



**2004 ANNUAL REPORT**

**ON**

**OIL PRODUCTION OPERATIONS**

**IN**

**PPL 204 ( Sellicks )**

**PPL 205 ( Christies ), and**

**PPL 210 ( Aldinga )**

**IN THE**

**COOPER BASIN,**

**SOUTH AUSTRALIA**

*December 31 , 2004*

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## Introduction

Beach Petroleum currently operates three Petroleum Production Licences in the South Australian Cooper Basin.

**PPL 204** was granted to Beach Petroleum and its partner, Cooper Energy, on September 11, 2003 to authorize ongoing oil production from the **Selicks** field. This Annual Report covers the operations at the Selicks field for the fourteen months from November 5th, 2003 until December 31, 2004.

Oil production commenced at the **Christies** field on 9<sup>th</sup> October 2003 as Extended Production Testing of the Christies-1 well. **PPL 205** was subsequently granted to Beach Petroleum and its partner, Cooper Energy twelve months later, on October 11th, 2004, to authorize ongoing oil production from the Christies field. This Annual Report covers the operations at the Christies field for the fourteen months from November 5th, 2003 until December 31, 2004.

Oil production commenced at the **Aldinga** field on 16<sup>th</sup> April 2003 as Extended Production Testing of the Aldinga-1 well. An application for a PPL to cover the Aldinga field (**PPLA 210**) was submitted to PIRSA on November 8<sup>th</sup>, 2004. This Annual Report covers the operations at the Aldinga field for the fourteen months from October 30th, 2003 until December 31st, 2004.

## ANNUAL REPORT ON PRODUCTION OPERATIONS

### **PPL 204 ( SELLICKS )**

**FOR THE PERIOD : November 5<sup>th</sup>, 2003 to December 31<sup>st</sup>, 2004**

#### **1. Summary of Regulated Activities undertaken**

Regulated activities associated with oil production operations are defined in the Regulations of the Petroleum Act 2000 to include :

- physical and geophysical surveys of land;
- drilling of wells;
- processing of substances recovered from a well;
- construction of borrow pits;
- installation and operation of plant and equipment;
- water disposal; and
- construction of roads, camps, airports, buildings and other infrastructure.

In June 2004, a 3D seismic **geophysical survey** was conducted on PPL 204 to better define the extent of the Sellicks structure. The Annual Report for Year 3 of PEL 92 included a report on how the survey operations complied with the objectives of the Statement of Environmental Objectives ( SEO ) to which the survey was committed.

In January 2004, a **preliminary survey** was undertaken along the route of a proposed pipeline connecting the Christies field to the Sellicks field. This project has since been shelved in favour of an alternative pipeline connecting the Christies field directly with Santos' Tantanna field.

No **wells** were **drilled** on PPL 204 during the reporting period.

The **formation fluid** from the Sellicks-1 well was **processed** to separate the oil from the formation water via a separator tank and skimmer pond. A total of 72,600 barrels of oil and 338,000 barrels of formation water were produced during the fourteen month reporting period.

No new **borrow pits** were constructed. The only major **plant and equipment** to be **installed** at the Sellicks field during the reporting period was a jet pump, which provides artificial lift for production from the Sellicks-1 well.

**Formation water** from Sellicks-1 is **disposed** into a bunded evaporation pond. A Notification was submitted to PIRSA for a proposal to develop an additional freeform evaporation pond alongside the facility to accommodate the anticipated volume of formation water to be produced from the Sellicks-1 well. Approval was granted by PIRSA to proceed with this project, however production rates from the well then declined substantially, and the additional water disposal capacity is no longer required.

There was no major **construction of roads or other facilities** on PPL 204. Routine maintenance continued on the existing haul road, and minor upgrades were carried out on the accommodation facilities.

## **2. Compliance Report**

Attached as **Appendix III** is a report on the level of compliance with the Petroleum Act, its Regulations, the terms of the PPL 204 Licence, and Beach Petroleum's "Statement of Environmental Objectives – Cooper Basin Petroleum Production Operations ( November 2003 )".

## **3. Audits**

An audit was undertaken of the operations at the Sellicks facility in December 2004 to assess them in terms of their compliance with good oilfield HSE practice. A report is in preparation.

## **4. Reports and Data**

A list of all Reports and data submitted to PIRSA relating to the production operations at Sellicks during the reporting period is attached as **Appendix II**.

## **5. Incidents**

No incidents occurred which required reporting to PIRSA under the definition of Reportable Incidents in the Beach Petroleum Production SEO.

## **6. Foreseeable threats**

A major ( "once in 10 years" ) flood of the Cooper Creek is the only foreseeable threat to the production operations at the Sellicks facility. A flood of this magnitude originates several hundred kilometers upstream in Queensland, and requires several months to reach the section of the Creek nearest the Sellicks facility. Such an extensive warning period would provide the opportunity for an orderly shutdown and abandonment of the facility, incorporating appropriate measures to minimize the damage to the facility.

## **7. Operations Proposed for 2005**

There are no current plans for further development wells or geophysical surveys on PPL 204.

Operations at the Sellicks facility are expected to continue in a similar manner to the operations over the previous 12 months.

The estimated rate of oil production from Sellicks-1 will require, on average, two road tankers per week to truck the produced oil off site.

## **8. Estimated Production for 2005**

Total production from PPL 204 for the next 12 month reporting period is estimated to be in the order of 30,000 barrels ( average of 80 barrels per day ).

## **9. Proposed Development Activities**

No significant infrastructure developments are anticipated on PPL 204 during the next 12 month reporting period.

## **10. Expenditure on Regulated Activities**

For accounting purposes, the production operations at both the Sellicks and Christies fields are considered as a single operation, as the two fields are owned by the same Joint Venture and operated by a single crew, based at the Sellicks facility.

Attached as **Appendix I** is a table providing a breakdown of the **combined** expenditure on these two fields into the categories defined in Regulation 33 (3) of the Petroleum Act.

# ANNUAL REPORT ON PRODUCTION OPERATIONS

## PPL 205 ( CHRISTIES )

FOR THE PERIOD : November 5<sup>th</sup>, 2003 to December 31<sup>st</sup>, 2004

### 1. Summary of Regulated Activities undertaken

Regulated activities associated with oil production operations are defined in the Regulations of the Petroleum Act 2000 to include :

- physical and geophysical surveys of land;
- drilling of wells;
- processing of substances recovered from a well;
- construction of borrow pits;
- installation and operation of plant and equipment;
- water disposal; and
- construction of roads, camps, airports, buildings and other infrastructure.

No **physical or geophysical surveys** were undertaken on the PPL 205 area.

No **wells** were **drilled** on the Christies field subsequent to the granting of PPL 205 in October 2004. Two wells, Christies-2 and Christies-3 were drilled on the Christies field prior to the granting of PPL 205.

The **formation fluid** produced from the Christies-1 well was **processed** to separate the oil from the formation water via a separator tank. A total of 202,000 barrels of oil and 23,000 barrels of formation water were produced during the reporting period.

During the construction of the new haul road from Christies to Lycium, **borrow pits** were established at regular intervals along the route.

**Plant and equipment installed** at the Christies field during the reporting period included :

- Flowlines to connect the two new production wells ( Christies-2 and Christies-3 ) to the production facility;

- Completion of the Christies-2 and Christies-3 wells; and
- Installation of additional facilities for the extended production test, including an additional oil storage tank, a dewatering tank and a lined interceptor pond;

**Formation water** from the three producing wells ( Christies-1, Christies-2, and Christies-3 ) is discharged from the dewatering tank into a temporary lined interceptor pond, and from there into an evaporation pond. Analyses of the water entering the interceptor pond and the water entering the evaporation pond showed the hydrocarbon concentrations were well within the levels regarded as acceptable by industry standards. Planning is in progress for a further upgrade of the water handling facilities, scheduled for the second half of 2005.

A new **haul road was constructed**, heading east from the Christies facility, to enable the road tankers to avoid crossing the Cooper Creek. The new haul road intersects the Sellicks haul road at Lycium bore. The original haul road into the Christies field became inoperative in April 2004, due to the flooding of the Cooper Creek.

## **2. Compliance Report**

Attached as Appendix 1 is a report on the level of compliance with the Petroleum Act, its Regulations, the terms of the PPL 205 Licence, and Beach Petroleum's " Statement of Environmental Objectives – Cooper Basin Petroleum Production Operations ( November 2003 ) ”.

## **3. Audits**

In December 2004, an audit was undertaken of the production operations at the Christies facility to assess them in terms of their compliance with good oilfield HSE practice. A report is in preparation.

## **4. Reports and Data**

A list of all Reports and data relating to the production operations at Christies that were submitted to PIRSA during the reporting period is attached as Appendix II.

## **5. Incidents**

No incidents occurred which required reporting to PIRSA under the definition of Reportable Incidents in the Beach Petroleum Production SEO.

## **6. Foreseeable threats**

A major ( "once in 10 years" ) flood of the Cooper Creek is the only foreseeable threat to the production operations of the Christies facility. A flood of this magnitude originates several hundred kilometers upstream in Queensland, and requires several months to reach the section of the Cooper Creek nearest the Christies facility. With such extensive advanced warning period, there is sufficient opportunity for an orderly shutdown and abandonment of the facility, incorporating appropriate measures to minimize the damage to the facility.

## **7. Operations Proposed for 2005**

The major operations proposed for the Christies facility during the next twelve months are :

- an upgrade of the facility to accommodate the anticipated increase in the volume of produced oil and formation water. The upgrade will include additional separator tanks and evaporation ponds, and
- installation of jet pumps to provide artificial lift on Christies-2 and Christies-3;

The estimated rate of oil production from the Christies field will require, on average, three to four road tankers per day to truck the produced oil off site.

There are no current plans for further development wells or geophysical surveys on PPL 205.

It is possible that permanent accommodation facilities may be constructed at the Christies facility. For the short term, the Christies field will continue to be serviced by the operators from the nearby Sellicks facility.

## **8. Estimated Production for 2005**

Total oil production from PPL 205 for the next 12 month reporting period is estimated to be in the order of 460,000 barrels ( average of 1250 barrels per day ).

## **9. Proposed Development Activities**

No further development wells are planned for the Christies field in the next twelve month period.

## **10. Expenditure on Regulated Activities**

For accounting purposes, the production operations at both the Sellicks and Christies fields are considered as a single operation, as the two fields are owned by the same Joint Venture and operated by a single crew based at the Sellicks facility.

Attached as Appendix III is a table providing a breakdown of the **combined** expenditure on these two fields into the categories defined in Regulation 33 (3).

## ANNUAL REPORT ON PRODUCTION OPERATIONS

### PPLA 210 ( ALDINGA )

FOR THE PERIOD : November 5<sup>th</sup>, 2003 to December 31<sup>st</sup>, 2004

#### 1. Summary of Regulated Activities undertaken

Regulated activities associated with oil production operations are defined in the Regulations of the Petroleum Act 2000 to include :

- physical and geophysical surveys of land;
- drilling of wells;
- injection of water into a natural reservoir in order to enhance production of petroleum
- processing of substances recovered from a well;
- construction of borrow pits;
- installation and operation of plant and equipment;
- water disposal; and
- construction of roads, camps, airports, buildings and other infrastructure.

No **physical or geophysical surveys** were conducted on the area covered by PPL 210 during the reporting period.

No **wells** were **drilled** on PPL 210 during the reporting period.

A fracture operation was conducted in March, 2004 to stimulate production from the Aldinga-1 well, however there was no significant long term increase in production resulting from the operation.

The **formation fluid** from the Aldinga-1 well was **processed** to separate the oil from the formation water via a skimmer tank. A total of 13,000 barrels of oil and 600 barrels of formation water were produced during the fourteen month reporting period.

No new **borrow pits** were constructed and no new **plant or equipment** was **installed** at the Aldinga field during the reporting period.

The volume of **formation water** produced from the Aldinga field is minimal, approximately two barrels per day ( or 10 litres per hour ) on average. The water is tapped off the skimmer tank to evaporate.

There was **no major road construction** at the Aldinga field. Routine maintenance continued on the existing haul road.

In April, 2004, a permanent 'load-out' facility for filling the road tankers was constructed to replace the temporary facility set up for the initial production testing.

## **2. Compliance Report**

Attached as Appendix 1 is a report on the level of compliance with the Petroleum Act, its Regulations, the terms of the PPL 210 Licence, and Beach Petroleum's " Statement of Environmental Objectives – Cooper Basin Petroleum Production Operations ( November 2003 ) ”.

## **3. Audits**

The Aldinga facility is unmanned, and is serviced by the two - man crew based at the Sellicks facility. An audit was undertaken of the operations of the Sellicks facility in December 2004, to assess their compliance with good oilfield HSE practice. A report is in preparation.

## **4. Reports and Data**

A list of all Reports and data submitted to PIRSA relating to the production operations at Aldinga during the reporting period is attached as Appendix VII.

## **5. Incidents**

Two incidents occurred during the fourteen month reporting period which required reporting to PIRSA under the definition of Reportable Incidents in the Beach Petroleum Production SEO. Both incidents involved a spill of oil in an area that had not been appropriately bunded to contain spills.

- a) The **first incident** was identified in January, 2004 by a PIRSA inspector, and involved an oil stain at the temporary truck load - out area, prior to the construction of the permanent truck load - out facility. The stain was caused by a slowly leaking seal on the pump at the load - out.

Two aspects of this incident constituted non-compliance with the objectives of the Beach Production SEO.

The first non-compliance was the operational procedure of loading trucks in an area that had not been bunded to contain spills. This aspect was addressed by constructing the permanent load – out facility two months later ( as scheduled ) with the load – out pump housed in a separate area which is lined and bunded.

The second non-compliance was the failure of the Beach operators to recognise that such a leak, in an area that was not banded, qualifies as a Reportable Incident, and should have been reported to PIRSA in the December 2003 Quarterly Report. Subsequent discussions with the operators at Sellicks have clarified their obligations under the Production SEO, and these obligations will be stressed more stringently to new operators during the induction program.

- b) The **second incident** occurred in May, 2004, and involved a small spill of oil outside the banded loading bay at the recently constructed permanent load – out facility. The spill was caused by a leaking ball valve on the load – out hose, which was lying outside the banded area. The spill was cleaned up and all other joints were inspected to ensure further leaks would not occur.

## **6. Foreseeable threats**

There are no foreseeable threats to the Aldinga production facility.

## **7. Operations Proposed for 2005**

There are no current plans for further development wells or geophysical surveys on PPLA 210.

Operations at the Aldinga facility are expected to continue in a similar manner to the operations over the previous 12 months.

The estimated rate of oil production from Aldinga-1 will require, on average, one road tanker per fortnight to truck the produced oil off site.

## **8. Estimated Production for 2005**

Total production from PPL 210 for the next 12 month reporting period is estimated to be in the order of 9,000 barrels ( average of 25 barrels per day ).

## **9. Proposed Development Activities**

No significant infrastructure developments are anticipated on PPL 210 during the next 12 month reporting period.

## **10. Expenditure on Regulated Activities**

Attached as Appendix VI is the Statement of Expenditure for the Aldinga production operations ( PPLA 210 ) covering the fourteen month reporting period, from November 2003 to December 2004.

**Statement of Expenditure for PPL 204 and PPL 205 \*\***

COMMERCIAL IN CONFIDENCE

## APPENDIX II

### REPORTS SUBMITTED TO PIRSA DURING 2004 FOR PPL 204 ( SELLICKS FIELD ) AND PPL 205 ( CHRISTIES FIELD )

#### QUARTERLY REPORTS :

CASED - HOLE ACTIVITY REPORTS	
DUE DATE	DATE SUBMITTED
31-Dec-03	19-Feb-04
31-Mar-04	28-Apr-04
30-Jun-04	5-Jul-04
30-Sep-04	28-Oct-04

REPORTABLE INCIDENT REPORTS	
DUE DATE	DATE SUBMITTED
31-Dec-03	
31-Mar-04	Jun-04
30-Jun-04	5-Jul-04
30-Sep-04	28-Oct-04

OTHER REPORTS / DATA	DUE DATE	DATE SUBMITTED
Cased CBL log, MPLT log		28-Apr-04
Sellicks CBL .LIS file & MPLT .LAS file		31-May-04
MPLT .DLIS file		18-Jun-04
Christies #2 Completion Program / Downhole Diagram		20-Sep-04

**ANNUAL**  
**COMPLIANCE**  
**REPORT**

FOR

*PPL 204 ( SELICKS )*

*AND*

*PPL 205 ( CHRISTIES )*

FOR THE PERIOD

*( NOVEMBER 2003 - DECEMBER 2004 )*

COOPER BASIN, SOUTH AUSTRALIA



Compliance Report for PPL 204 ( Sellicks ) and PPL 205 ( Christies ) - Nov 03 to Dec 04

## **Introduction**

Pursuant to Regulation 33 (2) of the 2000 Petroleum Act, Beach Petroleum, as operator of PPL 204 ( Sellicks ) and PPL 205 ( Christies ) in the Cooper Basin, South Australia, herewith submits its report on the compliance of its oil production operations with :

- the Petroleum Act and the Licence conditions of PPL 204 and PPL 205 ( **Section 1** ),
- the Regulations of the Petroleum Act ( **Section 2** ), and
- the various Statements of Environmental Objectives ( SEOs ) to which Beach Petroleum was committed in conducting its production operations ( **Section 3** ).

## **Section 1 :**

### **Compliance with the Petroleum Act and PPL Licence Conditions**

There were no instances during the reporting period in which Beach failed to comply with the 2000 Petroleum Act, or the conditions of PPL 204 or PPL 205, as a consequence of its production operations at the Sellicks and Christies fields.

## **Section 2 :**

### **Compliance with the Regulations of the Petroleum Act**

There were no instances during the reporting period in which Beach failed to comply with the **Regulations** of the 2000 Petroleum Act as a consequence of its production operations at the Sellicks and Christies fields.

Compliance Report for PPL 204 ( Sellicks ) and PPL 205 ( Christies ) - Nov 03 to Dec 04

### **Section 3 :**

#### **Compliance with Statements of Environmental Objectives ( SEOs )**

##### **( A ) Seismic Operations**

A 3D seismic survey, covering 25 square kilometres, was conducted in PPL 204 in July, 2004.

Government approval for Beach to undertake this survey was conditional on Beach committing to the objectives defined in the “Statement of Environmental Objectives for Seismic Operations in the Cooper / Eromanga Basins – South Australia”.

Beach’s strategies for achieving each of the SEO objectives during the seven days of recording the Sellicks 3D survey are outlined below.

<b>SEO Objective 1 :</b>	<b>Ensure that the potential impacts</b> of the proposed seismic operations on biological diversity and cultural requirements of the environment <b>are assessed within a planning process and incorporated into field management procedures.</b>
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**Goal 1.1 : *Identify important or sensitive environmental and cultural components.***

Beach has an Agreement with the Ngayana Dieri Karna ( NDK ) Claimant Group, whose Claim Area covers PPL 204. Prior to the commencement of line preparation, a Work Area Clearance was undertaken by representatives of the NDK under the terms of the Agreement. The scouting party inspected a representative sample of the proposed lines.

A report was prepared by the accompanying anthropologist, documenting the locations where deviations would be required to the proposed seismic lines to avoid sites of cultural significance.

All field crews associated with the seismic program attended an induction on cultural heritage issues for this area, with particular emphasis on identification and avoidance of significant cultural material.

The western boundary of the Sellicks 3D survey ran roughly parallel to the main channel of the Cooper Creek, at a distance of approximately one kilometre.

**Goal 1.2 : *Identify threatening processes and activities***

No processes or activities associated with the survey operations were considered to be threatening to the subject environment. A 2D seismic survey was undertaken in the same area during Year 2 of the Licence with no long term environmental impacts evident.

**Goal 1.3 : *Assess any adverse impact on biological diversity likely to arise from the proposed operation on a regional basis.***

The area covered by PPL 204 comprises two land systems : dunefield and floodplain. GAS criteria for assessing adverse impacts on biodiversity for these two land systems are provided in the Statement of Environmental Objectives ( Tables A2.2. and A2.3 ).

The impacts of the Sellicks 3D Seismic Survey have been audited against these criteria and the results are presented in the attached tables.

Compliance Report for PPL 204 ( Sellicks ) and PPL 205 ( Christies ) - Nov 03 to Dec 04

**Goal 1.4 : Ensure that issues raised in the planning process are incorporated into field management procedures.**

All personnel involved in the field operations were briefed at the commencement of the survey operations as to appropriate procedures for environmental management and protection of cultural heritage.

A company representative was present with the line clearing and recording crews throughout the field operations to ensure adherence to the planned field management procedures.

Compliance Report for PPL 204 ( Sellicks ) and PPL 205 ( Christies ) - Nov 03 to Dec 04

<b>SEO Objective 2 :</b>	<b>Monitor and manage those activities that have, or are likely to have, temporary impacts</b> on biological diversity, cultural components of the environment, groundwater, or other land users, <b>and facilitate rehabilitation</b> so as to minimize such impacts if they occur.
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As defined in the SEO, the goals of this objective are to minimize :

- clearing of native vegetation,
- disturbance to native fauna,
- impacts on soil, surface drainage , visual ambience and other land users,
- the potential for third parties to use survey tracks and sites following completion of operations.

Two sets of GAS criteria are defined in the SEO for assessing the extent of these impacts. One set of criteria relates to assessment carried out at the **completion of the field operations**. The second set relates to assessment carried out when the lines **have been left to rehabilitate** for some period.

At the completion of the Sellicks 3D survey, an assessment of the impacts was undertaken against the first set of GAS criteria. The results of the GAS audit are presented in the table attached as Appendix IV, and a report is in preparation.

As part of the assessment, two locations were selected as Environmental Monitoring Points ( EMPs ) for on going monitoring. The two EMPs, SEL3D04-EMP-01 and SEL3D04-EMP-02, are both situated in a dunefield environment.

<b>SEO Objective 3 :</b>	<b>Avoid undertaking any activities which have, or are likely to have, long-term significant adverse impact(s) on biological diversity, cultural components of the environment, groundwater, or other land uses</b>
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The seismic recording activities undertaken in the Sellicks 3D survey were similar to many previous seismic surveys undertaken in the dune field and floodplain environments of the Cooper Basin.

The GAS auditing for this survey showed that line preparation was carried out according to best practice techniques of minimal blading and minimal clearing of vegetation. Previous experience in this area has shown that, by adhering to these line preparation techniques, the combination of wind action and occasional rainfall will revegetate the lines to the point where they will be indiscernible within a few years. There was no indication of any likely long-term adverse impacts.

The technique of weaving the routes of the seismic lines had also been practiced extensively, allowing significant trees to be left standing, which will minimize the visual impact from these operations during the natural rehabilitation process.

The Sellicks production facility, located at the centre of the 3D survey, is permanently manned by Beach staff. Progress on the natural rehabilitation of the survey lines surrounding the facility can be monitored on a regular basis.

***Non - Compliance with Goal 3.1 of ( SEO ) Objective 3 :  
– Protection of Cultural Heritage Sites.***

An incident occurred during the preparation of the survey access lines, which constituted a non-compliance with Objective 3 ( Goal 3.1 ) –  
*...no significant long-term impact on .....cultural sites.*

A grader driver working with the line preparation crew became disorientated when attempting to drive his grader from one section of the 3D survey grid to another. Extensive local flooding from heavy rainfall during the previous days had prevented the driver from taking a route along established tracks with which he was familiar.

After becoming disoriented, the driver inadvertently drove the grader a short distance into an area that had previously been designated by a scouting team from the Ngayana Dieri Karna ( NDK ) as 'off limits' to exploration activities.

The incident was thoroughly investigated to determine why the grader driver was not fully aware of the exact boundaries of this "no go" zone.

A detailed report was prepared and submitted to the NDK, and a meeting was held with their representatives to express Beach's regret for the incident and to discuss proposed modifications to field operational procedures to reduce the likelihood of a similar reoccurrence.

Compliance Report for PPL 204 ( Sellicks ) and PPL 205 ( Christies ) - Nov 03 to Dec 04

**( B ) Production Operations**

- **Sellicks Field**

In September 2003 , PIRSA granted Petroleum Production Licence 204, covering the estimated area of the production field at Sellicks.

The granting of the PPL was conditional on Beach committing to achieving the objectives defined in Beach's " Statement of Environmental Objectives – Cooper Basin Petroleum Production Operations ( November 2003 ) ”.

Beach is satisfied that the production operations at the Sellicks facility during the reporting period have met the objectives required by the SEO, and the **spreadsheet below** summarises the strategies that were employed to achieve this compliance.

- **Christies Field**

In October 2003, Beach was given approval by PIRSA to undertake production testing of the Christies-1 well. In October 2004, PIRSA granted Petroleum Production Licence 205, covering the estimated area of the production field at Christies.

As with PPL 204, the granting of PPL 205 was conditional on Beach committing to achieving the objectives defined in Beach's " Statement of Environmental Objectives – Cooper Basin Petroleum Production Operations ( November 2003 ) ”.

***Non - Compliance with Goal 3.1 of ( SEO ) Objective 3 :  
– Protection of Cultural Heritage Sites.***

An incident occurred during the construction of the Christies production facility, which constituted a non-compliance with Objective 3 ( Goal 3.1 ) –.  
*...no significant long-term impact on .....cultural sites.*

A grindstone artifact was found broken in pieces in the south-east corner of the Christies production lease area. It appears the grindstone had been recently removed from the restricted area to the north of the production pad, in its original condition, and had subsequently broken.

A scouting team from the Ngayana Dieri Karna ( NDK ) Claimant Group conducted a field investigation shortly after the discovery, and a report was prepared by their accompanying anthropologist. Beach has made inquiries of all its contractors, but has been unable to ascertain who was responsible for this breach of the SEO .

Compliance Report for PPL 204 ( Sellicks ) and PPL 205 ( Christies ) - Nov 03 to Dec 04

To prevent a recurrence of this incident, it is proposed to fence off the perimeter of the area available for production operations and associated development at the Christies facility. The induction process for contractors will also be further tightened, particularly in respect of their obligations towards the protection of cultural heritage.

Beach is satisfied that, with the exception of the above incident, the production operations at the Christies facility have met the objectives required by the SEO, and the **spreadsheet below** provides comments on the strategies that were employed to achieve this compliance.

**Annual Report for PPL 204 ( Sellicks )**

This Annual Report for Year 1 of Petroleum Production Licence 204 ( Sellicks field ) was not submitted by the due date of 11<sup>th</sup> November, 2004.

Following discussions with PIRSA, it has been decided that the Annual Reports for all of Beach Petroleum's PPLs in the Cooper Basin will be combined and submitted as a single document. The reporting period will be the same for each PPL, and will be the calendar year ( 1<sup>st</sup> January to 31<sup>st</sup> December )

**GAS scores for assessing seismic lines on completion of survey in the Cooper Basin, South Australia**

Beach Petroleum Limited.: 2004 Sellicks 3D Seismic Survey: Recorded June 26<sup>th</sup> – 29<sup>th</sup>, 2004: Audited by: Bruce Beer

LAND SYSTEM (Locations)	MEASURE (Associated goals) <sup>(a)</sup>	SCORE				
		+2 <sup>(b, c)</sup>	+1 <sup>(b, c)</sup>	0 <sup>(b, c)</sup>	-1	-2 <sup>(d)</sup>
<b>Non land system specific</b> 1) SEL3D04- EMP-01; Line S580/R144 2) SEL3D04- EMP-02; Line R112/S580  Note: GAS scores refer to the area 500m either side of the EMP location	Impact on infrastructure 2.6			• N/A	•	•
	Visual impact 2.5, 2.7	•	•	1), 2)	•	•
	Uphole site restoration 2.3, 2.5 <sup>(e)</sup>	•	•	N/A	•	•
	Pollution or litter 2.1, 2.2, 2.3, 2.5	1)2)	•		•	•
Dunefield	Impact on vegetation 2.1, 2.2 <sup>(f)</sup>	•	1)2)		•	•
	Disturbance to land surface 2.2, 2.3 <sup>(e)</sup>	•	1)2)		•	•

(.../cont.)

(Table A2.2 cont.)

LAND SYSTEM	MEASURE (Associated goals) <sup>(a)</sup>	SCORE				
		+2 <sup>(b, c)</sup>	+1 <sup>(b, c)</sup>	0 <sup>(b, c)</sup>	-1	-2 <sup>(d)</sup>
Floodplain and wetlands	Impact on vegetation 2.1, 2.2 <sup>(f)</sup>	• 1),2)		•	•	•
	Disturbance to land surface 2.2, 2.3, 2.4, 2.5 <sup>(e)</sup>	• 1),2)		•	•	•
Gibber plain and tableland	Impact on vegetation 2.1, 2.2	•	•	• N/A	•	•
	Disturbance to land surface 2.2, 2.3, 2.5 <sup>(e)</sup>	•	•	• N/A	•	•
Salt lake	Disturbance to land surface 2.3, 2.5 <sup>(e)</sup>	•	•	• N/A	•	•

**(a)** Goals under Objective 2:

- 2.1 Clearing or other impacts on native vegetation are minimised.
- 2.2 Disturbance or other impacts on native fauna and their habitats are minimised.
- 2.3 Impact on soil is minimised.
- 2.4 Impact on surface drainage is minimised
- 2.5 Visual impact of operations (including litter) is minimised.
- 2.6 Impact on other land users is minimised.
- 2.7 Third party use of sites, following the completion of operations, is discouraged.

(b) If any criterion (dot point) within a -1 or -2 cell occurs, then a score of -1 or -2 will be allocated.

(c) For 0,+1 and +2 cells, all relevant criteria (dot point) within the cell must be satisfied to score at that level.

(d) Some criteria at -2 level may also be subject to defined conditions, but are included in this table to ensure that they are clearly identified.

(e) All vertical measurements to be measured from normal ground surface.

(f) Priority classification refers to Wiltshire and Schmidt (1977).

(g) 'Windrows' in this context means mounding of gibbers through the action of wheel trafficking and associated dispersal of gibbers away from wheel tracks.

**ACHIEVEMENT OF ENVIRONMENTAL OBJECTIVES DURING PRODUCTION**  
**FROM SELLICKS ( PPL 204 ) AND CHRISTIES ( PPL 205 ) FIELDS**

**LICENCE YEAR 3 : 5th NOVEMBER 2003 TO 4<sup>th</sup> NOVEMBER 2004**

<b>Objective</b>	<b>Goal</b>	<b>Measure / How</b>	<b>Objective Achieved</b>	<b>Performance Against Objectives</b>
1. To avoid unnecessary disturbance to 3 <sup>rd</sup> party infrastructure, landholders or land use	1.1 To minimise disturbance or damage to infrastructure / land use and remediate where disturbance cannot be avoided	Timely notification to adjacent landholders / 3 <sup>rd</sup> party prior to & during new or significant works. Procedures in the POM, EMS and PIRSA guidelines address removal of waste products, re-instatement of soil profiles and rehabilitation. Incident reports	Where disturbance is unavoidable or accidental, infrastructure or land use is restored to as is reasonably appropriate to the original undisturbed condition or as agreed with the landholder	Rehabilitation of the Sellicks and Christies production site to be undertaken in consultation with the landowner when production ceases. No additional land disturbance required outside of the area cleared initially for production.
	1.2 To minimise disturbance to landholders	Records of communications with adjacent landholders / 3 <sup>rd</sup> parties Record of disturbance management through appropriate documentation	No unresolved reasonable landholder/3 <sup>rd</sup> party complaints Landholder activities not restricted or disturbed as a result of activities unless by prior arrangement	The facilities are at least 10 kms from the nearest dwelling.
2. To maintain soil stability / integrity	2.1 To remediate erosion as a result of production operations in a timely manner	Inspections undertaken as part of regular patrols or following specific works or following significant storm events to look at evidence of erosion, subsidence, vegetation loss & compare to adjacent land  Preventative measures implemented and monitored in susceptible areas (eg. monitor for salinisation/erosion effects)	The extent of soil erosion is consistent or less than surrounding land	No significant erosion has been reported either at the facilities or along the access roads.

Objective	Goal	Measure / How	Objective Achieved	Performance Against Objectives
	2.2 To prevent soil inversion	Inspections undertaken as part of regular patrols to look for soil discolouration and the success of vegetation return as an indicator Contractor to indicate top soil/subsoil are stockpiled separately and soil profiles appropriately reinstated following the rehabilitation of earthworks/excavations	Vegetation cover is consistent with surrounding land No evidence of significant subsoil on surface (colour)	Topsoil was stockpiled when the sites were originally cleared for the drilling operations. Rehabilitation of the Sellicks and Christies production sites will be undertaken when production ceases.
	2.3 To minimise and remediate soil disturbance	Restrict activities (including vehicle access) to production areas and associated infrastructure and easements Minimise area required for safely undertaking activities in accordance with procedures Planning and assessment of proposed activities to minimise impact Design and construct road with drainage features (e.g. culverts and offtakes) to minimise erosion and sedimentation Rip areas of compacted soil (except on gibber plains and tableland environments) Restored borrow pits have topsoil / overburden replaced and pit re-profiled where necessary to prevent erosion Contractor to indicate that soil profiles appropriately reinstated following the rehabilitation of earthworks/excavations	No production activities undertaken on salt lakes, steep tableland land systems or wetlands land systems (as defined in the EIR) Abandoned areas (e.g. borrow pits) are remediated and rehabilitated to be reasonably consistent with the surrounding area 0, +1 or +2 GAS criteria for borrow pit construction and rehabilitation are attained (Appendix B)	All vehicle movements are restricted to the designated access roads and the production facility areas. Sellicks and Christies production sites and access track are located in a dunefield environment. The clay surface on the access roads minimises disturbance to the soil beneath. No significant drainage channels are traversed by either of the access roads to the production sites. The route of the new haul road from the Christies facility avoids crossing the Cooper Creek. Rehabilitation of the Sellicks and Christies production sites and access tracks will be undertaken in consultation with the landowner when production ceases.

Objective	Goal	Measure / How	Objective Achieved	Performance Against Objectives
3. To minimise disturbance to native vegetation	3.1 To maintain regrowth of native vegetation on reinstated areas to be consistent with surrounding area	Disturbance management to facilitate regrowth in rehabilitated areas Follow-up rehabilitation work was undertaken where natural regeneration was inadequate	Species abundance and distribution on the reinstated areas was consistent with the surrounding area Note: assessment of the consistency with surrounding areas will take into account that regrowth is a time and rainfall dependent process 0, +1 or +2 GAS criteria for borrow pit construction and rehabilitation are attained (Appendix B)	Rehabilitation of the Sellicks and Christies production sites will be undertaken in consultation with the landowner when production ceases.
	3.2 To minimise additional clearing of native vegetation as part of production activities	Planning and assessment of proposed activities to minimise impact which may include consultation with Native Vegetation Council Avoid significant or priority vegetation and ensure proposed routes have been scouted for significant vegetation and wildlife habitats by appropriately trained and experienced personnel Use existing cleared areas for laydowns and turn-arounds Consideration of sensitive vegetation during vegetation trimming and / or clearing activities Vegetation trimmed rather than cleared where possible Minimise area required for safely undertaking activities in accordance with procedures	Vegetation clearing is limited to previously disturbed areas or areas assessed to be of lowest sensitivity No rare, vulnerable or endangered flora removed without appropriate permits No production activities undertaken on salt lakes, steep tableland land systems or wetlands land systems (as defined in the EIR) 0, +1 or +2 GAS criteria for borrow pit construction and rehabilitation are attained (Appendix B)	No vegetation clearing was undertaken during the reporting period at either of the production facilities  Construction of the new haul road from Christies required minimal clearing of vegetation as the vegetation along the route was primarily sparse low saltbush.
	3.3 To ensure production activities are planned and conducted in a manner that minimises impacts on native fauna	Planning and assessment of proposed activities to minimise impact In event of earthworks, open trenches are monitored daily and not left open for more than 72 hours	Vegetation clearing is limited to previously disturbed areas or areas assessed to be of lowest sensitivity No rare, vulnerable or endangered fauna removed without appropriate permits 0, +1 or +2 GAS criteria for borrow pit construction and rehabilitation are attained (Appendix B)	No record of rare, vulnerable or endangered fauna in either areas.

<b>Objective</b>	<b>Goal</b>	<b>Measure / How</b>	<b>Objective Achieved</b>	<b>Performance Against Objectives</b>
	3.4 To minimise disturbance of aquatic habitats (specifically wetlands, permanent waterholes and flowing water courses)	Obtain regulatory approval prior to undertaking disturbance in aquatic habitat (contact should be initially made with PIRSA during the planning process) Planning and assessment of proposed activities to minimise impact	Works in aquatic habitats (e.g. flowing watercourses) has been approved by PIRSA	Sellicks and Christies facilities are both approx. 4 kms from the nearest significant watercourse ( Cooper Creek ) which flows only during large flood events ( 1 in 5 years )
4. To prevent the introduction or spread of weeds, pathogens and pest fauna	4.1 To ensure that weeds, pathogens and pest fauna are controlled at a level that is at least consistent with adjacent land	Regular patrols undertaken to look for evidence of weeds on production site and adjacent land (if weeds on production facility or easement but not adjacent land must implement control to prevent spread) Records of outbreaks found, weed control activities and photo-monitoring of significant outbreaks	The presence of weeds and pathogens was consistent with or better than adjacent land No new outbreak or spread of weeds reported	No new outbreak or spread of weeds reported.
5. To minimise the impact of the production operations on water resources	5.1 To maintain current surface drainage patterns	Regular patrols undertaken to look for evidence of erosion, abnormal vegetation growth or death Observations are also to be undertaken following significant storm events	For excavations, surface drainage profiles restored to as is reasonably consistent with surrounding area For existing easements, drainage is maintained similar to pre-existing conditions	No water courses in the close vicinity of the production facilities, nor crossing the access roads. The original haul road from the Christies facility crossed the Cooper Creek twice. As anticipated, the road crossings had no influence on the direction of the flow of water down the Cooper Creek during the flood in April 2004 .
	5.2 To minimise impact to aquifers / groundwater volumes and flow patterns	The volume/flow of water extracted is monitored and recorded Water usage is to be reviewed annually and management strategies implemented to reduce overall water usage where practical	Volume of water produced recorded No uncontrolled flow to the surface (i.e. no free flowing bores) Note: the drilling and well operations SEO provides detail on aquifer issues	The volume of water extracted in the production operations is monitored and recorded.

Objective	Goal	Measure / How	Objective Achieved	Performance Against Objectives
6. To avoid land or water contamination	6.1 To prevent spills occurring and if they occur minimise their impact	<p>All production facilities and flowlines are designed and constructed in accordance with relevant standards</p> <p>Containment of all hazardous substances including hydrocarbons and liquid waste in appropriate vessels and bunds</p> <p>Tanker load-out in lined area, with appropriate bunding to contain spills</p> <p>Roads and causeways designed to minimise risk of vehicle accident and appropriate safety signage installed (e.g. at access to public roads)</p> <p>Fuel and chemical handling and emergency response procedures included in staff training, implemented and reviewed periodically</p> <p>Transport procedures and restrictions to achieve compliance with POM and EMS (including no transport in wet conditions and no wet wheel fording)</p> <p>Implement POM procedures for temporary product storage pits</p> <p>Prevention program including inspection, maintenance and pigging where appropriate</p> <p>Patrols to look for evidence of soil discolouration, vegetation or fauna death</p> <p>Production operations will cease in event of flood inundation. In floodplain land systems, the following will be undertaken:</p> <ul style="list-style-type: none"> <li>▪ Storage tanks and flowlines drained, purged and filled with water to reduce buoyancy</li> <li>▪ Interceptor pit skimmed to remove oil</li> <li>▪ Fuel tanks drained, engines and all hydrocarbons (e.g. fuel and lubricants) removed off-site</li> </ul> <p>Fencing of contaminated areas if threat is posed to stock or wildlife</p> <p>Incident record system (preventative and post incident review)</p>	<p>No evidence of any spills or leaks to areas not designated to contain spills</p> <p>In the event of a spill, the spill was:</p> <ul style="list-style-type: none"> <li>▪ Contained</li> <li>▪ Reported</li> <li>▪ Cleaned-up</li> <li>▪ Cause investigated and corrective and/or preventative action implemented</li> </ul> <p>Compliance with the Environment Protection Act, Australian Standard 1940 and the Australian Dangerous Goods Code.</p>	<p>No spills outside of bunded areas during the reporting period.</p>

Objective	Goal	Measure / How	Objective Achieved	Performance Against Objectives
	6.2 To remediate and monitor areas of known contamination arising from production activities (salinisation, hydrocarbons, other production chemicals)	Incident record system (preventative and post incident review) Active remediation methods implemented where it is determined that contamination is spreading or level of contamination is not decreasing Use of groundwater monitoring bores. The number and positioning of monitoring bores will be in accordance with relevant industry practice to ensure adequate coverage of any potential underground water contamination and movement. Use of soil farms for remediation where appropriate	Contamination restricted to known areas and remediation strategies investigated and implemented where practical. Level of hydrocarbon contamination continually decreasing, ultimately to meet Environment Protection Authority (EPA) guidelines <sup>1</sup>	
	6.3 To ensure that rubbish and waste material is disposed of in an appropriate manner	Minimise generation of waste where practicable Provide suitable bins for the collection and storage of wastes and collect all waste in one area at each camp site Design and operation of any domestic waste disposal facility in accordance with EPA licence and guidelines Regular patrols undertaken to look for evidence of rubbish, spills (soil discolouration) Appropriately licensed contractors used for any hazardous waste disposal and records are maintained for all hazardous waste disposal All transported waste is adequately secured to the vehicle	No evidence of rubbish or litter on easements or at facilities No evidence that waste material is not contained and disposed of in accordance with Beach approved procedures Evidence of waste tracking certificates for prescribed wastes Evidence of compliance with any waste disposal licence conditions (e.g. EPA permits)	All waste material was disposed of in accordance with Beach approved procedures.

<sup>1</sup> Soil Health Index (SHI) study is currently being undertaken by Santos, in consultation with PIRSA and EPA. The results of this study will provide a proforma for establishing site-specific benchmarks for soil remediation.

Objective	Goal	Measure / How	Objective Achieved	Performance Against Objectives
	6.4 To prevent impacts as a result of hydrotest water and waste water (e.g. washdown water) disposal	Water disposed of in a manner that prevented discharge or runoff to watercourses or environmentally sensitive areas Water discharged onto stable ground, with no evidence of erosion as a result of discharge Records on source of water and discharge method/location Use of biocides and toxic chemicals are kept to a minimum and where practicable UV-degradable biocides (e.g. TPHS) shall be used Appropriate assessment of hydrostatic test water quality to determine disposal method Inspection of water disposal sites for evidence of water entering a watercourse or environmentally sensitive area	No evidence of impacts to soil, water and vegetation as a result of water disposal (i.e. soil erosion, dead vegetation, water discoloration)	
	6.5 To ensure the safe and appropriate disposal of grey water (sullage, sewage)	Compliance with the relevant local government regulations or relevant health and sanitation regulations	No evidence of non-compliance with local or state government regulations	Grey water disposed of in accordance with state government regulations.

Objective	Goal	Measure / How	Objective Achieved	Performance Against Objectives
	<p>6.6 To minimise impacts as a result of produced formation water treatment and disposal and restrict to defined areas</p>	<p>Produced formation water treatment and disposal in accordance with Beach approved procedures in POM and EMS</p> <p>Site ponds appropriately<sup>2</sup> to minimise potential impacts</p> <p>Fence contaminated areas if threat is posed to stock or wildlife</p> <p>Monitor evaporation pond water and sludge annually</p> <p>Monitor ponds for surrounding upwelling of PFW</p> <p>Undertake appropriate water quality monitoring where shallow groundwater exists in the vicinity of PFW ponds</p> <p>Records of volumes of produced formation water maintained and reported annually</p>	<p>Water monitoring results indicated levels of Total Petroleum Hydrocarbons (TPH) below 30mg/L in banded holding ponds and 10mg/L in banded and / or freeform evaporation ponds</p> <p>No evidence of overflow of product from interceptor pit</p> <p>No evidence of hydrocarbon contamination immediately adjacent to banded ponds</p>	<p>Produced water from both the Sellicks and Christies facilities well is separated from the oil in separator tanks, and then through a skimmer pond, for final disposed into evaporation ponds.</p> <p>Hydrocarbon levels in the disposed water were monitored and found to be well within the industry standard limits.</p> <p>Integrity of the evaporation ponds at both facilities is checked regularly by the operators based at the Sellicks field.</p> <p>Water handling facilities at Christies are to be substantially expanded during the second quarter of 2005 to cope with the anticipated increase in the volume of produced water.</p>
	<p>6.7 To minimise impacts as a result of land treatment units and restrict to defined areas</p>	<p>Land treatment areas constructed and operated in accordance with procedures</p> <p>Records of soil added to land treatment areas to be maintained and reported annually (including quantity, location of source)</p> <p>Monitoring of surrounding soil and groundwater for contaminants annually as required by licence</p> <p>Monitoring and reporting of remediation</p>	<p>Periodic reports as required detail quantity, level of contamination and proposed ongoing operation of the LTU</p>	<p>There are no land treatment units at either Sellicks or Christies. In the event that soil becomes contaminated, it is taken to a registered soil treatment area.</p>

<sup>2</sup> Appropriately manage means to take into consideration and assess relevant environmental factors (including location of surface water, shallow groundwater, potential flooding, location of vegetation, etc.) and take measures to reduce the potential impact on these factors through the use of best practice.

7. To minimise the risk to public health and safety	7.1 To adequately protect public safety during normal production operations	<p>Risk Assessments and inspections of facilities</p> <p>Use of signage, bunting and traffic management practices to identify all potentially hazardous areas</p> <p>Records of regular emergency response training for employees and review of procedures</p> <p>Incident record system (preventative and post incident review)</p> <p>Development, implementation and periodic review of Emergency Response Plan (ERP)</p> <p>All production facilities and flowlines are designed and constructed in accordance with relevant standards</p> <p>Safety, testing, maintenance and inspection procedures are implemented</p> <p>Personnel are trained to supervise and instruct individuals entering area to conduct work</p> <p>Safe work permits must be obtained to ensure only individuals with proper clearance can conduct works</p>	<p>No injuries or incidents involving the public</p> <p>Demonstrated compliance with relevant standards</p> <p>Emergency procedures implemented and personnel trained</p>	No incidents of risk to public health and safety during the reporting period.
	7.2 To avoid fires associated with production activities	<p>Incident record system (preventative and post incident review)</p> <p>Regular fire safety and emergency response training for all operations personnel and review of procedures</p> <p>Established procedures for minimising fire risk during operations</p> <p>All production facilities are designed and constructed in accordance with relevant standards</p> <p>Appropriate fire fighting equipment on site</p>	<p>No uncontrolled operations related fires</p> <p>Emergency procedures implemented and personnel trained</p>	<p>No fires occurred at either facility during the reporting period.</p> <p>Landowner ( and government ) have given approval that , in the event of a fire at either facility, if the first attack on the fire fails, it can be left to burn itself out.</p>
	7.3 To prevent unauthorised access to production facilities	<p>Use of signage, bunting to identify all potentially hazardous areas</p> <p>Communications with landholders</p> <p>All reports of unauthorised activity are reported and investigated</p>	No unauthorised activity	No incidents of unauthorised entry to either the Sellicks or Christies facility.

8. Minimise impact of emergency situations	8.1 To minimise the impact as a result of an emergency situation or incident	<p>Incident record system (preventative and post incident review)</p> <p>Emergency response trials and associated documentation</p> <p>Records of regular emergency response training for all personnel and review of procedures</p>	<p>Emergency response procedures are effectively implemented in the event of an emergency</p> <p>Emergency response exercises are aligned with credible threats and consequences identified in the risk assessment</p>	<p>No emergency situations arose at either the Sellicks or Christies facilities during the reporting period.</p> <p>Beach HSE system includes periodic simulation of Emergency situations at production facilities.</p>
	8.2 To restore any damage that may occur as a result of an emergency situation	Refer to previous criteria (Objective 1, 2, 3 & 6)	Refer to previous criteria (Objective 1, 2, 3 & 6)	
9. To minimise noise due to operations	9.1 To take reasonable practical measures to comply with noise standards	<p>Incident record system (preventative and post incident review)</p> <p>Monitoring results, where deemed necessary (e.g. frequent complaints)</p>	<p>Operational activities have taken reasonable practical measures to comply with noise regulations, under the Environment Protection Act 1993</p> <p>No unresolved reasonable complaints</p>	Sellicks and Christies facilities are both at least 10 kilometres from the nearest dwelling.
10. To minimise atmospheric emissions	10.1 To minimise uncontrolled atmospheric emissions	<p>Conduct all production activities in accordance with procedures</p> <p>Identify and implement strategies to minimise volumes if needed</p>	Reasonable practical measures implemented in design and operation to minimise emissions	The only source of atmospheric emissions at both Sellicks and Christies are the diesel engines driving the beam pumps on the well heads.
	10.2 To minimise controlled atmospheric emissions	<p>Conduct all production activities in accordance with procedures</p> <p>Identify and implement strategies to minimise volumes if needed</p> <p>Record and report annual emission volumes</p>	<p>Reasonable practical measures implemented in design and operation to minimise emissions</p> <p>Annual report includes atmospheric emissions data</p>	
	10.3 To minimise the generation of dust.	<p>Incident record system (preventative and post incident review)</p> <p>Compliance with procedures (vehicle movement, dust suppression, etc.)</p>	<p>No reasonable complaints received</p> <p>No dust related injuries recorded</p>	<p>Sellicks and Christies facilities are approximately 10 kms from nearest dwelling.</p> <p>Traffic along the joint access road is typically up to a maximum of four road tanker per day.</p>

<p>11. To adequately protect cultural heritage sites and values during operations and maintenance</p>	<p>11.1 To ensure that identified cultural sites are not disturbed</p>	<p>Consultation with relevant heritage groups if operations occurring outside known surveyed areas                  Surveys / cultural heritage monitoring before excavations                  Records of site locations within information systems                  Site examined by relevant aboriginal claimant group for cultural heritage material prior to work on areas not previously cleared</p>	<p>Proposed construction areas and access tracks surveyed by relevant cultural heritage group                  Any new sites identified are recorded and reported to appropriate authority                  No impact to identified sites</p>	<p>A grindstone artifact was found broken in pieces in the south-east corner of the Christies production lease area. It appears the grindstone had been recently removed in tact from the restricted area to the north of the production pad.</p> <p>A scouting team from the Ngayana Dieri Karna ( NDK ) Claimant Group conducted a field investigation shortly after the discovery, and a report was prepared by their accompanying anthropologist. Beach has made inquiries of all its contractors, but has been unable to ascertain who was responsible for this breach of the SEO .</p> <p>To prevent a recurrence of this incident, it is proposed to fence off the perimeter of the area available for production operations and associated development at the Christies facility. The induction process for contractors will also be further tightened, particularly in respect of their obligations towards the protection of cultural heritage.</p>
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**Statement of Expenditure for PPL 210 ( ALDINGA )**

**for the period**

**5th November, 2003 to 31st December, 2004**

COMMERCIAL IN CONFIDENCE

**REPORTS TO PIRSA DURING 2004 FOR PPL 210 ( ALDINGA FIELD )**

**QUARTERLY REPORTS :**

<b>CASED - HOLE ACTIVITY REPORTS</b>	
<b>DUE DATE</b>	<b>DATE SUBMITTED</b>
31-Dec-03	19-Feb-04
31-Mar-04	28-Apr-04
30-Jun-04	5-Jul-04
30-Sep-04	28-Oct-04

<b>REPORTABLE INCIDENT REPORTS</b>	
<b>DUE DATE</b>	<b>DATE SUBMITTED</b>
31-Dec-03	
31-Mar-04	Jun-04
30-Jun-04	5-Jul-04
30-Sep-04	28-Oct-04

<b>OTHER REPORTS / DATA</b>	<b>DUE DATE</b>	<b>DATE SUBMITTED</b>
Downhole Diagrams for Aldinga, Flow Buildup analysis		1-Apr-04
Aldinga Fracture stimulation report		26-Oct-04

**ANNUAL**  
**COMPLIANCE**  
**REPORT**

FOR

***PPLA 210 ( ALDINGA )***

FOR THE PERIOD

***( NOVEMBER 2003 - DECEMBER 2004 )***

COOPER BASIN, SOUTH AUSTRALIA



**Compliance Report for PPL 210 (Aldinga) - Nov 03 to Dec 04**

**Introduction**

Pursuant to Regulation 33 (2) of the 2000 Petroleum Act, Beach Petroleum, as operator of PPL 210 (Aldinga) in the Cooper Basin, South Australia, herewith submits its report on the compliance of its oil production operations with :

- the Petroleum Act and the PPL 210 Licence conditions ( **Section 1** ),
- the Regulations of the Petroleum Act ( **Section 2** ), and
- the various Statements of Environmental Objectives ( SEOs ) to which Beach Petroleum was committed in conducting its production operations ( **Section 3** ).

**Section 1 :**

**Compliance with the Petroleum Act and PPL Licence Conditions**

There were no instances during the reporting period in which Beach failed to comply with the 2000 Petroleum Act as a consequence of its production operations at the Aldinga field.

**Section 2 :**

**Compliance with the Regulations of the Petroleum Act**

There were no instances during the reporting period in which Beach failed to comply with the Regulations of the 2000 Petroleum Act as a consequence of its production operations at the Aldinga field.

**Section 3 :**

**Compliance with Statements of Environmental Objectives ( SEOs )**

In April 2003, Beach was given approval by PIRSA to undertake production testing of the Aldinga-1 well. In November, 2004, Beach applied for a Petroleum Production Licence ( PPLA 210 ), covering the estimated area of the production field at Aldinga.

PIRSA's approval for Beach to produce oil from Aldinga-1 was conditional on Beach committing to achieving the objectives defined in Beach's " Statement of Environmental Objectives – Cooper Basin Petroleum Production Operations ( November 2003 ) ”.

**Non - Compliance with Goal 6.1 of ( Beach Production SEO ) Objective 6 :  
– To avoid land or water contamination.**

Two incidents occurred at the Aldinga production facility during the reporting period, which constituted non-compliance with Objective 6 ( Goal 6.1 ) of the Beach Petroleum Production SEO :

*“...To prevent spills occurring, and if they occur, minimize their impact. “*

Both incidents involved a spill of oil in an area that had not been appropriately bunded to contain spills, and both incidents required reporting to PIRSA under the definition of Reportable Incidents in the Beach Petroleum Production SEO.

- a) The **first incident** was identified in January, 2004 by a PIRSA inspector, and involved an oil stain at the temporary truck load - out area, prior to the construction of the permanent truck load - out facility. The stain was caused by a slowly leaking seal on the pump at the load out.

Two aspects of this incident constituted non-compliance with the objectives of the Beach Production SEO.

The first non-compliance was the operational procedure of loading trucks in an area that had not been bunded to contain spills. This aspect was addressed by constructing the permanent load – out facility two months later ( as scheduled ) with the load – out pump housed in a separate area, which is lined and bunded.

The second non-compliance was the failure of the Beach operators to recognise that such a leak, in an area that was not bunded, qualifies as a Reportable Incident, and should have been reported to PIRSA in the December 2003 Quarterly Report. Subsequent discussions with the operators at Sellicks have clarified their obligations under the Production SEO, and these obligations will be stressed more stringently to new operators during their induction program.

- b) The **second incident** occurred in May, 2004, and involved a small spill of oil outside the bunded loading bay at the new load – out facility. The spill was caused by a leaking ball valve on the load – out hose, which was lying outside the bunded area. The spill was cleaned up and all other joints were inspected to ensure further leaks would not occur.

Beach is satisfied that, with the exception of the above incidents, the production operations at the Aldinga facility have met the objectives required by the SEO, and the **spreadsheet below** provides comments on the strategies that were employed to achieve this compliance.

**ACHIEVEMENT OF ENVIRONMENTAL OBJECTIVES DURING  
EXTENDED PRODUCTION TESTING AT ALDINGA – 1 IN PEL 95**

**REPORTING PERIOD :      NOVEMBER 5, 2003    TO    DECEMBER 31, 2004**

<b>Objective</b>	<b>Goal</b>	<b>Measure / How</b>	<b>Objective Achieved</b>	<b>Performance Against Objectives</b>
1. To avoid unnecessary disturbance to 3 <sup>rd</sup> party infrastructure, landholders or land use	1.1 To minimise disturbance or damage to infrastructure / land use and remediate where disturbance cannot be avoided	Timely notification to adjacent landholders / 3 <sup>rd</sup> party prior to & during new or significant works. Procedures in the POM, EMS and PIRSA guidelines address removal of waste products, re-instatement of soil profiles and rehabilitation. Incident reports	Where disturbance is unavoidable or accidental, infrastructure or land use is restored to as is reasonably appropriate to the original undisturbed condition or as agreed with the landholder	Rehabilitation of the Aldinga production site to be undertaken in consultation with the landowner when production ceases. No additional land disturbance required outside of the area cleared initially for production.
	1.2 To minimise disturbance to landholders	Records of communications with adjacent landholders / 3 <sup>rd</sup> parties Record of disturbance management through appropriate documentation	No unresolved reasonable landholder/3 <sup>rd</sup> party complaints Landholder activities not restricted or disturbed as a result of activities unless by prior arrangement	Facility is unmanned. Beach personnel are on site typically only once per week for two to three hours for supervising the loading of a road tanker . The facility is 15 kms from the nearest homestead.
2. To maintain soil stability / integrity	2.1 To remediate erosion as a result of production operations in a timely manner	Inspections undertaken as part of regular patrols or following specific works or following significant storm events to look at evidence of erosion, subsidence, vegetation loss & compare to adjacent land  Preventative measures implemented and monitored in susceptible areas (eg. monitor for salinisation/erosion effects)	The extent of soil erosion is consistent or less than surrounding land	No significant erosion has been reported either at the facility or along the access road.

Objective	Goal	Measure / How	Objective Achieved	Performance Against Objectives
	2.2 To prevent soil inversion	Inspections undertaken as part of regular patrols to look for soil discolouration and the success of vegetation return as an indicator Contractor to indicate top soil/subsoil are stockpiled separately and soil profiles appropriately reinstated following the rehabilitation of earthworks/excavations	Vegetation cover is consistent with surrounding land No evidence of significant subsoil on surface (colour)	Topsoil was stockpiled when the site was originally cleared for the drilling operations. Rehabilitation of the Aldinga production site will be undertaken when production ceases.
	2.3 To minimise and remediate soil disturbance	Restrict activities (including vehicle access) to production areas and associated infrastructure and easements Minimise area required for safely undertaking activities in accordance with procedures Planning and assessment of proposed activities to minimise impact Design and construct road with drainage features (e.g. culverts and offtakes) to minimise erosion and sedimentation Rip areas of compacted soil (except on gibber plains and tableland environments) Restored borrow pits have topsoil / overburden replaced and pit re-profiled where necessary to prevent erosion Contractor to indicate that soil profiles appropriately reinstated following the rehabilitation of earthworks/excavations	No production activities undertaken on salt lakes, steep tableland land systems or wetlands land systems (as defined in the EIR) Abandoned areas (e.g. borrow pits) are remediated and rehabilitated to be reasonably consistent with the surrounding area 0, +1 or +2 GAS criteria for borrow pit construction and rehabilitation are attained (Appendix B)	All vehicle movements are restricted to the designated access road and the production facility area.. Aldinga production site and access track are located in a dunefield environment. The clay surface on the access road minimises disturbance to the soil beneath. No significant drainage channels are traversed by either the access road or the production site. Rehabilitation of the Aldinga production site and access track will be undertaken in consultation with the landowner when production ceases.
3. To minimise disturbance to native vegetation	3.1 To maintain regrowth of native vegetation on reinstated areas to be consistent with surrounding area	Disturbance management to facilitate regrowth in rehabilitated areas Follow-up rehabilitation work was undertaken where natural regeneration was inadequate	Species abundance and distribution on the reinstated areas was consistent with the surrounding area Note: assessment of the consistency with surrounding areas will take into account that regrowth is a time and rainfall dependent process 0, +1 or +2 GAS criteria for borrow pit construction and rehabilitation are attained (Appendix B)	Rehabilitation of the Aldinga production site will be undertaken in consultation with the landowner when production ceases.

Objective	Goal	Measure / How	Objective Achieved	Performance Against Objectives
	3.2 To minimise additional clearing of native vegetation as part of production activities	<p>Planning and assessment of proposed activities to minimise impact which may include consultation with Native Vegetation Council</p> <p>Avoid significant or priority vegetation and ensure proposed routes have been scouted for significant vegetation and wildlife habitats by appropriately trained and experienced personnel</p> <p>Use existing cleared areas for laydowns and turn-arounds</p> <p>Consideration of sensitive vegetation during vegetation trimming and / or clearing activities</p> <p>Vegetation trimmed rather than cleared where possible</p> <p>Minimise area required for safely undertaking activities in accordance with procedures</p>	<p>Vegetation clearing is limited to previously disturbed areas or areas assessed to be of lowest sensitivity</p> <p>No rare, vulnerable or endangered flora removed without appropriate permits</p> <p>No production activities undertaken on salt lakes, steep tableland land systems or wetlands land systems (as defined in the EIR)</p> <p>0, +1 or +2 GAS criteria for borrow pit construction and rehabilitation are attained (Appendix B)</p>	<p>No vegetation clearing was undertaken during the reporting period.</p> <p>Vegetation along the access track , and in the area of the facility , is quite sparse.</p>
	3.3 To ensure production activities are planned and conducted in a manner that minimises impacts on native fauna	<p>Planning and assessment of proposed activities to minimise impact</p> <p>In event of earthworks, open trenches are monitored daily and not left open for more than 72 hours</p>	<p>Vegetation clearing is limited to previously disturbed areas or areas assessed to be of lowest sensitivity</p> <p>No rare, vulnerable or endangered fauna removed without appropriate permits</p> <p>0, +1 or +2 GAS criteria for borrow pit construction and rehabilitation are attained (Appendix B)</p>	No record of rare, vulnerable or endangered fauna in the area.
	3.4 To minimise disturbance of aquatic habitats (specifically wetlands, permanent waterholes and flowing water courses)	<p>Obtain regulatory approval prior to undertaking disturbance in aquatic habitat (contact should be initially made with PIRSA during the planning process)</p> <p>Planning and assessment of proposed activities to minimise impact</p>	Works in aquatic habitats (e.g. flowing watercourses) has been approved by PIRSA	Aldinga facility is over 10 kms from the nearest significant watercourse ( Strzelecki Creek ) which flows only during large flood events ( 1 in 5 years ) along the Cooper Creek.

<b>Objective</b>	<b>Goal</b>	<b>Measure / How</b>	<b>Objective Achieved</b>	<b>Performance Against Objectives</b>
4. To prevent the introduction or spread of weeds, pathogens and pest fauna	4.1 To ensure that weeds, pathogens and pest fauna are controlled at a level that is at least consistent with adjacent land	Regular patrols undertaken to look for evidence of weeds on production site and adjacent land (if weeds on production facility or easement but not adjacent land must implement control to prevent spread) Records of outbreaks found, weed control activities and photo-monitoring of significant outbreaks	The presence of weeds and pathogens was consistent with or better than adjacent land No new outbreak or spread of weeds reported	No new outbreak or spread of weeds reported.
5. To minimise the impact of the production operations on water resources	5.1 To maintain current surface drainage patterns	Regular patrols undertaken to look for evidence of erosion, abnormal vegetation growth or death Observations are also to be undertaken following significant storm events	For excavations, surface drainage profiles restored to as is reasonably consistent with surrounding area For existing easements, drainage is maintained similar to pre-existing conditions	No water courses in the vicinity of the production facility, nor crossing the access road.
	5.2 To minimise impact to aquifers / groundwater volumes and flow patterns	The volume/flow of water extracted is monitored and recorded Water usage is to be reviewed annually and management strategies implemented to reduce overall water usage where practical	Volume of water produced recorded No uncontrolled flow to the surface (i.e. no free flowing bores) Note: the drilling and well operations SEO provides detail on aquifer issues	The volume of water extracted in the production operations is monitored and recorded.

Objective	Goal	Measure / How	Objective Achieved	Performance Against Objectives
<p>6. To avoid land or water contamination</p>	<p>6.1 To prevent spills occurring and if they occur minimise their impact</p>	<p>All production facilities and flowlines are designed and constructed in accordance with relevant standards</p> <p>Containment of all hazardous substances including hydrocarbons and liquid waste in appropriate vessels and bunds</p> <p>Tanker load-out in lined area, with appropriate bunding to contain spills</p> <p>Roads and causeways designed to minimise risk of vehicle accident and appropriate safety signage installed (e.g. at access to public roads)</p> <p>Fuel and chemical handling and emergency response procedures included in staff training, implemented and reviewed periodically</p> <p>Transport procedures and restrictions to achieve compliance with POM and EMS (including no transport in wet conditions and no wet wheel fording)</p> <p>Implement POM procedures for temporary product storage pits</p> <p>Prevention program including inspection, maintenance and pigging where appropriate</p> <p>Patrols to look for evidence of soil discolouration, vegetation or fauna death</p> <p>Production operations will cease in event of flood inundation. In floodplain land systems, the following will be undertaken:</p> <ul style="list-style-type: none"> <li>▪ Storage tanks and flowlines drained, purged and filled with water to reduce buoyancy</li> <li>▪ Interceptor pit skimmed to remove oil</li> <li>▪ Fuel tanks drained, engines and all hydrocarbons (e.g. fuel and lubricants) removed off-site</li> </ul> <p>Fencing of contaminated areas if threat is posed to stock or wildlife</p> <p>Incident record system (preventative and post incident review)</p>	<p>No evidence of any spills or leaks to areas not designated to contain spills</p> <p>In the event of a spill, the spill was:</p> <ul style="list-style-type: none"> <li>▪ Contained</li> <li>▪ Reported</li> <li>▪ Cleaned-up</li> <li>▪ Cause investigated and corrective and/or preventative action implemented</li> </ul> <p>Compliance with the Environment Protection Act, Australian Standard 1940 and the Australian Dangerous Goods Code.</p>	<p>During the reporting period, there were two oil spills at the Aldinga facility.</p> <p>The <b>first spill</b> covered an area of approximately three square metres, and was caused by oil dripping from a leaking seal on the load-out pump.</p> <p>The load-out area at the time was a temporary facility, and was neither lined nor bunded. Being in an unbunded area, the leak should have been reported to PIRSA as a Serious Incident, under the management procedures specified in Beach's Production SEO.</p> <p>Beach's failure to report the incident constituted a non-compliance with the SEO.</p> <p>The new permanent load-out area was built shortly afterwards, as planned, with the load-out pump housed in a separate lined and bunded area.</p> <p>The <b>second spill</b> covered a similar sized area and was caused by a leaking valve in the load-out hose. The spill was outside the bunded area. All valves in the load-out apparatus were inspected to ensure no further leaks would occur.</p>

Objective	Goal	Measure / How	Objective Achieved	Performance Against Objectives
	6.2 To remediate and monitor areas of known contamination arising from production activities (salinisation, hydrocarbons, other production chemicals)	<p>Incident record system (preventative and post incident review)</p> <p>Active remediation methods implemented where it is determined that contamination is spreading or level of contamination is not decreasing</p> <p>Use of groundwater monitoring bores. The number and positioning of monitoring bores will be in accordance with relevant industry practice to ensure adequate coverage of any potential underground water contamination and movement.</p> <p>Use of soil farms for remediation where appropriate</p>	Contamination restricted to known areas and remediation strategies investigated and implemented where practical. Level of hydrocarbon contamination continually decreasing, ultimately to meet Environment Protection Authority (EPA) guidelines <sup>1</sup>	Soil contaminated by the two spills was either removed or bio-remediated in place
	6.3 To ensure that rubbish and waste material is disposed of in an appropriate manner	<p>Minimise generation of waste where practicable</p> <p>Provide suitable bins for the collection and storage of wastes and collect all waste in one area at each camp site</p> <p>Design and operation of any domestic waste disposal facility in accordance with EPA licence and guidelines</p> <p>Regular patrols undertaken to look for evidence of rubbish, spills (soil discolouration)</p> <p>Appropriately licensed contractors used for any hazardous waste disposal and records are maintained for all hazardous waste disposal</p> <p>All transported waste is adequately secured to the vehicle</p>	<p>No evidence of rubbish or litter on easements or at facilities</p> <p>No evidence that waste material is not contained and disposed of in accordance with Beach approved procedures</p> <p>Evidence of waste tracking certificates for prescribed wastes</p> <p>Evidence of compliance with any waste disposal licence conditions (e.g. EPA permits)</p>	<p>Facility is unmanned. Beach personnel are on site typically only once per week for two to three hours when a road tanker is being loaded.</p> <p>Rubbish and waste material taken to Sellicks facility for treatment with Sellicks waste.</p>

<sup>1</sup> Soil Health Index (SHI) study is currently being undertaken by Santos, in consultation with PIRSA and EPA. The results of this study will provide a proforma for establishing site-specific benchmarks for soil remediation.

Objective	Goal	Measure / How	Objective Achieved	Performance Against Objectives
	6.4 To prevent impacts as a result of hydrotest water and waste water (e.g. washdown water) disposal	<p>Water disposed of in a manner that prevented discharge or runoff to watercourses or environmentally sensitive areas</p> <p>Water discharged onto stable ground, with no evidence of erosion as a result of discharge</p> <p>Records on source of water and discharge method/location</p> <p>Use of biocides and toxic chemicals are kept to a minimum and where practicable UV-degradable biocides (e.g. TPHS) shall be used</p> <p>Appropriate assessment of hydrostatic test water quality to determine disposal method</p> <p>Inspection of water disposal sites for evidence of water entering a watercourse or environmentally sensitive area</p>	No evidence of impacts to soil, water and vegetation as a result of water disposal (i.e. soil erosion, dead vegetation, water discoloration)	There are no waste water handling facilities at Aldinga facility.
	6.5 To ensure the safe and appropriate disposal of grey water (sullage, sewage)	Compliance with the relevant local government regulations or relevant health and sanitation regulations	No evidence of non-compliance with local or state government regulations	Not Applicable.
	6.6 To minimise impacts as a result of produced formation water treatment and disposal and restrict to defined areas	<p>Produced formation water treatment and disposal in accordance with Beach approved procedures in POM and EMS</p> <p>Site ponds appropriately<sup>2</sup> to minimise potential impacts</p> <p>Fence contaminated areas if threat is posed to stock or wildlife</p> <p>Monitor evaporation pond water and sludge annually</p> <p>Monitor ponds for surrounding upwelling of PFW</p> <p>Undertake appropriate water quality monitoring where shallow groundwater exists in the vicinity of PFW ponds</p> <p>Records of volumes of produced formation water maintained and reported annually</p>	<p>Water monitoring results indicated levels of Total Petroleum Hydrocarbons (TPH) below 30mg/L in banded holding ponds and 10mg/L in banded and / or freeform evaporation ponds</p> <p>No evidence of overflow of product from interceptor pit</p> <p>No evidence of hydrocarbon contamination immediately adjacent to banded ponds</p>	<p>Production of formation water is minimal – approximately two barrels per day ( 10 litres per hour ) on average.</p> <p>Formation water is separated from the oil through a skimmer tank..</p>

<sup>2</sup> Appropriately manage means to take into consideration and assess relevant environmental factors (including location of surface water, shallow groundwater, potential flooding, location of vegetation, etc.) and take measures to reduce the potential impact on these factors through the use of best practice.

Objective	Goal	Measure / How	Objective Achieved	Performance Against Objectives
	6.7 To minimise impacts as a result of land treatment units and restrict to defined areas	Land treatment areas constructed and operated in accordance with procedures Records of soil added to land treatment areas to be maintained and reported annually (including quantity, location of source) Monitoring of surrounding soil and groundwater for contaminants annually as required by licence Monitoring and reporting of remediation	Periodic reports as required detail quantity, level of contamination and proposed ongoing operation of the LTU	There are no land treatment units at Aldinga. In the event that soil becomes contaminated, it is taken to the Sellicks production facility.

7. To minimise the risk to public health and safety	7.1 To adequately protect public safety during normal production operations	Risk Assessments and inspections of facilities Use of signage, bunting and traffic management practices to identify all potentially hazardous areas Records of regular emergency response training for employees and review of procedures Incident record system (preventative and post incident review) Development, implementation and periodic review of Emergency Response Plan (ERP) All production facilities and flowlines are designed and constructed in accordance with relevant standards Safety, testing, maintenance and inspection procedures are implemented Personnel are trained to supervise and instruct individuals entering area to conduct work Safe work permits must be obtained to ensure only individuals with proper clearance can conduct works	No injuries or incidents involving the public Demonstrated compliance with relevant standards Emergency procedures implemented and personnel trained	No incidents of risk to public health and safety during the reporting period.
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	7.2 To avoid fires associated with production activities	<p>Incident record system (preventative and post incident review)</p> <p>Regular fire safety and emergency response training for all operations personnel and review of procedures</p> <p>Established procedures for minimising fire risk during operations</p> <p>All production facilities are designed and constructed in accordance with relevant standards</p> <p>Appropriate fire fighting equipment on site</p>	<p>No uncontrolled operations related fires</p> <p>Emergency procedures implemented and personnel trained</p>	<p>No fires occurred at the facility during the reporting period.</p> <p>Landowner ( and government ) have given approval that , in the event of a fire at the facility, if the first attack on the fire fails, it can be left to burn itself out.</p>
	7.3 To prevent unauthorised access to production facilities	<p>Use of signage, bunting to identify all potentially hazardous areas</p> <p>Communications with landholders</p> <p>All reports of unauthorized activity are reported and investigated</p>	<p>No unauthorised activity</p>	<p>A sign has been placed at the start of the access track to advise that unauthorised entry to the Aldinga facility is prohibited.</p>
8. Minimise impact of emergency situations	8.1 To minimise the impact as a result of an emergency situation or incident	<p>Incident record system (preventative and post incident review)</p> <p>Emergency response trials and associated documentation</p> <p>Records of regular emergency response training for all personnel and review of procedures</p>	<p>Emergency response procedures are effectively implemented in the event of an emergency</p> <p>Emergency response exercises are aligned with credible threats and consequences identified in the risk assessment</p>	<p>No emergency situations arose at the Aldinga facility during the reporting period.</p> <p>Beach HSE system includes periodic simulation of Emergency situations at production facilities.</p>
	8.2 To restore any damage that may occur as a result of an emergency situation	<p>Refer to previous criteria (Objective 1, 2, 3 &amp; 6)</p>	<p>Refer to previous criteria (Objective 1, 2, 3 &amp; 6)</p>	
9. To minimise noise due to operations	9.1 To take reasonable practical measures to comply with noise standards	<p>Incident record system (preventative and post incident review)</p> <p>Monitoring results, where deemed necessary (e.g. frequent complaints)</p>	<p>Operational activities have taken reasonable practical measures to comply with noise regulations, under the Environment Protection Act 1993</p> <p>No unresolved reasonable complaints</p>	<p>Aldinga facility is approximately 15 kilometres from the nearest dwelling.</p>
10. To minimise atmospheric emissions	10.1 To minimise uncontrolled atmospheric emissions	<p>Conduct all production activities in accordance with procedures</p> <p>Identify and implement strategies to minimise volume s if needed</p>	<p>Reasonable practical measures implemented in design and operation to minimise emissions</p>	<p>The only source of atmospheric emissions at Aldinga is a single diesel engine driving the beam pump on the Aldinga 1 well.</p>

	10.2 To minimise controlled atmospheric emissions	Conduct all production activities in accordance with procedures Identify and implement strategies to minimise volumes if needed Record and report annual emission volumes	Reasonable practical measures implemented in design and operation to minimise emissions Annual report includes atmospheric emissions data	
	10.3 To minimise the generation of dust.	Incident record system (preventative and post incident review) Compliance with procedures (vehicle movement, dust suppression, etc.)	No reasonable complaints received No dust related injuries recorded	Aldinga facility is approximately 15 kms from nearest dwelling. Traffic along the access road is typically limited to one road tanker per week.
11. To adequately protect cultural heritage sites and values during operations and maintenance	11.1 To ensure that identified cultural sites are not disturbed	Consultation with relevant heritage groups if operations occurring outside known surveyed areas Surveys / cultural heritage monitoring before excavations Records of site locations within information systems Site examined by relevant aboriginal claimant group for cultural heritage material prior to work on areas not previously cleared	Proposed construction areas and access tracks surveyed by relevant cultural heritage group Any new sites identified are recorded and reported to appropriate authority No impact to identified sites	No instances during the reporting period of any disturbance to cultural heritage sites arising from production activities.  A Work Area Clearance was conducted at Aldinga to extend the area available for potential future production activities, including earthworks.