

Community SHEC Report

**Kooragang Island
June 2016**

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1 Introduction

This report focuses on activities and events during the month of May 2016 with the exception of community engagement activity which is reported for mid-May to mid-June 2016.

2 Safety and Environmental Reporting

Orica Kooragang Island records safety and environmental incidents and opportunities for improvement in the Enablon reporting system. For each incident, a manager is nominated who ensures that the incident is investigated where required, and actions generated to minimise the potential for recurrence. Actions associated with the incident are captured in a database with responsibilities and scheduled due dates to ensure completion.

Category	May 2016	Summary
Injuries	0	There were no injuries requiring medical treatment during the month.
Environmental Non Compliances	2	There were two exceedences of the suspended solids concentration limit in effluent. See Section 2.1.1.
Complaints – received by Orica	0	Orica did not receive any complaints directly during the month.
Complaints – received by EPA*	3	EPA received two complaints from a Stockton resident regarding dust from the AN1 Prill Tower. Investigation did not identify any abnormal AN1 plant operations. EPA received a complaint from a Newcastle resident regarding yellow coloured smoke from the site. An investigation did not identify any abnormal plant operations, with all acid plant emissions below the licence limits.

* Note: Complaints received by EPA and Orica contacted to investigate.

2.1 May 2016 Environmental Performance

The following section provides information on Orica's compliance during May 2016 with the site's Environment Protection Licence conditions.

2.1.1 Water Emissions

Effluent is process water captured across the site and discharged to the Hunter River North Arm via a licensed discharge point. Daily composite sampling is undertaken for arsenic, chromium VI, zinc, nitrogen and total suspended solids. pH, temperature and flow are monitored continuously and oil and grease twice weekly. There were two exceedences of the effluent total suspended solids concentration limit during the month which investigation indicates was due to algal material from the internal wall of effluent pipes. A number of effluent pipes in the network that services the ammonia plant area were cleaned to remove any algal material and minimise the potential for a recurrence of the incidents.

Effluent (Monitoring Point 23)	Licence 100% limit	May 2016			
		Minimum	Maximum	Average	Compliance
Arsenic	0.05mg/L	<0.01	0.04	0.01	✓
Chromium VI	0.2mg/L	<0.01	<0.01	<0.01	✓
Nitrogen (Total)	2000mg/L	81	231	163	✓
Oil and Grease	10mg/L	0.1	0.3	0.2	✓
pH	6.2 to 9.5	6.7	8.8	7.6	✓
Temperature	Max 43°C	27.3	38.9	34.9	✓
Total Suspended Solids	50mg/L	6	136	17	×
Zinc	5mg/L	0.04	0.3	0.08	✓
Effluent Volume	4500kL/day	1948	2726	2338	✓

2.1.2 Stormwater

Orica is required to collect a monthly sample, during a rain event of sufficient quantity that it results in a discharge from the site stormwater drains. The results for the month are shown in the table below.

May 2016						
Stormwater drain	Arsenic mg/L	Chromium VI mg/L	Total Nitrogen mg/L	pH	Phosphate mg/L	Total Suspended Solids mg/L
1	<0.01	<0.01	76	7	1.4	147
2	<0.01	<0.01	6	6.9	1.9	47
3	<0.01	<0.01	1	6.9	0.8	36
4	No flow was detected during May 2016					
5	No flow was detected during May 2016					
6	No flow was detected during May 2016					

2.1.3 Air Emissions

Orica is required to continuously monitor NOx emissions from the nitric acid plant stacks. During the month the site complied with the licence requirements in relation to NOx emissions.

May 2016				
NOx limits	Licence 99% limit	Hours above limit	Cumulative no. hours above limit (YTD)	No. hours per year allowed above the licence limit
No. 1 Nitric Acid Plant	400ppm	0	3	87.8
No. 2 Nitric Acid Plant	250ppm	1	5	87.8
No. 3 Nitric Acid Plant	200ppm	1	11	87.8

Note: The Environment Protection Licence year runs from 1/04/16 – 31/03/17

2.1.4 Air Quality

Following variation of the site Environment Protection Licence in May 2015 Orica ceased monitoring of NOx at Roxburgh St, Stockton and Total Suspended Particulates at Fullerton St, Stockton on 31 May 2015. Information on Stockton air quality is available in near-real time from <http://www.environment.nsw.gov.au/aqms/newcastlelocalmap.htm>.

3 Environmental Improvements

3.1 Arsenic Remediation Management Order

The Remediation Action Plan detailing the remediation works to be undertaken on site to address arsenic contamination of soil and groundwater is in the process of being finalised for submission to the EPA. The project remains on track for commencement in late 2016 to ensure the project is completed prior to 31 December 2017.

3.2 PM2.5 Management Program

The Lower Hunter Particle Characterisation Study, which characterised air quality for the period March 2014 to February 2015, was released in late April 2016 and it identified elevated levels of PM2.5 sized primary ammonium nitrate at the Stockton air quality monitoring station during the winter months. Orica has commenced investigations to determine whether changes made since the completion of the monitoring program have reduced the levels of ammonium nitrate and if required, options to further reduce Orica's contribution to PM2.5. As the program progresses further updates will be provided to the CRG.

4 Community Engagement Activity – Reported for mid-May to mid-June 2016

4.1 Launch of Museum Express Video

Newcastle Museum's science outreach program Museum Express, sponsored by Orica, last month launched a new promotional film starring students from the Hunter School of Performing Arts (HSPA). The film, which was shot over two days at the Broadmeadow

school, demonstrates how science can both inspire and intrigue students from a very young age.



4.2 Orica Board visit to Kooragang Island

On Thursday 9 and Friday 10 June, Orica's Board of Directors visited the Kooragang Island site. As well as meeting employees, being briefed on operations and touring the plants, the Board had the opportunity to meet a number of community representatives whose organisations had received support from Orica.

