



Newcastle Local Government Area Environment Protection Licence Summary

2012

Summary of monitoring requirements
and EPA regulatory action 2007–2012

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Contents

1	Introduction	4
2	Regulation of industry – legislation and regulatory tools	5
3	Summary of Environment Protection Licences	8
4	Licence monitoring and compliance data	14
5	Regulatory action by the EPA	16
6	References	18

1 Introduction

In response to the August 2011 Orica incident in Newcastle, the NSW Government announced a series of legislative reforms and other initiatives to improve industry's environmental performance and the community's access to information about industrial activities and any incidents that occur at industrial sites. One of these initiatives was a proposal to establish an industry-funded environmental monitoring network in the Lower Hunter, focusing on the Newcastle Local Government Area (LGA).

To give effect to this initiative, on 9 October 2011 the Minister for the Environment, Robyn Parker MP, directed the EPA under s. 295Y of the *Protection of the Environment Operations Act 1997*, to immediately commence an investigation into the need for an environmental monitoring program in the vicinity of the heavy industrial precincts within the Lower Hunter area. This area includes but is not limited to the suburbs of Stockton and Mayfield, where a cluster of industries may be having cumulative impacts on population centres and the environment more generally.

Specifically the EPA must investigate:

- whether pollution impacts are occurring or have the potential to develop in the area
- the nature of those impacts (such as cumulative, hot spot or site-specific)
- the type of pollutants that appear to be causing the impacts and in general where they are occurring
- the need for a program to monitor the identified pollutants, and
- whether the program should be funded by licence holders or particular classes of licence holders.

In conducting the investigation the EPA must consult with industry and relevant communities and report its findings to the Minister.

The EPA currently regulates 64 premises through Environment Protection Licences (EPLs) in the Newcastle LGA. The purpose of this report is to:

- provide an overview of the current source emission air quality monitoring requirements associated with those licensed premises, and the level of compliance by industry with licence and regulatory requirements, and
- describe the range of regulatory actions taken by the EPA to address key issues associated with air quality at specific premises over the past five years.

This report is structured as follows:

- **Regulation of industry – legislation and regulatory tools (Section 2)**

This section presents a summary of the regulatory tools available to the EPA under the *Protection of the Environment Operations Act 1997* to regulate industry throughout NSW.

- **Summary of Environment Protection Licences (Section 3)**

This section presents a summary of all current Environment Protection Licences in the Newcastle LGA.

- **Licence monitoring and compliance data (Section 4)**

This section presents a detailed summary of point source (stack) emissions monitoring conducted by licensed industry and compares available monitoring data with the prescribed EPL and regulatory limits.

- **Regulatory action by the EPA to address air quality issues (Section 5)**

This section presents a detailed summary of regulatory action taken by the EPA to address specific compliance or air quality issues at licensed premises in the Newcastle LGA.

2 Regulation of industry – legislation and regulatory tools

The management of air quality in NSW is an integrated whole-of-government approach, using a mix of regulatory and non-regulatory measures and is increasingly linked with efforts to reduce greenhouse gas emissions. The goal of the framework is to improve regional and local air quality by meeting the air quality standards and goals set out in the National Environment Protection Measure for Ambient Air Quality and by reducing the population's exposure to air pollution.

The *Protection of the Environment Operations Act 1997* (POEO Act) is a key piece of environment protection legislation administered by the Environment Protection Authority (EPA). The Protection of the Environment Operations (Clean Air) Regulation 2010 (the Clean Air Regulation) is one of eight regulations which support the objectives of the POEO Act. The regulation-making powers for the POEO Act are contained in Section 3 of the Act.

Emissions of air pollutants are regulated using the POEO Act, together with the Clean Air Regulation and the Protection of the Environment Operations (General) Regulation 2009 (the General Regulation).

The Clean Air Regulation provides regulatory measures for a number of air quality issues:

- domestic solid fuel heaters – Part 2
- control of burning – Part 3
- motor vehicles and motor vehicle fuels – Part 4
- industrial air emissions from plant and activities – Part 5
- storage of volatile organic liquids – Part 6, and
- sulfur content of liquid fuel – Part 7.

There is also capacity to control air emissions through land-use planning: this is either through approvals made under the integrated development requirements of the *Environmental Planning and Assessment Act 1979* (the EP&A Act), where an Environment Protection Licence may be required for the development, or by local councils within the parameters of a local approvals policy, local environmental plan or a development control plan.

The regulatory tools which enable the EPA to licence and regulate emissions from industry are established by the POEO Act and the Clean Air Regulation. The relevant provisions of these pieces of legislation are outlined below.

EPA authority to regulate air emissions in licences is limited when a development is assessed under the provisions of State Significant Development (clause 89K) of the EP&A Act. The Department of Planning and Infrastructure is responsible for administration of the EP&A Act.

2.1 Protection of the Environment Operations Act 1997

2.1.1 Environment Protection Licences

The POEO Act requires that any person carrying out a scheduled activity must hold an Environment Protection Licence (s. 48). Scheduled activities are defined in Schedule 1 of the POEO Act and include a range of industry types. Typically the requirement to hold a licence is based on the type of industry and the operational scale of the activity being carried out.

The EPA can issue licences with or without conditions. Licence conditions can include requirements for the monitoring of discharges from the licensed premises and ambient conditions beyond the premises. The licence can limit the emissions of pollutants from point sources (stacks and vents) on the premises, but cannot place specific limits on ambient air quality.

The conditions of a licence may require the holder of the licence to undertake and submit to the EPA studies into any aspect of the environmental impact of the activity or work authorised or controlled by the licence. These conditions, as known as Pollution Reduction Programs (PRPs), can require the licensee to carry out works or to install plant for the purpose of preventing, controlling, abating or mitigating pollution.

It is an offence to fail to comply with the conditions of a licence.

2.1.2 Air pollution offences

The POEO Act also includes offence provisions for causing air pollution as a result of failing to maintain and/or operate plant in a proper and efficient manner, or for dealing with material in such a way as to cause air pollution from the premises.

Air pollution is defined as the emission into the air of any air impurity. An air impurity includes smoke, dust (including fly ash), cinders, solid particles of any kind, gases, fumes, mists, odours and radioactive substances.

It is also an offence for a premises to emit any air impurity at a level which exceeds the criteria set out in the Protection of the Environment Operations (Clean Air) Regulation 2010.

2.2 Protection of the Environment (Clean Air) Regulation 2010

The Protection of the Environment Operations (Clean Air) Regulation 2010 is the key regulatory mechanism in NSW for reducing source emissions of harmful pollutants to the air.

The Clean Air Regulation provides regulatory measures for a number of specific air quality issues:

- residential emissions are controlled by targeting woodsmoke and backyard burning
- emissions associated with motor vehicles are addressed through pollution control devices on vehicles, and

- industrial emissions are controlled mainly by setting maximum emission limits.

These regulatory measures target particulate matter, volatile organic compounds, oxides of nitrogen and a range of other pollutants.

2.2.1 Particles

Industrial premises emit approximately 62% of human-sourced emissions of particles less than 10 microns in diameter (PM₁₀) in the NSW Greater Metropolitan Region (GMR) (Sydney, Wollongong and Newcastle metropolitan areas) for both fugitive and point-source emissions. The two largest industrial point sources of human-sourced emissions in the GMR are electricity generation from coal (6%) and primary iron and steel production (2%, but as high as 53% in Wollongong). The Clean Air Regulation controls particles from industry by setting maximum source emission limits for both scheduled industry (those premises required to hold a licence under the POEO Act) and non-scheduled industry.

2.2.2 Volatile organic compounds

Volatile organic compounds (VOCs) include a wide range of carbon-based compounds that vaporise at normal temperatures. Roughly half of VOCs (53%) are emitted from natural sources (such as trees) while the rest are emitted from a wide range of processes (such as combustion and the production or use of solvents, paints or chemicals) or released from a range of products (such as petrol, paint and household cleaners). In the GMR, exhaust and evaporative emissions of petrol from vehicles account for the largest proportion of human-sourced VOC emissions – around 36%. Surface coating (paint), aerosols and solvents account for a further 25% with the remainder from a number of diverse sources.

VOC emissions are controlled for two reasons:

- VOCs are a significant precursor to the formation of near ground-level ozone, and
- some VOCs are harmful for health and the environment as 'air toxics'.

VOC emissions from industry are controlled through vapour recovery systems for the storage and distribution of volatile organic liquids, particularly in the petroleum and chemical industries. VOCs are also controlled through emission limits for newer industry (those commencing operations on or after September 2005) and by prescribing performance standards for emission control equipment for that industry. The benefits of these controls are not quantifiable at this stage.

2.2.3 Oxides of nitrogen (NO_x)

Oxides of nitrogen (NO_x) are a group of highly reactive gases produced mainly by combustion processes. Controls on NO_x emissions are in place for three reasons:

- NO_x are significant precursors to the formation of near ground-level ozone
- they are also precursors to the formation of fine particles, and
- NO_x are themselves significant pollutants with potential impacts on health and the environment.

In the GMR, around half of all NO_x emissions (both from natural and human sources) are emitted from electricity generation.

NO_x emissions are mainly controlled using the Clean Air Regulation to set maximum source emission limits for scheduled industry.

2.2.4 Other pollutants

Scheduled industries must comply with the Clean Air Regulation emission limits for sulfur oxides, hydrogen sulfide, fluorine, chlorine, hydrogen chloride, cadmium, dioxins, furans and toxic metals. Sulfur dioxide is also controlled through limits on the sulfur content of fuel. Emissions from a range of air toxics are also limited through the controls relating to woodheaters, backyard burning and anti-pollution devices on motor vehicles.

It should be noted that for all scheduled industries the emission limits prescribed by the Clean Air Regulation represent the maximum emission concentrations of each pollutant allowable. In many cases, specific licence conditions impose much lower concentration limits.

3 Summary of Environment Protection Licences

The EPA licenses a total of 64 premises in the Newcastle LGA. A list of these premises is provided in Table 3.1 below. Those premises with licence conditions which authorise the emission of air pollutants via point sources (stacks) are highlighted in yellow. Figure 3.1 shows all licensed premises in the Newcastle LGA by scheduled activity type and Figure 3.2 shows the location of all licensed premises in the Newcastle LGA.

Table 3.1: Licensed premises in the Newcastle LGA

Licence number	Licensee	Premises name	Suburb/Town	Scheduled activity
329	McDonald's Australia Limited	McDonald's Hexham	Hexham	Sewage treatment
369	The Shell Company of Australia Limited	Shell Hamilton Terminal	Hamilton	Chemical storage
452	Caltex Australia Petroleum Pty Ltd	Caltex Newcastle Terminal	Wickham	Chemical storage
505	Industrial Galvanizers Corporation Pty Ltd	Industrial Galvanizers (Newcastle)	Hexham	Metallurgical activities
527	BP Australia Pty Ltd	BP Carrington Terminal & Dyke No. 1 Berth	Carrington	Shipping in bulk
601	Port Waratah Coal Services Ltd	PWCS Carrington Coal Terminal	Carrington	Coal works
816	Brancourts Manufacturing and Processing Pty Ltd	Brancourt Hexham	Hexham	Agricultural processing
822	Commonwealth Steel Company Pty Limited	Commonwealth Steel Company Pty Limited	Mayfield West	Metallurgical activities
828	Orica Australia Pty Ltd	Orica Kooragang Island	Kooragang	Chemical production
1094	Boral Cement Ltd	Blue Circle Southern Cement	Kooragang	Cement or lime works
1266	Sibelco Australia Limited	Unimin Australia Limited	Sandgate	Crushing, grinding or separating

Licence number	Licensee	Premises name	Suburb/Town	Scheduled activity
1296	Graincorp Operations Limited	Newcastle Grain Terminal	Carrington	Shipping in bulk
1329	Bartter Enterprises Pty Limited	Bartter Enterprises Pty Limited	Beresfield	Agricultural processing
1419	Boral Timber Fibre Exports Pty Ltd	Boral Timber Fibre Exports Pty Ltd	Kooragang	Shipping in bulk
1431	Conports Pty Ltd	The Carrington Shiploader	Carrington	Shipping in bulk
1552	Port Waratah Coal Services Ltd	PWCS – Kooragang Coal Terminal	Kooragang	Coal works
1586	Hexham Bowling Club Co-operative Limited	Hexham Bowling Club Co-Op Ltd	Hexham	Sewage treatment
1676	Community Association In DP 270447	Hexham Engineering	Hexham	Sewage treatment
1683	Hunter Water Corporation	Newcastle Sewerage System including Burwood Beach Wastewater Treatment Plant	Merewether	Sewage treatment
1967	P&O Automotive & General Stevedoring Pty Limited	'K3'	Kooragang	Shipping in bulk
2156	Koppers Carbon Materials & Chemicals Pty Ltd	Koppers Carbon Materials & Chemicals Pty Ltd	Mayfield	Chemical production
2367	Kooragang Bulk Facilities Pty Ltd	Kooragang Bulk Facilities Pty Ltd	Kooragang	Shipping in bulk
3373	Newcastle Port Corporation	Maintenance Dredging Port of Newcastle	Newcastle	Extractive activities
4193	Cement Australia Holdings Pty Ltd	Kooragang Island Cement Terminal	Kooragang	Cement or lime works
4687	Newcastle Port Corporation	No. 3 Berth Kooragang Island	Kooragang	Shipping in bulk
4688	Newcastle Port Corporation	Carrington Basin Bulk Berths: No's 3 & 4 Western Basin Berths & No's 1 & 2 Eastern Basin Berths	Carrington	Shipping in bulk
5022	Port Waratah Coal Services Ltd	Fines Disposal Facility	Kooragang	Waste disposal (application to land)
5345	OneSteel Recycling Pty Limited	OneSteel Recycling Pty Limited	Hexham	Metallurgical activities
5430	Impact Fertilisers Pty Ltd	Impact Fertilisers Pty Ltd	Kooragang	Chemical storage
5583	Newcastle City Council	Waterways of Newcastle City	Newcastle	(not applicable)
5810	Cargill Australia Limited	Cargill Australia Limited	Newcastle	Agricultural processing
5897	Newcastle City Council	Summerhill Waste Management Facility	Wallsend	Waste disposal (application to land)

Licence number	Licensee	Premises name	Suburb/Town	Scheduled activity
6001	Forgacs Engineering Pty Limited	Forgacs Dockyard	Carrington	Marinas and boat repairs
6124	Transpacific Industries Pty Ltd	Transpacific Technical Services	Kooragang	Contaminated soil treatment
6609	Forgacs Engineering Pty Ltd	Forgacs Dockyard	Carrington	Marinas and boat repairs
7434	Specialised Waste Treatment Services Pty Ltd	Specialised Waste Treatment Services Pty Ltd	Kooragang	Waste processing (non-thermal treatment)
7675	Port Waratah Coal Services Ltd	Kooragang Island Waste Facility	Kooragang	Waste disposal (application to land)
10181	Fuchs Lubricants (Australasia) Pty Ltd	Fuchs Lubricants (Australasia) Pty Ltd	Wickham	Chemical production
10772	Newcastle Port Corporation	Newcastle Port Corporation Helipad	Carrington	Helicopter-related activities
11149	OneSteel Wire Pty Limited	OneSteel – Newcastle Market Mills	Mayfield	Metallurgical activities
11264	Sims Group Australia Holdings Limited	Sims Group Limited	Newcastle	Metallurgical activities
11396	Newcastle Cruising Yacht Club Limited	Newcastle Cruising Yacht Club Limited	Wickham	Marinas and boat repairs
11422	Fairfax Regional Printers Pty Limited	Fairfax Regional Printers Pty Ltd	Beresfield	Printing, packaging and visual communications
11549	Mayfield Industrial Estate Association Incorporated	Mayfield Industrial Estate Sewage Treatment Plant	Mayfield	Sewage treatment
11781	Incitec Pivot Limited	Incitec Pivot	Kooragang	Chemical production
11968	Boral Recycling Pty Limited	Boral Country Concrete and Quarries and Boral Recycling	Kooragang	Resource recovery
11984	Ausgrid	Energy Australia Wallsend Depot	Wallsend	Waste storage
12147	Juice Terminals Pty Limited	Juice Terminals Pty Ltd	Newcastle	Shipping in bulk
12192	Aero Logistics Pty Limited	Newcastle Regional Heliport	Mayfield West	Helicopter-related activities
12249	The University of Newcastle	Groundwater Remediation Test Site (GRTS), University of Newcastle	Callaghan	Waste processing (non-thermal treatment)
12367	Transpacific Cleanaway Pty Ltd	Cleanaway	Kooragang	Waste storage
12521	Mountain Industries Pty Ltd	Mountain Industries Pty Ltd	Kooragang	Shipping in bulk
12665	Onesteel Australian Tube Mills Pty Limited	Newcastle Pipe & Tube	Mayfield West	Metallurgical activities

Licence number	Licensee	Premises name	Suburb/Town	Scheduled activity
12693	Newcastle Coal Infrastructure Group Pty Ltd	Newcastle Coal Infrastructure Group	Kooragang	Railway systems activities
12740	Newcastle Coal Infrastructure Group Pty Ltd	Newcastle Coal Infrastructure Group Pty Ltd	Kooragang	Extractive activities
12764	SCE Resources Pty Ltd	Steelstone	Mayfield	Waste processing (non-thermal treatment)
12876	Austpac Resources N.L.	Austpac Resources Demonstration Plant	Kooragang	Chemical production
12977	Manildra Park Pty Limited	Manildra Park Pty Limited	Kooragang	Shipping in bulk
13059	LMS Generation Pty Ltd	Summer Hill Gas Utilisation Facility	Wallsend	Electricity generation
13073	Slattery Auctions Australia Pty Ltd	Slattery Auctions	Hexham	Helicopter-related activities
13181	Newcastle Port Corporation	Mayfield No. 4 berth	Mayfield North	Shipping in bulk
13206	Bulbeck Envirosolutions Pty Ltd	Bulbeck Envirosolutions Pty Ltd	Mayfield West	Waste processing (non-thermal treatment)
13214	Donhad Pty Ltd	Donhad Pty Ltd	Mayfield North	Metallurgical activities
13264	Reed Constructions Australia Pty Limited	Newcastle Inner City Bypass – Shortland to Sandgate	Newcastle	Road construction

Figure 3.1: Licensed premises in the Newcastle LGA by scheduled industry type

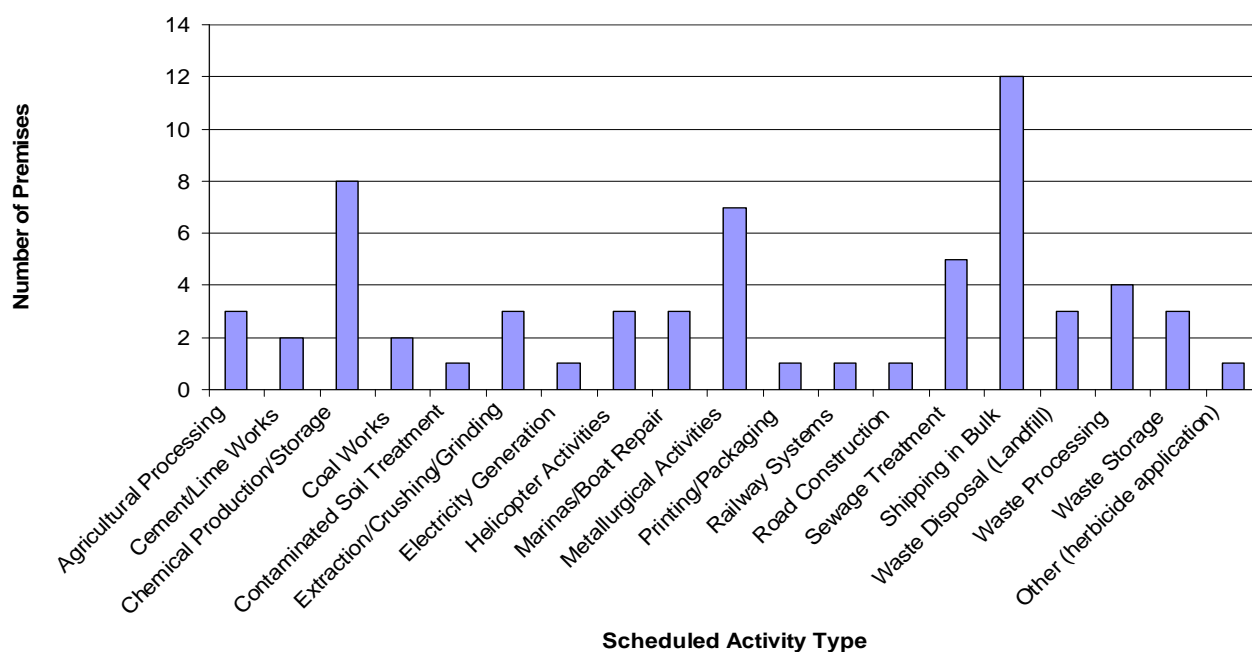


Figure 3.2: Licensed premises in the Newcastle LGA



<p>Legend</p> <ul style="list-style-type: none"> ● Newcastle Licensed Premises ● Premises with air discharge points Newcastle Local Government Area 	<p>Environment Protection Licenses Newcastle Local Government Area</p> <p><small>Copyright ©2012 Office of Environment and Heritage, February 2012 This map is not guaranteed to be free from error or omission. The NSW Office of Environment and Heritage and its employees accept liability for error and delay in the information in this map and any consequences of such error or omission.</small></p>	<p>N</p> <p>0 500 1000 2000 Meters</p> <p>Date/Projection: GDA 1994 MGA Zone 56 Printed By: EPA Newcastle 28 February 2012 <small>© NSW GOVERNMENT</small></p> <p> Office of Environment & Heritage</p>
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The EPA is also the Appropriate Regulatory Authority (ARA) for 21 other premises which, up until amendments to the POEO Act in 2008, were required to hold an Environment Protection Licence. While these premises are no longer regulated by a licence, the EPA remains the ARA for the regulation of environmental issues at these premises. A list of the premises which are not licensed, but for which the EPA is the ARA is provided in Table 3.2 below. These premises consist of concrete batching plants, asphalt batching plants and waste generation activities.

As these facilities are not regulated by a licence, and no pollution monitoring is required to be conducted at these facilities, these facilities are not considered further in this report.

Table 3.2: Non-licensed premises for which the EPA is the Appropriate Regulatory Authority

Licence number	Licensee	Suburb/Town	Scheduled activity
7	Bitupave Ltd	Carrington	Bitumen pre-mix or hot-mix industries
2566	Bitupave Ltd	Black Hill	Bitumen pre-mix or hot-mix industries
10	Premier Concrete (NSW) Pty Limited	Wallsend	Concrete works
111	Hymix Australia Pty Limited	Mayfield	Concrete works
995	Boral Resources (Country) Pty Limited	Jesmond	Concrete works
1017	Holcim (Australia) Pty Ltd	Tighes Hill	Concrete works
1259	Hanson Construction Materials Pty Ltd	Wallsend	Concrete works
1261	Hanson Construction Materials Pty Ltd	Adamstown	Concrete works
12331	CMG Concrete Pty Limited	Adamstown	Concrete works
12497	Boral Resources (Country) Pty Limited	Beresfield	Concrete works
6104	Pacific National (NSW) Pty Ltd	Tighes Hill	Waste activities
6114	Hunter Water Corporation	Shortland	Waste activities
6808	United Goninan Limited	Broadmeadow	Waste activities
10023	Hunter and New England Area Health Service	New Lambton Heights	Waste activities
10036	Hunter and New England Area Health Service	Newcastle	Waste activities
10996	Rail Corporation New South Wales	Broadmeadow	Waste activities

Licence number	Licensee	Suburb/Town	Scheduled activity
11357	Newcastle Private Hospital Pty Ltd	New Lambton Heights	Waste activities
11485	Medirest (Australia) Pty Ltd	Waratah	Waste activities
11487	Hunter and New England Area Health Service	Newcastle	Waste activities
11729	Health Care Lingard Pty Ltd	Merewether	Waste activities
11926	The Hunter Valley Private Hospital Pty Ltd	Shortland	Waste activities

4 Licence monitoring and compliance data

The conditions of Environment Protection Licences may set concentration limits for specific pollutants and require the licensees to monitor for those pollutants, and/or other parameters/indicators of plant performance. There are 12 premises which are authorised by an Environment Protection Licence to discharge pollutants to air from point sources (stacks) in the Newcastle LGA. These premises are listed in Table 4.1 below. The location of these premises is shown in Figure 3.2 (yellow dots).

Table 4.1 also indicates which pollutants are authorised to be discharged and/or monitored at each of these premises. For the majority of premises, limit conditions are also specified on the licence and specify the maximum concentration of a pollutant that may be emitted from the discharge point. Where no limits are specified, the requirements of the Clean Air Regulation apply.

At the end of each 12-month licensing period, the licensee is required to submit an Annual Return to the EPA which provides a summary of all data obtained from monitoring throughout the licence period, as well as a statement of compliance against the conditions of the licence. A summary of compliance with the licence and regulation air emission limits for each of these 12 licensed premises for the period 2006–2010 is shown in Table 4.2 below.

Table 4.1: Air emission discharge point limits and/or monitoring conditions

Licence number	Accountable party	Suburb/Town	No. of discharge points	Particulates	Oxides of nitrogen	Oxides of sulfur	Fluoride	Hydrogen sulfide	Hydrogen chloride	Hazardous substances (metals)	Volatile organic carbons	Zinc	Iron	Methyl bromide
816	Brancourts Manufacturing and Processing Pty Ltd	Hexham	1											
5810	Cargill Australia Limited	Newcastle	3		●									
1329	Bartter Enterprises Pty Limited	Beresfield	1	●	●	●								
11781	Incitec Pivot Limited	Kooragang	4	●			●							
828	Orica Australia Pty Ltd	Kooragang	10	●	●									
2156	Koppers Carbon Materials & Chemicals Pty Ltd	Mayfield	13	●	●	●	●							
13059	LMS Generation Pty Ltd	Wallsend	2		●	●								
822	Commonwealth Steel Company Pty Limited	Mayfield West	3	●	●	●			●	●	●	●	●	
5345	OneSteel Recycling Pty Limited	Hexham	1	●										
1296	Graincorp Operations Limited	Carrington	3	●										●
2367	Kooragang Bulk Facilities Pty Ltd	Kooragang	6	●										
13181	Newcastle Port Corporation	Mayfield North	2	●										●

Table 4.2: Compliance with licence air emission limits

Licence number	Licensee	Suburb	2006–2007	2007–2008	2008–2009	2009–2010
5810	Cargill Australia Limited	Kooragang	✓	✓	✓	✓
1329	Bartter Enterprises Pty. Limited	Beresfield	✓	✓	✓	✓
11781	Incitec Pivot Limited*	Kooragang	✓	✓	✓	✓
828	Orica Australia Pty Ltd	Kooragang	∞	∞	∞	✓
13059	LMS Generation Pty Ltd	Wallsend	N.A.	N.A.	N.A.	✓
822	Commonwealth Steel Company Pty Limited	Mayfield West	∞	∞	∞	∞
5345	Onesteel Recycling Pty Limited	Hexham	N.D.	✓	✓	✓
13181	Newcastle Port Corporation	Mayfield North	N.A.	N.A.	N.A.	✓
1296	Graincorp Operations Limited	Carrington	N.D.	✓	✓	✓
2156	Koppers Carbon Materials & Chemicals Pty Ltd	Mayfield	✓	✓	✓	✓
2367	Kooragang Bulk Facilities Pty Ltd	Kooragang	✓	✓	✓	✓

Notes to Table 4.2:

N.A.: Not applicable as licence was not issued until 2009–2010.

N.D.: Not determined as monitoring was not conducted during the licence period.

* Incitec Pivot closed the fertiliser manufacturing plant (acid plant, MPK (monopotassium phosphate) plant, double super plant) in 1990. Only the granulock plant and rock mill remained. The granulock plant was closed in 2006 (there were still some stack emissions from this plant) and the company has recently applied to remove the remaining plants from the licence.

5 Regulatory action by the EPA

As shown in Table 4.2, Environment Protection Licence air emission limit conditions were exceeded by both Orica Australia Pty Ltd and Commonwealth Steel Company Pty Ltd. This non-compliance relates to NO_x concentration limits (Orica) and NO_x mass load limits (Commonwealth Steel).

The EPA has taken a range of regulatory and other actions to address these specific EPL non-compliances and air quality issues in the Newcastle LGA generally. Actions taken by the EPA include making Pollution Reduction Programs (PRPs) part of the licence conditions, requiring:

- upgrades to plant and equipment, and
- further monitoring to identify emission sources and inform further improvement actions.

The EPA has also issued penalty notices for non-compliances with licence conditions.

A summary of the EPA's regulation of licensed industry in the Newcastle LGA specific to air quality is provided below:

- In the period 2007–2012 the EPA issued 11 penalty infringement notices to licensees in the Newcastle LGA for failing to comply with the conditions of their licence. Four of these notices relate to air emission incidents.
- The EPA varied the Environment Protection Licence held by Australian Rail Track Corporation (ARTC) to include a PRP that requires ARTC to quantify the level of dust (fine particulates: PM₁₀ and PM_{2.5}) generated from the rail transport of coal and other freight in the Newcastle area rail corridor. The study results will assist the EPA to consider appropriate strategies to mitigate the impacts of the rail corridor on ambient air quality. The program is due to be completed by the end of 2012.
- OEH is investigating sulfur dioxide emissions generated by ships while in port. In late 2010 OEH engaged consultants PAE Holmes to analyse the operations of GMR ports, including Newcastle port, and to determine the scope of opportunities to reduce emissions. The report has been received. As a next step, OEH proposes to consult with Roads and Maritime Services and port authorities to:
 - discuss potential emission reduction actions for ports that could be implemented in the near term, including expanding the Port Botany Landside Improvement Strategy and EPA Clean Machine program, and
 - improve EPA's understanding of the ports industry and its operating environment, as the basis for exploring further opportunities for emission reductions from all port operations.
- In April 2011 the EPA negotiated a PRP with Koppers Carbon Materials and Chemicals Pty Ltd to install nitrogen blankets on tanks within their naphthalene tank farm and to complete improvements to the fume scrubbers connected to the naphthalene tank farm. These works are now complete and will result in a significant reduction of odorous emissions from this facility.
- In June 2011 the EPA negotiated a PRP with The Shell Company of Australia Ltd to install a vapour recovery system at its Hamilton fuel terminal by the end of 2014. The installation of vapour recovery equipment at this premises will significantly reduce volatile organic compound (including benzene) emissions.
- In June 2011 the EPA negotiated PRPs with Commonwealth Steel Company Pty Ltd to reduce NO_x emissions from its Waratah manufacturing facility. These works are due for completion by the end of 2012.
- In November 2011 the EPA negotiated a PRP with Cargill Australia Ltd, who operates an oil seed processing plant on Kooragang Island, to engage suitably qualified persons to design and implement works to mitigate the emission of potentially offensive odours from the premises. Cargill has received development consent to construct a biofilter to treat odorous air from the preparation plant and solvent extraction plant. Construction has commenced and works are expected to be completed by the end of 2012.

- In September 2011 the EPA negotiated a PRP with Orica to investigate emissions from its AN1 Prill Tower. The aim of the PRP is to characterise the composition, concentration and mass load of emissions from the prill tower and identify options to reduce emissions from the prill tower. These works are due to be completed by September 2012.
- In December 2011 the EPA negotiated a PRP for general plant improvements with Orica. This PRP requires improvements to a variety of alarm systems, procedures and equipment to improve operations management at the Orica site. These works are due to be completed by the end of 2012.
- Following the August 2011 hexavalent chromium release incident, the EPA has required Orica to engage suitably qualified auditors to conduct a mandatory environmental audit of its plant. This audit includes the ammonia plant, nitric acid plants, ammonium nitrate plants and the remainder of operations on the site. Interim reports will be submitted for each of these activities. The final audit report is due to be completed by July 2013.

The report *Lower Hunter Ambient Air Quality Review of Available Monitoring Data* (OEH 2012) identifies elevated sulfur dioxide emissions in the vicinity of School Road Tomago, in the Port Stephens LGA. The two licensed industries which emit sulfur dioxide in the Port Stephens LGA (bordering the Newcastle LGA) are Tomago Aluminium Company Pty Ltd and Minmet Operations Pty Limited. Regulatory action taken by the EPA to address air quality issues at these premises includes:

- In January 2012 the EPA negotiated a PRP with Minmet Operations Pty Limited which requires a comprehensive review of all available air quality data, with the aim to revise the emissions limits on Minmet's licence. This work is due to be completed by September 2013.
- In February 2011 the EPA negotiated a PRP with Tomago Aluminium Company Pty Ltd to investigate and minimise all sources of sulfur dioxide from the premises. This work is due to be completed by May 2013. A second PRP was negotiated in September 2011 which requires Tomago Aluminium Company Pty Ltd to investigate each event when the ambient air quality monitors for sulfur dioxide record a level above the National Environment Protection Measure (NEPM) ambient sulfur dioxide standard and to implement measures to ensure that sulfur dioxide levels remain below the NEPM standard and goal. These works are due to be completed by April 2012.

The total value of all PRPs issued to these licensed premises to improve air quality in the past 12 months is approximately \$11 million.

6 References

Regulatory Impact Statement – Proposed Protection of the Environment Operations (Clean Air) Regulation 2010 (DECCW 2010).

Lower Hunter Ambient Air Quality Review of Available Monitoring Data (OEH 2012).