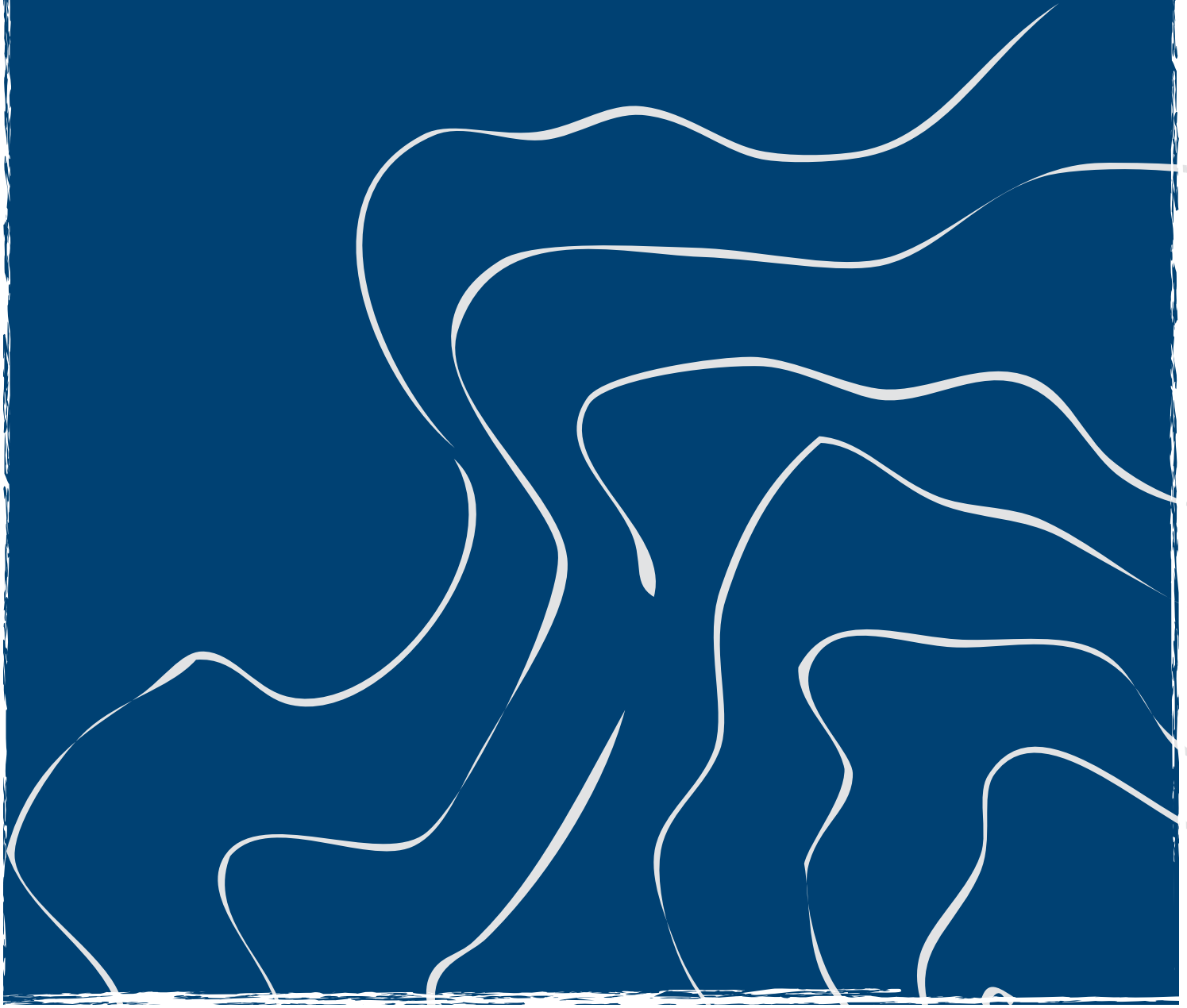


Management of Environmental Risks and Emergencies

Compliance Audit Program



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ISBN 978 1 74293 570 6
EPA 2012/0283
April 2012

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Introduction

The NSW Government has introduced an extensive reform package to strengthen environmental regulation. Among the reforms are provisions contained in the *Protection of the Environment Legislation Amendment Act 2011* including:

- establishing the Environment Protection Authority (EPA) as an independent, accountable and modern environmental regulator
- strengthening the requirements for industry to report and respond to pollution incidents
- improving communication and information flow to the community about industry environmental performance, and
- ensuring response agencies are well coordinated and have the necessary information to effectively manage and respond to pollution incidents.

As part of strengthening environmental regulation in New South Wales the EPA has completed a targeted audit program of EPA regulated premises that pose a high risk of environmental harm. A number of audits were also conducted in partnership with councils, at premises they were responsible for regulating.

The audits focused on making sure that industry is managing potential risks to people and the environment and that adequate emergency response procedures are in place.

This report contains a summary of:

- the purpose of the audit program and how it was conducted
- findings of the audit including non-compliances identified and a risk analysis of these
- areas for improvement identified for both EPA and council regulated premises
- regulatory actions taken by the EPA and councils to respond to the issues identified
- progress of the Government's reforms and further actions for improving environmental regulation and industry environmental performance.

Compliance audit reports have been completed for each of the audits conducted. The EPA audit reports can be accessed on the EPA's website at www.environment.nsw.gov.au/licensing/audit.htm

Purpose of the audit program

Facilities that store, handle or process hazardous, toxic or dangerous chemicals in large quantities or volumes can pose a high risk of environmental harm and have the potential to impact on public health in the event of an incident such as a fire, explosion or chemical spillage. These risks are increased where facilities are located close to residential areas and/or near sensitive receiving environments. It is therefore critical that facilities identify all environmental risks and have effective controls in place to prevent or reduce these risks.

This targeted audit program involved an assessment of the adequacy and appropriateness of the facilities' current environmental emergency management practices, procedures and monitoring processes in relation to managing major environmental risks from their activities.

The program reinforced the importance of facilities maintaining site specific incident response plans that can be implemented effectively in the event of an environmental emergency or pollution incident, so that responses are effective and both the local community and the environment are protected.

The detailed examination also identified opportunities for the involvement of local government in the project, to help ensure consistency in government regulation of industry in relation to the management of major environmental risks, and to provide capacity building for local government.

How the audit program was conducted

Audited premises

The EPA undertook audits of 34 premises regulated by the EPA, including 33 premises holding Environment Protection Licences issued under the *Protection of the Environment Operations Act 1997* (POEO Act) and one premises where the EPA is the appropriate regulatory authority.

The audit inspections were completed between 21 September and 20 December 2011.

The licensed premises that were audited undertook one or more of the following activities, as listed in Schedule 1 of the POEO Act:

- chemical production
- chemical storage
- petroleum and fuel production
- metallurgical activities
- shipping in bulk
- dangerous goods production
- waste storage.

Six (6) local government regulated premises were also audited. These audits were conducted jointly by the relevant councils and the EPA.

Appendix A contains a complete list of the premises that were audited.

The audits involved:

- assessing compliance with licence conditions and relevant provisions of the POEO Act relating to the competent management of major environmental risks and emergency response planning. This included a review of the risk registers provided by facilities for the identification and classification of environmental risks, controls that are in place to manage the major risks identified, monitoring undertaken by site personnel to assess the effectiveness of controls in reducing or minimising the risk, any contingencies in place to manage environmental incidents, and training procedures

- assessing compliance with licence conditions relating to recording reports by the public about pollution, operating and advertising a telephone complaints line, and notifying the EPA of incidents that are causing or are likely to cause environmental harm
- identifying any other issues of environmental concern relating to the management of environmental risks or emergency management.

The audits were undertaken in accordance with the procedures and protocols in the EPA’s *Compliance Audit Handbook* (www.environment.nsw.gov.au/licensing/complianceaudit.htm).

The EPA also worked with the Ministry of Health and WorkCover NSW during this audit program.

While all facilities audited were given prior notification about the audit program and that their facility had been selected for audit, they were not advised of the date when the audit inspection would be undertaken.

Analysing the risks

The environmental significance of non-compliances identified was assessed against two criteria: the likelihood of environmental harm occurring, and the level of potential environmental impact. The likelihood of environmental harm was determined by assessing:

- past environmental performance
- current environmental performance
- potential contributing factors.

The level of potential environmental impact was assessed by considering factors such as the quantity and toxicity of the material and the sensitivity of the receiving environment, including the location of the premises relative to where people work or live.

After these assessments were made, information was transferred into the risk analysis matrix shown in Table 1, where the environmental significance was assigned a colour code.

Table 1: Risk analysis matrix

| | | Likelihood of environmental harm occurring | | |
|---|----------|--|-------------|-------------|
| | | Certain | Likely | Less likely |
| Level of potential environmental impact | High | Code red | Code red | Code orange |
| | Moderate | Code red | Code orange | Code yellow |
| | Low | Code orange | Code yellow | Code yellow |

Any non-compliance assessed as ‘code red’ suggests that the non-compliance is of considerable environmental significance and therefore must be addressed as a matter of priority.

A non-compliance assessed as ‘code orange’, while still considered to pose a significant risk of harm to the environment, can be given a lower priority than a code red non-compliance.

A non-compliance assessed as ‘code yellow’ suggests that the non-compliance could receive a lower priority but must still be addressed.

There are also a number of licence conditions such as those relating to administration, monitoring and reporting requirements that do not have a direct environmental significance, but are still important to the integrity of the regulatory system and the performance of the licensee. Non-compliance with these conditions are assessed as ‘code blue’.

Due to the importance of managing environmental emergencies with a view to minimising environmental impact, any non-compliances with requirements to prepare, maintain and update Emergency Response Plans were categorised as code red.

Audit findings

The findings of the audit program showed that sites regulated by the EPA and councils generally had appropriate processes, systems and procedures addressing the major environmental risks identified at each premises; however, improvements were needed in some areas.

Risk analysis of identified non-compliances

Non-compliances identified during the audits were categorised using the risk matrix in Table 1. The numbers and percentages of non-compliances found in each category during the audit process are shown in Table 2.

Table 2: Numbers and percentages of non-compliances found in each risk category

| Regulating authority | Code red (high risk) | Code orange | Code yellow | Code blue | Total |
|----------------------|----------------------|-------------|-------------|-------------|--------------|
| EPA | 12 (26%) | 1 (2%) | 1 (2%) | 33 (70%) | 47 (100%) |
| Local council | 2 (14%) | 5 (33%) | 3 (20%) | 5 (33%) | 15 (100%) |

Notes:

1. Five licensed premises and one of the council regulated premises audited had no non-compliances.
2. 17 licensed premises and five of the council regulated premises audited had multiple non-compliances.
3. Single code red non-compliances were identified at 12 EPA regulated premises and two council regulated premises.

Summary of non-compliances – EPA regulated premises

Code red non-compliances

- Hazardous chemicals were stored in Intermediate Bulk Containers (IBCs) and drums without adequate secondary containment to capture any leaks or spills, thereby increasing the likelihood of polluting waters at one site.
- Toxic waste materials were stored in tanks without adequate secondary containment to capture any leaks or spills, thereby increasing the likelihood of soil and groundwater pollution at one site.
- The operation of a stormwater isolation valve installed to prevent the uncontrolled release of contaminated water including contaminated fire water was not monitored at one site. When tested at the time of the audit inspection the valve did not operate.
- The audit found that while monitoring data relating to contamination of stormwater was being collected, the data was not being used to assess the effectiveness of the controls at one site.
- At one site, the Emergency Response Plan (ERP) did not have clear procedures for notifying the EPA and other relevant authorities in the event of an emergency.
- At seven premises, the ERP's developed were not either site-specific or were not maintained and updated in relation to critical details, such as:
 - Organisational changes relating to the licensee's business

- Current responsible staff
- Relevant authorities to be notified
- Current emergency contact telephone numbers

Other areas for improvement included:

- ensuring that written details of environmental incidents and information required by pollution reduction programs are provided to the EPA within the specified time frames
- ensuring that the telephone contact line made available to the community for the purpose of making complaints is advertised as a complaints line.

Summary of non-compliances – council regulated premises

Code red non-compliances

- At one site, pollution of waters was assessed as a high risk; however, the controls in place were inadequate in minimising the likelihood of contaminated stormwater, including any firewater generated in an emergency causing pollution of waters.
- At one site, the ERP prepared had not been updated to reflect changes to surrounding land use that would require modifications to the way emergencies are handled.

Other areas for improvement included:

- ensuring that all control equipment is maintained to ensure the controls are effective in preventing or minimising environmental impacts.

The audits also identified that five of the council regulated premises were storing chemicals in such quantities that the occupiers are required to hold environment protection licences and two of the premises did not have relevant council approvals to undertake the activities occurring at the site.

Regulatory actions taken in response to the audit findings

The EPA uses a mix of regulatory tools to address identified non-compliances and improve industry environmental performance. The regulatory response is proportionate to the seriousness of the non-compliance and the actual/potential impact to the environment. Actions include warning letters, notices directing a person or company to rectify issues found and make environmental improvements, penalty notices, and for very serious matters, prosecutions.

The EPA and the relevant councils have implemented a systematic and rigorous process of follow-up actions to ensure that all issues identified at the audited sites are being addressed. The following summarises regulatory action taken.

Regulatory actions taken at EPA regulated premises

- Four (4) prevention notices and one warning letter issued to:
 - develop and implement appropriate communication procedures for notifying the relevant regulatory authorities, including the EPA, and the community immediately. The immediate notification will help ensure that appropriate action is taken in a timely and efficient manner
 - implement procedures to maintain Emergency Response Plans and keep them up to date, ensuring a timely and appropriate response to pollution incidents.
- One (1) prevention notice and one (1) penalty notice issued. The prevention notice required the licensee to take immediate action to:
 - repair a site stormwater retention basin isolation valve and include the maintenance of the isolation valve in the company's maintenance schedule, thereby reducing the likelihood of an environmental incident occurring.
- One (1) penalty notice issued to a licensee for:

- not storing hazardous chemicals in a manner to prevent any spills or leaks from contaminating stormwater.
- Three (3) prevention notices and two (2) penalty notices issued to facilities that were operating without an Environment Protection Licence. The prevention notices required facilities to:
 - reduce the amount of chemicals stored at the facility and if necessary apply for an Environment Protection Licence. The EPA also worked with the relevant councils to address environmental issues found at these sites during the audits.
- Pollution reduction programs being negotiated with two (2) licensed facilities to:
 - ensure that stormwater monitoring data is used to assess and review environmental performance and that any necessary action is taken to reduce the environmental impact of stormwater discharge from the site
 - ensure that monitored gas leak detection equipment is installed on the site to enable timely detection and response to gas leaks that may occur outside normal working hours.
- Fifteen (15) warning letters issued to ensure that licensees:
 - advertise telephone contact details for making complaints
 - provide written details of environmental incidents that have been reported to the EPA verbally, within the specified timeframes
 - provide all information as required by a pollution reduction program within the specified time frames
 - ensure the safe storage of hazardous wastes.

All other non-compliances identified during the audit inspections have been addressed to the satisfaction of the EPA, either immediately following the inspections or in response to the draft audit report.

The EPA has undertaken several follow-up inspections of premises audited to ensure that licensees are managing environmental risks and have put in place procedures to report pollution incidents immediately.

Regulatory actions taken at council regulated premises

Councils, in collaboration with the EPA, have followed up on the issues identified during the joint audits of council regulated facilities. Actions taken included one council issuing an order to an operator to apply for development consent to cover the activities being undertaken at the premises and to immediately address environmental issues identified, and the council undertaking follow-up inspections to ensure issues have been addressed.

Further actions to improve environmental regulation and industry performance

Implementation of Government reforms

A number of initiatives have been implemented to ensure that industry is fully accountable for its environmental performance and there is effective communication with the community about this performance and any impacts activities may have on neighbouring properties.

These initiatives have strengthened the POEO Act and include:

- **Changes to pollution incident notification requirements:** It is now a requirement that pollution incidents be notified immediately (instead of as soon as practicable) to all relevant response agencies and there has been a doubling of the penalties for failing to do so. This will ensure that industry and the relevant agencies are able to respond promptly and without delay to pollution incidents. This provision commenced on 6 February 2012.

- **Requiring the preparation, implementation and testing of pollution incident response management plans:** This requirement applies to all Environment Protection Licensees. Plans will need to include actions to be taken to protect communities and the environment from a pollution incident and clearly specify the procedures to inform local communities and relevant authorities. These requirements are set out in Part 5.7 of the POEO Act and the Protection of the Environment (General) Amendment (Pollution incident response management plans) Regulation 2012. These provisions commenced on 29 February 2012 and licensees will need to have plans in place by 1 September 2012. The EPA has produced *Environmental*

guidelines: Preparation of pollution incident response management plans to assist licensees to prepare their plans (www.environment.nsw.gov.au/legislation/20120227egpreppirmp.htm).

The findings of this audit program were used to inform the pollution incident response management plan requirements.

- **Improving community access to information about industry performance:** Licensees are now required to make monitoring data collected as a result of a licence condition publicly available, in accordance with the document *Requirements for publishing pollution monitoring data* (www.environment.nsw.gov.au/legislation/20120263regpubpmdata.htm). These provisions commenced on 31 March 2012 and licensees have until 1 July 2012 to make monitoring data available.

There are also additional requirements to expand regulatory information available on public registers maintained by the EPA and other appropriate regulatory authorities such as local councils. This information includes providing details of penalty notices issued. These provisions commenced on 31 March 2012.

The EPA will be conducting a series of audit programs to ensure that the new requirements listed above are being complied with.

Further regulatory reforms

The EPA is undertaking a comprehensive review of the environment protection licensing framework to ensure that regulation is appropriately targeted to activities that have a high risk of harm to the environment or human health.

Ongoing compliance and enforcement activities

The EPA will continue to pro-actively monitor the compliance of premises holding environment protection licences by a range of mechanisms, including site inspections, targeted compliance audits and campaigns, and investigation of complaints and incidents.

Working with local government

The audit program provided an excellent opportunity for the EPA and councils to work together in regulating facilities that pose a risk of environmental harm, and to share information and experiences.

The EPA will continue to support councils to undertake their regulatory activities, including providing training and guidance to council officers so that environment protection regulatory activities are conducted consistently and effectively across New South Wales.

Appendix A: List of premises audited

Individual compliance audit reports for EPA regulated facilities are publicly available at www.environment.nsw.gov.au/licensing/audit.htm.

EPA regulated premises

| Scheduled activity | Licence number | Accountable party |
|--|-----------------------|---|
| Chemical storage | 11690 | AUSTRALIAN PETRO CHEMICAL STORAGE PTY LTD |
| Metallurgical activities | 6092 | BLUESCOPE STEEL (AIS) PTY LTD |
| Chemical storage and chemical production | 10095 | BOC LTD |
| Chemical storage | 13141 | BOC LTD |
| Chemical storage and chemical production | 6679 | BOC LTD |
| Petroleum and fuel production | 837 | CALTEX REFINERIES (NSW) PTY LTD |
| Chemical storage and chemical production | 12259 | COREGAS PTY LTD |
| Other activities | 4458 | DEGREMONT PTY LTD |
| Chemical production | 12325 | DOWNER EDI MINING – BLASTING SERVICES PTY LTD |
| Chemical production | 12158 | DYNO NOBEL ASIA PACIFIC PTY LTD |
| Chemical storage | 10698 | ELGAS LTD |
| Petroleum products storage | 20023 | ELGAS LTD |
| Petroleum and fuel production | 2695 | HC EXTRACTIONS PTY LTD |
| Chemical production | 7494 | HUNTSMAN CORPORATION AUSTRALIA PTY LTD |
| Chemical storage | 11781 | INCITEC PIVOT LTD |
| Chemical storage | 11793 | INCITEC FERTILIZERS LTD |
| Chemical production | 5104 | LYONDELLBASELL AUSTRALIA PTY LTD |
| Chemical production | 11220 | ORICA AUSTRALIA PTY LTD |
| Chemical production | 2148 | ORICA AUSTRALIA PTY LTD |
| Chemical storage | 245 | ORIGIN ENERGY LPG LTD |
| Chemical storage and chemical production | 3530 | PAX AUSTRALIA PTY LTD |
| Chemical storage | 2934 | POOL RESOURCES PTY LTD |
| Chemical production | 10000 | QENOS PTY LTD |
| Petroleum and fuel production | 464 | QENOS PTY LTD |

EPA regulated premises, continued

| Scheduled activity | Licence number | Accountable party |
|-------------------------------|-----------------------|---------------------------------------|
| Chemical storage | 13154 | RECKITT BENCKISER (AUSTRALIA) PTY LTD |
| Chemical storage | 661 | SHELL REFINING (AUSTRALIA) PTY LTD |
| Petroleum and fuel production | 570 | SHELL REFINING (AUSTRALIA) PTY LTD |
| Chemical production | 1255 | SOLVAY INTEROX PTY LTD |
| Other activities | n/a – EPA as ARA | SYDNEY WATER CORPORATION |
| Chemical storage | 6152 | TOLL NORTH PTY LTD |
| Chemical production | 12485 | UNITED INITIATORS PTY LTD |
| Chemical storage | 6007 | VOPAK TERMINALS SYDNEY PTY LTD |
| Chemical storage | 6581 | VOPAK TERMINALS SYDNEY PTY LTD |
| Chemical production | 11308 | WOODCHEM AUSTRALIA PTY LTD |

Council regulated premises

| Activity | Company name | Local council |
|------------------|-------------------------------|---------------------------|
| Chemical storage | CRAWFORD FREIGHTLINES PTY LTD | Newcastle City Council |
| Chemical storage | TOLL MINING SERVICES PTY LTD | Port Stephens Council |
| Chemical storage | TOLL NORTH PTY LTD | Dubbo City Council |
| Chemical storage | TOLL JALCO PTY LTD | Campbelltown City Council |
| Chemical storage | ORICA MINING SERVICES | Berrigan Shire Council |
| Chemical storage | ORIGIN ENERGY PTY LTD | Newcastle City Council |