANS	Ammonium Nitrate Solution
CEMP	Construction Environmental Management Plan
CSS	Construction Safety Study
DPI	Department of Planning and Infrastructure
EA	Environmental Approval
EMSO	Environmental Management Strategy Operations
EPL	Environment Protection Licence
FHA	Final Hazard Analysis
FSS	Fire Safety Study
HAZOP	Hazard and Operability Study
ktpa	kilo tonnes per annum
OEH	Office of Environment and Heritage
SHEC	Safety, Health, Environment and Community
SHES	Safety, Health, Environment and Security

## 1 Introduction

In October 2010 Orica Australia Pty Ltd commenced construction of an Ammonium Nitrate Emulsion (ANE) manufacturing facility located at its Kurri Kurri Technical Centre, NSW. The facility will produce a maximum of 250,000 tonnes of ANE per annum once in full production (**Figure 1**). This plant has been developed to meet an increasing demand for ANE product and projected growth in the mining and quarry / construction sectors in South Eastern Australia. Approval for this project was granted in July 2010 by the Minister for Planning.

The facility began the commissioning process in October, 2011 and began production in February 2012.

This document has been prepared to comply with the requirement of the Project Approval (09\_0090) as modified that an Annual Environmental Management Report be prepared for the project and relates to August 2016 – July 2017



Figure 1: ANE Plant layout

## 1.2 Facility Description

The facility activities include the following:

- ANE production of up to 250,000 tonnes of product per annum;
- Maintenance of access roads and relevant services infrastructure;
- Operation of storage for raw materials used in the manufacturing process including ammonium nitrate solution (ANS), solid ammonium nitrate, fuel blend ingredients such as palm olein, yubase 3 and diesel oil, thiourea, urea, acetic acid, caustic soda and water;
- Transport truck weighing, loading and unloading facilities and management;
- Management of the facility office, control room, switch room and quality control laboratory;
- Management of contractors and visitors.

## 2 Facility Requirement

As a condition of the project consent, this facility is required to prepare an Annual Environmental Management Report.

This report includes the following:

1. *This facility Annual Environmental Report (AEMR) will include the following;*
  - a) *identify the standards and performance measures for the facility;*
  - b) *describe the works carried out in the past 12 months and the works to be carried out in the next 12 months;*
  - c) *include a summary of complaints received in the past year and provide comparison with previous years;*
  - d) *report results of monitoring required by the approval and EPL for this facility;*
  - e) *provide analysis of monitoring results in the context of relevant criteria and limits, previous monitoring results and the predictions made in the EA;*
  - f) *identify any trends in monitoring results over the life of the facility; and*
  - g) *report on compliance with the project approval, summarise non-compliances in the previous 12 months and report on actions taken to rectify non-compliances.*

## 3 Facility Standards and Performance Measures

This facility meets the standards and conditions detailed in the following documents:

- Project Approval 09-0090 dated 26 July 2010;
- Modification Application MP 09\_0090 MOD 1;
- Modification Application MP 09\_0090 MOD 2;
- Schedules 2 to 4 of Project Approval;
- Environmental Approval dated December 2009;
- Response to Submissions report dated March 2010;
- Independent Environmental Audit March 2016.



The key standards and performance measures for the operating facility include:

	<b>Standard</b>	<b>Performance Measure</b>	<b>Comment</b>
Noise Management	Noise generated from the operation of the facility does not exceed 35dB (A) at nearest residential receptor at any time.	Proponent shall conduct a Noise Audit for the premises within 3 months of the commencement of operation of the ANE Facility or as otherwise agreed by the Director-General.	Large buffer area around plant. Noise controls have been incorporated into design and equipment selection. The Noise Audit has been completed and submitted to the DPI, no actions were required from the audit.
Air Quality	Dust	All trucks leaving or entering the facility with loads have their loads covered;  Trucks movements associated with the facility do not track dirt onto the public road network.	Requirement incorporated into the Environmental Management Plan.
Soil and Water Discharges	Section 120 of the <i>Protection of the Environment Operations Act 1997</i>	Bunding to comply with all relevant Australian Standards and the OEH's Storing and Handling Liquids: Environmental Protection, Participants Manual.	Facility is designed to meet bunding requirements.
Lighting	Australian Standard AS4282(INT)-Control of Obtrusive Effects of Outdoor Lighting	Facility Lighting complies with the requirements of the standard.	Lighting compliance has been assessed during the design phase.
Production Limits	Production not to exceed prescribed levels.	ANE – 250ktpa	Production limits are monitored and documented weekly.  Limits not exceeded.

## 4 Facility Status

### 4.1 Facility Progress Review

During the previous 12 months covered by this report normal production activities have been undertaken and include:

- 21% production increase over reporting year;
- Plant operating at 49% of Licence Limit of 250,000 T/pa;
- Traffic management and site access;
- Production of ANE, and Companion Solution.
- Unloading of raw materials;
- Loading tankers with ANE;
- Maintenance management and associated activities;
- Contractor & Visitor Induction and Management;

- Production of Ammonium Nitrate Solution from dissolved solid Ammonium Nitrate as a contingency only;
- Minor changes of raw materials;
- Continued reduction of vehicle movements on George Booth Drive with the opening of the freeway extension M15.

**4.2 Planned Facility Progress**

- Increase in ANE production tonnage as per EA document;
- As per RTP proportional heavy vehicle movements to support raw materials and production schedule.

**4.3 Significant Activities Undertaken in the Reporting Period**

- Installation of a Heat Exchanger and Cooling Tower. The installation of the cooling tower / heat exchanger system is an initiative to cool down certain types of manufactured ANE (Ammonium Nitrate Emulsion), the cooling down of these products is for quality reasons and performance enhancement in the field.

**4.4 Important Initiative Planned in the Next Reporting Period**

- Roster change planned to optimise plant efficiency and reduce the number of plant shutdowns.

**5 Environmental Monitoring and Complaints Summary**

**5.1 Environmental Monitoring**

Following the commissioning of the ANE Plant, monitoring is undertaken to assess compliance with relevant conditions as outlined in the Project Approval and the EPL.

**5.2 Community Complaints**

27.07.2010 – 26.07.2011	27.07.2011 – 26.07.2012	27.07.2012 – 26.07.2013
No Complaints	One unsubstantiated complaint	No Complaints
27.07.2013 – 26.07.2014	27.07.2014 – 26.07.2015	27.07.2015 – 26.07.2016
No Complaints	No Complaints	No Complaints
27.07.2016 – 26.07.2017	27.07.2017 – 26.07.2018	27.07.2018 – 26.07.2019
No Complaints		



## 6 Facility Compliance

A review of the status of compliance with the operation of this facility is detailed in the table below.

### SUMMARY OF KEY FACILITY COMPLIANCE ACTIVITIES

Issue	Condition	Requirement	Compliance Status
<b>Schedule 3: Specific Environmental Conditions</b>	1	Undertake the following studies and submit to DPI Director-General for approval:	
	a)	<ul style="list-style-type: none"> <li>Fire Safety Study (FSS)</li> </ul>	Complied. The FSS was submitted on 9 February 2011 and a response was received from Fire Rescue NSW (FRNSW) on 3 May 2011. Formal review underway with SHERPA engaged.
	b)	<ul style="list-style-type: none"> <li>Hazard &amp; Operability Study</li> </ul>	Complied. The HAZOP was submitted to the DPI 15 February 2011. DPI approved the study on 18 February 2011. Hazop Actions completed.
	c)	<ul style="list-style-type: none"> <li>Final Hazard Analysis</li> </ul>	Complied. The Phase 1 FHA was submitted to the DPI on 8 February 2011. DPI approved the study on 18 March 2011.
	d)	<ul style="list-style-type: none"> <li>Construction Safety Study</li> </ul>	Complied. The Construction Safety Study was submitted to DPI on 8 February 2011. Approval was obtained from DPI on 18 February 2011.
	2	Undertake the following studies and submit to DPI Director-General for approval: <ul style="list-style-type: none"> <li>Emergency Plan (update)</li> <li>Safety Management Plan</li> </ul>	Completed
	6	Comply with the requirements of the Director-General in relation to conditions 1-5.	Complied
	10	Prepare a Road Transport Protocol prior to the commencement of construction and operation.	Complied. A Road Transport Protocol was included in the EMSO. RTP revised and updated with Maps showing M15 freeway extension.

Issue	Condition	Requirement	Compliance Status
			Nil NON compliances
	12	Within 6 months of approval implement the offset strategy to the satisfaction of the director general	Complied An application was submitted to OEH to enter into a Voluntary Conservation Agreement. Biodiversity Report will be sent once received.
	15	Implement Vegetation Clearing Protocol	Complied Vegetation Clearing Protocol was included in the EMSO and followed for clearing of the site prior to the commencement of construction.
	16	Carry out all reasonable and feasible measures to minimise dust generated by the Project / Facility	Complied EMSO included measures to control dust. All road surfaces sealed for permanent operation.
	17	Trucks entering or leaving the Project site must have their loads covered and must not track dirt onto public roads	Complied. Measures for the control of dust were included in the CEMP.
	18	Noise generated from the construction and operation of the project shall not exceed 35dB(A) at nearest residential receptor	Complied. Post start up Noise Audit completed
	20	Implement the recommendations of the 'Bushfire Threat Assessment' included with the EA and also any additional bushfire hazard reduction measures outlines in the Submissions Report	Complied Requirements included in the design.
	21	Compliance with section 120 of Protection of the Environment Operation Act 1997	Annual Environmental Return submitted to EPA
	22	Ensure that all chemicals are stored in appropriately bunded areas	Complied. EMSO included requirements for management of materials. Design incorporates bunding requirements. Daily shift Housekeeping checks completed and documented.
	23	Prepare a Soil and Water Management Plan	Complied. Measures for the control of erosion and sediment were included in the Construction Environmental Management Plan.
	24	A Stormwater Management Plan must be included in the design	Complied.

Issue	Condition	Requirement	Compliance Status
			CEMP included these requirements, where applicable to construction.
	25	An Erosion and Sediment Control Plan is to be prepared	Complied. EMSO included an Erosion and Sediment Control Plan.
	26	Ensure that lighting associated with the Project complies with the latest version of <i>Australian Standard AS 4282(INT)-Control of Obtrusive Effects of Outdoor Lighting</i>	Complied A consultant was engaged to provide a report on external lighting to ensure compliance.
	27	Waste to be classified in accordance with <i>DECCW Guidelines 2008</i> and disposed of to approved premises	Complied. Measures for the control of waste were included in the EMSO. Registered Waste disposal provider engaged for production operations
	28	In the event that skeletal remains, or an Aboriginal object is identified, all construction activities that will or would have the potential to impact on indigenous heritage item(s), shall cease until the DECCW is consulted and their directions complied with	Complied. CEMP and EMSO included requirements. Aboriginal groups were consulted during the construction period.
<b>Schedule 4: Environmental Management, Reporting and Auditing</b>	1	Prepare and implement an Environmental Management Strategy for the Facility to the satisfaction of the Director-General.	The Facility Environmental Management Strategy was submitted on 24 February 2012.
	2	Prepare an Annual Environmental Management Report and submit to the DPI Director-General <ol style="list-style-type: none"> <li>a. Identify the standards &amp; performance measures for the Facility</li> <li>b. Describe the works carried out in the past 12 months and the works to be carried out in the next 12 months</li> <li>c. Include a summary of complaints received in the past year and provide comparison with previous years</li> <li>d. Report results of all monitoring required by this approval and an EPL for the Facility</li> <li>e. Provide analysis of monitoring results in the context of relevant criteria and limits, previous monitoring results and the predictions made in the EA</li> <li>f. Identify any trends in monitoring results over the life of the Facility</li> <li>g. Report on compliance with the facility approval, summarise non-compliances in the previous 12 months and report on actions taken to rectify non-compliances</li> </ol>	Submission of this document is the fifth annual report <ol style="list-style-type: none"> <li>a. See section 3 this report</li> <li>b. See section 4.3 and 4.4 above</li> <li>c. See section 5 this report</li> <li>d. See Appendix 1</li> <li>e. See Appendix 2</li> <li>f. Monitoring Point 2. Results have shown a stable trend compared to previous reporting period.</li> <li>g. See Appendix 3</li> </ol>

Issue	Condition	Requirement	Compliance Status
	3	Notify the Director-General and any other relevant agencies of any incident with actual or potential significant off-site impacts	There were no significant incidents relating to the facility during this reporting period that required reporting to the Director General
	4	<p>An independent Environmental Audit within two years of commencement of operations at the ANE Facility and every 3 years thereafter. The audit will;</p> <ol style="list-style-type: none"> <li>a. Be conducted by a suitable, experienced and independent expert whose appointment has been endorsed by the Director General</li> <li>b. Assess the environmental performance of the Facility and its effect on the surrounding environment</li> <li>c. Assess whether the Facility is complying with the relevant standards, performance measures and statutory requirements</li> <li>d. Review the adequacy of any strategy / plan / program required under the approval; and if necessary,</li> <li>e. Recommend measures or actions to improve the environmental performance of the Facility and / or any strategy / plan / program required under the approval</li> </ol>	An independent Auditor was appointed and endorsed by the Director General to carry out the audit in the last quarter of 2016. Audit completed and submitted to DPE.
	5	<p>The following information regarding the Facility is included on the website:</p> <ul style="list-style-type: none"> <li>• Copy of all current statutory approvals;</li> <li>• Copy of the current environmental management strategy and associated plans and programs;</li> <li>• Copy of any Annual Reports (over the last 5 years);</li> <li>• Copy of any Independent Environmental Audit, and the Proponent's response to the recommendations in any audit; and</li> </ul> <p>Any other matter required by the Director-General</p>	Copies of information relating to the facility are included on the Orica Mining Services website ( <a href="http://www.oricaminingservices.com">www.oricaminingservices.com</a> )

**Appendix 1: DISCHARGE & MONITORING POINT 1 and POINT 2****DISCHARGE & MONITORING POINT 1as at 27.07.2012 -- 26.07.2013**

Discharge to Utilisation Area.

Low	Average	High
5250L/day	6875L/day	8500L/day

Max Limit 16800L/day

**DISCHARGE & MONITORING POINT 1 as at 27.07.2013 – 26.07.2014**

Discharge to Utilisation Area.

Low	Average	High
4500L/day	6350L/day	8500L/day

Max Limit 16800L/day

**DISCHARGE & MONITORING POINT 1 as at 27.07.2014 – 26.07.2015**

Discharge to Utilisation Area.

Low	Average	High
4625L/day	6063L/day	7500L/day

Max Limit 16800L/day

**DISCHARGE & MONITORING POINT 1 as at 27.07.2015 – 26.07.2016**

Discharge to Utilisation Area.

Low	Average	High
4500L/day	6000L/day	7500L/day

Max Limit 16800L/day

**DISCHARGE & MONITORING POINT 1 as at 27.07.2016 – 26.07.2017**

Discharge to Utilisation Area.

Low	Average	High
4500L/day	6000L/day	7500L/day

Max Limit 16800L/day

**Appendix 1 (cont.)****DISCHARGE & MONITORING POINT 2 as at 27.07.2016 – 26.07.2017**

Wet weather discharge, overflow pipe from water treatment systems 'Stormceptre System' (Pit 17) located at the south-eastern corner of the Ammonium Nitrate Emulsion Production Facility.

<b>POLLUTANT</b>	<b>UNIT OF MEASURE</b>	<b>NO. OF SAMPLES REQUIRED BY LICENCE</b>	<b>NO. OF SAMPLES YOU COLLECTED AND ANALYSED</b>	<b>LOWEST SAMPLE VALUE</b>	<b>MEAN OF SAMPLE</b>	<b>HIGHEST SAMPLE VALUE</b>
AMMONIA	Milligrams per litre	<b>32</b>	<b>31</b>	<b>0.13</b>	<b>0.43</b>	<b>0.96</b>
CONDUCTIVITY	Micro Siemens per centimetre	<b>32</b>	<b>31</b>	<b>20</b>	<b>97.22</b>	<b>806</b>
NITROGEN (TOTAL)	Milligrams per litre	<b>32</b>	<b>31</b>	<b>0.5</b>	<b>2.12</b>	<b>6.6</b>
OIL & GREASE	Visible	<b>32</b>	<b>31</b>	<b>Nil Visible</b>	<b>Nil Visible</b>	<b>Nil Visible</b>
PH	PH	<b>32</b>	<b>31</b>	<b>6.47</b>	<b>7.28</b>	<b>9.95</b>
TOTAL DISSOLVED SOLIDS	Milligrams per litre	<b>32</b>	<b>31</b>	<b>14</b>	<b>71.94</b>	<b>518</b>
TOTAL SUSPENDED SOLIDS	Milligrams per litre	<b>32</b>	<b>31</b>	<b>0.0</b>	<b>92</b>	<b>515</b>

## **Appendix 2: EXTRACTS from QUALITY ASSURANCE DOCUMENT within the EPL**

### **L2 Volume and Mass Limits**

Pollution Solutions Report – September 2016

Pollution Solutions Sampling Analysis – December 2016

Pollution Solutions Report – March 2017

Pollution Solutions Report – June 2017

(Refer to attached reports)

The Orica Australia Technical Centre is compliant with condition L2 and its subsection.

To ensure condition L2 of the sites licence is conformed with, quarterly assessments on the sites treatment plant by a NATA accredited company are undertaken. Part of this quarterly assessment includes the review on the quantity of discharge. From this review an average daily output is identified of which is approximately 50% below the current daily licence limit.

Quantity of discharge amount was consistent with previous year.



### **L3 Noise Limits**

The Orica Australia Technical Centre is compliant with condition L3 and all of its subsections.

A noise survey conducted on April 2012 by independent consult Umwelt during production phase identified compliance with condition L3. No complaints have been received relating to noise generated by the site.

For the period of this report there have been no breach of noise limits and no complaints received.

This survey is readily accessible if an authorised officer of the EPA requests it.

### **L4 Potentially Offensive Odour**

The Orica Australia Technical Centre is compliant with condition L4 and its subsection.

No potentially offensive odours were identified at the site.

**Appendix 3: Projected ANE Annual Tonnages between 2011 and 2023 with total daily truck movements**

<b>Year</b>	<b>Total Truck Movements - Projected</b>	<b>Total Truck Movements – Actual Average / day</b>	<b>Total Tonnes - Projected</b>	<b>Total Tonnes - Actual</b>
2011	50	1	125,000	0
2012	55	26	137,500	40,657
2013	60	34	150,000	111,310
2018	80		200,000	
2023	100		250,000	

## Appendix 4: Audit Actions

### Recommendations from the Independent Hazard Report – 2016

The requirement to conduct the Hazard Audit forms part of the Project Approval for the ANE Facility, under Section 75J of the Environmental Planning and Assessment Act 1979, dated 26 July 2010 (Application Number 09\_0090).

In accordance with Schedule 3.5 listed below is the audit report implementation program of all recommendations made in the audit report.

Recommendation				Priority	
<b>Common to all plants</b>					
1. The signatory Orica Policy documents was updated from 2010 (Graham Liebelt) to 2013 (Ian Smith). Having now again changed CEO, the Orica Policy document are again signed by the ex CEO. While the 2013 action was closed it needs to be re-opened again for the 2016 hazard audit.				MEDIUM	
Orica Action No.	Ref. No.	Description	Due Date		
AP00030488	5.6	Updating of Orica's Policy documents is required. Currently displaying signature of ex CEO.	30.09.2016	Complete	
2. Opportunity for improvement: There are some platforms on site – a medical emergency at height would require evacuation from height. It is recommended to schedule an emergency drill for medical evacuation from a platform in the next Hazard Audit period.				LOW	
Orica Action No.	Ref. No.	Description	Due Date		
AP00030167	5.5	Schedule an emergency drill for medical evacuation from a platform.	30.09.2016	Complete	
<b>Site responsibility</b>					
Site 1. Check the hydrant at the RL1 plant (back of process building) which appears to be non-compliant (post audit comment from Site: <i>Currently working with Fire protection supplier for compliance with a new packaged unit</i> )				MEDIUM	
Orica Action No.	Ref. No.	Description	Due Date		
AP00030166	A2.1.1	Check the hydrant at the RL1 plant (back of process building) for compliance.	30.09.2016	Complete	
<b>ANE Plant</b>					
ANE 1.Reinforce requirements for all fields on the hot work permit to be filled in, including the Gas Test panel				MEDIUM	

Recommendation			Priority	
Orica Action No.	Ref. No.	Description	Due Date	
AP00030168	A1.5.1	Reinforce requirements for all fields on the hot work permit to be filled in, including the Gas Test panel	30.12.2016	Complete
ANE 2. There appears to be a discrepancy w.r.t. pressure vessel inspection documentation: Records show only six (6) PVs completed of which two (2) PVs did not have any test sheets prepared (PVs 22-4490 & 32-4460); inspection status is uncertain for remaining three (3) PVs (PV 32-4470; 35-4450A; 35-4450B) with no evidence of complete inspection provided during the audit. PV inspection documentation requires upgrading and further checks by ANE personnel is required to ensure that the PV inspections, carried out by contractors, is as per Code requirements			MEDIUM	
Orica Action No.	Ref. No.	Description	Due Date	
AP00030169	A1.5.1	Upgrade PV inspection documentation and further checks by ANE personnel is required to ensure that the PV inspections, carried out by contractors, is as per Code requirements.	30.09.2016	Complete
ANE 3. Overprotective devices on the pumps are currently not included in RV testing regime (though they are drawn as RVs on the P&IDs). Review relief valve register and ensure testing of RVs are carried out as per Code requirement for all applicable RVs			MEDIUM	
Orica Action No.	Ref. No.	Description	Due Date	
AP00030170	A1.5.1	Review relief valve register and ensure testing of RVs are carried out as per Code requirement for all applicable RVs.	30.09.2016	Complete
<b>Research Laboratory (RL1)</b>				
R&D 1. Training matrix used in the R&D plants (currently managed / updated by RL1 Supervisor) should be managed in a more proactive manner as it shows that some training has expired (e.g. magazine keeper). Management attention is required for this system			MEDIUM	

<b>Orica Action No.</b>	<b>Ref. No.</b>	<b>Description</b>	<b>Due Date</b>	
AP00030209	5.11	Review training matrix used in the R&D plants and provide training for expired competencies.	30.09.2016	Complete
R&D 2.Ensure that training against safety critical procedures is carried out as per the set frequency			MEDIUM	
<b>Orica Action No.</b>	<b>Ref. No.</b>	<b>Description</b>	<b>Due Date</b>	
AP00030209	A4.3	Ensure that training against safety critical procedures is carried out as per the set frequency.	30.09.2016	Complete
R&D 3.Formalise Orica in-house ETF training and competency for work within the UN test Unit and within the Friction & impact testing facility			MEDIUM	
<b>Orica Action No.</b>	<b>Ref. No.</b>	<b>Description</b>	<b>Due Date</b>	
AP00030211	A4.3	Formalise Orica in-house ETF training and competency for work within the UN test Unit and within the Friction & impact testing facility.	30.09.2016	Complete
R&D 4.Investigate whether the high pressure reliefs on the water bath heaters and on the ANE refinement unit in ML1 should be on a PM task			MEDIUM	
<b>Orica Action No.</b>	<b>Ref. No.</b>	<b>Description</b>	<b>Due Date</b>	
AP00030212	A4.5.1	Investigate whether the high pressure reliefs on the water bath heaters and on the ANE refinement unit in ML1 should be on a PM task	30.09.2016	Complete

## Recommendations from the Independent Environmental Audit 2017

- Response to Recommendations – 6th February 2017
- Revised Response as requested by DPE – 28th July 2017

**Table 9.1 – Consolidated Audit Recommendations**

Source	Reference	Commitment	Recommendation	Orica Response	Progress
Project Approval	Schedule 3 – Hazards, condition 4.1	Within 3 months of the approval of Modification 2. or further time agreed with SafeWork NSW, the applicant shall update the current MHF Safety Case for the facility and provide the relevant information of SafeWork NSW.	To remain compliant, Orica will need to submit the updated Safety Case to SafeWork NSW on or before 27 April 2017	Action No: 2017-AP00046848  Action Description:  Submit the updated Safety Case to SafeWork NSW prior to 27 April 2017.  Due Date: 27/04/2017	Action No: 2017-AP00050799  Raised to replace original action number  Safety Case submitted 26 <sup>th</sup> April 2017  Action Complete
Project Approval	Schedule 3 – Hazards, condition 5	Twelve months after the commencement of operations of the proposed ANE Facility and every three years thereafter, or at such intervals as the	To meet consent time frames, the next Hazard Audit is due to be conducted by 7 February 2019, and the report due to be submitted to the Director-General by 7 March 2019.	Accepted	Action No.  2017-AP00064777

Source	Reference	Commitment	Recommendation	Orica Response	Progress
		<p>Director-General may agree, the Proponent shall carryout a comprehensive Hazard Audit of the site and within one month of each audit submit a report to the Director-General.</p> <p>a) The audits shall be carried out at the Proponent's expense by a qualified person or team, independent of the overall site, approved by the Director-General 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'.</p> <p>b) The audit report must be accompanied by a program for the implementation of all recommendations made in the audit report. If the Proponent intends to defer the implementation of a recommendation, reasons must be documented.</p>			Due Date: 07.02.2019
Project Approval	Schedule 3 – Independent	Independent Traffic Audits must have the verification component of the audit	As requested by DPE in their letter to Orica (23.10.16) future ITAs must clearly state that the verification	Action No:	Action Complete 30.03.2017



Source	Reference	Commitment	Recommendation	Orica Response	Progress
	Traffic Audit, condition 11a	undertaken without prior notice to the proponent.	component of the audit was undertaken without prior notice to the Proponent	2017-AP00046850  Action Description:  Notify independent traffic auditor of requirements.  Due Date: 30/06/2017	
Project Approval	Schedule 3 – Independent Traffic Audit, condition 11f	Within 1 month of commissioning the audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General, with a response to any of the recommendations contained in the audit report.	In future submissions of ITAs include a response to audit recommendations.	Accepted	
Emergency Plan	1.5.1 Document control and Distribution	This plan has been submitted to the Director-General NSW Department of Planning for approval and must be resubmitted for approval when there are	Check with DPE regarding their need to review. If not required, remove the requirement to submit to Director-General from the document. The Plan is submitted to NSW Fire and	Action No:  2017-AP00046851	Action No: 2017-AP00050804  Raised to replace original action number

Source	Reference	Commitment	Recommendation	Orica Response	Progress
		significant changes to the plan.	Rescue when external review is required.	Action Description:  Check with DPE regarding their need to review the Emergency Plan.  Due Date: 31/10/2017	Due Date 31/10/2017  In progress
Safety Management System	14.3.1 Specialist SH&E Training	Additionally, all principal Site Managers undergo a Site Manager's Competency Assessment, and preparation of a development plan at least every four years. The Engineering Shared Services team is responsible for scheduling the competency assessment.	We suggest that the document be updated to reflect new process.	No longer applicable. Orica to review Safety Management System and external audit checklist to be updated.	

Source	Reference	Commitment	Recommendation	Orica Response	Progress
Safety Management System	17.2 Letter of Assurance	The Letter of Assurance process is used to report SH&E Assurance annually to the Chief Executive Officer (CEO) of Orica Ltd. Letters of Assurance are prepared by each Site Manager, using information gained during audits conducted during the period, the results of investigations into incidents and reviews with the Site Management Team.	We suggest report is updated to reflect updated process	No longer applicable. Orica to review Safety Management System and external audit checklist to be updated.	Orica has introduced a SHES Assurance Program
Road Transport Protocol	1.3.2 Truck controls	Licensing of all vehicles by the relevant regulatory authority	It is recommended that the document be revised to put the responsibility back onto the contractor as Orica can't control this.	Action No: 2017-AP00046852  Action Description: Review and update Road Transport Protocol.  Due Date: 31/10/2017	Action No: 2017-AP00050806  Raised to replace original action number  Review in progress

Source	Reference	Commitment	Recommendation	Orica Response	Progress
Road Transport Protocol	3.2 Compliance	Drivers found to be non-compliant may be subjected to Orica's disciplinary process or prevented from delivering to site in the case of contract or delivery drivers.	We suggest that the document is revised to put the responsibility back onto the contractor as Orica can't control this.	<p>Action No: 2017-AP00046853</p> <p>Action Description: Review and update Road Transport Protocol.</p> <p>Dues Date: 31/10/2017</p>	<p>Action No: 2017-AP00050805</p> <p>Raised to replace original action number</p> <p>Review in progress</p>
Soil and Water Management Plan	Table 5.1	Maintain existing upslope diversion bunds. Maintain concentrated water channels adjacent to diversion bunds to prevent erosion and down slope sedimentation.	Undertake measures to reduce erosion in clean water diversion.	<p>Action No: 2017-AP00046854</p> <p>Action Description: Engage contractors to repair erosion.</p> <p>Due Date: 31/12/2017</p>	<p>Action No: 2017-AP00050808 Raised to replace original action number</p> <p>Contractor engaged.</p>

Source	Reference	Commitment	Recommendation	Orica Response	Progress
Soil and Water Management Plan	Table 6.1	Regular inspection of clean water diversions, especially following rainfall events. Carry out repairs as required to ensure they remain in good working condition.	Undertake measures to reduce erosion in clean water diversion.	Action No: 2017-AP00046854  Action Description: Carry out inspection as per SAP PM.  Due Date: 31/12/2017	Action No: 2017-AP00050808 Raised to replace original action number  Contractor engaged.
Soil and Water Management Plan	4.0 Legislative Requirements	In addition to Orica's legislative requirements detailed in Section 2.0 of the EMS-O, Orica will undertake stormwater, erosion and sediment management in accordance with: • Project Approval (09_0090); • Environmental Protection Licence (number 4121); • Protection of the Environment Operations Act 1997 (POEO Act), administered by the NSW Department of	Undertake measures to reduce erosion in clean water diversion.	Action No: 2017-AP00046854  Action Description: Engage contractor to ensure legislative requirements are met.	Action No: 2017-AP00050808 Raised to replace original action number  Contractor engaged.

Source	Reference	Commitment	Recommendation	Orica Response	Progress
		<p>Environmental and Heritage (OEH);</p> <ul style="list-style-type: none"> <li>• Environmental Planning and Assessment Act 1979 (EP&amp;A Act), administered by the NSW Department of Planning (DoP);</li> <li>• Water Management Act 2000, administered by the NSW Office of Water (NOW);</li> <li>• Operation phase commitments of the CSWMP;</li> <li>• Managing Urban Stormwater: Soils and Construction (the Blue Book) Volume 1 (Landcom, 2004); and</li> <li>• Managing Urban Stormwater: Harvesting and Reuse (DEC, 2006).</li> </ul>		<p>Due Date:</p> <p>31/12/2017</p>	
Environmental Management Strategy	2.1 Environmental Aspects	The Register [of Environmental Aspects] will be reviewed every two years, and changes to the identification of aspects, the assessment of risk, and the identification of control measures to reduce the risk will be implemented as required.	Schedule a biennial review the register of environmental aspects.	<p>Action No:</p> <p>2017-AP00046855</p> <p>Action Description:</p> <p>Schedule a biennial review of the register</p>	<p>Action No: 2017-AP00050809 Raised to replace original action number</p> <p>Action Complete</p>

Source	Reference	Commitment	Recommendation	Orica Response	Progress
				of environmental aspects.  Due Date: 30/04/2017	
Environmental Management Strategy	2.2 Legal and Other Requirements	Should the scope of current operations change, or if a development application is to be lodged for alterations or extensions to the ANE Facility or its associated lands, applicable legislation and environmental planning instruments should be investigated, and this section should be updated, to ensure currency.	Include review of the legal register in the biennial review of the EMS.	Accepted	Update as required.
Environmental Management Strategy	2.3 Objectives and Targets	It is expected that these objectives and targets will be reviewed at least every two years to ensure they are actively achieving best practice in environmental management, and are still relevant to local conditions and the legislative framework. New objectives	Review the EMS objectives and targets during the biennial review.	Accepted	Bi-annual review underway



Source	Reference	Commitment	Recommendation	Orica Response	Progress
		may be determined and new targets set over time.			
Environmental Management Strategy	3.3.2.1 General enquiries, information and visitors	The contact numbers for the site are as listed below: - Orica Technology Centre enquiry line - (02) 4939 5200; and - ERS - 1800 033 111. These phone numbers will be listed in the White Pages, advertised via signage at the Orica Richmond Vale site entrance on George Booth Drive, and noted on relevant vehicles in the case of the ERS number in accordance with the Road Transport Protocol.	Suggestion for improvement to the document. Remove the ERS number. Add the complaints number. Remove requirement to list these in the white pages. Change to webpage. Advertised number on the signage at front of Orica should be the 1300 number advertised on the website.	The enquiry lines 4939 5200 and 1300 are linked to the same telephone reception.	
Environmental Management Strategy	3.3.2.6 Community Consultation and Support	The Technical Centre site will implement a community consultative group which will include representatives from local government, emergency services and local residents. This group will provide a communication conduit between the site and the local community and provide feedback on business performance and	Establish a consultative group in line with DPE guidelines.	Action No: 2017-AP00046857  Action Description: The Technical Centre to establish a consultative group in	Action No: 2017-AP000508010 Raised to replace original action number  In progress

Source	Reference	Commitment	Recommendation	Orica Response	Progress
		discuss community concerns.		line with DPE guidelines.  Due Date: 30/09/2017	
Environmental Management Strategy	4.1 Monitoring and Evaluation	the EMPs will be formally audited on an annual basis by the Technology Centre site Manager with the SH&E team representative.	Implement annual audit process for EMPs.	Action No. 2017-AP00046883  Action Description: Implement a six monthly PM audit process for EMPs.  Due Date: 31/03/2017	Action No: 2017-AP00050811 Raised to replace original action number  Complete 30/03/2017
Environmental Management Strategy	4.4.1 Internal Audits	The EMS shall be audited on two-yearly (biennial) basis. Biennial audits will also be conducted of the site-specific Management Plans referred to in this EMS.	Schedule a biennial internal audit of the EMS.	Action No. 2017-AP00046884  Action Description:	Action No: 2017-AP00050812 Raised to replace original action number

Source	Reference	Commitment	Recommendation	Orica Response	Progress
				<p>Schedule a biennial internal audit of the EMS in the Orica DMS system.</p> <p>Due Date: 30/04/2017</p>	Complete 24/04/2017
Environmental Management Strategy	4.4.1 Internal Audits	All auditing records will be maintained by the SH&E team. A formal audit report must be prepared for each audit undertaken.	Establish and maintain a system to record audit records.	<p>Action No. 2017-AP00046884</p> <p>Action Description: All auditing records from the audit to be recorded in the Orica DMS system.</p> <p>Due Date: 30/04/2017</p>	<p>Action No: 2017-AP00050812 Raised to replace original action number</p> <p>Complete 24/04/2017</p>

Source	Reference	Commitment	Recommendation	Orica Response	Progress
Environmental Management Strategy	6.2 Reuse and recycling	Recycling provisions in accordance with council requirements and the Waste Avoidance and Resource Recovery (WARR) Act. Check that any waste produced on site is taken to the appropriately labelled storage bin and taken to the appropriate licensed facility. Monthly via receipt of report from waste contractor.	We suggest a periodic audit of waste vehicles is undertaken to check compliance with weight records.	Accept	

### Additional actions raised from correspondence from Department of Planning dated 11.07.2017 re: Independent Environmental Audit 2017 under Schedule2, Condition 4.

Source	Reference	Commitment	Orica Response	Progress
Request from DPE	Schedule 2, Condition 8.	Address compliance with BCA	Action No: 2017-AP00064786  Due Date: 30/09/2017	Certifier engaged.  Currently reviewing compliance.
Request from DPE	Schedule 4, Condition 1	Update and implement the Environmental Management Strategy to address the non-compliances identified in the IEA	Action No: 2017-AP00064787  Due Date: 30/09/2017	Advisors engaged.  Document currently under review.
Request from DPE	Schedule 4, Condition 5	Update and maintain the company website	Action No: 2017-AP00064788  Due Date: 31/08/2017	In progress
Request from DPE	Schedule 2,	Review and revise as necessary any strategies/plans/programs in relation to the outcomes of the IEA.	Action No: 2017-AP00064791	List of strategies, plans and programs compiled.

Source	Reference	Commitment	Orica Response	Progress
	Condition 4		Due Date: 30/09/2017	Reviews underway.