

**Submission
No 17**

**INQUIRY INTO KOORAGANG ISLAND ORICA
CHEMICAL LEAK**

Organisation: Office of Environment & Heritage

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**Office of
Environment
& Heritage**

Our reference: ED11/1351
Contact:

Ms Rachel Callinan
Director Select Committee on the Kooragang Island Orca
Chemical Leak
Legislative Council, Parliament House, Macquarie Street
SYDNEY NSW 2000

4 NOV 2011

Dear Ms Calinan

I refer to the letter dated 13 October 2011 from Mr Robert Borsak MLC inviting the Office of Environment and Heritage to make a submission to the Select Committee Inquiry on the Kooragang Island Orca Chemical Leak.

Please find attached the Office of Environment and Heritage submission. I would be happy to provide more information about any of the issues covered in the submission at the Inquiry Hearing.

Yours sincerely

LISA CORBYN
Chief Executive

**OFFICE OF ENVIRONMENT AND HERITAGE
SUBMISSION TO**

**NSW LEGISLATIVE COUNCIL SELECT COMMITTEE INQUIRY ON THE
KOORAGANG ISLAND ORICA CHEMICAL LEAK**

The Office of Environment and Heritage (OEH), which incorporates the work of the statutory Environment Protection Authority, appreciates the opportunity to make a submission to the Inquiry. The submission provides information to respond to the Committee's Terms of Reference that are relevant to OEH, and information on actions being taken to implement the findings and recommendations of the O'Reilly Review.

1. GENERAL COMMENTS

OEH takes its roles and responsibilities in emergency response and pollution control very seriously, is skilled and experienced in dealing with pollution incidents and has built robust and tested processes to investigate and take action when such incidents occur. OEH staff are provided with training and guidance on how to effectively respond to pollution incidents.

These processes were followed in response to the 8 August 2011 incident at Orica, Kooragang Island. In his report Mr. O'Reilly commended OEH's officers for their efforts in dealing with the incident that occurred on 8 August, 2011.

Specific actions taken by OEH are outlined in Section 2 of this submission.

In reviewing all aspects of incident response, the area identified and acknowledged for improvement by OEH is in the timeliness of communication, both with the community about the incident and across Government, including in providing information to the Minister for the Environment.

OEH's ability to respond to the incident was hampered by the fact that Orica failed to notify OEH of the incident until some 16 ½ hours after the release. Orica also failed to notify other agencies and their industrial and residential neighbours. Once notified OEH responded.

Orica's failure to notify the incident earlier also significantly impacted on the timeliness for determining potential risks to the community and the environment as a result of the incident.

While the Ministry of Health and independent health specialists have advised that the incident did not result in any health impacts for the local community, the incident has highlighted the need for much earlier information to be provided to potentially affected communities. OEH regrets the impacts these delays have had on the residents of Stockton.

OEH has taken strong regulatory action in response to the incident, including directing Orica to shut down the Ammonia Plant and not restart the plant until approved by the EPA, to clean up affected Stockton premises, and to engage independent reviews to ensure that the plant operates to the highest standard of environmental performance.

The O'Reilly Review found that while there were no systemic problems in dealing with pollution incidents, a number of improvements should be made including strengthening the requirements for industry notifying and responding to pollution incidents, improving communication with the community and with the Minister, ensuring agencies involved in responses to pollution incidents are well coordinated and strengthening environmental regulation through a modernised and independent Environment Protection Authority (EPA).

The Government has developed a comprehensive package of reforms which include adoption of all of the recommendations of the O'Reilly Review as well as a number of initiatives which go beyond the recommendations. The reform package, which contains both legislative and non-legislative initiatives, will:

- Strengthen the legislation, holding industry to account for its environmental performance and its notification and communication with agencies and the community
- Improve community's right to know and access to information
- Provide for an independent and modern EPA to better regulate high risk activities
- Improve Government's and the community's knowledge about the cumulative impacts of industry

Further details about these reforms and implementation actions are contained in Section 5 of this submission.

OEH's view is that licensees should take responsibility for their environmental performance and their relationship with their neighbours. Effective engagement with their neighbours is fundamental to industry's 'licence' to operate. This responsibility is supplemented by the oversight of industry operations by a strong environmental regulator. The Government's steps to establish the EPA and strengthened legislation are intended to augment this regulatory oversight.

Orica's failure to communicate effectively with Government and the community has demonstrated the need for change. Our internal protocols have already been amended and our response managers and staff have been instructed that they must also directly notify the relevant agencies and the community when significant incidents occur.

There will also be much stronger requirements for industry to notify the relevant agencies and the community and it will be an offence for not doing so.

2. OEH'S REGULATORY ROLE AND APPROACH

As the lead environmental regulator in NSW, OEH aims to ensure that its regulatory activities are conducted effectively, consistently and transparently so that the environment is protected and improved.

The *Protection of the Environment Operations Act 1997* (POEO Act) establishes regulatory roles and responsibilities and the concept of Appropriate Regulatory Authority (ARA). OEH is responsible for regulating activities that are required to hold an environment protection licence (due to their size and nature) and activities operated by public authorities, including councils. Local government is responsible for regulating more local and less harmful activities.

A mix of tools is used to achieve environmental outcomes including education, economic mechanisms and a strategic and environmental risk based compliance and enforcement program.

Industry accountability and monitoring provisions include statutory requirements to control pollution; industry monitoring and reporting requirements; a legally binding compliance certification process; mechanisms to confirm compliance including inspections; compliance audits and campaigns; a formal licence review process to ensure that licence requirements reflect potential environmental impacts; enforcement powers and regulatory decisions publicly available via an internet based Public Register.

The Orica incident has highlighted some weaknesses in the environment protection legislation and OEH's ability to be a strong, independent and accountable environmental regulator.

The Government's reforms will modernise and strengthen the EPA. It will be a firm but fair regulator that:

- Focuses resources on activities with the potential for environmental or human health impacts
- Ensures an escalating response for non-compliances
- Applies appropriate responses to all non-compliances
- Takes strong action where needed
- Engages with the community in decision making to achieve the desired outcomes

3. THE ORICA INCIDENT

OEH took the following actions to respond to the Orica incident:

- Around 10.30 am on 9 August 2011 Orica telephoned OEH's Hunter regional office to notify that a pollution incident had occurred between 5.30 pm and 6.00 pm the day before.
- Orica advised that there had been a discharge to atmosphere containing Hexavalent Chromium (Chromium IV) and that the fallout was contained on the premises.
- As soon as OEH became aware of the incident (some 16½ hours after it happened) officers acted quickly and were on the site by 12.15 pm that day.
- While the officers were conducting an inspection of the site Orica admitted that there was also fallout of the material in the nearby suburb of Stockton. The OEH officers verbally directed Orica to notify Ministry of Health and the potentially affected community in Stockton.
- As soon as OEH officers had completed their inspection of the Orica site, they travelled to Stockton and undertook inspections and took samples. The samples were transported to OEH's Laboratory at Lidcombe the

following day for urgent analysis. In hindsight it would have been better to arrange for the samples to be transported to Lidcombe that evening and have the Laboratory staff commence work overnight.

- OEH officers re-inspected the site at 11.00 am on 10 August 2011 and found that Orica had not yet contacted Ministry of Health or the Stockton community. The officers again asked Orica to comply with this direction, and the company finally notified Ministry of Health around 11.30 am that day and began visiting and informing the residents of Stockton.
- OEH officers also then contacted Ministry of Health and worked very closely with Health officers to identify and confirm possible health impacts so that appropriate information could be communicated to the community.
- At this time the situation was not considered an emergency – therefore the formal arrangements under the State Emergency Management Framework were not activated. By the time OEH and other agencies were notified, the plant was shut down, the emergency response phase had passed and the recovery phase was instigated by OEH. Regardless of this OEH worked closely with other agencies and the relevant steps outlined in the *Hazardous Materials/Chemicals, Biological, Radiological Emergency Sub-Plan* were followed. In his report Mr. O'Reilly recognised the collaboration that occurred across the agencies.

OEH has taken strong regulatory action in response to the incident including issuing legal notices requiring Orica to:

- Shut down the Ammonia Plant. OEH has convened a Re-Start Committee of key Government and local government agencies to oversee the procedures and safeguards Orica will be required to implement before approval is given to restart the Plant. The Committee is ensuring that the community is kept fully informed about the start up process.

- Inspect all properties in potentially affected areas of Stockton and where necessary clean up and remove any contamination. Orica has now cleaned up the majority of affected properties.
- Engage a qualified and experienced engineer to review and report on the causes of the incident and make recommendations to ensure that a similar incident does not happen again. The report has now been submitted and OEH is reviewing the findings and recommendations.
- Engage an independent auditor to conduct an environmental audit of the site. The audit is to include an assessment of Orica's operational practices and procedures to ensure that the plant operates in an environmentally satisfactory manner and provide advice on improvements that can be made in order to better protect the environment. Orica has submitted details of the proposed auditor for OEH's approval.

OEH is also currently conducting comprehensive legal investigations into the Orica incident.

OEH has also taken a number of other regulatory actions to deal with previous breaches of legislation and the company's Environment Protection Licence, including commencing a prosecution in relation to an incident in October 2010 involving the release of nitric acid into the environment.

4. ORICA'S EMERGENCY RESPONSE PLAN

Orica has an Emergency Response Plan as required by its Environment Protection Licence issued under the POEO Act.

A plan is also required by the Workcover Authority of NSW in accordance with the Major Hazard Facilities requirements. OEH understands that the WorkCover Authority is currently reviewing the Plan for its adequacy.

The Emergency Response Plan lists a number of toxic chemicals that are stored or produced on the site. These include Natural Gas, Hydrogen, Ammonia (liquid and gases), Nitric Acid, Nitrogen Oxides, Ammonium Nitrate and Chlorine.

The independent mandatory environmental audit required by OEH is to include an inventory of all chemicals on the premises and descriptions of all planned chemical reactions involved in the production processes at the Plant.

5. RESPONSE TO O'REILLY REVIEW

Action has commenced to implement the O'Reilly recommendations and to progress a number of other reforms including a suite of comprehensive legislative changes. A Bill to amend the environmental legislation was introduced in Parliament on 11 October 2011. The main features of the Bill are:

Modernising and strengthening the Environment Protection Authority (EPA)

- The EPA will be a modern environmental regulator that is responsive and flexible with clear goals, functions and accountabilities.
- The EPA will be headed by a new statutory senior executive service position of Chairperson who will be responsible for managing and controlling the affairs of the EPA. The Chairperson will be required to actively engage with the community to hear their concerns about environmental and health impacts from industries.
- There will be a reconstituted expertise-based Board with clear governance accountability and reporting requirements. The Board will be required to

provide an annual Regulatory Assurance Statement to the Minister for the Environment. The Statement will be tabled in Parliament.

- A new position of Chief Environmental Regulator will be responsible for the day to day running of the EPA and its activities. The Chief Environmental Regulator will report to the EPA Chairperson.

Strengthening environmental legislation

- Requiring industry to immediately notify pollution incidents to the EPA and other relevant response agencies
- Doubling the maximum penalty for failure to notify pollution incidents to act as a deterrent for not complying with these requirements.
- Allowing the EPA to direct an industry where a pollution incident has occurred to notify other parties of the incident, including immediate industrial neighbours and the community and creating an offence for not doing so.
- Allowing the EPA to require polluters to pay for independent, expert advice or studies into the human health (on the advice of the Chief Health Officer) and/or environmental impacts needed to better understand the effects of a particular incident and to inform the response.
- Requiring all activities licensed under the POEO Act to prepare, implement and test pollution incident response management plans. The plans will include community notification and communication protocols. There will also be an ability for EPA to make a Regulation that requires certain non-licensed industrial facilities to prepare, implement and test plans.

- Making it more straightforward for the EPA to require industry to conduct mandatory audits.

Improving “community right to know” provisions

- Requiring industry to make its monitoring results available and expanding the information on EPA’s Public Register.
- Establishing a pilot Lower Hunter Area community advisory and consultative committee framework, initially for the Lower Hunter area, with representation from interested members of the community, local and state government and industry. This will ensure that the local community is given the information it needs to have confidence that its industrial neighbours are addressing issues of community concern.
- Establishing an industry funded environmental monitoring network in the Lower Hunter, in particular for the suburbs of Stockton and Mayfield, to provide information on potential cumulative impacts that might be occurring. The Minister for the Environment has directed the EPA to investigate approaches for setting up the network and to report back by March 2012.

Non-legislative initiatives

OEH is working with other emergency management agencies and the State Emergency Management Committee to:

- Expand the role for the community engagement system for hazardous materials incidents
- Develop a specific emergency management plan for Kooragang Island and neighbouring industrial precincts

- Involve the public and the media in Emergency Response Exercises to test and evaluate communications.

OEH 'Early Alert' System

OEH used its 'Early Alert' email system for the Regional Office to provide initial notification and information to the Deputy Chief Executive-Environment Protection and Regulation, the Chief Executive and the Minister for the Environment's Office. The 'Early Alert' was sent to the Deputy Chief Executive, Chief Executive and the Minister's office at 4:23pm on 10 August 2011. OEH's Chief Executive contacted the Chief Health Officer as soon as she was advised of the incident and subsequently the Minister's Office to provide further information on the incident and the next steps that would be taken in conjunction with Health.

The O'Reilly review found that OEH should have notified the Minister "sooner or at least by COB that day" and recommended that the Early Alert system be reviewed. OEH agrees with this assessment and has instituted a review, with a new communication protocol to be put in place to ensure that senior management and the Minister are notified of any serious pollution incidents as a matter of priority.

Environmental Audit Program

OEH has commenced a program of audits targeting industries that pose a high risk of environmental harm. Initial audits are being conducted at 42 high risk facilities across the State that store toxic, hazardous or dangerous substances in large quantities or volumes. These include oil refineries, chemical processing plants, large chemical and gas storage depots and large chemical warehouses.

The audits are focusing on making sure industry manages potential risks to people and the environment and that adequate emergency response procedures are in place should an incident occur. OEH will take action where

non-compliances are found to ensure all issues are addressed and environmental improvements are made.

6. SUMMARY

Orica should have notified OEH as soon as the incident occurred. Once informed of the incident, OEH staff were mobilised quickly and worked hard and fast. Staff from the Regional office in Newcastle, Analytical Laboratories, Public Affairs and other areas worked tirelessly and under significant pressure from the time that the incident was notified to OEH.

Staff from Ministry of Health and OEH worked cooperatively on sampling, risk assessments and communication material for the public. Our agencies worked well together at all levels. Information was shared promptly and the level of cooperation was excellent.

The Ministry of Health and its experts concluded that there were no health impacts on the local residents of Stockton.

There are improvements that OEH will also take to respond to the issues raised by this incident. The intense scrutiny of the incident and the concern in the public arena about the government's response and about late communication could have been lessened or avoided through better communication. Earlier communication by OEH to the community and to the Minister's office about the regulatory steps taken, what had happened and how OEH was responding should have occurred. This will be standard practice in future for major pollution incidents.