



**Office of  
Environment  
& Heritage**

**FINAL  
COMPLIANCE AUDIT REPORT  
ORIGIN ENERGY LPG LIMITED  
47 FRIENDSHIP ROAD  
PORT BOTANY NSW 2036**

**NOVEMBER 2011**

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## EXECUTIVE SUMMARY

An Office of the Environment and Heritage (OEH), Department of Premier and Cabinet Compliance Audit was undertaken at the Origin Energy LPG Limited storage facility located at Port Botany. The site was audited as part of a state-wide program of audits focusing on the management of major environmental risks associated with the activities undertaken at the site. The audit also focussed on emergency management procedures to be used by the licensee in the event of an incident occurring that is or is likely to impact on the environment or on the local community. The main objectives of the audit were to assess compliance with the requirements of Environment Protection Licence 245 relating to the management of major environmental risks and emergency management planning, and to recommend an action program to be implemented by the licensee to address any non-compliance identified during the audit.

Assessment of compliance was undertaken using information collected during a detailed audit inspection, information supplied by the enterprise, and a review of records and documentation relating to the premises. The procedures and protocols for conducting compliance audits are detailed in the OEH *Compliance Audit Handbook*. The audit inspection was carried out by officers of the OEH on 21 September 2011.

The findings of the audit indicate that the enterprise was not complying with some conditions attached to Environment Protection Licence 245 issued under the Protection of the Environment Operations Act 1997.

The non-compliances related to:

- Maintaining the Emergency Response Plan; and
- Advertising the telephone complaints line to the public.

A risk assessment of non-compliances is used to colour code non-compliances according to their environmental significance and an action program has been developed. The action program includes a timeframe for non-compliances to be addressed to ensure the licensee deals with issues raised through the audit process in a timely manner (Table 4.1).

While the risk assessment of non-compliances is used to prioritise actions to be taken, the OEH considers all non-compliances to be important and licensees must ensure that all non-compliances are addressed by the due date specified in the Action Program.

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## 1.0 INTRODUCTION

An Office of the Environment and Heritage (OEH), Department of Premier and Cabinet Compliance Audit has been undertaken at the Origin Energy LPG Limited storage facility at Port Botany. The site was audited as part of a state-wide program of audits focusing on the management of major environmental risks associated with the activities undertaken at the site. The audit also focussed on emergency management procedures employed by licensee in the event of an incident occurring at the site that is or is likely to impact on the environment or on the local community. The audit inspection was undertaken on 21 September 2011.

The procedures and processes for conducting OEH Compliance Audits are detailed in the *Compliance Audit Handbook*, which can be accessed on the OEH website at <http://www.environment.nsw.gov.au/resources/licensing/cahandbook0613.pdf>.

### 1.1 Audit Objective

The objectives of the audit were

- to determine whether the enterprise is complying with environment protection licence requirements in relation to the audit scope and criteria; and
- to outline a time frame for follow-up action to address any non-compliances identified during the audit.

### 1.2 Scope of the Audit

The scope of the audit is limited to the examination of the activities undertaken at Origin Energy Limited, in relation to the management of major environmental risks.

The temporal scope adopted for assessment of compliance is:

- The day of the audit inspection for assessing compliance with Operating Conditions, relating to the management of major environmental risks and emergency management planning; and
- 12 months prior to the end of the audit inspection for assessing compliance with any Monitoring, Recording and Special Conditions and Pollution Studies and Reduction Programs relating to the audit scope.

### 1.3 Audit criteria, evidence and findings

Audit criteria (the requirements against which the auditor compares collected audit evidence) are the Conditions attached to Environment Protection Licence Number 245 issued under the POEO Act to Origin Energy Limited, in relation to the management of major environmental risks.

Audit criteria may include any document referred to by the licence, or relevant to a particular condition of the licence.

Audit evidence was collected during discussions with site personnel, examination of documentation provided by the licensee and/or contained on OEH files, together with observations made during the audit inspection.

Findings of non-compliance with licence conditions are summarised in table 2.1. An Action Program provides a time frame for follow-up action necessary to comply with the licence condition concerned.

#### **1.4 Premises and Process Description**

Origin Energy LPG Limited operates an LPG storage facility and shipping terminal at Port Botany. The facility is located within City of Randwick local government area and is surrounded by industrial premises.

The terminal consists of 18 mounded gas storage tanks each with a nominal capacity of 250 tonnes, a system of piping, pumps, compressors and three road tanker loading bays. LPG is delivered to the terminal via bulk shipping tanker. LPG is transported from the bulk shipping facility to the terminal via a pipeline to the storage tanks. LPG gas is then directed by pipeline to the loading bays for loading into road tankers for transport off site.

#### **1.5 Statutory Instruments Issued to the Enterprise**

The EPA has issued the following statutory instruments to the enterprise:

Licence number 245 issued under the Protection of the Environment Operations Act 1997.

The scheduled activity undertaken at the premises is *Chemical Storage and Shipping in Bulk* with a fee scale category of *Petroleum products storage – Sydney Basin >5000 – 100000 kL of active storage capacity* and *Shipping in Bulk 0 – 100000 T loaded and unloaded*.

The anniversary date for the licence is 14 September.

A copy of Licence 245 can be accessed through the OEH online public register at: <http://www.environment.nsw.gov.au/prpoeoapp/searchregister.aspx>

## 1.6 Risk Assessment of Non-compliances

The significance of any non-compliances identified during the audit process are categorised. Following risk assessment of non-compliances, an escalating response relative to the seriousness of the non-compliance is determined to ensure the non-compliance is addressed by the enterprise.

The risk assessment of non-compliances involves assessment of the non-compliance against two criteria; the likelihood of environmental harm occurring and the level of environmental impact as a result of the non-compliance. After these assessments have been made, information is transferred into the risk analysis matrix below.

		Likelihood of Environmental Harm Occurring		
		Certain	Likely	Less Likely
Level of Environmental Impact	High	Code Red	Code Red	Code Orange
	Moderate	Code Red	Code Orange	Code Yellow
	Low	Code Orange	Code Yellow	Code Yellow

The assessment of the likelihood of environmental harm occurring and the level of environmental impact allows for the risk assessment of the non-compliance via a colour coding system. A red risk assessment for non-compliance denotes that the non-compliance is of considerable environmental significance and therefore must be dealt with as a matter of priority. An orange risk assessment for non-compliance is still a significant risk of harm to the environment however can be given a lower priority than a red risk assessment. A yellow risk assessment for non-compliance indicates that the non-compliance could receive a lower priority but must be addressed.

There are also a number of licence conditions that do not have a direct environmental significance, but are still important to the integrity of the regulatory system. These conditions relate to administrative, monitoring and reporting requirements. Non-compliance of these conditions is given a blue colour code.

The colour code is used as the basis for deciding on the priority of remedial action required by the licensee and the timeframe within which the non-compliance needs to be addressed. This information is presented in the action program alongside the target/action date for the non-compliance to be addressed.

While the risk assessment of non-compliances is used to prioritise actions to be taken, the OEHL considers all non-compliances are important and licensees must ensure that all non-compliances are addressed as soon as possible.

## **2.0 ASSESSMENT OF COMPLIANCE**

### **2.1 Compliance with Audit Criteria**

Compliance was assessed against the licensing requirements of the POEO Act, and the requirements of Environment Protection Licence Number 245 relating to the audit scope and criteria.

Assessment of compliance was undertaken by a detailed site inspection and review of all records and documentation relating to the audit scope and criteria as required by the licence issued to the licensee.

The findings of the audit indicate that some of the conditions of the environment protection licence, relating to the audit scope were not being complied with.

Details of assessment are presented in Table 2.1.



**Table 2.1 Assessment of Compliance with Environment Protection Licence No. 245**

<b>Statutory Instrument: Environment Protection Licence No. 245</b>			
<b>Condition No.</b>	<b>Compliance/ Risk assessment for non-compliance *</b>	<b>Comment</b>	<b>Action required by licensee</b>
<b>O</b>	<b>Operating Conditions</b> <i>The audit assessment is based upon evidence relating to the period limited to on the day of the audit inspection.</i>		
O1.1 Licensed activities must be carried out in a competent manner	<b>Managing major environmental risks associated with water pollution</b>		
	Yes	<b>Identification of Major Environmental Risks</b> The licensee has identified major environmental risks associated with the pollution of stormwater at the premises. This includes pollution of stormwater from the release of fire water from the premises. The auditors did not identify any other major environmental risks during the site inspection that had not already been identified by the licensee.	
		<b>Use of controls to minimise the Major Environmental Risks Identified</b> The licensee has controls in place to manage the major environmental risks identified such as: <ul style="list-style-type: none"> <li>• Overfill prevention devices to help prevent overfilling of storage tanks</li> <li>• Recirculation of water in the fire water storage tank on a weekly basis to prevent the growth of algae</li> <li>• Training of staff in the use and managements of controls and their roles in emergency response</li> </ul>	
		<b>Monitoring the effectiveness of the controls used by the licensee to manage the Major Environmental Risks</b> The licensee monitors the effectiveness of the controls used to manage the major environmental risks identified at the site. Monitoring undertaken by the licensee includes the use of: <ul style="list-style-type: none"> <li>• Written procedures</li> </ul>	

\* See explanation of risk assessment of non-compliances codes on p3.

<b>Statutory Instrument: Environment Protection Licence No. 245</b>			
<b>Condition No.</b>	<b>Compliance/ Risk assessment for non-compliance *</b>	<b>Comment</b>	<b>Action required by licensee</b>
		<ul style="list-style-type: none"> <li>• Routine monitoring of the quality of the fire water at the site</li> <li>• Routine inspections/maintenance/calibration of monitoring and control equipment</li> <li>• Monitoring high level alarms on storage tanks</li> <li>• Drills and simulations to help ensure that site staff respond as required to emergency situations.</li> </ul>	
<b>Managing major environmental risks associated with air pollution</b>			
	Yes	<p><b>Identification of Major Environmental Risks</b></p> <p>The licensee has identified the major environmental risks associated with the pollution of air at the premises. This includes pollution of air due to gas leaks from the storage tanks, leaks during tanker loading including leaks from pipelines at the road tanker loading bay and leaks during bulk ship unloading and leaks from pipelines leading to the licensed premises. The licensee also identified fumes from fires as an environmental risk at the site. The auditors did not identify any other major environmental risks during the site inspection that had not already been identified by the licensee.</p>	
		<p><b>Use of controls to minimise the Major Environmental Risks Identified</b></p> <p>The licensee uses controls to manage the major environmental risks such as</p> <ul style="list-style-type: none"> <li>• Perimeter gas and smoke detectors to help detect gas leaks</li> <li>• Fail safe primary, secondary excess flow valves, pressure relief valves and pressure venting</li> <li>• Earthen mounds around the gas tanks to help control the temperature of the tanks and prevent tanks from rupturing</li> <li>• Enclosed pressurised gas tanks</li> <li>• Fill detectors and alarms telemetrically connected to the control room</li> <li>• Vapour recovery units to help prevent vapour emissions from the site</li> </ul>	

\* See explanation of risk assessment of non-compliances codes on p3.

<b>Statutory Instrument: Environment Protection Licence No. 245</b>			
<b>Condition No.</b>	<b>Compliance/ Risk assessment for non-compliance *</b>	<b>Comment</b>	<b>Action required by licensee</b>
		<ul style="list-style-type: none"> <li>• Backup diesel generators in the event of power failure</li> <li>• Corrosion protection is provided to pipelines to help prevent deterioration</li> <li>• Prohibition of potential ignition sources onsite</li> <li>• Automatic Emergency Stop procedures</li> <li>• Training of staff in the use and managements of controls and their role in emergency response</li> </ul>	
		<p><b>Monitoring the effectiveness of the controls used by the licensee to manage the Major Environmental Risks</b></p> <p>The licensee monitors the effectiveness of the controls used to manage the major environmental risks at the site. Monitoring undertaken by the licensee includes the use of</p> <ul style="list-style-type: none"> <li>• Maintenance procedures including calibration of all controls and alarm systems</li> <li>• Monitoring pressure, temperature and integrity of gas storage tanks</li> <li>• Routine inspections of control and monitoring equipment</li> <li>• Drills and emergency simulations to help ensure that site staff respond as required to emergency situations.</li> </ul>	
		<b>Managing Major Environmental Pollution Incidents</b>	
	Yes	<p><b>Procedures, processes and equipment for managing major environmental pollution incidents</b></p> <p>The licensee has procedures, processes and equipment in place to manage major environmental incidents. The procedures include;</p> <ul style="list-style-type: none"> <li>• Emergency response procedures for major risks identified that include plant closure</li> <li>• Evacuation of personnel and notification to Senior Licensee management</li> <li>• Notification to relevant agencies such as NSW Fire Services, Health, Workcover</li> </ul>	

\* See explanation of risk assessment of non-compliances codes on p3.

<b>Statutory Instrument: Environment Protection Licence No. 245</b>			
<b>Condition No.</b>	<b>Compliance/ Risk assessment for non-compliance *</b>	<b>Comment</b>	<b>Action required by licensee</b>
		NSW, OEH and Local Council <ul style="list-style-type: none"> <li>• Notification to the impacted community</li> <li>• Staff training in emergency response procedures</li> <li>• Assigning roles and responsibilities to key personnel</li> <li>• Availability of emergency response equipment</li> </ul>	
O3.1	Yes	<b>Emergency Response Plan</b> <i>Documentation systems and procedures within the Emergency Response Plan to deal with all types of incidents and keeping the Plan onsite</i>	
	<b>No Code Red</b>	<i>Maintaining the Emergency Response Plan</i> The licensee has not updated the emergency personnel contacts contained within the Emergency Response Plan. The Plan contains contact details for staff who are no longer employed by the licensee. The Emergency Response Plan indicates that plan will be revised when there are changes in personnel. The OEH is concerned that the Plan is not updated to reflect staff changes and contact details.	The licensee must ensure that the Emergency Response Plan is updated immediately to reflect changes to personnel or contact details.
<b>M</b>	<b>MONITORING CONDITIONS</b> <i>The audit assessment is based upon evidence relating to the period limited to 12 months prior to the end of the audit inspection.</i>		
M4.1, M4.2 & M4.4	<b>Recording of pollution complaints</b> These conditions were not applicable at the time of the audit as there is no evidence to indicate that any pollution complaints were received during the audit scope that required recording. However it is noted that the licensee has mechanisms in place to record all the required details if any complaints are received that relate to pollution from the premises.		
M4.3	It is beyond the scope of the audit to determine whether the licensee retains the records for at least 4 years. The licensee has records of complaints made in the past and the OEH has no reason to believe that those records would not be kept for the required 4 years.		

\* See explanation of risk assessment of non-compliances codes on p3.

<b>Statutory Instrument: Environment Protection Licence No. 245</b>			
<b>Condition No.</b>	<b>Compliance/ Risk assessment for non-compliance *</b>	<b>Comment</b>	<b>Action required by licensee</b>
M5.1	Yes	<p><b>Operating a telephone line for receiving complaints</b></p> <p>The licensee operates, during its operating hours a telephone line for the purpose of receiving any complaints from members of the public.</p>	
M5.2	No <b>Code Blue</b>	<p><b>Advertising the telephone complaints line number to the public</b></p> <p>The licensee has advertised a telephone line number on a sign located on the entry gate to the site. The licensee has also advertised the contact line using the company web site. It was noted that neither the sign nor the licensee's web site indicated that the telephone line is for the purpose of making complaints.</p> <p>OEH acknowledges that the licensee is a member of the local community liaison committee and has no reason to believe that the local community would not use the advertised telephone contact number if they wished to make any complaints to the licensee including complaints relating to pollution from the premises.</p>	The licensee must inform members of the community that the advertised telephone line is a complaints line that can be used by members of the for the purpose of making complaints.
M5.3	This is a deeming clause that determines the applicability of Conditions M5.1-M5.2 and no assessment of compliance is required. It is noted that M5.1 and M5.2 do apply as the licence was issued for more than 3 months.		
<b>R</b>	<p><b>REPORTING CONDITIONS</b></p> <p><i>The audit assessment is based upon evidence relating to the period limited to 12 months prior to the end of the audit inspection.</i></p>		
R2.1 & R2.2	<p><b>Notification of environmental harm</b></p> <p>These requirements did not apply as no incidents causing or threatening material harm to the environment occurred within the scope of the audit.</p>		

\* See explanation of risk assessment of non-compliance codes on p3.

### **3.0 FURTHER OBSERVATIONS**

Further observations are recorded where the audit identified issues of environmental concern which do not strictly relate to the scope of the audit or assessment of compliance. Further observations are considered to be indicators of potential non-compliances or areas where environmental performance may be improved.

The audit team did not identify any further observations during the audit inspection.

#### 4.0 ACTION PROGRAM

The following action program must be undertaken in relation to Origin Energy LPG Limited.

**Table 4.1 Action Program – Environment Protection Licence No. 245**

Condition No.	Action Details	Non-Compliance Code (where applicable)	Target/Action Date
O3.1	<p><i>Maintaining the Emergency Response Plan</i></p> <p>The licensee must ensure that the Emergency Response Plan is updated immediately to reflect changes to personnel or contact details.</p>	<b>Code Red</b>	18 November 2011
M5.2	<p><i>Advertising the telephone complaints line to the public</i></p> <p>The licensee must inform members of the community that the advertised telephone line is a complaints line that can be used by members of the for the purpose of making complaints.</p>	<b>Code Blue</b>	18 November 2011

OEH considers that the licensee should take the necessary actions to ensure that environmental performance is improved in relation to any matters identified as a Further Observation in Section 3.0 of this Report.







**APPENDIX A**

**LICENSEES RESPONSE TO DRAFT REPORT**

**(Refer to Appendix B)**



**APPENDIX B**

**LETTER COVERING LICENSEES RESPONSE TO DRAFT COMPLIANCE AUDIT  
REPORT**



Office of  
Environment  
& Heritage

Your reference:  
Our reference: FIL10/9860  
Contact: Nicole Wilmot 02 9995 5427

Mr Ron Brennan  
Port Botany Terminal Manager  
Origin Energy LPG Ltd  
PO Box 121  
MATRAVILLE NSW 2036

Dear Mr Brennan

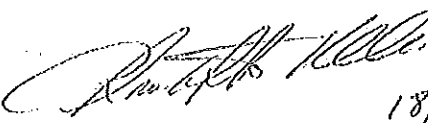
**Re: Final Compliance Audit Report – High Risk Facilities Audit  
Origin Energy LPG Ltd (Licence Number 245)**

The Office of Environment and Heritage (OEH) is pleased to present you with a copy of the Final Compliance Audit Report for Origin Energy LPG Ltd located at Port Botany. The compliance audit was undertaken as part of the OEH's program of compliance audits across the state, focussing on industries that pose a high risk of environmental harm.

OEH acknowledges from your email received on 16 November 2011 that your company are in the process of actioning the non-compliances identified. A copy of this letter has been attached to the Appendix of the final report. A copy of this report will be available in the OEH Library for public review.

I would like to take this opportunity to thank you and your staff for the co-operation during the audit. If you require further information or clarification on any matters regarding this audit, please do not hesitate to contact Melanie Meatheringham on 02 9995 6858.

Yours sincerely



18/11/2011

**CHRISTOPHER KELLY**  
A/Manager Compliance and Assurance Section  
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Enclosure: Final Audit Report Origin Energy LPG Ltd

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