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ENVIRONMENT PROTECTION AUTHORITY

FINAL
COMPLIANCE AUDIT REPORT
SHELL REFINING (AUSTRALIA) PROPRIETARY LIMITED
CLYDE REFINERY
DURHAM STREET
CAMELLIA NSW 2142

FEBRUARY 2012

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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.

EXECUTIVE SUMMARY

An Environment Protection Authority (EPA) Compliance Audit was undertaken at the Shell Refinery (Australia) Propriety Limited facility located at Camellia. 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 570 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 22/23 November 2011.

The findings of the audit indicate that the enterprise was not complying with some conditions attached to Environment Protection Licence 570 issued under the Protection of the Environment Operations Act 1997.

The non-compliances related to:

- Advertising the telephone complaints line to the public
- Submitting report on groundwater monitoring and investigation activities

The following issues of concern were identified through further observations:

- Overflow from interceptor bay 4
- Waste oily residue behind slops tank
- Integrity testing of earthen bund floors and clay liner under the land farm
- Trajectory leaks from hydrocarbon storage tanks

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.

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1.0 INTRODUCTION

An Environment Protection Authority (EPA) Compliance Audit has been undertaken at the Shell Refining (Australia) Proprietary Limited facility at Camellia. 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 22 and 23 November 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, Reporting 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 570 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 petrol refinery located at Durham Street, Camellia. The area of the site is approximately 100 hectares and is located within the Parramatta City Council area. The facility has been in operation since 1928. The site is surrounded by industrial premises. The site operates 24 hours a day 7 days per week. The nearest water course is the Parramatta River and Duck Creek which border the site.

The site operates a petrol refinery which takes crude oil from Gore Bay and is initially processed through the Crude Distillation Unit which separates out the different fractions of hydrocarbons in the crude oil.

The different fractions of hydrocarbons are then treated further and refined to produce a total make up of products across the site of 5% fuel oil, 25% diesel, 20% kerosene, 45-50% petrol, small percentage is LPG, fuel gas and sulphur.

1.5 Statutory Instruments Issued to the Enterprise

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

Licence number 570 issued under the Protection of the Environment Operations Act 1997.

The scheduled activity undertaken at the premises is *Chemical Storage* with a fee scale category of *Petroleum products storage – Sydney Basin >100000 kL of active storage capacity, Petroleum and fuel production* with a fee scale category of *Petroleum production and fuel production – Sydney Basin > 500000 T produced, Waste storage and Waste processing (non-thermal treatment)* with a fee scale category of *Non-thermal treatment of hazardous and other waste 0 -All*.

The anniversary date for the licence is 2 July.

A copy of Licence 570 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.

	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 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 570 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. 570

Statutory Instrument: Environment Protection Licence No. 570			
Condition No.	Compliance/ Risk assessment for non-compliance *	Comment	Action required by licensee
O	Operating Conditions <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	Managing major environmental risks associated with water pollution		
	Yes	Identification of Major Environmental Risks The licensee has identified major environmental risks associated with the pollution of stormwater at the premises. This includes: <ul style="list-style-type: none"> • Discharge to water relating to pH overflow to main interceptors • Discharge to water relating to visible hydrocarbons overflow to main interceptors • Discharge of water from Shell to Basell interceptors The auditors did not identify any other major environmental risks during the site inspection that had not already been identified by the licensee.	
		Use of controls to minimise the Major Environmental Risks Identified The licensee has controls in place to manage the major environmental risks identified such as: <ul style="list-style-type: none"> • Stormwater collection system which consist of 4 bays with under and over weirs to collect the hydrocarbons prior to overflow which have a total capacity of 7000 cubic meters. • Operator training on different production areas to reduce the risk of operator errors • High/Low level alarms on storage tanks • Provision of secondary containment at storage tanks to contain leaks and spills 	

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

Statutory Instrument: Environment Protection Licence No. 570			
Condition No.	Compliance/ Risk assessment for non-compliance *	Comment	Action required by licensee
		<ul style="list-style-type: none"> Daily operator rounds to check the condition of the stormwater collection bays Draining and desludging the stormwater bays annually 	
		<p>Monitoring the effectiveness of the controls used by the licensee to manage the Major Environmental Risks</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"> Regular integrity testing of the storage tanks including the walls, floor, seals on floating roof tanks Testing of high/low alarms on tanks Visual checks of bund walls and removal of vegetation 	
		Managing major environmental risks associated with air pollution	
	Yes	<p>Identification of Major Environmental Risks</p> <p>The licensee has identified the major environmental risks associated with the pollution of air at the premises. This includes:</p> <ul style="list-style-type: none"> Incomplete combustion in the furnace attached to the distiller with the potential to cause fire/explosion Incomplete combustion in the furnace attached to the platformer 3 unit with the potential to cause fire/explosion Fuel gas build up in the hydrodesulphurisation unit with the potential to cause fire/explosion Fuel gas build up in the high vacuum unit with the potential to cause fire/explosion <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>	

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

Statutory Instrument: Environment Protection Licence No. 570			
Condition No.	Compliance/ Risk assessment for non-compliance *	Comment	Action required by licensee
		<p>Use of controls to minimise the Major Environmental Risks Identified</p> <p>The licensee uses controls to manage the major environmental risks such as</p> <ul style="list-style-type: none"> • Automatic fuel shutoff for the Crude Distillation Unit • Continuous oxygen, temperature and pressure monitors to ensure that the process is operating at optimal conditions • Primary and Secondary Cyclones are used to take particulates out of flue gas stream prior to discharge • Flares are used as a last control to minimise releases of hydrocarbons direct to atmosphere if a failure of a piece of equipment occurs. • Asset integrity checks such as checking relief valves, flanges reliability 	
		<p>Monitoring the effectiveness of the controls used by the licensee to manage the Major Environmental Risks</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"> • Visual inspection of condition of equipment to see if there are any leaks or unusual noises • Routine testing of alarms with a dedicated instrument technician team • Utilising a Continuous Emissions Monitoring System for monitoring sulphur dioxide and opacity which are both alarmed for the Catalytic Cracking Unit. Measurements go to the control system every 30 seconds. • Calibration of Continuous Emission Monitoring System equipment 	

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

Statutory Instrument: Environment Protection Licence No. 570			
Condition No.	Compliance/ Risk assessment for non-compliance *	Comment	Action required by licensee
	Managing Major Environmental Pollution Incidents		
	Yes	<p>Procedures, processes and equipment for managing major environmental pollution incidents</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"> • Emergency response procedures for major risks identified that include plant closure and refinery evacuation • Notification to relevant agencies such as NSW Fire Brigade, Health, Workcover NSW, EPA and Local Council • Notification to the impacted community • Staff training in emergency response with live and desktop scenarios • Assigning roles and responsibilities to key personnel • Availability of emergency response equipment 	
O3.1	Yes	<p>Emergency Response Plan</p> <p>The licensee maintained an emergency response plan that documents the procedures for the management of all types of incidents that may occur at the premises that are like to cause harm to the environment.</p>	
M	MONITORING CONDITIONS		
	<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	Yes	<p>Recording of pollution complaints</p> <p>The licensee does keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which the licence applied.</p>	
M4.2	Yes	The licensee has recorded all the details of the complaint as required.	

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

Statutory Instrument: Environment Protection Licence No. 570			
Condition No.	Compliance/ Risk assessment for non-compliance *	Comment	Action required by licensee
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.	
M4.4	Yes	The licensee is required to produce a record of complaints to any authorised officer of the EPA who asks to see them. The licensee did produce records of complaints within the 12 month scope of this audit.	
M5.1	Yes	Operating a telephone line for receiving complaints 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	Advertising the telephone complaints line number to the public The licensee has not notified the public of the fact that the contact number is a complaints line or can be used to make a complaint. In the material provided the telephone line is advertised as ' To speak with us, phone 98978888 (24hrs)' or 'For further information please contact the Shell Clyde Refinery on 9897 8016' The EPA is concerned that members of the public may not be aware that they can make a complaint using that telephone number since the telephone line is not advertised as a complaints line for the purpose of receiving any complaints from members of the public.	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 been issued for more than 3 months.	
R		REPORTING CONDITIONS <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	Yes	Notification of environmental harm The licensee does make notification of incidents causing or threatening material harm to the environment to Environment Line.	

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

Statutory Instrument: Environment Protection Licence No. 570			
Condition No.	Compliance/ Risk assessment for non-compliance *	Comment	Action required by licensee
R2.2	Not Determined	The licensee is required to provide written details of notifications to the EPA within 7 days of the date on which the incident occurred. The licensee advised that the written reports are emailed within the 7 days and a hardcopy is posted soon there after. It could not be determined if the written reports submitted by the licensee were provided to the EPA within 7 days of the date on which the incident occurred as there is no records of when the reports were sent by email from the licensee.	The licensee must submit a written report after notification of an incident to Environment Line within 7 days of the days of the incident.
U1.4	Yes	Pollution Studies and Reduction Programs Reporting on soil and Groundwater monitoring and investigation Activities The licensee has submitted the report to the Parramatta Regional Office by the required timeframe and the report contained the requirements as listed in this condition.	
U4.3	Outside Scope of Audit	Leak Detection and Repair Program Summary Report This condition is outside the scope of the audit as the summary report is due on the 30 November 2011.	
E1.1	No Code Blue	Special Conditions Report on Groundwater monitoring and investigation activities The licensee has not submitted a report detailing the progress of works completed outline since the last progress report submitted on groundwater monitoring and investigation activities by the 1 March 2011. The report was received on the 31 March 2011 by the Parramatta Regional Office. The EPA is concerned that the licensee are not submitting their reports by the required timeframe as required by the licence condition.	The licensee must ensure that reports are submitted on or before the 1 March every year as required by Condition E1.1.

* 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 – Overflow from Interceptor bay 4

During the audit inspection an oily sheen was observed in the water overflowing from the EPA licence discharge point at interceptor Bay 4 into Duck Creek.

It was observed that the oily discharge was being captured by two permanent booms that were located between the discharge point and Duck Creek.

Although there was no pollution of waters occurring, the EPA is concerned that the reliance of Shell on the two booms to capture any oil that may escape the interceptor bays, may be influencing the way the maintenance of the interceptor pits is being undertaken.

Shell must ensure that the interceptor pits are properly maintained to ensure that no oil escapes the interceptor bay.

Further Observation No. 2 – Waste oily residue behind slops tank

During the audit inspection, a sump behind the slops tank adjacent to the interceptor bays was full of an oily residue. The slops tank and sump are located in close proximity to Duck Creek and any stormwater from the area drains directly into the creek.

The EPA is concerned that the sump is not being maintained in a proper and efficient condition and in the event of rain increases the likelihood of the oily residue overflowing and potentially draining into Duck Creek.

In addition two full plastic buckets containing an oily residue were observed adjacent to the sump without any containment. An oily sheen was observed on the concrete floor around the area. The EPA is concerned that the storage of oily residue without containment increases the likelihood of stormwater contamination with the potential to pollute Duck Creek.

The licensee must ensure that plant and equipment are maintained in a proper and efficient condition and all activities are undertaken in a manner that prevents the pollution of waters.

Further Observation No. 3 – Testing the Integrity of earthen bund floors and clay liner under the land farm

The storage of hydrocarbons is undertaken in bunded tank farms and some of the bunded tanks farms have earthen floors. The Licensee was unable to provide any information on the integrity of the bund floors.

The licensee should ensure that the bund floors are sufficiently impervious to minimise any risk of hydrocarbons polluting groundwater.

It was also observed that waste sludge is being stored for drying in a landfarm. The licensee advised that the land farm area is lined with synthetic clay. The Licensee also advised that no integrity checks have been undertaken on the clay liner under the land farm.

However, the licensee has a soil and groundwater monitoring plan which includes routine groundwater monitoring of groundwater wells including those located near the land farm.

Although the licensee undertakes routine groundwater monitoring near the land farm, the licensee should ensure that the clay liner is sufficiently impervious to minimise any risk of contaminating groundwater.

Further Observation No. 4 – Trajectory leaks from hydrocarbon storage tanks

During the audit inspection, it was observed that several hydrocarbon storage tanks were located close to the bund wall and in the event of a trajectory leak hydrocarbons would not be contained within the bund. However, it is noted that the licensee has a regular program of integrity testing of the tanks.

The EPA is concerned that in the event of a trajectory leak it may not be captured within an impervious containment structure (also refer to Further Observation No 3) and has the potential to contaminate soil and groundwater in unsealed areas.

The licensee should ensure that the risk of trajectory leaks is managed to minimise any potential for soil and groundwater contamination.

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. 570

Condition No.	Action Details	Non-Compliance Code (where applicable)	Target/Action Date
M5.2	<p>Advertising the telephone complaints line number to the public</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	31 January 2012
E1.1	<p>Report on Groundwater monitoring and investigation activities</p> <p>The licensee must ensure that reports are submitted on or before the 1 March every year as required by Condition E1.1.</p>	Code Blue	1 March 2012

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

Your reference:
Our reference: FIL11/9666
Contact: Raelene West (02) 9995 5426

Mr Scott McGhee
HSSE Manager
Shell Refining (Australia) Proprietary Limited
PO Box 26
GRANVILLE NSW 2142

Dear Mr McGhee

**Re: Final Compliance Audit Report – High Risk Facilities Audit
Shell Refining (Australia) Proprietary Limited (Licence Number 570)**

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 Camellia. 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 15 February 2012 have been considered when finalising the report. EPA's response to your comments are outlined in the Attachment. 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.

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 Stephen Durrington on 02 9995 6826.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Christopher Kelly'. Below the signature is the date '23/2/2012' written in the same ink.

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

Enclosure: Final Audit Report 'Shell Refining (Australia) Proprietary Limited'

ATTACHMENT

Non – Compliances

- 1) Not advertising the complaints line to the public – response noted
- 2) Not submitting a report on groundwater monitoring and investigation activities as required by condition E1.1 of your licence on time – response noted

Further Observations

- 1) Overflow from interceptor Bay 4 – response noted
- 2) Waste oily residue behind slops tank – response noted
- 3) Impervious testing of earthen bund floors and clay liner under the land farm

Earthen Bund Floor

It is noted that Shell in their response to the draft report indicated that soil and groundwater monitoring wells are strategically located around the land farm. However, there is no reference to any soil or groundwater monitoring being undertaken around the tank farms that have earthen floors. Shell should ensure that the earthen floors are sufficiently impervious to minimise the risk of hydrocarbons seeping through the earthen floor thereby reducing the potential to cause soil and groundwater contamination in the event of a spill or leak.

Land farm Clay Liner

Shell should ensure that the clay liner under the land farm is sufficiently impervious to minimise the risk of pollutants leaching through the clay liner with potential to cause soil and groundwater contamination. Using soil and groundwater monitoring results as the only means of assessing the effectiveness of the clay liner will provide evidence that the liner has failed.

It doesn't provide evidence that the liner is impervious. However the detection of pollution in soil and/or groundwater could place Shell in breach of Section 120 of the Protection of the Environment Operations Act 1997.

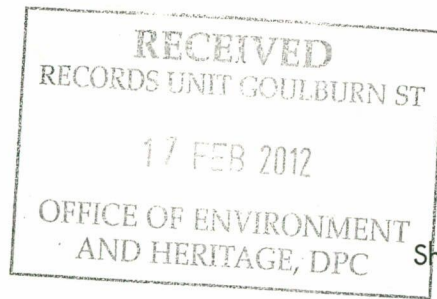
- 4) Trajectory leaks from hydrocarbon storage tanks – response noted

Other General Comments

- 1) Condition R2.2 – Not determined for submitting reports within 7 days – response noted

APPENDIX B

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



Shell Refining (Australia) Proprietary
Limited

Health Safety and Environment

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Christopher Kelly
A/Manager Compliance and Assurance Section
Environment Protection Authority
PO Box A290
Sydney South NSW 1232

15 February 2012

Dear Christopher,

Re: Draft Compliance Audit Report – High Risk Facilities Audit Shell Refining (Australia) Proprietary Limited (Clyde Refinery) (Licence Number 570)

Shell would like to thank you for the opportunity to comment in regards the draft audit report and findings, both non-compliances and observations, of the audit which was carried out by officers of the EPA on the 22-23 November 2011.

Non-Compliances

1) Not advertising the complaints line to the public

Shell liaises with the Community Advisory Panel quarterly which consists of local government representatives and community leaders. Shell will use this forum as a reminder to the public of the Clyde Refinery's complaints line.

In addition, a fridge magnet will be distributed advertising the complaints line in Q1 2012.

2) Not submitting a report on ground water monitoring and investigation activities as required by condition E1.1 of your licence on time.

Shell does not consider that there has been a non-compliance with its licence in regards this condition. Condition E1.1 "E1 Report on Groundwater Monitoring and Investigation Activities" has been superceded by Pollution Reduction Program "U1.4 Reporting on Soil and Groundwater Monitoring and Investigation Activities". The soil and groundwater progress report required by Condition U1.4, which is due annually by the 31st of March, was submitted 29th March 2011.

Shell will endeavour to have the superceded clause removed from its current licence (EPL 570).

Observations

1) Overflow from Interceptor Bay 4

Shell considers that the two permanent booms which are located near the biotreater discharge and main interceptor overflow point at the southern end of the Clyde Refinery is sound environmental management. The booms are a precautionary measure as a means of containment in the event of an unforeseen potential pollution incident. The permanent deployment of these booms has not reduced the measures undertaken upstream of those booms, within the Refinery, to facilitate no discharges of oil to river.

2) Waste oily residue behind slops tank

Shell acknowledges that during the audit, an oily sump behind the slops tank as well as two buckets containing oily residue in the sump's vicinity were observed. Shell has cleaned out the oily residue in the sump and has removed the two oily buckets. This area has been added to the operators' routine inspection rounds to facilitate the timely cleaning of this sump if required and acceptable housekeeping of this area.

3) Impervious testing of earthen bund floors and clay liner under the land farm

Shell considers that in determining the impervious nature of the earthen bund and clay liner under the land farm, the process of accessing the clay liner has the potential to disturb the earthen bund and clay liner, potentially resulting in damage to both. Shell considers that the current methodology of monitoring the soil and groundwater via monitoring wells, which have been strategically placed in locations around or in the vicinity of the landfarm, are an adequate measure of determining whether the clay liner and earthen bund are impervious. The findings of ongoing groundwater monitoring events indicate that the clay liner and bund remain impervious.

4) Trajectory leaks from hydrocarbon storage tanks

As noted in the EPA's correspondence, Shell has a tankage program aimed at maintaining the integrity of the storage tanks on site. In the event of a loss of primary containment (LOPC) and the secondary containment (ie bund) is unable to contain the hydrocarbon, the surrounding areas are generally hard paved surfaces where subsequent clean-up activities can be undertaken. In the event that the LOPC reaches Clyde Refinery's drainage system, the hydrocarbon will pass through corrugated plate interceptors where the hydrocarbon will be separated from water and piped to a slops tank for subsequent reprocessing.


Other General Comments

1. Under Condition R2.2, the draft audit report notes that:

"It could not be determined if the written reports submitted by the licensee were provided to the EPA within 7 days of the date on which the incident occurred as there is no records of when the reports were sent by email from the licensee."

Shell is able to provide records of when self incident reports are emailed to the EPA. In addition, hard copies of self incident reports are sent via registered mail to ensure delivery.

Kind regards,

A handwritten signature in black ink, appearing to read 'J. Roberts', with a large, sweeping flourish underneath.

Jacqueline Roberts
Environmental Team Leader