



**Office of  
Environment  
& Heritage**

**FINAL  
COMPLIANCE AUDIT REPORT  
SOLVAY INTEROX PTY. LIMITED  
20-22 McPHERSON STREET  
BANKSMEADOW NSW 2019**

**NOVEMBER 2011**

The Office of Environment and Heritage exercises certain statutory functions and powers in the name of the Environment Protection Authority.

This report has been prepared to present the findings of the audit carried out and no responsibility is accepted for its use in any other context, or for any other purpose.

© 2012 State of NSW and Office of Environment and Heritage

The State of NSW and the Office of Environment and Heritage (OEH) are pleased to allow this material to be reproduced in whole or in part for educational and non-commercial use, provided the meaning is unchanged and its source, publisher and authorship are acknowledged.

The OEH has compiled this publication in good faith, exercising all due care and attention. No representation is made about the accuracy, completeness or suitability of the information in this publication for any particular purpose. The OEH shall not be liable for any damage which may occur to any person or organisation taking action or not on the basis of this publication. Readers should seek appropriate advice when applying the information to their specific needs.

**Published by:**

Office of Environment and Heritage  
59–61 Goulburn Street, Sydney  
PO Box A290, Sydney South 1232  
Phone: (02) 9995 5000 (switchboard)  
Phone: 131 555 (environment information and publications requests)  
Fax: (02) 9995 5999  
TTY users: phone 133 677, then ask for 131 555  
Speak and listen users: phone 1300 555 727, then ask for 131 555  
Email: [info@environment.nsw.gov.au](mailto:info@environment.nsw.gov.au)  
Website: [www.environment.nsw.gov.au](http://www.environment.nsw.gov.au)

**Report pollution and environmental incidents**

Environment Line: 131 555 (NSW only) or [info@environment.nsw.gov.au](mailto:info@environment.nsw.gov.au)  
See also [www.environment.nsw.gov.au](http://www.environment.nsw.gov.au)

ISBN 978 1 74293 595 9  
OEH 2012/0318  
April 2012

## EXECUTIVE SUMMARY

An Office of the Environment and Heritage (OEH), Department of Premier and Cabinet Compliance Audit was undertaken at Solvay Interlox Pty. Limited located at Banksmeadow. The site was audited as part of a state-wide program of audits focusing on the management of major environmental risks and emergency management procedures. The main objectives of the audit were to assess compliance with the requirements of Environment Protection Licence 1255 relating to the management of major environmental risks and emergency management planning, and make recommendations for an action program to address any non-compliance identified during the audit.

Assessment of compliance was undertaken by 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 22 September 2011.

The findings of the audit indicate that the enterprise was not complying with one condition attached to Environment Protection Licence 1255 issued under the Protection of the Environment Operations Act 1997.

The non-compliance related to:

- 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.

## TABLE OF CONTENTS

<b>1.0 INTRODUCTION.....</b>	<b>1</b>
1.1 Audit Objective .....	1
1.2 Scope of the Audit.....	1
1.3 Audit criteria, evidence and findings .....	1
1.4 Premises and Process Description.....	2
1.5 Statutory Instruments Issued to the Enterprise.....	2
1.6 Risk Assessment of Non-compliances .....	3
<b>2.0 ASSESSMENT OF COMPLIANCE .....</b>	<b>4</b>
2.1 Compliance with Audit Criteria .....	4
Table 2.1 Assessment of Compliance with Environment Protection Licence No. 1255 .....	5
<b>3.0 FURTHER OBSERVATIONS.....</b>	<b>11</b>
<b>4.0 ACTION PROGRAM.....</b>	<b>12</b>
Table 4.1 Action Program – Environment Protection Licence No. 1255 .....	12

## APPENDICES

Appendix A	Licensee Response to Draft Report
Appendix B	Letter covering licensee's response to Draft Compliance Audit Report

## 1.0 INTRODUCTION

An Office of the Environment and Heritage (OEH), Department of Premier and Cabinet Compliance Audit has been undertaken in relation to Solvay Interrox Pty. Limited at Banksmeadow. The site was audited as part of a state-wide program of audits focusing on the management of major environmental risks and emergency management procedures. The audit inspection was undertaken on 22 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 Solvay Interrox Pty, 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 against the Monitoring and Recording Conditions 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 1255 issued under the POEO Act to Solvay Interrox Pty. 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

Solvay Interox Pty Ltd is located at 20-22 McPherson Street, Banksmeadow. The premises cover an area of 5.5 hectares and lie within the boundaries of City of Botany Bay. The site and surrounding properties are zoned industrial 4(a).

The nearest water course to the site is Floodvale Drain, which runs parallel to the eastern border of the premises, ending in Botany Bay some 500m to the south.

The company primarily produces hydrogen peroxide for use in industries such as pulp and paper, mining, textiles, environmental, chemical synthesis, consumer products and food processing industries. The associated production process involves generation of hydrogen from natural gas using the Steam Reformer process in a Hydrogen Plant followed by the manufacture of hydrogen peroxide by way of auto-oxidation in a Hydrogen Peroxide Plant. The annual hydrogen peroxide production lies at approximately 20,000 tonnes.

Hydrogen peroxide is stored on site and sold in bulk or in packaged containers, in a range of grades in accordance with industrial requirements. A small amount of the product, approximately 1%, is combined with acetic acid to make peracetic acid. A further small amount is sold for the production of organic peroxides.

## 1.5 Statutory Instruments Issued to the Enterprise

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

Licence number 1255 issued under the Protection of the Environment Operations Act 1997.

The scheduled activity undertaken at the premises is *Chemical production* with fee scale categories of *Dangerous goods production >10000 – 25000 T produced*, as well as *Chemical production waste generation >5 – 100 T generated and/or stored*.

The anniversary date for the licence is 31 December.

A copy of Licence 1255 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 1255 relating to the audit scope and criteria.

Assessment of compliance was undertaken by a detailed site inspection and review of all methods, 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 one of the conditions of the environment protection licence, relating to the audit scope was not complied with.

Details of assessment are presented in Table 2.1.

**Table 2.1 Assessment of Compliance with Environment Protection Licence No. 1255**

<b>Statutory Instrument: Environment Protection Licence No. 1255</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	<p><b>Identification of Major Environmental Risks</b></p> <p>The licensee has identified major environmental risks associated with the pollution of water at the premises. This includes the risk of pollution of waters due to leakage from storage tanks, from product containers or pipelines in loading areas, as well as pollution of stormwater and the release of fire water from the premises.</p> <p>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 has controls in place to manage the major environmental risks identified, such as:</p> <ul style="list-style-type: none"> <li>• Automatic shut-off valves in the event of power failure</li> <li>• Provision of bunds to collect leaks and spills from storage tanks and containers</li> <li>• Firewater collection system with firewater holding tank of 1,250,000L</li> <li>• Controls in the stormwater collection sump to prevent contaminated water being discharged off site</li> <li>• Alarms (visual and acoustic) to warn of over-fill conditions</li> <li>• Written procedures to help ensure application of correct processes and correct use of equipment</li> <li>• Training of staff in the use and management of controls and their roles in emergency response</li> </ul>	

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

<b>Statutory Instrument: Environment Protection Licence No. 1255</b>			
<b>Condition No.</b>	<b>Compliance/ Risk assessment for non-compliance *</b>	<b>Comment</b>	<b>Action required by licensee</b>
		<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 identified at the site. Monitoring undertaken by the licensee includes the use of:</p> <ul style="list-style-type: none"> <li>• Routine inspections/maintenance/calibration of monitoring and control equipment</li> <li>• Closed-circuit television</li> <li>• Monitoring and assessment of stormwater quality prior to discharge</li> <li>• Drills and review of incident reports to help ensure that site staff respond as required to emergency situations</li> </ul>	
		<b>Managing major environmental risks associated with air pollution</b>	
	<b>Yes</b>	<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 production vessels, pumps, valves, pipelines, or other production components, from storage tanks, loading processes and from product contamination.</p>	

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

<b>Statutory Instrument: Environment Protection Licence No. 1255</b>			
<b>Condition No.</b>	<b>Compliance/ Risk assessment for non-compliance *</b>	<b>Comment</b>	<b>Action required by licensee</b>
		<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>• Operating procedures</li> <li>• Oxygen detectors and alarms</li> <li>• Back-up (dual) pressure switches</li> <li>• Pressure detection and plant shutdown or partial shutdown</li> <li>• Tank inspections</li> <li>• Use of fusible cables to generate an alarm in the event of a seal failure causing a fire</li> <li>• UV/IR fire detection</li> <li>• Provision of fire fighting equipment</li> <li>• Product sampling during manufacture</li> <li>• Backup diesel generator in case of power failure</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 and calibration of detection and alarm systems (e.g. oxygen detectors)</li> <li>• Radar level monitoring supported by manual level monitoring in storage tanks and internal inspections of tanks</li> <li>• Review of procedures</li> <li>• Quarterly review of Incident reports and</li> <li>• Drills to help ensure that site staff respond as required to emergency situations</li> </ul>	

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

<b>Statutory Instrument: Environment Protection Licence No. 1255</b>			
<b>Condition No.</b>	<b>Compliance/ Risk assessment for non-compliance *</b>	<b>Comment</b>	<b>Action required by licensee</b>
	<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>• Site specific emergency response procedures for major risks identified that include emergency shut-down procedures</li> <li>• Evacuation of personnel and notification to Senior Licensee management</li> <li>• Notification to relevant agencies, such as NSW Fire Services, Health, Police, Workcover NSW, OEH and Local Council</li> <li>• Notification to the impacted community</li> <li>• Staff training in emergency response</li> <li>• Assigning roles and responsibilities to key personnel</li> <li>• Availability of emergency response equipment</li> </ul>	
O3.1	Yes	<p><b>Emergency Response Plan</b></p> <p><i>Documentation systems and procedures within the Emergency Response Plan to deal with all types of incidents and keeping the Plan onsite</i></p> <p>The licensee has maintained a current emergency response plan for the premises. The emergency response plan contained systems and procedures to deal with all types of emergencies likely to occur at the site and the Plan was kept on site.</p>	
<b>M</b>	<p><b>MONITORING 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>		

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

<b>Statutory Instrument: Environment Protection Licence No. 1255</b>			
<b>Condition No.</b>	<b>Compliance/ Risk assessment for non-compliance *</b>	<b>Comment</b>	<b>Action required by licensee</b>
M4.1, M4.2 & M4.4		<p><b>Recording of pollution complaints</b></p> <p>These conditions were not applicable at the time of the audit as there is no evidence to indicate that there were pollution complaints received during the audit scope.</p> <p>However it is noted that the licensee has mechanisms in place to record all the required details if complaints are received that relate to pollution from the premises.</p>	
M4.3		<p>It is beyond the scope of the audit to determine whether the licensee retains the records for at least 4 years.</p> <p>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.</p>	
M5.1	Yes	<p><b>Operating a telephone line for receiving complaints</b></p> <p>The licensee operates, during its operating hours a telephone contact line that can be used for the purpose of receiving any complaints from members of the public.</p>	
M5.2	<b>No Code Blue</b>	<p><b>Advertising the telephone complaints line number to the public</b></p> <p>The licensee has advertised the telephone contact line as a 24 hour Emergency Number on the company web site. It was noted that this telephone contact number was not advertised as a telephone complaints line for the purpose of receiving any complaints from members of the public.</p> <p>OEH acknowledges that the licensee is associated with the <i>Botany and Eastern Region Environmental Association</i>, and regularly attends meetings of the <i>Orica Botany Community Liaison Committee</i>. OEH 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 public 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 been 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>		

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

<b>Statutory Instrument: Environment Protection Licence No. 1255</b>			
<b>Condition No.</b>	<b>Compliance/ Risk assessment for non-compliance *</b>	<b>Comment</b>	<b>Action required by licensee</b>
R2.1 & R2.2	<b>Notification of environmental harm</b> These requirements did not apply as no incidents causing or threatening material harm to the environment occurred within the scope of the audit.		

---

\* See explanation of risk assessment of non-compliances 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 Solvay Interox Pty. Limited.

**Table 4.1 Action Program – Environment Protection Licence No. 1255**

Condition No.	Action Details	Non-Compliance Code (where applicable)	Target/Action Date
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>	Code Blue	5 December 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**



**SOLVAY  
INTERLOX** PTY LTD

Solvay Interlox Pty Ltd A.B.N. 70 000 882 137

Mr Andreas Ronpage-Drabe  
Senior Compliance Audit Officer  
Environment Protection and Regulation Branch  
Office of Environment and Heritage  
Department of Premier and Cabinet

Re: Draft Compliance Audit Report-High Risk Facilities Audit  
Solvay Interlox Pty Ltd ( Licence Number 1255 )

Rear Mr Ronpage-Drabe,

Thankyou for the opportunity to review the draft compliance audit report for Solvay Interlox Pty Ltd. We are satisfied with content of the report and only advise of one small correction on page 7, under the title: Use of controls to minimise the Major Environmental Risks Identified.

Please replace “Heat detection installed along the length of pipe work to detect increase in product temperature (risk of fire/explosion) on pumps and pump seals.”

With

“ Protectowire, a fusible cable, is looped and placed adjacent to the pump seals. In the event of a seal failure causing a fire, the Protectowire insulation will melt and the cable will fuse. This will generate an alarm at the fire panel.”

I would like to commend you and your audit team for conducting such a professional and thorough audit of our facility.

Yours sincerely,

Andrew Malanos  
Health, Safety and Environment Manager  
Solvay Interlox Pty Ltd

November 11th, 2011

**APPENDIX B**

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



**Office of  
Environment  
& Heritage**

Your reference:  
Our reference: FIL11/9667  
Contact: Andreas Ronpage-Drabe 02 9995 5594

Mr Rick Bevan  
Production Manager  
Solvay Interlox Pty Ltd  
PO Box 18  
BOTANY NSW 2019

Dear Mr Bevan,

**Re: Final Compliance Audit Report – High Risk Facilities Audit  
Solvay Interlox Pty Ltd (Licence Number 1255)**

The Office of Environment and Heritage (OEH) is pleased to present you with a copy of the Final Compliance Audit Report for Solvay Interlox Pty Ltd located at Banksmeadow. 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.

The comments provided by you in your letter dated 11 November 2011 have been considered when finalising the report. Your comments have also been attached as an Appendix to the final report together with a copy of this letter. 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 Dana Alderson on (02) 9995 6851.

Yours sincerely

**CHRISTOPHER KELLY**  
**A/Manager Compliance and Assurance Section**  
**Environment Protection and Regulation**

Enclosure: Final Audit Report Solvay Interlox Pty Ltd