



**FINAL**  
**COMPLIANCE AUDIT REPORT**  
**SHELL REFINING (AUSTRALIA) PROPRIETARY LIMITED**  
**(GORE BAY TERMINAL)**  
**MANNS AVENUE**  
**GREENWICH NSW 2065**

**FEBRUARY 2012**

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 Environment Protection Authority

The State of NSW and the Environment Protection Authority (EPA) 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 EPA 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 EPA 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:**

Environment Protection Authority  
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.epa.nsw.gov.au](http://www.epa.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.epa.nsw.gov.au](http://www.epa.nsw.gov.au)

ISBN 978 1 74293 599 7  
EPA 2012/0322  
April 2012

## EXECUTIVE SUMMARY

An Environment Protection Authority (EPA) Compliance Audit was undertaken at the Shell Refining (Australia) Proprietary Limited – Gore Bay Terminal located at Manns Avenue, Greenwich. 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 661 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 EPA *Compliance Audit Handbook*. The audit inspection was carried out by officers of the EPA on 7 October 2011.

The findings of the audit indicate that the enterprise was not complying with one condition attached to Environment Protection Licence 661 issued under the Protection of the Environment Operations Act 1997.

The non-compliance related to:

- Advertising the telephone complaints line to the public.

The following issue of concern was identified through further observations:

- The secondary containment structures around some bulk storage tanks did not appear to be impervious to the substances being stored.

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 EPA 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. 661 .....	5
<b>3.0 FURTHER OBSERVATIONS.....</b>	<b>13</b>
<b>4.0 ACTION PROGRAM.....</b>	<b>14</b>
Table 4.1 Action Program – Environment Protection Licence No. 661 .....	14
<b>APPENDICES</b>	

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

## **1.0 INTRODUCTION**

An Environment Protection Authority (EPA) Compliance Audit has been undertaken at the Shell Refining (Australia) Proprietary Limited – Gore Bay Terminal at Manns Avenue, Greenwich. 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 the 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 7 October 2011.

The procedures and processes for conducting EPA Compliance Audits are detailed in the *Compliance Audit Handbook*, which can be accessed on the EPA 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 Shell Refining (Australia) Proprietary 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 661 issued under the POEO Act to Shell Refining (Australia) Proprietary 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 EPA 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

Shell Refining (Australia) Proprietary Limited operates a commercial oil terminal (Gore Bay Terminal) along 1 kilometre of Sydney Harbour foreshore at Greenwich. The site is approximately ten hectares in area and is located within the Lane Cove Municipal Council area. The nearest residences are located on Manns Avenue, in relatively close proximity to the site. The site operates 24 hours, 7 days a week.

The main activities undertaken at the site are storage and movement of petroleum based products to/from the site and around the site. These products include: crude oil, diesel, marine diesel fuel, residue and bitumen feedstock, as well as slurry from the catalytic cracking unit at the licensee's refinery at Clyde.

These products are received on site either via large ship/tanker or via underground pipeline from Clyde. Products are transported offsite in the same manner. Diesel and marine fuels are also conveyed offsite via the licensee's bunkering vessel, which supplies bunker fuel to cruise liners and other ships in the harbour.

Transfer of products to/from all water vessels occurs through the use of hydraulically operated loading arms. From the loading arms, products are conveyed on site via above ground pipelines to bulk storage tanks.

## 1.5 Statutory Instruments Issued to the Enterprise

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

Licence number 661 issued under the Protection of the Environment Operations Act 1997.

The scheduled activities undertaken at the premises are *Chemical storage* and *Waste storage*. The fee scale activities for the site are:

- |   |                                       |
|---|---------------------------------------|
| • <i>Chemical storage waste generation</i>  | >100 T generated or stored            |
| • <i>Waste storage – Hazardous, restricted solid, liquid, clinical &amp; related waste and Asbestos waste</i> | 0 - All                               |
| • <i>Petroleum products storage – Sydney Basin</i>  | >100000 kL of active storage capacity |

The anniversary date for the licence is 30 November.

A copy of Licence 661 can be accessed through the EPA 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.

Level of Environmental Impact	Likelihood of Environmental Harm Occurring			
		Certain	Likely	Less Likely
	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 EPA 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 661 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 one condition of the environment protection licence, relating to the audit scope was not being complied with.

Details of assessment are presented in Table 2.1.



**Table 2.1 Assessment of Compliance with Environment Protection Licence No. 661**

Statutory Instrument: Environment Protection Licence No. 661			
Condition No.	Compliance/ Risk assessment for non-compliance *	Comment	Action required by licensee
<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 waters. This includes: <ul style="list-style-type: none"> <li>Loss of containment of petroleum based products to stormwater/Gore Bay: <ul style="list-style-type: none"> <li>From bunded bulk storage areas;</li> <li>During transfer to/from berthed ships and the site;</li> <li>During transfer by pipeline to/from the site and around the site.</li> </ul> </li> </ul> There are several bulk tanks storing petroleum based products on site. The products stored include: crude oil, diesel, marine diesel fuel, residue and bitumen feedstock, as well as slurry from the cracker. Many of these products are also transferred to and from the site by ship or by pipeline. There is also another potential major environmental risk: <ul style="list-style-type: none"> <li>Release of contaminated firewater to stormwater/Gore Bay.</li> </ul> The auditors did not identify any other major environmental risks during the audit inspection.	
		<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 which can lead to spillages.</li> </ul>	

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

Statutory Instrument: Environment Protection Licence No. 661			
Condition No.	Compliance/ Risk assessment for non-compliance *	Comment	Action required by licensee
		<ul style="list-style-type: none"> <li>Secondary containment provided for bulk storage tanks, with manually operated valves which are maintained in a closed position.</li> <li>Any hydrocarbons in the stormwater collected on site or from bunded areas, are removed via oil skimmers at the corrugated plate interceptors (CPIs) on site, before being released. The oil is collected and recycled. Cofferdams located after the CPIs, act as tertiary controls to prevent oil from leaving the site and being discharged into Gore Bay.</li> <li>The flow through the CPIs is monitored through flow meters and if the flow rate is too high, an alarm sounds in the control room. Staff can isolate the system if there is concern that contaminated water might leave the site.</li> <li>All ship transfers are monitored and there is 2 way radio communication between the ship and terminal personnel.</li> <li>Ship and terminal staff follow strict procedures for ship transfers including completion of an ISGOT checklist and ship/shore safety checklist to ensure that all equipment associated with the transfer is operational and controls are put in place to minimise the likelihood of a leak or spill. One such control is placing containment booms around berthed ships during a transfer to contain any spills or leaks during a transfer.</li> <li>Intrinsically safe submerged fluorescent lights installed around the wharves to detect any oil on the water surface during night-time loading operations.</li> <li>Movement of substances via pipeline is monitored (flow rate and pressure) in the control room and individual pipelines can be isolated and depressurised if required by closing valves on a pipeline or at a tank.</li> <li>Pipes are welded with minimal flanging to reduce the likelihood of failure and leaks. These are also located within bunded areas with the exception of the 'over-water' pipelines from wharf 1. These pipes are monitored and regularly inspected/ tested.</li> </ul>	

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

Statutory Instrument: Environment Protection Licence No. 661			
Condition No.	Compliance/ Risk assessment for non-compliance *	Comment	Action required by licensee
		<ul style="list-style-type: none"> <li>The Gore Bay/Clyde pipeline has additional controls as it is an underground high pressure pipeline. Controls include: a leak detection system, cathodic protection and additional testing including 'pigging' along the line to ensure the integrity of the pipeline.</li> <li>Training of staff in the use and management of controls and their roles 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 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>Hydrostatic testing of the loading arms at the wharves and pressure testing of pipelines at levels higher than operational needs, to ensure their integrity and prevent leaks.</li> <li>Independent site audits of plant and equipment conducted by Shell</li> <li>Drills and simulations to help ensure that site staff respond as required to emergency situations. Joint exercises are conducted with the Australian Marine Oil Spill Team and the Sydney Ports Corporation.</li> </ul>	
	<b>Managing major environmental risks associated with air pollution (fire and explosion)</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 associated with fire and explosions from the storage and handling of flammable substances at the site.</p> <p>The sources of risk include:</p> <ul style="list-style-type: none"> <li>Bulk storage of petroleum based products</li> </ul>	

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

Statutory Instrument: Environment Protection Licence No. 661			
Condition No.	Compliance/ Risk assessment for non-compliance *	Comment	Action required by licensee
		<ul style="list-style-type: none"> <li>Transfer of petroleum based products to/from berthed ships and the site;</li> <li>Transfer of petroleum based products by pipeline to/from the site and around the site.</li> </ul> <p>It should be noted that there is a risk posed from both an ignited and unignited release of petroleum based products.</p> <p>The auditors did not identify any other major environmental risks during the audit inspection.</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>Prohibition of ignition sources (including smoking and electronic devices) unless in designated areas, or authorised by a permit.</li> <li>Any 'hot work' requires a permit for clearance.</li> <li>Floating tanks have rim seal protection (melt tubes) to minimise the risk of fire between the roof and walls of the tank.</li> <li>Fixed roof tanks have lineal heat detection devices (radar heads and temperature probes). These are monitored in the control room and are alarmed.</li> <li>Fixed roof tanks also have foam rim seal pourers which can be deployed in the event of a fire in a tank.</li> <li>Storage tanks can be cooled using water sprays (fire monitors) along the foreshore. The water sprays can also be used to assist in the suppression of fire.</li> <li>Fire shields are in place around the premises to protect staff and to minimise the impact of a fire.</li> <li>Fixed hydrocarbon gas detectors are installed at the wharves to detect any leaks of flammable substances (with the potential to ignite) associated with a ship transfer.</li> <li>Availability of fire fighting equipment and other emergency response equipment,</li> </ul>	

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

Statutory Instrument: Environment Protection Licence No. 661			
Condition No.	Compliance/ Risk assessment for non-compliance *	Comment	Action required by licensee
		including a mains fire water system with a backup diesel system. <ul style="list-style-type: none"> <li>• Activation of a fire alarm automatically links to Fire and Rescue NSW for response.</li> <li>• Training of staff in the use of controls, fire fighting and 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 at the site. Monitoring undertaken by the licensee includes the use of: <ul style="list-style-type: none"> <li>• Routine inspections/maintenance/calibration of monitoring and control equipment</li> <li>• Regular testing of alarms.</li> <li>• Regular testing of emergency equipment and response including deployment of foam via the rim seal pourers and pumping water and foam into the fixed tanks.</li> <li>• Regular maintenance and inspection of fire equipment by an independent contractor.</li> <li>• Drills and simulations to help ensure that site staff respond as required to emergency situations</li> <li>• Independent site audits of plant and equipment conducted by Shell.</li> </ul>	
	<b>Managing Major Environmental Pollution Incidents</b>		
	Yes	<b>Procedures, processes and equipment for managing major environmental pollution incidents</b> The licensee has procedures, processes and equipment in place to manage major environmental incidents. These include: <ul style="list-style-type: none"> <li>• Emergency response procedures for the major risks identified.</li> <li>• Staff training in the emergency response procedures incorporating drills and simulations.</li> <li>• Clear delineation of roles and responsibilities of site personnel and other parties in responding to an incident.</li> </ul>	

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

Statutory Instrument: Environment Protection Licence No. 661			
Condition No.	Compliance/ Risk assessment for non-compliance *	Comment	Action required by licensee
		<ul style="list-style-type: none"> <li>Evacuation of personnel and notification to Senior Licensee management.</li> <li>Notification to relevant agencies such as Fire and Rescue NSW, Sydney Ports Corporation, Australian Customs, Workcover NSW and the EPA.</li> <li>Availability and maintenance 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>	
	Yes	<i>Maintaining the Emergency Response Plan</i>	
<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	Yes	<b>Recording of pollution complaints</b> The licensee keeps a legible record of all complaints received and these records contain all the details outlined in M4.2 a) to f). When asked to see these records, the licensee produced these to the auditor	
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 EPA has no reason to believe that those records would not be kept for the required 4 years.		
M5.1	Yes	<b>Operating a telephone line for receiving complaints</b> The licensee operates, during its operating hours a telephone line for the purpose of receiving any complaints from members of the public.	
M5.2	No Code Blue	<b>Advertising the telephone complaints line number to the public</b> The licensee has advertised a telephone line number to the impacted community. However, it was noted during the audit that the number advertised does not indicate that the telephone line is for the purpose of making complaints, but rather as a means to contact the licensee if they have a 'concern'.	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

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

Statutory Instrument: Environment Protection Licence No. 661			
Condition No.	Compliance/ Risk assessment for non-compliance *	Comment	Action required by licensee
		<p>The number advertised is the site Senior Operator's number (a 24 hour contact number) and this is communicated to local residents via leaflets which are distributed to houses in the vicinity. It is also noted that the licensee conducts regular quarterly community meetings where this number is also advertised as a number to contact the licensee with any concerns.</p> <p>A general 'contact us' number is also provided on the licensee's website and there is another number advertised on the Gore Bay/ Clyde pipeline from the premises which members of the public can call in relation to any concerns regarding the pipeline.</p> <p>Although none of these numbers are advertised as 'complaints' lines, the EPA has no reason to believe that the local community would not use one of these numbers if they wished to make any complaints to the licensee including complaints relating to pollution from the premises.</p>	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.		
R	<b>REPORTING 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>		
R2.1 & R2.2	Not Applicable	<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.	
U	<b>POLLUTION STUDIES AND REDUCTION PROGRAMS</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>		
U1.1 and U1.2	Yes	<b>U1 Current Vapour Emissions Control System (VCES) monitoring and Maintenance Program</b> A written report was provided to the EPA outlining the required information and within the specified timeframe.	

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

Statutory Instrument: Environment Protection Licence No. 661			
Condition No.	Compliance/ Risk assessment for non-compliance *	Comment	Action required by licensee
U2.1 and U2.2	Yes	<b>U2 Long Term Option</b> A written report was provided to the EPA outlining the required information and within the specified timeframe.	
U3.1 and U3.2	Not Applicable	<b>U3 Long Term Control – Commissioning and Proof of Performance (CPOP)</b> This condition is dependent on the timeframes for implementation of the long term option outlined in U2. At the time of the audit, implementation of the long term option had not occurred; therefore this condition is not applicable.	
U4.1 and U4.2	Yes	<b>U4 Volatile Organic Compounds (VOC) and Toxic Air Pollutants Reduction Program</b> A written report was provided to the EPA outlining the required information and within the specified timeframe.	

\* 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.

#### **Further Observation No. 1 – Secondary containment for bulk storage tanks**

It was noted during the audit inspection that the secondary containment structures around many of the bulk hydrocarbon storage tanks, did not appear to be impervious to the substances being stored. These secondary containment structures are designed so that the natural sandstone rock in which the site is set, forms part of the bund wall. Unsealed sandstone can be very porous and is not impervious to hydrocarbons.

If there was a major leak or spill from one of these tanks, and the containment structure is not adequately sealed, there is potential for any hydrocarbons captured within the secondary containment structure to breach the structure by percolating through the sandstone and potentially contaminating surface and/or ground water. In addition, it is important that any areas where the sandstone joins the remainder of the bund structure (wall) are adequately sealed to prevent any potential leakage from the walls of the structure.

The licensee should ensure that the secondary containment structures provided around bulk storage tanks at the site are impervious to the substances being stored.

#### 4.0 ACTION PROGRAM

The following action program must be undertaken in relation to Shell Refining (Australia) Proprietary Limited.

**Table 4.1 Action Program – Environment Protection Licence No. 661**

Condition No.	Action Details	Non-Compliance Code (where applicable)	Target/Action Date
M5.2	<i>Advertising the telephone complaints line to the public</i> The licensee must inform members of the community that the advertised telephone line is a complaints line that can be used by members of public for the purpose of making complaints.	<b>Code Blue</b>	2 December 2011 (as requested by the EPA Parramatta Office by letter)

EPA 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**



Environment Protection Authority  
Attn: Edwina Howard  
PO Box A290  
Sydney South NSW 1232

Shell Refining (Australia) Proprietary  
Limited

Health Safety and Environment  
PO Box 26  
Granville NSW 2142  
Australia

Tel +612 98978262

Internet <http://www.shell.com.au>

02 February 2012

Dear Edwina,

**Re: Draft Compliance Audit Report – High Risk Facilities Audit Shell Refining (Australia) Proprietary Limited (Gore Bay Terminal) (Licence Number 661)**

Shell would like to thank you for the opportunity to review the draft report and submit comments regarding the findings of the audit which was carried out by officers of the EPA on 7 October 2011.

Shell would like to comment on the following sections of the draft compliance audit report:

- The improper use of the word 'non-compliances' in the EXECUTIVE SUMMARY of the report which states;

"The findings of the audit indicate that the enterprise was not complying with some conditions attached to Environment Protection 661 issued under the Protection of the Environment Operations Act 1997."

"The non-compliances related to:"

The draft audit report has only indicated that Shell is in breach of (1) non-compliance relating to condition M5.2 – Advertising the telephone complaints line number to the public and therefore has not received "non-compliances."

- The inadequacy of our secondary containment structures around our substances being stored in section 3.0 – FURTHER OBSERVATIONS on page 13 where it states;

"It is noted that during the inspection secondary containment structures around many of the bulk hydrocarbon storage tanks, were not impervious to the substances being stored..." the report goes on to state that "...If there was a major leak or spill from one of these tanks, there is potential for any hydrocarbons captured within the secondary containment structure to percolate through the sandstone and contaminate surface and/or groundwater."

Shell believes that the secondary containment structures around bulk storage tanks at the site are adequate for the substances being stored. In the instance of a major leak or spill from one of these tanks, the secondary containment structures would be adequately impervious to capture hydrocarbons before any substances were to percolate through the sandstone and affect surface and/or groundwater.

Furthermore, as part of the actions undertaken to address the audit findings at Gore Bay, Shell communicated at its regular quarterly community meetings held on December 1, 2011 that all future community communications materials will use the term "community complaint" rather than "concern", "question", etc. The existing telephone line will now be referred to as the complaints line and a fridge magnet will be distributed to Greenwich residents with this change in Q1 2012.

Yours faithfully,

A handwritten signature in cursive script that reads "A. Paul".

Tony Paul

**General Manager**

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

Your reference:  
Our reference: FIL11/9665  
Contact: Edwina Howard., (02) 9995 5422

Mr Tony Paul  
General Manager  
Shell Refining (Australia) Proprietary Limited  
Health Safety and Environment  
PO Box 26  
GRANVILLE NSW 2142

Dear Mr Paul

**Re: Final Compliance Audit Report – High Risk Facilities Audit  
Shell Refining (Australia) Proprietary Limited (Gore Bay Terminal) (Licence Number 661)**

The Environment Protection Authority (EPA) is pleased to present you with a copy of the Final Compliance Audit Report for the Shell Refining (Australia) Proprietary Limited premises located at Greenwich. The compliance audit was undertaken as part of the EPA'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 2 February 2012 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 EPA Library for public review.

In relation to your comments:

- As you correctly state in your response, only one non-compliance was found through the audit. Details in the Executive Summary and section 2.1 of the report have been amended to reflect this.
- Section 3.0 – FURTHER OBSERVATIONS: The EPA is concerned that the walls of some bulk storage bund structures may not be impervious to the substances being stored. It was noted during the audit inspection that parts of the walls of some of the bund structures consisted of natural sandstone. Shell should ensure that a major spill or leak from a storage tank will be fully contained within the bund structures and will not percolate through the sandstone walls, potentially contaminating surface and/or ground water.

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 Steve Durrington on 02 9995 6826.

Yours sincerely



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

Enclosure: Final Audit Report Shell Refining (Australia) Proprietary Limited (Gore Bay Terminal)

PO Box A290 Sydney South NSW 1232  
59-61 Goulburn St Sydney NSW 2000  
Tel: (02) 9995 5000 Fax: (02) 9995 5999  
TTY (02) 9211 4723  
ABN 30 841 387 271  
[www.environment.nsw.gov.au](http://www.environment.nsw.gov.au)