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ENVIRONMENTAL AUDIT REPORT

PETROSA OFFSHORE PRODUCTION RIGHT: BLOCK 9 – FO PRODUCTION AREA

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List of Abbreviations

Abbreviation	Item
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EIMS	Environmental Impact Management Services (Pty) Ltd
EMPr	Environmental Management Programme Report
PWP	Production Works Programme
HSE	Health, Safety, and Environment
I&AP	Interested and Affected Party
IMO	International Maritime Organization
MMO	Marine Mammal Observer
MPRDA	Mineral and Petroleum Resources Development Act, Act 28 of 2002
NADF	Non-Aqueous Drilling Fluid
NEMA	National Environmental Management Act, Act 107 of 1998
OSCP	Oil Spill Contingency Plan
PASA	Petroleum Agency of South Africa
PetroSA	Petroleum Oil and Gas Corporation of South Africa (Pty) Ltd
ROV	Remote Operated Vehicle
SAHRA	South African Heritage Resources Agency
SANBI	South African National Biodiversity Institute
SANHO	South African Hydrographic Office
SAMSA	South African Maritime Safety Authority

EXECUTIVE SUMMARY

Environmental Impact Management Services (Pty) Ltd (EIMS) was appointed by the Petroleum Oil and Gas Corporation of South Africa SOC LTD (hereafter referred to as PetroSA) to undertake an Environmental Audit of the Environmental Authorization (EA)/ Record of Decision (RoD) and Environmental Management Programme (EMPr) for the FO Production Operations in Block 9 off the South Coast of South Africa.

PetroSA's Block 9 licence area covers a surface area of 22,756km^2 and presently includes four production lease areas: FA-EM; South Coast Gas (SCG), FO-EM (Sable) and Oribi/Oryx. Each of these areas has its own EA (or RoD) and associated EMPr. **This audit report is relevant to the FO Production Area and associated EA and EMPr** (DFFE Ref: 12/12/20/1132; PASA ref: 12/4/08).

PetroSA's Block 9 licence area encompasses 22,756 km² and includes four production lease areas: FA-EM, South Coast Gas (SCG), FO, and Oribi/Oryx. Each lease area maintains its own EMPr. The FA-EM, SCG, and FO areas produce gas from numerous wells, which is transported via subsea pipeline infrastructure, and processed at the FA Platform. Here, condensate is separated, and both gas and condensate are transported ashore via separate pipelines to the Gas-to-Liquid (GTL) refinery in Mossel Bay. The F-O production area covers about 275 km², with water depths between 125 m and 250 m. Development of the F-O Gas Field follows exploratory activities under PetroSA's Exploration Licence and approved EMPr.

Regulation 54(a)(2) of the Environmental Impact Assessment (EIA) Regulations (GNR982- EIA Regulations) requires all rights and permits issued in terms of the Mineral and Petroleum Resources Development Act, Act 28 of 2002 (MPRDA) and associated Environmental Management Plans to be subjected to the audit requirements stipulated in Part 3 of Chapter 5 of the Regulations. Part 3, Chapter 5 of the EIA Regulations in turn requires that compliance with the conditions of the EA, and the EMPr is audited and an environmental audit report be submitted to the relevant competent authority.

The period of assessment for this audit is June 2015 – December 2025. The scope of the audit is to assess compliance with the requirements of the EA and EMPr for the FO Production area currently held by PetroSA, and to confirm the continued adequacy of the EMPr. The purpose of the audit is to determine and report on:

- The level of performance against and compliance of the conditions with the provisions of the requisite approved EMPr; and
- The ability of the measures contained in the EMPr, to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the applicable exploration activities.

Compliance with the requirements was evaluated using the pre-determined scoring criteria (described in Section 6.2) and the results of the audit are described in detail in Section 7 of this report. A straight compliance of 33% and a weighted compliance of 58% was achieved against the requirements of the EMPr. A straight and weighted compliance of 67% was achieved against the requirements of the EA.

The Auditor also undertook an evaluation of the adequacy of the EMPr to determine the ability of the EMPr's, to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity on an ongoing basis. It is the auditors opinion that the 2011 EMPr does, in large part, sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity on an ongoing basis. However, certain shortcomings have been identified in the preceding sections of this audit report which should be amended.

1 INTRODUCTION

The Petroleum Oil and Gas Corporation of South Africa (Pty) Ltd (PetroSA) is the holder of a converted Production Right for petroleum issued in accordance with the Minerals and Petroleum Resources Development Act (Act 28 of 2002-MPRDA). PetroSA is required to implement the production activities in accordance with the requirements of the approved Environmental Authorisation (EA) (Department of Environmental Affairs, 2011) and associated Environmental Management Programme (EMPr) (CCA Environmental (Pty) Ltd, 2011). Regulation 34 of the National Environmental Management Act (Act 107 of 1998-NEMA), Environmental Impact Assessment Regulations (GNR982) requires that the holder of an approved EMPr must, for the period during which the EMPr remains valid, ensure that the compliance with the conditions of the EMPr and EA are audited.

This report aims to comply with these obligations to audit compliance with the EA and associated EMPr and submit the findings of the audit to the relevant competent authority, in this case the Petroleum Resources Agency of South Africa (PASA).

2 ACTIVITY DESCRIPTION

PetroSA's Block 9 licence area covers a surface area of 22,756km^2 and presently includes four production lease areas: FA-EM; South Coast Gas (SCG), FO and Oribi/Oryx. Each of these areas has its own EMPr, and in some instances EA's or RoD's. This audit report is relevant to the FO Production Area and associated EA and EMPr.

PetroSA's Block 9 licence area encompasses 22,756 km² and includes four production lease areas: FA-EM, South Coast Gas (SCG), FO, and Oribi/Oryx. Each lease area maintains its own EMPr. The FA-EM, SCG, and FO areas produce gas from numerous wells, which is transported via subsea pipeline infrastructure, and processed at the FA Platform. Here, condensate is separated, and both gas and condensate are transported ashore via separate pipelines to the Gas-to-Liquid (GTL) refinery in Mossel Bay. The F-O production area covers about 275 km², with water depths between 125 m and 250 m. The location of the FO production area within the context of the other production areas in Block 9 is illustrated in Figure 1. The location of the FO Production area is presented in Figure 2.

The FO production area includes approximately 16 wells. Of these wells 5 were drilled post 2011 and only 3 were drilled to production. The wells are controlled directly from the FA Platform via an electro-hydraulic umbilical to the sub-sea wells. All of the wells in the FO field have been shut in.

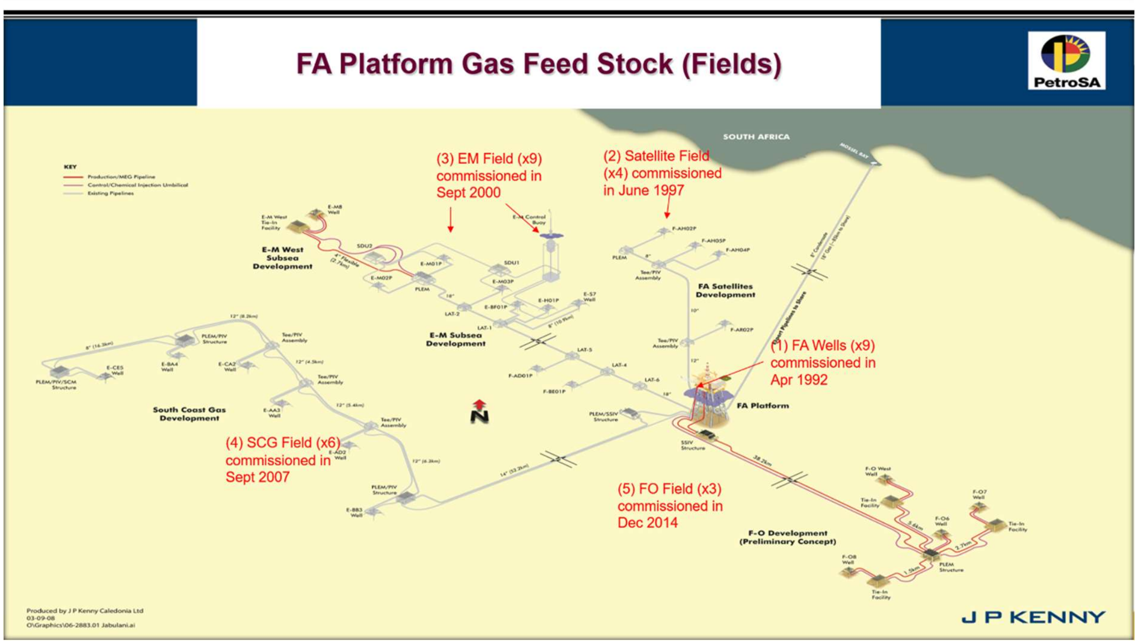

Figure 1: PetroSA Wells and Subsea Network

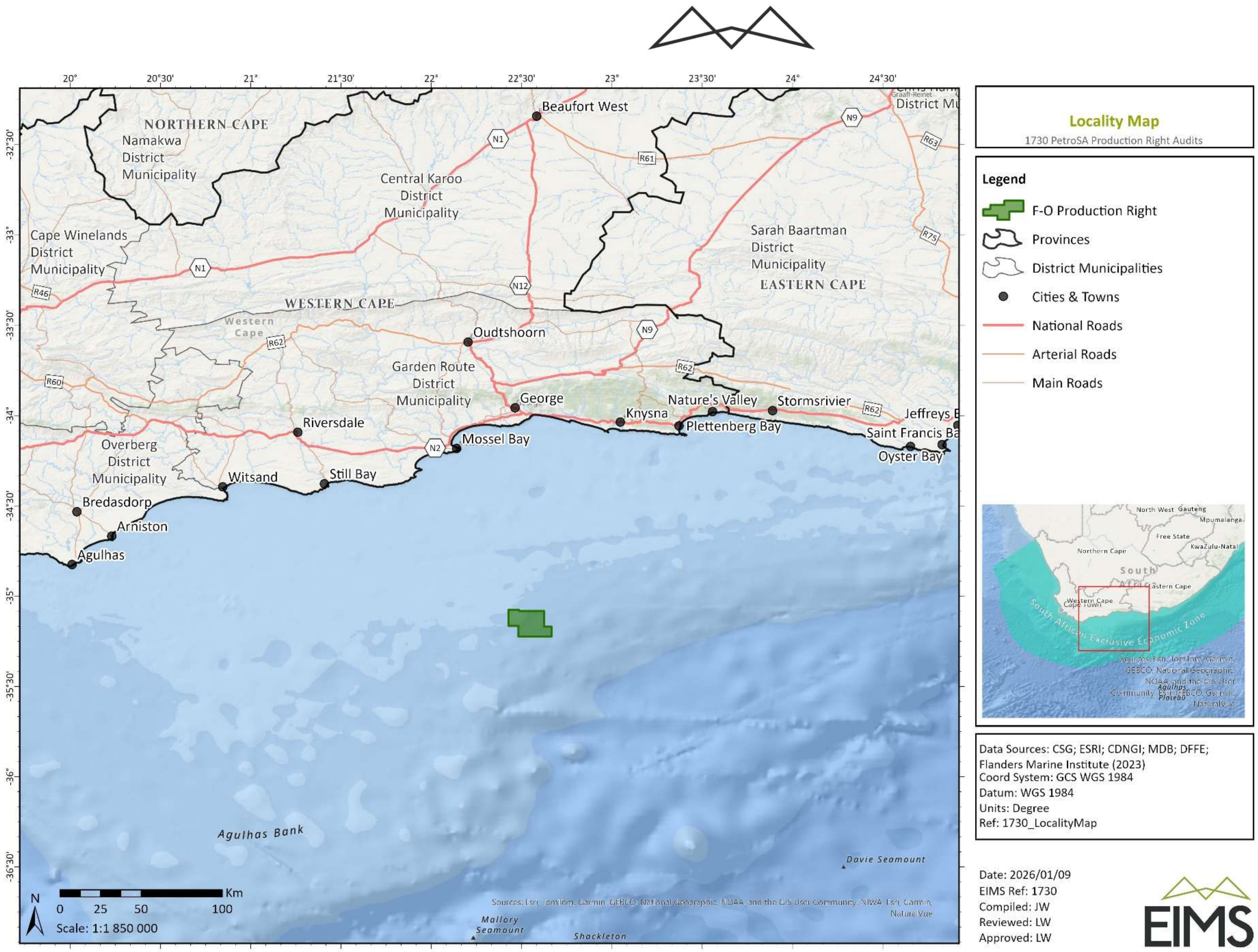

Figure 2: Locality map.

3 LEGISLATIVE FRAMEWORK

Regulation 54A(2) of the EIA Regulations requires all rights and permits issued in terms of the Mineral and Petroleum Resources Development Act, Act 28 of 2002 (MPRDA) and associated Environmental Management Plans/ programmes to be subjected to the audit requirements stipulated in Part 3 of Chapter 5 of the EIA Regulations.

Regulation 54A(2) states that: *Where a right or permit issued in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) and the associated Environmental Management Programme or Environmental Management Plan approved in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) is still in effect after 8 December 2014, the requirements contained in Part 3 of Chapter 5 of these Regulations apply to such Environmental Management Programmes or Environmental Management Plans, and where-*

> *(a) the audit or performance assessment cycle of the Environmental Management Programme or Environmental Management Plan exceeds five years, an audit report will be required to be submitted at least every five years commencing from the date of submission of the last audit, for the period during which the right or permit remains in effect; or*
>
> *(b) no audit or performance assessment requirement was set in the Environmental Management Programme or Environmental Management Plan, an audit report will be required to be submitted to the competent authority no later than 7 December 2021 and at least every 5 years thereafter for the period during which the right or permit remains in effect.*

Part 3 of Chapter 5 of the Regulations refers to requirements for auditing and amendment of an Environmental Authorisation or Environmental Management Programme. This audit was undertaken in line with these requirements. The period of assessment for this audit is 2010 - 2025.

4 DETAILS OF THE AUDITOR

The environmental audit was undertaken by Liam Whitlow from EIMS.

4.1 EXPERTISE OF THE AUDITOR

Liam Whitlow is an experienced Environmental Scientist with a B.Sc. Honours in Environmental Management and over 25 years of professional experience. Liam is a registered Environmental Assessment Practitioner and Professional Natural Scientist. His expertise includes environmental impact assessments, project management, and environmental monitoring, with significant experience in the oil and gas, mining and infrastructure sectors.

4.2 DECLARATION OF INDEPENDENCE

*I, **Liam Whitlow**, declare that –*

- *I act as the independent Environmental Auditor;*
- *I will perform the work relating to the environmental audits in an objective manner, even if this results in views and findings that are not favourable to the Client;*
- *I declare that there are no circumstances that may compromise my objectivity in performing such work;*
- *I have expertise in conducting environmental audits, including knowledge of the environmental Acts, regulations and any guidelines that have relevance to the audited operations;*
- *I will comply with the relevant Acts, regulations, and all other applicable legislation;*
- *I have no, and will not engage in, conflicting interests in the audit process;*
- *I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the NEMA; and*

- *I do not have and will not have any vested interest (either business, financial, personal, or other) in the audit other than remuneration for work performed.*

Signature of Auditor

5 SCOPE, PURPOSE AND OBJECTIVE OF THE AUDIT

The scope of the audit is to assess compliance with the conditions of the EA and approved EMPr and to confirm the continued adequacy of the EMPr. The purpose of the audit is to ensure compliance with the requirement of the EA and EMPr and the NEMA EIA Regulation 34 to undertake scheduled compliance audits. The objectives of the audit are to determine:

- The level of performance against and compliance with the provisions of the requisite EA and EMPr; and
- The ability of the measures contained in the EMPr, to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the authorised activities.

The scope of the audit is defined by the activities that were undertaken for each area during the defined audit period June 2015 to December 2025. Auditing compliance with the following documents is included:

- Current approved EMPR (CCA Environmental (Pty) Ltd, 2011); and
- EA (Department of Environmental Affairs, 2011).

6 AUDIT METHODOLOGY

6.1 PROCEDURE FOR THE AUDIT

Initial documentation was obtained and reviewed in preparation for the audit. A checklist was prepared based on the requirements of the EA and EMPr respectively. Compliance with the requirements was evaluated using the pre-determined scoring criteria as described in Section 6.2 and the results of the audit are described in Section 7 of this report.

The Environmental Audit is primarily a Compliance Audit against the conditions of the EA and approved EMPr. Findings from the audit that did not relate to an EA or EMPr condition did not contribute to the audit score. However, where deficiencies have been identified that do not necessarily correspond to specific EMPr conditions, these findings have been used to provide recommendations for improvement. Various documentation and records were required during the audit to confirm compliance with the requirements and were made available electronically for review.

There is wide variety of South African environmental legislation, and the organisation is required to comply with all relevant legislation. Whilst consideration was given to the relevant environmental legislation, a full comprehensive legal compliance audit is beyond the scope of this audit.

6.2 EVALUATION CRITERIA USED DURING THE AUDIT

Compliance scoring is based on a pre-determined system, with each EMPr condition weighted equally. The audit used the following compliance scoring criteria:

- Fully Compliant: Indicating that the condition was fully complied with and provided with a compliance rate score of 4.
- Partially Compliant: Indicating that the condition has not been fully complied with and that additional measures are required to obtain full compliance. Partial compliances were provided with a compliance rating score of 2.

- Non-Compliant: Indicting that the condition has not been complied with and provided with a compliance rating score of 0.
- Not Applicable (N/A): Indicating that the condition is not currently applicable. Not applicable conditions were removed from the total number of conditions from which the compliance score was calculated during this reporting period.

It is noted that the overall compliance is presented in both a straight compliance (i.e. strict compliant/ non-compliant) as well as the weighted compliance (i.e. where partial compliance is represented).

6.3 CONSULTATION PROCESS UNDERTAKEN

The findings of this assessment are based only on meetings / interviews and documentation reviewed. No site visit, physical testing or analysis was performed (or necessary) during the assessment and information provided by auditee employees was verified by review only.

As per Regulation 34 of the EIA Regulations, 2014, all potential and registered interested and affected parties should be notified of the submission of the report to the authorities and the report should be made available to anyone on request and it should be made available on a publicly accessible website, where the holder has such a website.

7 RESULTS OF THE AUDIT

This section of the report details the audit results. It comprises a summary of compliance with the EA and EMPr requirements, the compliance evaluation results, a summary of findings, and an analysis of the ongoing adequacy of the EMPr.

A total of 347 conditions (commitments) were identified in the EMPr. Three hundred and eleven (311) of these conditions were considered not applicable to the current phase of the project. Of the applicable conditions 12 were regarded as being compliant, and the remaining 24 as non-compliant (of which 18 were regarded as being partially compliant).

A total of 34 conditions (commitments) were identified in the EA. Twenty-two (22) of these conditions were considered not applicable to the current phase of the project. Of the applicable conditions 8 were regarded as being compliant, and the remaining 4 as non-compliant.

The level of compliance for each commitment was calculated according to the methodology described in section 6.2. Utilising this scoring system, the following compliance scores were obtained:

- EMPr Compliance:
  - Straight compliance: 33%
  - Weighted compliance: 58%
- RoD Compliance:
  - Straight compliance: 67%
  - Weighted compliance: 67%

7.1 COMPLIANCE EVALUATION

7.1.1 EMPR

The compliance evaluation of the EMPr is provided in Table 1. The conditions were rated according to the compliance evaluation criteria described in 6.2.

Table 1: Compliance evaluation of the relevant EMPr conditions.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
SECTION 3: EMPR FOR WELL DRILLING					
ACTIVITY 3.1. PLANNING PHASE					
Activity 3.1.1: Adherence to Legal Requirements Objectives: To ensure all legal requirements described in Section 2.1 and all provisions specified in these Activity Schedules (3.1 – 3.14) are complied with in order to ensure environmental protection and human and vessel safety at sea.					
EMPr	2011_3.1.1.1	Prepare a legal register of all relevant legislation applicable to drilling activities to ensure that these are applied during drilling.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EMPr	2011_3.1.1.2	Prepare an Environmental Notification Report for submission to PASA and DEA. Refer to Activity 3.12.2.2.2 for content of Environmental Notification Report.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EMPr	2011_3.1.1.3	Ensure all relevant permits and approvals are obtained prior to drilling and adhere to all conditions attached	N/A	N/A	No drilling undertaken within the production right during the audit period.
EMPr	2011_3.1.1.4	Prepare schedule of all legally required monitoring measures including the required frequency and responsibility, using Activity 3.12.1 as minimum guideline.	N/A	N/A	
EMPr	2011_3.1.1.5	Drilling and Support Vessel Contractors to be provided with a copy of the EMPr and written confirmation of receipt to be obtained, and instructed to have the EMPr available on board the drilling rig and support vessels at all times.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EMPr	2011_3.1.1.6	Contracts with service providers shall specifically require that the service provider complies with all relevant legislation and indemnifies PetroSA of any shared liability in the event that the service provider contravenes legislation in spite of being required to adhere to the EMPr. PetroSA reserves the right to inspect drilling activities on the service provider's vessel to assess compliance. Deviations from the EMPr without sound justification may be deemed a breach of contract.	N/A	N/A	No drilling undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
Activity 3.1.2: Subsidiary Plans Objectives: • Subsidiary plans are developed and are in place prior to drilling. • Subsidiary plans provide the necessary level of detail and are aligned with the requirements provided in this EMPr and relevant existing procedures of PetroSA.					
EM Pr	2011_3.1.2 .1	Ensure that the service providers (drilling, support vessels, etc.) have the following subsidiary plans in place: • Oil Spill Contingency Plan; • Emergency Response Plan, including MEDIVAC plan; • Waste Management Plan; • Incident Management and Reporting; • Ballast Management Plan; and • An emergency preparedness and response plan for the Onshore Drilling and Completion Fluids Plant.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.1.2 .2	Compile a Communications Plan which shall outline the communications procedures for all stakeholder engagement, including the Stakeholder Engagement Register, responsibilities for review of stakeholder comments, feedback to the stakeholder and close out actions and requirements.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.1.2 .3	Compile an Environmental Notification prior to drilling to be submitted to PASA and DEA, which includes the relevant information from the subsidiary plans as well as: • Describes the type and volume of drilling fluid/s to be used; • Estimates the quantities of drill cuttings to be generated; • Describes the treatment process to be used to minimise oil content; and • Describes the disposal method.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.1.2 .4	Ensure subsidiary plans are aligned with national plans (e.g. National Oil Spill Contingency & Response Plan), and other relevant regional, provincial, local and PetroSA plans and procedures (e.g. Integrated Waste Management Plans, Incident Management Plan, Communications Plans etc).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.1.2 .5	All plans contain the required level of detail such as: • Up to date contact names and numbers; • Clear lines of communication for specific tasks;	N/A	N/A	No drilling undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		• Clear role and responsibilities allocated to specific staff members; • Training and awareness needs and activities; and • Formats for reporting e.g. filing incident reports, waste manifests, etc			
EM Pr	2011_3.1.2.6	All plans shall be readily available on the drilling and support vessels as appropriate at all times	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.1.2.7	PetroSA to keep copies of all subsidiary plans in the Joint Operations Centre during drilling activities.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.1.2.8	Retain copies of all subsidiary plans for five years.	N/A	N/A	No drilling undertaken within the production right during the audit period. More than 5 years has elapsed post drilling.
EM Pr	2011_3.1.2.9	The pre-spud meeting agenda between PetroSA and the contractor must include a formal handover of subsidiary plans. Drilling and support vessel staff and relevant PetroSA staff must be familiar with the content of the plans.	N/A	N/A	No drilling undertaken within the production right during the audit period.
Activity 3.1.3: Drilling Contractor and Drilling Vessel Certification Objectives: •Ensure the Drilling contractor operates to the highest possible safety and environmental protection standards, and that the Drilling Vessel is appropriately certified.					
EM Pr	2011_3.1.3.1	The Drilling Contractor shall be registered with the International Association for Drilling Contractors (IADC) and shall be able to demonstrate a track record for maintaining optimum safety and environmental protection	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.1.3.2	Ensure the Drilling Vessel is certified for seaworthiness through an appropriate internationally recognised certification programme (e.g. Det Norske Veritas, American Bureau of Shipping etc.).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.1.3.3	All anchor chains and anchors to be certified.	N/A	N/A	No drilling undertaken within the production right during the audit period.
ACTIVITY 3.2. STAKEHOLDER ENGAGEMENT Objective: • To provide regular feedback to relevant and key stakeholders. • To establish and maintain a register of stakeholders. • To receive, process and respond to inputs from external and internal stakeholders.					
Activity 3.2.1: Stakeholder Engagement					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_3.2.1.1	Prepare an Environmental Notification Report for submission to PASA and DEA. Refer to Activity 3.12.2.2.2 for content of Environmental Notification Report.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.2.1.2	Fishing stakeholder, key stakeholders and other marine users who operate in the area shall be notified of drilling operations and the timing and location of exclusion zones at least 30 days prior to the scheduled commencement of drilling activities. Fishing stakeholders should include; the Agulhas Offshore Forum, Association of Small Hake Industries, SA Deep Sea Trawling Industry Association, SA Inshore Fishing Industry Association, South East Coast Inshore Fishing Association, SA Midwater Trawling Association, SA Tuna Association, Fresh Tuna Exporters Association, South Coast Rock Lobster Association. Key stakeholders should include; SAMSA, relevant Port Captains, the naval hydrographic office and the Department of Agriculture, Forestry and Fisheries (Fisheries branch).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.2.1.3	Information regarding drilling should be communicated to SA Navy Hydrographic office so that they can be issued on Notices to Mariners and all necessary maritime communications followed to ensure marine users are kept informed of restrictions on fishing and other marine uses. A Notice to Mariners should provide: • the co-ordinates of the well drilling activities; • an indication of the well drilling timeframes; • location reports of the drilling unit; • an indication of the 500 m safety zones around the drilling unit; and • a special note on the hazard posed by the anchor chains and anchors.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.2.1.4	Stakeholder engagement process shall be undertaken in accordance with a Communications Plan (see Activity 3.1.2.2).	Noted	Noted	Compliance assessed in Activity 3.1.2.2.
EM Pr	2011_3.2.1.5	Implement and maintain a Stakeholder Engagement Register which shall include the following information: • Contact details of stakeholder; • Date and time of stakeholder input; • Nature of input; • Name of reviewing manager; • Stakeholder engagement form reference number;	N/A	N/A	No drilling undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		• Date of Review; • Result of Review; and • Date of communication with stakeholder.			
EM Pr	2011_3.2.1.6	Any feedback from stakeholders concerning offshore exploration activities shall be reported in PetroSA's Quarterly Report.	N/A	N/A	No drilling undertaken within the production right during the audit period.
ACTIVITY 3.3. ENVIRONMENTAL TRAINING AND AWARENESS Objective: • To equip all personnel involved in the drilling operations to perform their duties in an environmentally responsible manner through regular training. • To raise environmental awareness through feedback on environmental performance and any changes in legislation governing best practices.					
Activity 3.3.1: Environmental Training and Awareness					
EM Pr	2011_3.3.1.1	Utilise suitable regular meetings such as weekly safety meetings for environmental awareness and report back on environmental performance including the content of subsidiary plans. .	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.3.1.2	All personnel shall receive regular training including tool box talks on the handling and management of waste	N/A	N/A	No drilling undertaken within the production right during the audit period.
ACTIVITY 3.4. POLLUTION PREVENTION					
Activity 3.4.1: Supply Vessels and Other Shipping • To minimise navigational risks to other marine users. • To ensure that professional and seaworthy certification is appropriate to requirements. • To inform the Masters of the supply vessels of the actions to be taken to minimise environmental damage and the actions to be taken in the event of such damage occurring. • To check that the requisite actions are taken and that they are effective in minimising environmental damage. • To ensure that provisions prescribed by SAMSA to ensure that the drilling rig and associated vessels are "visible" to marine traffic and aircraft have been implemented. • To ensure that the provisions are effective in maintaining "visibility" of the drilling vessel and associated vessels.					
EM Pr	2011_3.4.1.1	All measures prescribed by SAMSA to minimise the risks of collision of marine traffic with the drilling vessel must be implemented and maintained.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.4.1.2	Measures to be implemented include: • Maintenance of an exclusion zone through Notices to Mariners issued by SAN Hydrographic Office seven days prior to rig positioning or movement (see Activity 3.2.1.3); • A supply vessel to be on standby in the exclusion zone at all times; • Maintenance of standard watch procedures;	N/A	N/A	No drilling undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		• Issue Radio Navigational Warnings if visibility of drilling vessel is diminished (e.g. power outages or failure of fog horn); • Radio communication to alert approaching vessels; • Use of Flares and Sirens where necessary; • Recording of interactions with vessels in a log book; and • Collisions, near misses or other transgressions with associated pollution risks will be treated as incidents and handled according to the procedure detailed under Activity 3.10.			
Activity 3.4.2: Helicopter Services • To minimise disturbance to coastal sea bird populations and large marine fauna from helicopter flights. • To minimise disturbance to coastal communities and activities such as tourism and recreational fishing.					
EM Pr	2011_3.4.2.1	Existing PetroSA and aviation service providers' procedures, e.g. the Materials Handling & Transport and Marine Support Services procedures, shall be implemented to minimise the risk of objects and chemical substances being dropped overboard, during cargo transfer, leaking from storage containers and during handling.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.4.2.2	Helicopter transfers to and from the drilling vessel shall: • Fly at a minimum height of 500 m above sea level and shall not hover or circle over whales, dolphins, sharks, turtles or aggregations of seabirds. An aircraft may not approach to within 300 m of whales in terms of the Marine Living Resources Act, 1998; • Not fly over seal and seabird colonies, coastal reserves, marine islands or estuarine systems; and • Avoid extensive coastal flights (parallel to the coast within 1 nautical mile of the shore). There is a restriction of coastal flights on the south coast between the months of June and November to avoid Southern Right whale breeding areas.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.4.2.3	Helicopter flight logs will be kept to demonstrate compliance with set flight paths.	N/A	N/A	No drilling undertaken within the production right during the audit period.
Activity 3.4.3: Transfer of Materials / Dropped Objects • To minimise the risk of objects being lost overboard during transit or transfer. • To retrieve objects which have fallen overboard before they pose a risk to the environment or shipping. • To log the existence and location of fallen objects for future reference / action.					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
• To notify interested parties of the existence and location of un-retrieved fallen objects. • To minimise the risk of introduction of non-indigenous invasive marine species through equipment transfer.					
EM Pr	2011_3.4.3 .1	Procedures shall be implemented to minimise the risk of objects and chemical substances being dropped overboard during cargo transfer or leaking from storage containers or during handling.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.4.3 .2	Incidents involving dropped objects or chemicals will be treated as incidents and handled according to the procedure detailed under Activity 3.10.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.4.3 .3	No infrastructure (e.g. wellheads, BOP, etc.) should be deployed that has been used in other regions, unless thoroughly cleaned.	N/A	N/A	No drilling undertaken within the production right during the audit period.
Activity 3.4.4: Workshops and Repairs • To manage the workshops in a manner that minimises the risk of liquids polluting the sea and to expedite clean up of any such spillages that do occur. • To minimise the risk of polluting the environment during repairs and maintenance on the vessel or platform.					
EM Pr	2011_3.4.4 .1	All fuels, greases, oils and other chemicals shall be stored and handled as per chemical handling procedures specified in the drilling contractor's standard operating procedures and summarised in the chemical handling procedures below (see Activity 3.4.5).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.4.4 .2	Repair and servicing of loose equipment or machinery shall be undertaken only in the workshops or within areas of the drilling vessel which has drainage dedicated to containing spilled liquid and suspended debris.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.4.4 .3	Where repair of equipment or machinery must take place in situ, precautions appropriate to the location must be taken to minimise the risk of spills or loss of objects overboard.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.4.4 .4	Any spills of liquids shall be treated as an incident and handled according to the procedure detailed under Activity 3.10.1.	N/A	N/A	No drilling undertaken within the production right during the audit period.
Activity 3.4.5: Chemical Storage and Handling • To handle and store chemicals in such a way as to minimise the risk of spillage or leakage. • To dispose expired chemicals in an environmentally responsible and legal manner. • To respond to any spills and or leaks in such a way that environmental damage does not occur. • To formally evaluate any spills or leaks in order to plan for prevention of recurrence.					
EM Pr	2011_3.4.5 .1	A chemical register shall be maintained and will detail: • All chemicals used and stored on the drilling rig/vessel; • Chemical characterisation of each chemical including SABS class and	N/A	N/A	No drilling undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		hazard rating; • Specific storage handling or disposal requirements for each chemical including Personal Protective Equipment; • Emergency response actions for each chemical; and • The process used to verify the information contained in the register.			
EM Pr	2011_3.4.5 .2	All containers of hazardous liquids shall be stored inside impermeable bunds (portable or fixed) which have a total capacity of 110% of the total amount liquid stored inside them. This shall apply both in store-rooms and in situations where containers have been temporarily moved from the store room to a position close to where the contents are being used for convenience.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.4.5 .3	All chemicals shall have current Material Safety Data Sheets (MSDS) prominently displayed at the location of storage and use	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.4.5 .4	Incompatible chemicals shall not be stored in the same location.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.4.5 .5	Personnel using chemicals shall be trained in their use, disposal and clean-up.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.4.5 .6	Expired chemicals shall be labelled as waste and treated in accordance with the disposal requirements specified in their MSDS.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.4.5 .7	Any chemical spills of more than 5 litres shall be treated as an incident and handled according to the incident procedure detailed under Activity 3.10.1.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.4.5 .8	Any loss of chemicals overboard shall be treated as an incident and handled according to the procedure detailed under Activity 3.10.1.	N/A	N/A	No drilling undertaken within the production right during the audit period.
Activity 3.4.6: Drilling Activities and Severe Weather Objectives: • To minimise the risk of spillage, leakage and dropped objects and materials during storm events.					
EM Pr	2011_3.4.6 .1	Drilling must only be undertaken in accordance with the Contractor's Operations Manual specifying conditions within which drilling can be safely undertaken.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.4.6 .2	During major storm events that could pose a pollution risk during drilling the contractor must: • stop drilling;	N/A	N/A	No drilling undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		• disconnect the marine riser, if necessary; • ballast the drilling vessel to Survival Draft to minimise instability, if necessary; and • do not undertake bunkering (see Activity 3.5.3 on bunkering).			
Activity 3.4.7: Management of Ballast Water Objectives: • To minimise the risk of contaminating receiving waters with exotic biota through the release of ballast water.					
EM Pr	2011_3.4.7 .1	Comply with Guideline A.868(20) of the International Maritime Organisation through: • Ensuring the drilling unit has a ballast water management plan in place to ensure safe and effect ballast water management; • Reduce the risk of transfer of harmful aquatic organisms by onboard ballast water treatment or exchange by: o Exchange ballast water from a distant area collection point at least 200 nautical miles from nearest land and in water at least 200 m deep, or if not possible, as far from nearest land as possible but at least a minimum of 50 nautical miles and in water of 200 m deep; o Comply with one of the three following ballast water exchange methods: > Sequential method: empty at least 95% or more of the volume of ballast tanks and refill with replacement ballast water (open-ocean). However, the emptying of certain tanks may lead to significantly reduced stability, higher stresses, high sloshing pressures, and/or reduced forward drafts. A secondary effect of reduced forward draft would be an increased probability of bow slamming. > Flow through method: This method involves pumping open-ocean water into a full ballast tank. Ballast equal to approximately three times the tank capacity must be pumped through the tank to achieve 95% effectiveness in eliminating aquatic organisms. Applying the flow through method does not alter the stability, stress and ship attitude. > Dilution method: This method involves the pumping the replacement ballast water through the top of the ballast tank or hold intended for the carriage of water ballast with simultaneous discharge from the bottom at the same flow rate and maintaining a constant level in the tank or hold. At	N/A	N/A	No drilling undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		least three times the tank or hold volume should be pumped through the tank or hold. o When exchanging ballast at sea, take into account guidance on safety aspects of ballast water exchange as set out in Appendix 2 of the IMO Guidelines. When these requirements cannot be met, ballast water exchange should be undertaken in designated ballast water exchange areas, as determined with the relevant authority (e.g. DEA: Directorate Pollution & Waste Management or Transnet National Ports Authority). o Where practicable, routine cleaning of the ballast tank to remove sediments should be carried out in mid-ocean or under controlled arrangements in port or dry dock, in accordance with the provisions of the ship's ballast water management.			
ACTIVITY 3.5. RIG ESTABLISHMENT & REFUELLING					
Activity 3.5.1: Rig Site Survey and Selection Objectives: • To minimise disturbance to sensitive seabed habitats. • To check for shipwrecks or other historical remains and thereby allow for excavation if required.					
EM Pr	2011_3.5.1.1	Undertake a seabed survey using side scan sonar or other appraisal method to determine the presence of sensitive reef habitats or shipwreck, to confirm whether any infrastructure might be affected (pipelines, etc.), and to confirm the state of the seabed.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.5.1.2	Prepare a written summary of the seabed survey documenting the state of seabed and presence of any key features prior to drilling as a baseline reference condition.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.5.1.3	Notify the South African Heritage Resources Agency (SAHRA) if shipwreck or other historical relicts are identified. All rig positioning activities should be suspended until approval is given to proceed by SAHRA.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.5.1.4	Use the seabed survey data to prepare a rig positioning plan taking into account the presence of sensitive features.	N/A	N/A	No drilling undertaken within the production right during the audit period.
Activity 3.5.2: Drilling Vessel Positioning and Anchoring Objectives: • To ensure the drilling rig is appropriately secured on the seabed and that all positioning systems are operational and effective. • To minimise the need for measures that cause additional seabed and marine disturbance.					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_3.5.2 .1	Drilling vessel positioning should be done in accordance with the following measures: • A hazard identification and risk assessment; • Compliance with all relevant national codes and standards (e.g. maritime and navigational warnings) and good oil field practice (e.g. seabed surveys and measures to minimise seafloor disturbance and risks to sea life); and • Procedures laid down in the drilling vessel's operation manual as approved by the relevant classification society.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.5.2 .2	Maintain the drilling vessel to class standard throughout drilling.	N/A	N/A	No drilling undertaken within the production right during the audit period.
Activity 3.5.3: Drilling Vessel Refuelling / Bunkering Objectives: • To minimise the risk of spills and marine pollution during bunkering.					
EM Pr	2011_3.5.3 .1	Obtain permission from SAMSA five days prior to bunkering activities.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.5.3 .2	Diesel and other fuels must be stored in enclosed and secured tanks, designed to withstand extreme events and conditions	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.5.3 .3	Where feasible, drip trays must be in place to collect leakage from connection and discharge points.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.5.3 .4	Offshore bunkering will not be allowed in the following circumstances: • Wind force and sea state conditions of 6 or above on the Beaufort Wind Scale; • During helicopter operations; and • During the transfer of heavy in-sea equipment.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.5.3 .5	Floating hoses will be made of flexible double carcass sections and will be equipped with a breakaway coupling for protection against excessive tension or overpressures in the fuel system. The closure time will be set to minimise the volume of oil spilled to the sea whilst being slow enough to prevent surge pressure building up. Hoses will also be fitted with marker lights and will have built-in buoyancy with a minimum reserve of 25% (to cope with a situation where the hose becomes filled with seawater and	N/A	N/A	No drilling undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		immersed). This will also prevent accidental damage to unseen hoses by supply vessels.			
EM Pr	2011_3.5.3 .6	Spillages of fuel during bunkering should be logged as an incident in accordance with the procedures given in Activity 3.10.	N/A	N/A	No drilling undertaken within the production right during the audit period.
ACTIVITY 3.6. DRILLING FLUIDS AND CUTTINGS					
Activity 3.6.1: Drill Cuttings Selection, Treatment and Disposal Objectives: • To minimise turbidity and toxicity effects on the marine environment. • To minimise human exposure to non-aqueous drill fluids.					
EM Pr	2011_3.6.1 .1	In compliance with industry standards, select the lowest toxicity drilling fluid (or mud) available to meet the technical drilling requirements. Water based drilling fluids (WBDF) should be selected in preference to Non-Aqueous drilling fluids (NADF) wherever possible. Where NADFs are required, use Synthetic Based Drilling Fluid (OGP Type III) with low polycyclic aromatic hydrocarbon content. NADF should not be used in the upper part of a well (with the exception in cases of geological or safety reasons) as specified by the OSPAR Convention. This information will be documented in the Drilling Fluids programme section of the Drilling Programme.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.6.1 .2	Comply with the MSDS specifications of the selected drilling mud relating to handling, storage and disposal.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.6.1 .3	Drill cuttings drilled using NADFs must be treated on board the drilling vessel to reduce oil content to less than 5% average weight. No bulk discharge of untreated NADF cutting should be allowed.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.6.1 .4	Drill cuttings brought to the surface for processing should be released via a shunt pipe placed 5 m below the sea surface to reduce turbidity plumes and to limit the impact area.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.6.1 .5	Oil content of drill cuttings must be monitored at least 12-hourly throughout drilling or in accordance with the specified calibration of oil testing equipment.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.6.1 .6	Monitoring equipment used to monitor oil content is certified for the intended purpose, and has a valid certificate. A copy of this certification is to be provided to PetroSA.	N/A	N/A	No drilling undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_3.6.1 .7	Monitoring results of oil content must be submitted monthly to PetroSA and areas of non-compliance indicated. Oil content exceeding 5% monthly average should be recorded as an incident (see Activity 3.10.3).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.6.1 .8	Drilling Fluids Contractor to record and provide the following information (for inclusion in the Well Environmental Close-Out report (see Activity 3.12.2.2.4): • the volume of drill cuttings discharged at the seabed prior to running the marine riser and the volume of drill cuttings discharged from below the sea surface after running the marine riser; and • the type and volume of drilling fluids used.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.6.1 .9	Observable drill cutting depositions to be taken note of during post drilling seabed survey (see Activity 3.11.4) and described in Final Seabed Survey report (see Activity 3.12.2.2.4)	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.6.1 .10	Recovered non-aqueous drilling fluids shall be returned to shore for reuse or disposal at an approved waste site.	N/A	N/A	No drilling undertaken within the production right during the audit period.
Activity 3.6.2: Onshore Drilling and Completion Fluids Plant Objectives: • To minimise the risk and consequences of an unlikely tank or bund fire.					
EM Pr	2011_3.6.2 .1	The final design of the proposed drilling and completion fluids plant should comply with applicable SANS codes (including SANS 10089-1, SANS 10131, SANS 10108, etc.) and guidelines or equivalent international recognised codes of good design and practice.	N/A	N/A	Drilling was not undertaken during the audit period. It is expected that compliance with this condition was audited during the drilling phase where the site was actively used. No hazardous chemicals stored at the plant and it was last operated by TotalEnergies in December 2020.
EM Pr	2011_3.6.2 .2	A review of the final designs and materials should be undertaken by an Approved Inspection Authority. This should include a recognised process hazard analysis (HAZOP, FMEA, etc.). No significant increase to the product list or product inventories, as presented in the EIA, should be permitted without reassessing the associated risk.	N/A	N/A	Drilling was not undertaken during the audit period. It is expected that compliance with this condition was audited during the drilling phase where the site was actively used. No hazardous chemicals stored at the plant and it was

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					last operated by TotalEnergies in December 2020.
EM Pr	2011_3.6.2.3	An emergency preparedness and response plan for onsite incidents must be compiled.	N/A	N/A	Drilling was not undertaken during the audit period. It is expected that compliance with this condition was audited during the drilling phase where the site was actively used. No hazardous chemicals stored at the plant and it was last operated by TotalEnergies in December 2020.
ACTIVITY 3.7. SOLID WASTE MANAGEMENT Objectives: • To prevent any waste from entering the marine environment except for macerated galley waste and macerated and treated sewage waste. • To reduce the amount of waste disposed to landfill by reducing waste generation and maximising recycling and reuse. • To comply with waste management legislation. • To dispose of all solid waste in an environmentally responsible manner.					
Activity 3.7.1: General Measures for Solid Waste Management					
EM Pr	2011_3.7.1.1	Prior to commencing drilling operations, an integrated waste management plan shall be prepared in line with the waste management hierarchy below.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.7.1.2	Waste Management Hierarchy- refer to Figure 3.7.1.	Noted	Noted	
EM Pr	2011_3.7.1.3	A Waste Register shall be compiled which shall detail: • Categories of different waste types generated on the drilling vessel and support vessels; • Their source; • Their SABS class and hazard rating; • Their disposal methods; and • Any specific precautions or legislative requirements.	N/A	N/A	No drilling undertaken within the production right during the audit period. The document retention period of 5 years has lapsed.
EM Pr	2011_3.7.1.4	The Waste Register shall be updated to record actual waste volumes generated during the drilling campaign.	N/A	N/A	No drilling undertaken within the production right during the audit period. The document retention period of 5 years has lapsed.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_3.7.1 .5	Waste shall be segregated into the following categories shown in Figure 3.7.2. Recyclables shall be stored separately as shall hazardous waste.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.7.1 .6	All wastes shall be handled according to the flow diagram in Figure 3.7.3 below while awaiting transport to disposal sites.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.7.1 .7	No waste may be stored for more than 30 days on any drilling vessel without formal permission from DEA.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.7.1 .8	Wastes shall be stored in sealed containers or bags and protected from the environment according to specifications for storage in the Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste published by Department of Water Affairs and Forestry in 1998 (or the latest update thereof).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.7.1 .9	Incompatible waste may not be stored in the same location (see the hazard ratings for wastes in the Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste published by Department of Water Affairs and Forestry in 1998 for compatibility, or the latest update of this document).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.7.1 .10	Galley waste shall be macerated at sea to pieces smaller than 25 mm and deposited overboard at a distance at least 12 nautical miles from shore in accordance with MARPOL requirements.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.7.1 .11	The discharge of galley waste material shall be minimised should obvious attraction of marine fauna be observed.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.7.1 .12	Sewage shall be discharged as outlined in Activity 3.8.2.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.7.1 .13	The Drilling Contractor shall maintain a waste manifest system which includes: • The quantities of different categories of wastes leaving the drilling vessel; • The nature and source of the waste types; • The date upon which the waste was removed; • The date upon which they were received by the disposal facility; • Proof of correct disposal by the landfill site (including a safe disposal certificate for hazardous waste); and	N/A	N/A	No drilling undertaken within the production right during the audit period. The document retention period of 5 years has lapsed.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		• Obtaining completed waste disposal certificates including quantities and method of disposal for different waste types.			
EM Pr	2011_3.7.1 .14	Hazardous waste shall be disposed of at a registered waste disposal site, and a safe disposal certificate shall be issued for each load of hazardous waste.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.7.1 .15	Waste manifests shall be provided to PetroSA and reported in the Drilling Contractor's Monthly Report.	N/A	N/A	No drilling undertaken within the production right during the audit period. The document retention period of 5 years has lapsed.
EM Pr	2011_3.7.1 .17	• The post-drilling audit should verify that: o A complete record of waste management was maintained throughout the drilling campaign.	N/A	N/A	No drilling undertaken within the production right during the audit period.
ACTIVITY 3.8. DISCHARGE OF EFFLUENT Objectives: • To contain effluents which could pose a threat to the marine environment. • To treat effluents before discharge in order to minimise damage to the marine environment. • To comply with legislative obligations for effluent discharge.					
3.8.1 Deck and Bilge Water					
EM Pr	2011_3.8.1 .1	Drainage water from deck and bilges shall be routed to separate drainage systems on drilling vessels, and shall include contaminated oily water from closed drains and drainage water from non-process areas (open drains).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.8.1 .2	Drip trays or bunds shall be provided to contain contaminated water from all works areas that do not drain or route to the closed drainage system.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.8.1 .3	No deck or bilge water may be discharged to the sea unless the oil concentration is below 15 ppm (MARPOL standard).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.8.1 .4	Oil concentration of discharged bilge and deck water shall be monitored at least twice daily and concentrations logged daily.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.8.1 .5	In the event that the discharged oil concentration exceeds 15ppm the root cause of non-compliance shall be investigated and rectified.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.8.1 .6	Oil concentration records shall be retained and submitted to PetroSA in the Monthly Report.	N/A	N/A	No drilling undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					The document retention period of 5 years has lapsed.
EM Pr	2011_3.8.1 .7	Where possible, environmentally-friendly, low toxicity, and biodegradable cleaning materials shall be used.	N/A	N/A	No drilling undertaken within the production right during the audit period.
3.8.2 Sewage					
EM Pr	2011_3.8.2 .1	Sewage shall be comminuted to <25 mm in size before discharge to the sea at greater than 12 nautical miles in accordance with MARPOL standards.	N/A	N/A	No drilling undertaken within the production right during the audit period.
ACTIVITY 3.9. GASEOUS EMISSIONS Objectives: • To reduce the volumes of green house gases emitted and minimise air pollution.					
3.9.1 Gaseous Emissions					
EM Pr	2011_3.9.1 .1	Any accidental release of Ozone Depleting Substances, if applicable, shall be treated as an incident and be dealt with in accordance with the incident procedure in Activity 3.10.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.9.1 .2	Any release of ozone depleting substances shall be reported to DEA.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.9.1 .3	The volume of gas flared on a daily basis shall be recorded and submitted to PetroSA in the Monthly Report.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.9.1 .4	Flare test burners shall be equipped with an appropriate enhancement system selected to minimise incomplete combustion, black smoke and hydrocarbon fall out to sea, and should be maintained at highest possible efficiency. Incidents of black smoke exceeding 24 hours in duration shall trigger an investigation of operating efficiency and rectification where feasible.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.9.1 .5	Sustained emission of black smoke for a period of more than 24 hours shall be recorded as an incident (see Activity 3.10.3).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.9.1 .6	All valves, taps and pipe connections should be inspected regularly in accordance with the maintenance and monitoring schedule to check for leaks and should be immediately rectified in the event of leak detection.	N/A	N/A	No drilling undertaken within the production right during the audit period.
ACTIVITY 3.10. INCIDENTS & EMERGENCIES Objectives: • To undertake all maintenance and system checks to ensure preventive procedures are optimised to minimise the risk of an incident or emergency.					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
• To provide a coherent, planned response to any incident which could adversely affect the environment. • To improve response time and efficiency of the plans and the activities of staff members through drills and test runs. • To provide a process for the management of an incident or emergency depending upon the severity of the occurrence. • To minimise the risk of loss of solid objects overboard and to expedite the retrieval (if possible) of any objects which fall overboard. • To log the existence and location of fallen objects for future reference/ action. • To notify interested parties of the existence and location of un-retrieved fallen objects. • Through post-emergency evaluations, minimise the risk of a recurrence of the incident.					
3.10.1 Uncontrolled Release of Liquids					
EM Pr	2011_3.10.1.1	The Drilling Contractor will comply with the Incident Management Procedure and Oil Spill Contingency and Emergency Response Plans developed prior to drilling (see Activity 3.1.2).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.10.1.2	Incident management shall entail the following key steps: • Incident detection; • Rapid assessment of incident severity; and • Implement response actions, as follows: Routine Incident: In the case of an onboard spill or leak confined to the drilling vessel or other incident that does not pose a risk of major harm to the environment or people, then the following steps may be taken: • Mobilisation of onboard response person or team to: o contain the spill and shut off or control the source of the incident event, and o clean up the spill or take steps to rectify the incident consequences • Complete an incident report form; • Conduct an investigation; and • Close out the incident. Major Oil Spill (Emergency): In the case of an oil spill to sea with serious potential consequences to marine and human life, the provisions of the Oil Spill Contingency and Response Plan will be implemented and the following key steps will be required: • Classify the spill scenario, size and nature of the spill; • Notify PetroSA, who will in turn notify DEA, SAMSA and other relevant authorities to respond depending on the nature of the emergency;	N/A	N/A	No drilling undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		• Mobilise on-board resources and take all practical steps on the drilling vessel to contain the oil spill; and • Adhere to all notification, investigation procedures, and reporting requirements in accordance with the Oil Spill Contingency and Response Plan.			
EM Pr	2011_3.10. 1.3	An incident and the results of any investigation shall be recorded and submitted to PetroSA in the Monthly Report.	N/A	N/A	No drilling undertaken within the production right during the audit period. The document retention period of 5 years has lapsed.
3.10.2 Materials and Equipment Lost Overboard					
EM Pr	2011_3.10. 2.1	If a solid object falls overboard, the incident shall be managed as follows: • Retrieve object if possible to do so; • If object not retrievable, record location (GPS Coordinates) and assess whether it will pose a hazard to other marine users; • If object poses a hazard then notify PetroSA who in turn will inform SAMSA / HydroSAN; • Complete the Incident Report Form and Dropped Object Log; • Conduct an Incident Investigation; and • Close Out Investigation.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.10. 2.2	Notifiable incidents, as set out in the Incident Management Plan, shall be reported by the Drilling Contractor to PetroSA within 48 hours, and must be included in PetroSA's Monthly Report. Incidents posing a threat to human life or significant marine pollution should immediately be reported to the designated Emergency Coordinator of PetroSA.	N/A	N/A	No drilling undertaken within the production right during the audit period. The document retention period of 5 years has lapsed.
3.10.3 General Incident Reporting and Auditing					
EM Pr	2011_3.10. 3.1	General Reporting • All incidents that may occur during drilling will require the following investigation and reporting, and which shall be detailed in the Incident Management Plan: o Assessment of the nature and source of the incident; o Assessment and evaluation of the impact and affected environmental receptors; o Recording the date and time;	N/A	N/A	No drilling undertaken within the production right during the audit period. The document retention period of 5 years has lapsed.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		o Description of incident; o Actions taken to remedy the incident and report the incident; o Investigation into root cause; and o Identification of measures to prevent reoccurrence and communication of such.			
ACTIVITY 3.11. WELL SUSPENSION & ABANDONMENT Objectives: • To keep stakeholders informed of the status of the drilling campaign and cessation of activities. • To safely abandon or suspend wells in order to minimise the risk of marine pollution. • To ensure the location and type of any dropped objects or equipment remaining on the seabed is recorded. • Final reporting in the form of a well Close-Out report is complete and provides a record for future reference.					
3.11.1 Notification of Stakeholders					
EM Pr	2011_3.11.1.1	Notify PASA of location of wells and status with 60 days from the end of the drilling campaign.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.11.1.2	Compile Well Environmental Close-Out Report and submit to PASA within 60 days from the end of drilling (see Activity 3.12.2.2.4 for contents).	N/A	N/A	No well drilling or abandonment undertaken within the production right during the audit period.
EM Pr	2011_3.11.1.3	Notify fishing stakeholders and other marine users of the completion of drilling activities, and the location and status of wells.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.11.1.4	Information regarding suspended wells should be communicated to HydroSAN so that they can be marked on Notices to Mariners and all necessary maritime communications followed to ensure marine users are kept informed of restrictions on fishing and other marine uses.	N/A	N/A	This action was required to be undertaken immediately after drilling. This falls outside of the audit period. It is noted however that the 3 production wells are listed in the abandoned and suspended well heads listed in the Notice to mariners. The wells are also identified on the relevant hydrographic chart of the area.
3.11.2 Well Abandonment					
EM Pr	2011_3.11.2.1	Safely abandon the well in accordance with good oil field and abandonment practices by inserting cement plugs in the well bore at various levels and test for integrity.	N	2	15 Wells were drilled in the field between 1980 and 2015. All of these wells are listed in the latest Notice to Mariners. Of these 1 well is listed as

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					abandoned (F-O1). Based on the well bore schematic or completion diagram provided the wellhead on this site was recovered and 2 cement plugs were placed. Only 1 of the cement plugs were recorded as being pressure tested.
EM Pr	2011_3.11. 2.2	Remove BOP stack, well head structure and lost equipment to leave the seabed free of drilling equipment and waste (apart from drill cuttings).	Y	4	16 Wells were drilled in the field between 1980 and 2015. All of these wells are listed in the latest Notice to Mariners. Of these 1 well is listed as abandoned (F-O1). Based on the well bore schematic or completion diagram provided the wellhead on this site was recovered. By implication of removing the wellhead the BOP stack would also have been removed.
EM Pr	2011_3.11. 2.3	Well casings should be cut off approximately 3 m below the seabed for permanent abandonments.	N/A	Not verified	Well F-O1 is listed as being abandoned in the Notice to Mariners. The well completion diagram does not confirm whether the casing was removed as per this condition.
EM Pr	2011_3.11. 2.4	Abandoned wells should be mapped and documented, and records retained by PetroSA indefinitely.	Y	4	15 wells were drilled in the field between 1980 and 2015. All of these wells are listed in the latest Notice to Mariners. Of these 1 well is listed as abandoned in the notice, namely F-O1. The well schematic/ completion diagram was provided.
3.11.3 Well Suspension					
EM Pr	2011_3.11. 3.1	Should economically viable reserves be found at drilling sites, the well(s) will be plugged and temporarily suspended in accordance with oil industry standards for possible use as a production or monitoring well in future.	Noted	Noted	

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EMPr	2011_3.11.3.2	Suspended wells should be mapped and documented, and records retained by PetroSA indefinitely.	N	2	15 wells were drilled in the field between 1980 and 2015. All of these wells are listed in the latest Notice to Mariners. Of these, 1 well is listed as abandoned, and 9 listed as being suspended in the notice. according to PetroSA, the 3 production wells have been shut-in and may be used in the future. PetroSA provided well bore schematics or completions diagrams for all of these wells. However well completion documentation for certain other wells were not available (e.g. F-O8).
3.11.4 Post Drilling Survey and Well Environmental Close-Out Report					
EMPr	2011_3.11.4.1	Undertake a post-drilling seabed survey to check for dropped objects and state of seabed post- drilling, and prepare a report. The survey should document the following as far as possible: • The presence or absence of mounding or unusual depositions of drill cuttings and/or observable influences of drill cuttings on marine life, if evident, for future reference; • The presence and characteristics of any dropped objects, completion waste or other materials in the vicinity of the abandoned or suspended well; • Validation of the removal of the well head (if removed); and • The report should describe the state of the seabed and any observable object.	N/A	N/A	No drilling undertaken or completed within the production right during the audit period. The survey and close-out report should have been done after drilling was completed.
EMPr	2011_3.11.4.2	Prepare an Environmental Well Close-Out Report at the end of drilling which shall document compliance with the provisions of this EMPr; deviations from specified standards for discharges; any incidents arising, and the status and requirements relating to any remaining infrastructure on the seabed. Refer to Activity 3.12.2.2.4 for more detail.	N/A	N/A	No drilling undertaken or completed within the production right during the audit period. The survey and close-out report should have been done after drilling was completed.
ACTIVITY 3.12. SYSTEM ADMINISTRATIVE REQUIREMENTS Objectives:					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
• To provide a comprehensive and coherent system which accesses and stores information pertinent to environmental management from diverse sources to verify responsible environmental practices. • To provide a formal platform for reporting on environmental performance. • To monitor and audit environmental performance against pre-determined criteria. • To use formal management reviews to continuously improve the system itself and thereby environmental performance as a whole.					
3.12.1 Monitoring - The following parameters shall be monitored during drilling:					
EM Pr	2011_3.12.1.1	Deck & bilge water discharge: oil concentrations to ensure <15ppm. (Refer to Activity 3.8.1.3).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.12.1.2	Solid waste production and disposal (Refer to Activity 3.7.1).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.12.1.3	Flare emissions: Gas volume flared (Refer to Activity 3.9.1.3).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.12.1.4	Drill cuttings: Total volume of drill cuttings generated and quantity discharged to sea (Refer to Activity 3.6.1.8).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.12.1.5	Drill cuttings: Oil content on drill cuttings (Refer to Activity 3.6.1.5).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.12.1.6	Drill fluids: Quantity of drilling fluids used during drilling and amount recovered for disposal / recycling (Refer to Activity 3.6.1.8 and 3.6.1.10).	N/A	N/A	No drilling undertaken within the production right during the audit period.
EM Pr	2011_3.12.1.7	Monitoring results shall be reported to PetroSA in the Monthly Report	N/A	N/A	No drilling undertaken within the production right during the audit period. The document retention period of 5 years has lapsed.
EM Pr	2011_3.12.1.8	PetroSA shall report monitoring results to PASA in the Quarterly Report	N/A	N/A	No drilling undertaken within the production right during the audit period. The document retention period of 5 years has lapsed.
EM Pr	2011_3.12.1.9	Monitoring results shall be retained for 5 years.	N/A	N/A	No drilling undertaken within the production right during the audit period. The document retention period of 5 years has lapsed.
3.12.2 Reporting					
EM Pr	2011_3.12.2.1	Reporting Requirements for a drilling campaign are indicated in the flow chart below: see Figure 3.12.1.	N/A	N/A	No drilling undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					The document retention period of 5 years has lapsed.
EM Pr	2011_3.12. 2.2	Reporting by PetroSA to PASA, DEA & SAMSA	N/A	N/A	No drilling undertaken within the production right during the audit period. The document retention period of 5 years has lapsed.
EM Pr	2011_3.12. 2.2.1	Documentation required by SAMSA Prior to drilling, the following documentation will be provided to SAMSA by the Licence Holder or is required by SAMSA: • Oil Spill Contingency Plan to be approved by SAMSA; and • SAMSA to issue a Pollution Safety Certificate for the drilling rig.	N/A	N/A	No drilling undertaken within the production right during the audit period. The document retention period of 5 years has lapsed.
EM Pr	2011_3.12. 2.2.2	Environmental Notification Prior to the drilling of any well, PetroSA shall submit an Environmental Notification to PASA and DEA which shall include: • General information; • Project description (include detailed project specifications); • Communications plan including notification of mariners; • Affected environment; • Drilling Fluids information; • Contractor's receipt of Notification and pre well seabed survey, and insurances; and • Information on contractor and drilling unit such as seaworthiness certificates, specifications of rig and support vessels, and contractor's environmental policy and proof of receipt of EMPr.	N/A	N/A	No drilling undertaken within the production right during the audit period. The document retention period of 5 years has lapsed.
EM Pr	2011_3.12. 2.2.3	Quarterly Reports: PetroSA shall submit Quarterly Reports to PASA, which shall include key information, as drawn from Contractor's monthly reports to PetroSA, on: • the progress of drilling activities and any changes to the drilling schedule; • any incidents (e.g. pollution spills, navigational incidents, loss of equipment ,etc.); • issues raised by stakeholders; • monitoring information; • non-compliance with monitoring standards and steps taken to rectify	N/A	N/A	No drilling undertaken within the production right during the audit period. The document retention period of 5 years has lapsed.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		these; and • training and awareness.			
EM Pr	2011_3.12.2.2.4	Environmental Well Close-Out Report PetroSA shall submit a Close Out Report to PASA within 60 days of Completing a well. The information contained in this report shall be based on the monthly reports compiled by the Drilling Contractor and other data and records compiled during the drilling campaign. The Close Out Report shall contain as a minimum a full description of the following per well: General: • The drilling contractor details , drilling vessel and supply vessel details; • Proof of Environmental Notification and communication with other users of the sea; and • Description of the drilling operation (location, timetable). Drilling Phase Activities: • Volume of drilling fluids and cuttings discharged to sea; • Observable drill cuttings deposited to seafloor from post-drilling seabed survey; • Volume of cement deposited on sea floor; • Monitoring information e.g. cuttings, flaring etc.; • Waste volumes and management; • Refuelling and bunkering volumes; and • Training and Awareness. Incidents: • Lost/dropped objects; • Spills; and • Aircraft or unauthorised vessels approach dangerously close to the rig or its anchors, enter the 500m safety zone or fail to respond to warnings to stay clear. Well completion and abandonment: • Well status; • End of well seabed survey; and • Results of Performance Assessment against EMPr requirements.	N	2	Well F-O12 was completed in May 2015. A copy of the Well Suspension Environmental Report for F-O12 was provided. The report is dated June 2015 and therefore complies with the 60 day requirement. A quarterly environmental report was provided which reported on compliance from 1 April 2015 to 30 June 2015. Evidence was however not provided to confirm submission of these reports to the authorities. In addition the content of these reports do not align with, or include all of the specific aspects, that are required by this condition.
EM Pr	2011_3.12.2.3	Contractor Reporting to PetroSA and Documentation Requirements	Noted	Noted	

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EMPr	2011_3.12.2.3.1	Pre-Drilling Agreements and Documentation Prior to drilling, the following documentation will be provided to PetroSA by the Drilling Contractor: • Signed Contractor's Acknowledgement of Receipt of EMPr; • Environmental Safety and Health Policy; • Certificates of Sea Worthiness such as Classification Certificate, Safety Certificate, Pollution Prevention Certificate and Load line Certificate; and • Plan to compile the Environmental Close-Out report and the information requirements needed and how it will be compiled.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EMPr	2011_3.12.2.3.2	Monthly Report A monthly report shall be compiled by the drilling contractor, and submitted to PetroSA which shall include: • Incidents, including effluent quality exceedances; • Quantity of gas flared; • Quality and quantity of bilge water discharged; • Amount and type of waste generated and disposed of; • Energy consumed e.g. fuel; • Quantity of drilling fluids used and estimated quantities of drill cuttings generated; • Quantity of mud and mud components and cuttings discharged overboard; and • Quantity of cement deposited on seafloor.	N/A	N/A	No drilling undertaken within the production right during the audit period. The document retention period of 5 years has lapsed.
3.12.3 Auditing					
EMPr	2011_3.12.3.1	General	Noted	Noted	
EMPr	2011_3.12.3.1.1	Compliance with the EMPr shall be subject to compliance auditing at various phases of the drilling campaign. The findings of these audits shall contribute towards PetroSA's annual performance report.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EMPr	2011_3.12.3.1.2	The audits shall review and report on the auditing requirements detailed in each section of this management plan.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EMPr	2011_3.12.3.2	Pre-drilling	Noted	Noted	

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EMPr	2011_3.12.3.2.1	The pre-drilling audit shall check the following: • The EMPr has been approved by PASA and all reporting requirements (described in Activity 3.12.2) have been complied with; • The Drilling Contractor has received a copy of the EMPr, understands the content, the content of the EMPr is aligned with the drilling rig's standard operating procedures, and has agreed to its implementation; and • The Drilling Contractor has the necessary equipment and protocols in place and staff on the drilling rig are suitably trained to implement the monitoring requirements outlined in the EMPr.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EMPr	2011_3.12.3.3	During drilling audit	Noted	Noted	
EMPr	2011_3.12.3.3.1	The audit during drilling shall check the following: • Monitoring is being undertaken in accordance with the requirements described in this EMPr for the variables summarised in Activity 3.12.1. • Monitoring data are retained and all deviances reported correctly in the Monthly Reports. • Incidents, where relevant, have been reported as per the incident reporting and investigating requirements (see Activity 3.10). • Observations made on the rig and service vessels check commitments to good housekeeping and waste management protocols, and • General audit measures.	N/A	N/A	No drilling undertaken within the production right during the audit period.
EMPr	2011_3.12.3.4	Post-drilling Audit	Noted	Noted	
EMPr	2011_3.12.3.4.1	The post-drilling audit shall check the following: • A Well Environmental Close-Out report was compiled by PetroSA; and • All records comply with EMPr requirements and are stored in an accessible and logical manner.	N/A	N/A	No drilling undertaken within the production right during the audit period. The post drilling audit would have needed to be undertaken after the drilling activities.
3.12.4 Record keeping					
EMPr	2011_3.12.4.1	All records shall be retained for 5 years.	N/A	N/A	No drilling undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					The document retention period of 5 years has lapsed.
EMPr	2011_3.12.4.2	The following records shall be maintained as part of the EMPr and cross-referenced for auditing purposes: • Environmental Notification; • Quarterly reports; and • Environmental Well Close-Out report.	N/A	N/A	No drilling undertaken within the production right during the audit period. The document retention period of 5 years has lapsed.
SECTION 4: EMPR FOR CONSTRUCTION- EXCLUDING WELL DRILLING					
ACTIVITY 4.1. PLANNING PHASE					
4.1.1 Adherence to Legal Requirements Objectives: To ensure all legal requirements described in Section 2.1 and all provisions specified in these Activity Schedules (4.1 – 4.10) are complied with in order to ensure environmental protection and human and vessel safety at sea.					
EMPr	2011_4.1.1.1	Prepare a legal register of all relevant legislation applicable to construction activities to ensure that these are applied during the construction phase	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EMPr	2011_4.1.1.2	Prepare an Environmental Notification Report for submission to PASA and DEA. Refer to Activity 4.10.2.2.2 for content of Environmental Notification Report.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EMPr	2011_4.1.1.3	Ensure all relevant permits and approvals are obtained prior to construction and adhere to all conditions attached.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EMPr	2011_4.1.1.4	Prepare schedule of all legally required monitoring measures including the required frequency and responsibility, using Activity 4.10.1 as minimum guideline.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EMPr	2011_4.1.1.5	Vessel Contractors to be provided with a copy of the EMPr and written confirmation of receipt to be obtained, and instructed to have the EMPr available on board at all times.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
4.1.2 Subsidiary Plans Objectives: • Subsidiary plans are developed and are in place prior to construction. • Subsidiary plans provide the necessary level of detail and are aligned with the requirements provided in this EMPr and relevant existing procedures of PetroSA.					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_4.1.2 .1	Ensure that the service providers have the following subsidiary plans in place: • Emergency Response Plan, including MEDIVAC plan; • Waste Management Plan; and • Incident Management and Reporting.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.1.2 .2	Compile a Communications Plan which shall outline the communications procedures for all stakeholder engagement, including the Stakeholder Engagement Register, responsibilities for review of stakeholder comments, feedback to the stakeholder and close out actions and requirements.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.1.2 .3	Compile an Environmental Notification prior to construction to be submitted to PASA and DEA, which includes the relevant information from the subsidiary plans.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.1.2 .4	Ensure subsidiary plans are aligned with national plans (e.g. National Oil Spill Contingency & Response Plan), and other relevant regional, provincial, local and PetroSA plans and procedures (e.g. Integrated Waste Management Plans, Incident Management Plan, Communications Plans etc).	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.1.2 .5	All plans contain the required level of detail such as: • Up to date contact names and numbers; • Clear lines of communication for specific tasks; • Clear role and responsibilities allocated to specific staff members; • Training and awareness needs and activities; and • Formats for reporting e.g. filing incident reports, waste manifests, etc.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.1.2 .6	All plans shall be readily available on all vessels as appropriate at all times.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.1.2 .7	PetroSA to keep copies of all subsidiary plans in the Joint Operations Centre during construction activities.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.1.2 .8	Retain copies of all subsidiary plans for five years.	N/A	N/A	No construction activities were undertaken within the production right

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					during the audit period. The 5 year retention period has expired.
EM Pr	2011_4.1.2 .9	The pre-construction meeting agenda between PetroSA and the contractor must include a formal handover of subsidiary plans. Vessel staff and relevant PetroSA staff must be familiar with the content of the plans.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
4.1.3 Contractor and Vessel Certification Objectives: • Ensure the Installation Contractor operates to the highest possible safety and environmental protection standards, and that vessels are appropriately certified.					
EM Pr	2011_4.1.3 .1	Ensure the vessels are certified for seaworthiness through an appropriate internationally recognised certification programme (e.g. Det Norske Veritas, American Bureau of Shipping etc.).	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
ACTIVITY 4.2. STAKEHOLDER ENGAGEMENT Objectives: • To provide regular feedback to relevant and key stakeholders. • To establish and maintain a register of stakeholders. • To receive, process and respond to inputs from external and internal stakeholders.					
4.2.1 Stakeholder Engagement					
EM Pr	2011_4.2.1 .1	Prepare an Environmental Notification Report for submission to PASA and DEA. Refer to Activity 4.10.2.2.2 for content of Environmental Notification Report.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.2.1 .2	Fishing stakeholder, key stakeholders and other marine users who operate in the area shall be notified of construction activities and the timing of such activities at least 30 days prior to the scheduled commencement of construction. Fishing stakeholders should include; the Agulhas Offshore Forum, Association of Small Hake Industries, SA Deep Sea Trawling Industry Association, SA Inshore Fishing Industry Association, South East Coast Inshore Fishing Association, SA Midwater Trawling Association, SA Tuna Association, Fresh Tuna Exporters Association, South Coast Rock Lobster Association. Key stakeholders should include; SAMSA, relevant Port Captains, the naval hydrographic office and the Department of Agriculture, Forestry and Fisheries (Fisheries branch).	N/A	N/A	No construction activities were undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_4.2.1 .3	Information regarding construction activities should be communicated to SA Navy Hydrographic office so that they can be issued on Notices to Mariners and all necessary maritime communications followed to ensure marine users are kept informed of restrictions on fishing and other marine uses. A Notice to Mariners should provide: • the co-ordinates of the construction activities; • an indication of the construction timeframes; • location reports of the pipe-laying vessel; and • a special note on the hazards posed by construction activities.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.2.1 .4	Stakeholder engagement process shall be undertaken in accordance with a Communications Plan (see Activity 4.1.2.2).	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.2.1 .5	Implement and maintain a Stakeholder Engagement Register which shall include the following information: • Contact details of stakeholder; • Date and time of stakeholder input; • Nature of input; • Name of reviewing manager; • Stakeholder engagement form reference number; • Date of Review; • Result of Review; and • Date of communication with stakeholder.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.2.1 .6	Any feedback from stakeholders concerning offshore exploration activities shall be reported in PetroSA's Quarterly Report.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
ACTIVITY 4.3. ENVIRONMENTAL TRAINING AND AWARENESS Objectives: • To equip all personnel involved in construction activities to perform their duties in an environmentally responsible manner through regular training. • To raise environmental awareness through feedback on environmental performance and any changes in legislation governing best practices.					
4.3.1 Environmental Training and Awareness					
EM Pr	2011_4.3.1 .1	Utilise suitable regular meetings such as weekly safety meetings for environmental awareness and report back on environmental performance including the content of subsidiary plans. .	N/A	N/A	No construction activities were undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_4.3.1 .2	All personnel shall receive regular training including tool box talks on the handling and management of waste	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
ACTIVITY 4.4. POLLUTION PREVENTION					
4.4.1 Pipe-laying / Supply Vessels and Other Shipping Objectives: • To minimise navigational risks to other marine users. • To ensure that professional and seaworthy certification is appropriate to requirements. • To inform the Masters of the supply vessels of the actions to be taken to minimise environmental damage and the actions to be taken in the event of such damage occurring. • To check that the requisite actions are taken and that they are effective in minimising environmental damage. • To ensure that provisions prescribed by SAMSA to ensure that the vessels are "visible" to marine traffic and aircraft have been implemented. • To ensure that the provisions are effective in maintaining "visibility" of the vessels.					
EM Pr	2011_4.4.1 .1	All measures prescribed by SAMSA to minimise the risks of collision of marine traffic with the pipe-laying and supply vessels must be implemented and maintained.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.4.1 .2	Measures to be implemented include: • Information regarding construction activities should be communicated to SA Navy Hydrographic office so that they can be issued on Notices to Mariners seven days prior to construction commencement (see Activity 4.2.1.3); • A supply vessel to be on standby at all times; • Maintenance of standard watch procedures; • Issue Radio Navigational Warnings if visibility of pipe-laying vessel is diminished (e.g. power outages or failure of fog horn); • Radio communication to alert approaching vessels; • Use of Flares and Sirens where necessary; • Recording of interactions with vessels in a log book; and • Collisions, near misses or other transgressions with associated pollution risks will be treated as incidents and handled according to the procedure detailed under Activity 4.9.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
4.4.2 Helicopter Services Objectives:					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
• To minimise disturbance to coastal sea bird populations and large marine fauna from helicopter flights. • To minimise disturbance to coastal communities and activities such as tourism and recreational fishing.					
EM Pr	2011_4.4.2.1	Existing PetroSA and aviation service providers' procedures, e.g. the Materials Handling & Transport and Marine Support Services procedures, shall be implemented to minimise the risk of objects and chemical substances being dropped overboard, during cargo transfer, leaking from storage containers and during handling.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.4.2.2	Helicopter transfers to and from the pipe-laying vessel shall: • Fly at a minimum height of 500 m above sea level and shall not hover or circle over whales, dolphins, sharks, turtles or aggregations of seabirds. An aircraft may not approach to within 300 m of whales in terms of the Marine Living Resources Act, 1998; • Not fly over seal and seabird colonies, coastal reserves, marine islands or estuarine systems; and • Avoid extensive coastal flights (parallel to the coast within 1 nautical mile of the shore). There is a restriction of coastal flights on the south coast between the months of June and November to avoid Southern Right whale breeding areas.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.4.2.3	Helicopter flight logs will be kept to demonstrate compliance with set flight paths.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
4.4.3 Transfer of Materials / Dropped Objects Objectives: • To minimise the risk of objects being lost overboard during transit or transfer. • To retrieve objects which have fallen overboard before they pose a risk to the environment or shipping. • To log the existence and location of fallen objects for future reference / action. • To notify interested parties of the existence and location of un-retrieved fallen objects. • To minimise the risk of introduction of non-indigenous invasive marine species through equipment transfer.					
EM Pr	2011_4.4.3.1	Procedures shall be implemented to minimise the risk of objects and chemical substances being dropped overboard during cargo transfer or leaking from storage containers or during handling.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_4.4.3 .2	Incidents involving dropped objects or chemicals will be treated as incidents and handled according to the procedure detailed under Activity 4.10.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.4.3 .3	No infrastructure (e.g. pipes, SSIV assembly, TIFs, metering skids, etc.) should be deployed that has been used in other regions, unless thoroughly cleaned.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
4.4.4 Workshops and Repairs Objectives: • To manage the workshops in a manner that minimises the risk of liquids polluting the sea and to expedite clean up of any such spillages that do occur. • To minimise the risk of polluting the environment during repairs and maintenance on the vessel.					
EM Pr	2011_4.4.4 .1	All fuels, greases, oils and other chemicals shall be stored and handled as per chemical handling procedures specified in the contractor's standard operating procedures and summarised in the chemical handling procedures below (see Activity 4.4.5).	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.4.4 .2	Repair and servicing of loose equipment or machinery shall be undertaken only in the workshops or within areas of the vessel which has drainage dedicated to containing spilled liquid and suspended debris.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.4.4 .3	Where repair of equipment or machinery must take place in situ, precautions appropriate to the location must be taken to minimise the risk of spills or loss of objects overboard.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.4.4 .4	Any spills of liquids shall be treated as an incident and handled according to the procedure detailed under Activity 4.9.1.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
4.4.5 Chemical Storage and Handling Objectives: • To handle and store chemicals in such a way as to minimise the risk of spillage or leakage. • To dispose expired chemicals in an environmentally responsible and legal manner. • To respond to any spills and or leaks in such a way that environmental damage does not occur. • To formally evaluate any spills or leaks in order to plan for prevention of recurrence.					
EM Pr	2011_4.4.5 .1	A chemical register shall be maintained and will detail: • All chemicals used and stored on the vessel; • Chemical characterisation of each chemical including SABS class and hazard rating;	N/A	N/A	No construction activities were undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		• Specific storage handling or disposal requirements for each chemical including Personal Protective Equipment; • Emergency response actions for each chemical; and • The process used to verify the information contained in the register.			
EM Pr	2011_4.4.5.2	All containers of hazardous liquids shall be stored inside impermeable bunds (portable or fixed) which have a total capacity of 110% of the total amount liquid stored inside them. This shall apply both in store-rooms and in situations where containers have been temporarily moved from the store room to a position close to where the contents are being used for convenience.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.4.5.3	All chemicals shall have current Material Safety Data Sheets (MSDS) prominently displayed at the location of storage and use	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.4.5.4	Incompatible chemicals shall not be stored in the same location.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.4.5.5	Personnel using chemicals shall be trained in their use, disposal and clean-up.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.4.5.6	Expired chemicals shall be labelled as waste and treated in accordance with the disposal requirements specified in their MSDS.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.4.5.7	Any chemical spills of more than 5 litres shall be treated as an incident and handled according to the incident procedure detailed under Activity 4.9.1.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.4.5.8	Any loss of chemicals overboard shall be treated as an incident and handled according to the procedure detailed under Activity 4.9.1.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
4.4.6 Construction Activities and Severe Weather Objectives: • To minimise the risk of spillage, leakage and dropped objects and materials during storm events.					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_4.4.6 .1	Construction must only be undertaken in accordance with the Contractor's Operations Manual specifying conditions within which activities can be safely undertaken.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.4.6 .2	During major storm events that could pose a pollution risk during construction the contractor must: • stop construction activity; and • do not undertake bunkering (see Activity 4.5.3 on bunkering).	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
4.4.7 Management of Ballast Water Objectives: •To minimise the risk of contaminating receiving waters with exotic biota through the release of ballast water.					
EM Pr	2011_4.4.7 .1	Comply with Guideline A.868(20) of the International Maritime Organisation through: • Ensuring the vessel has a ballast water management plan in place to ensure safe and effect ballast water management; • Reduce the risk of transfer of harmful aquatic organisms by onboard ballast water treatment or exchange by: o Exchange ballast water from a distant area collection point at least 200 nautical miles from nearest land and in water at least 200 m deep, or if not possible, as far from nearest land as possible but at least a minimum of 50 nautical miles and in water of 200 m deep; o Comply with one of the three following ballast water exchange methods: > Sequential method: empty at least 95% or more of the volume of ballast tanks and refill with replacement ballast water (open-ocean). However, the emptying of certain tanks may lead to significantly reduced stability, higher stresses, high sloshing pressures, and/or reduced forward drafts. A secondary effect of reduced forward draft would be an increased probability of bow slamming. > Flow through method: This method involves pumping open-ocean water into a full ballast tank. Ballast equal to approximately three times the tank capacity must be pumped through the tank to achieve 95% effectiveness in eliminating aquatic organisms. Applying the flow through method does not alter the stability, stress and ship attitude. > Dilution method: This method involves the pumping the replacement	N/A	N/A	No construction activities were undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		ballast water through the top of the ballast tank or hold intended for the carriage of water ballast with simultaneous discharge from the bottom at the same flow rate and maintaining a constant level in the tank or hold. At least three times the tank or hold volume should be pumped through the tank or hold. o When exchanging ballast at sea, take into account guidance on safety aspects of ballast water exchange as set out in Appendix 2 of the IMO Guidelines. When these requirements cannot be met, ballast water exchange should be undertaken in designated ballast water exchange areas, as determined with the relevant authority (e.g. DEA: Directorate Pollution & Waste Management or Transnet National Ports Authority). o Where practicable, routine cleaning of the ballast tank to remove sediments should be carried out in mid-ocean or under controlled arrangements in port or dry dock, in accordance with the provisions of the ship's ballast water management.			
ACTIVITY 4.5. INFRASTRUCTURE POSITIONING & REFUELLING					
4.5.1 Site Survey and Infrastructure Positioning Objectives: • To minimise disturbance to sensitive seabed habitats. • To check for shipwrecks or other historical remains and thereby allow for excavation if required.					
EM Pr	2011_4.5.1 .1	Undertake a seabed survey using side scan sonar or other appraisal method to determine the presence of sensitive reef habitats or shipwreck, to confirm whether any infrastructure might be affected (pipelines, etc.), and to confirm the state of the seabed.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.5.1 .2	Prepare a written summary of the seabed survey documenting the state of seabed and presence of any key features prior to infrastructure installation as a baseline reference condition.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.5.1 .3	Notify the South African Heritage Resources Agency (SAHRA) if shipwreck or other historical relicts are identified. All infrastructure positioning activities should be suspended until approval is given to proceed by SAHRA.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_4.5.1.4	Use the seabed survey data to prepare an infrastructure positioning plan taking into account the presence of sensitive features.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
4.5.2 Vessel Refuelling / Bunkering Objectives: • To minimise the risk of spills and marine pollution during bunkering.					
EM Pr	2011_4.5.2.1	Obtain permission from SAMSA five days prior to bunkering activities.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.5.2.2	Diesel and other fuels must be stored in enclosed and secured tanks, designed to withstand extreme events and conditions	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.5.2.3	Where feasible, drip trays must be in place to collect leakage from connection and discharge points.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.5.2.4	Offshore bunkering will not be allowed in the following circumstances: • Wind force and sea state conditions of 6 or above on the Beaufort Wind Scale; • During helicopter operations; and • During the transfer of heavy in-sea equipment.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.5.2.5	Floating hoses will be made of flexible double carcass sections and will be equipped with a breakaway coupling for protection against excessive tension or overpressures in the fuel system. The closure time will be set to minimise the volume of oil spilled to the sea whilst being slow enough to prevent surge pressure building up.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.5.2.6	Spillages of fuel during bunkering should be logged as an incident in accordance with the procedures given in Activity 4.9.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
ACTIVITY 4.6. SOLID WASTE MANAGEMENT Objectives: • To prevent any waste from entering the marine environment except for macerated galley waste and macerated and treated sewage waste. • To reduce the amount of waste disposed to landfill by reducing waste generation and maximising recycling and reuse.					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
• To comply with waste management legislation. • To dispose of all solid waste in an environmentally responsible manner.					
4.6.1 General Measures for Solid Waste Management					
EM Pr	2011_4.6.1.1	Prior to commencing construction operations, an integrated waste management plan shall be prepared in line with the waste management hierarchy below.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.6.1.2	Waste Management Hierarchy: See Figure 4.6.1	Noted	Noted	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.6.1.3	A Waste Register shall be compiled which shall detail: • Categories of different waste types generated on the pipe-laying vessel and support vessels; • Their source; • Their hazard rating; • Their disposal methods; and • Any specific precautions or legislative requirements.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.6.1.4	The Waste Register shall be updated to record actual waste volumes generated during the construction phase.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.6.1.5	Waste shall be segregated into the following categories shown in Figure 4.6.2. Recyclables shall be stored separately as shall hazardous waste.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.6.1.6	All wastes shall be handled according to the flow diagram in Figure 4.6.3 below while awaiting transport to disposal sites.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.6.1.7	No waste may be stored for more than 30 days on any vessel without formal permission from DEA.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.6.1.8	Wastes shall be stored in sealed containers or bags and protected from the environment according to specifications for storage in the Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste published by Department of Water Affairs and Forestry in 1998 (or the latest update thereof).	N/A	N/A	No construction activities were undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_4.6.1 .9	Incompatible waste may not be stored in the same location (see the hazard ratings for wastes in the Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste published by Department of Water Affairs and Forestry in 1998 for compatibility, or the latest update of this document).	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.6.1 .10	Galley waste shall be macerated at sea to pieces smaller than 25 mm and deposited overboard at a distance at least 12 nautical miles from shore in accordance with MARPOL requirements.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.6.1 .11	The discharge of galley waste material shall be minimised should obvious attraction of marine fauna be observed.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.6.1 .12	Sewage shall be discharged as outlined in Activity 4.7.2.	Noted	Noted	
EM Pr	2011_4.6.1 .13	The Contractor shall maintain a waste manifest system which includes: • The quantities of different categories of wastes leaving the vessel; • The nature and source of the waste types; • The date upon which the waste was removed; • The date upon which they were received by the disposal facility; • Proof of correct disposal by the landfill site (including a safe disposal certificate for hazardous waste); and • Obtaining completed waste disposal certificates including quantities and method of disposal for different waste types.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.6.1 .14	Hazardous waste shall be disposed of at a registered waste disposal site, and a safe disposal certificate shall be issued for each load of hazardous waste.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.6.1 .15	Waste manifests shall be provided to PetroSA and reported in the Contractor's Monthly Report.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.6.1 .17	• The post-construction audit should verify that: o A complete record of waste management was maintained throughout the construction phase.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
ACTIVITY 4.7. DISCHARGE OF EFFLUENT Objectives:					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
• To contain effluents which could pose a threat to the marine environment. • To treat effluents before discharge in order to minimise damage to the marine environment. • To comply with legislative obligations for effluent discharge.					
4.7.1 Deck and Bilge Water					
EM Pr	2011_4.7.1.1	Drainage water from deck and bilges shall be routed to separate drainage systems on vessels, and shall include contaminated oily water from closed drains and drainage water from non-process areas (open drains).	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.7.1.2	Drip trays or bunds shall be provided to contain contaminated water from all works areas that do not drain or route to the closed drainage system.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.7.1.3	No deck or bilge water may be discharged to the sea unless the oil concentration is below 15 ppm (MARPOL standard).	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.7.1.4	Oil concentration of discharged bilge and deck water shall be monitored at least twice daily and concentrations logged daily.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.7.1.5	In the event that the discharged oil concentration exceeds 15ppm the root cause of non-compliance shall be investigated and rectified.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.7.1.6	Oil concentration records shall be retained and submitted to PetroSA in the Monthly Report.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.7.1.7	Where possible, environmentally-friendly, low toxicity, and biodegradable cleaning materials shall be used.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
4.7.2 Sewage					
EM Pr	2011_4.7.2.1	Sewage shall be comminuted to <25 mm in size before discharge to the sea at greater than 12 nautical miles in accordance with MARPOL standards.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
ACTIVITY 4.8. GASEOUS EMISSIONS Objectives: • To reduce the volumes of green house gases emitted and minimise air pollution.					
4.8.1 Gaseous Emissions					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_4.8.1 .1	Any accidental release of Ozone Depleting Substances, if applicable, shall be treated as an incident and be dealt with in accordance with the incident procedure in Activity 4.9.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.8.1 .2	Any release of ozone depleting substances shall be reported to DEA.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.8.1 .3	All valves, taps and pipe connections should be inspected regularly in accordance with the maintenance and monitoring schedule to check for leaks and should be immediately rectified in the event of leak detection.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
ACTIVITY 4.9. INCIDENTS & EMERGENCIES Objectives: • To undertake all maintenance and system checks to ensure preventive procedures are optimised to minimise the risk of an incident or emergency. • To provide a coherent, planned response to any incident which could adversely affect the environment. • To improve response time and efficiency of the plans and the activities of staff members through drills and test runs. • To provide a process for the management of an incident or emergency depending upon the severity of the occurrence. • To minimise the risk of loss of solid objects overboard and to expedite the retrieval (if possible) of any objects which fall overboard. • To log the existence and location of fallen objects for future reference/ action. • To notify interested parties of the existence and location of un-retrieved fallen objects. • Through post-emergency evaluations, minimise the risk of a recurrence of the incident.					
4.9.1 Uncontrolled Release of Liquids					
EM Pr	2011_4.9.1 .1	The Contractor will comply with the Incident Management Procedure and Emergency Response Plans developed prior to construction (see Activity 4.1.2).	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.9.1 .2	Incident management shall entail the following key steps: • Incident detection; • Rapid assessment of incident severity; and • Implement response actions, as follows:	N/A	N/A	No construction activities were undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		Routine Incident: In the case of an onboard spill or leak confined to the vessel or other incident that does not pose a risk of major harm to the environment or people, then the following steps may be taken: • Mobilisation of onboard response person or team to: o contain the spill and shut off or control the source of the incident event, and o clean up the spill or take steps to rectify the incident consequences • Complete an incident report form; • Conduct an investigation; and • Close out the incident. Major Oil Spill (Emergency): In the case of an oil spill to sea with serious potential consequences to marine and human life, the following key steps will be required: • Classify the spill scenario, size and nature of the spill; • Notify PetroSA, who will in turn notify DEA, SAMSA and other relevant authorities to respond depending on the nature of the emergency; • Mobilise on-board resources and take all practical steps on the vessel to contain the oil spill; and • Adhere to all notification, investigation procedures, and reporting requirements in accordance with the Oil Spill Contingency and Response Plan.			
EM Pr	2011_4.9.1.3	An incident and the results of any investigation shall be recorded and submitted to PetroSA in the Monthly Report.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
4.9.2 Materials and Equipment Lost Overboard					
EM Pr	2011_4.9.2.1	If a solid object falls overboard, the incident shall be managed as follows: • Retrieve object if possible to do so; • If object not retrievable, record location (GPS Coordinates) and assess whether it will pose a hazard to other marine users; • If object poses a hazard then notify PetroSA who in turn will inform SAMSA / HydroSAN; • Complete the Incident Report Form and Dropped Object Log;	N/A	N/A	No construction activities were undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		• Conduct an Incident Investigation; and • Close Out Investigation.			
EM Pr	2011_4.9.2.2	Notifiable incidents, as set out in the Incident Management Plan, shall be reported by the Contractor to PetroSA within 48 hours, and must be included in PetroSA's Monthly Report. Incidents posing a threat to human life or significant marine pollution should immediately be reported to the designated Emergency Coordinator of PetroSA.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
4.9.3 General Incident Reporting and Auditing					
EM Pr	2011_4.9.3.1	General Reporting • All incidents that may occur during construction will require the following investigation and reporting, and which shall be detailed in the Incident Management Plan: o Assessment of the nature and source of the incident; o Assessment and evaluation of the impact and affected environmental receptors; o Recording the date and time; o Description of incident; o Actions taken to remedy the incident and report the incident; o Investigation into root cause; and o Identification of measures to prevent reoccurrence and communication of such.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
ACTIVITY 4.10. SYSTEM ADMINISTRATIVE REQUIREMENTS Objectives: • To provide a comprehensive and coherent system which accesses and stores information pertinent to environmental management from diverse sources to verify responsible environmental practices. • To provide a formal platform for reporting on environmental performance. • To monitor and audit environmental performance against pre-determined criteria. • To use formal management reviews to continuously improve the system itself and thereby environmental performance as a whole.					
4.10.1 Monitoring : The following parameters shall be monitored during construction					
EM Pr	2011_4.10.1.1	Deck & bilge water discharge: oil concentrations to ensure <15ppm. (Refer to Activity 4.7.1.3).	N/A	N/A	No construction activities were undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_4.10. 1.2	Solid waste production and disposal (Refer to Activity 4.6.1).	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.10. 1.3	Monitoring results shall be reported to PetroSA in the Monthly Report	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.10. 1.4	PetroSA shall report monitoring results to PASA in the Quarterly Report	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.10. 1.5	Monitoring results shall be retained for 5 years.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
4.10.2 Reporting					
EM Pr	2011_4.10. 2.1	Reporting Requirements for the construction phase are indicated in the flow chart below: See Figure 4.10.1	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.10. 2.2	Reporting by PetroSA to PASA & DEA	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.10. 2.2.1	Environmental Notification Prior to the construction, PetroSA shall submit an Environmental Notification to PASA and DEA which shall include: • General information; • Project description (include detailed project specifications); • Communications plan including notification of mariners; • Affected environment; • Contractor’s receipt of Notification and seabed survey, and insurances; and • Information on contractor and pipe-laying vessel such as seaworthiness certificates, specifications and support vessels, and contractor’s environmental policy and proof of receipt of EMPr.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_4.10. 2.2.2	Quarterly Reports: PetroSA shall submit Quarterly Reports to PASA, which shall include key information, as drawn from Contractor's monthly reports to PetroSA, on: • the progress of construction activities and any changes to the construction schedule; • any incidents (e.g. pollution spills, navigational incidents, loss of equipment ,etc.); • issues raised by stakeholders; • monitoring information; • non-compliance with monitoring standards and steps taken to rectify these; and • training and awareness.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.10. 2.3	Contractor Reporting to PetroSA and Documentation Requirements	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.10. 2.3.1	Pre-Construction Agreements and Documentation Prior to construction, the following documentation will be provided to PetroSA by the Contractor: • Signed Contractor's Acknowledgement of Receipt of EMPr; • Environmental Safety and Health Policy; and • Certificates of Sea Worthiness such as Classification Certificate, Safety Certificate, Pollution Prevention Certificate and Load line Certificate.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EM Pr	2011_4.10. 2.3.2	Monthly Report A monthly report shall be compiled by the Contractor, and submitted to PetroSA which shall include: • Incidents, including pollution spills, effluent quality exceedances, navigational incidents, loss of equipment ,etc.; • Quality and quantity of bilge water discharged; • Amount and type of waste generated and disposed of; and • Energy consumed e.g. fuel.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
4.10.3 Auditing					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EMPr	2011_4.10.3.1	General	Noted	Noted	No construction activities were undertaken within the production right during the audit period.
EMPr	2011_4.10.3.1.1	Compliance with the EMPr shall be subject to compliance auditing at various phases of the Construction Phase. The findings of these audits shall contribute towards PetroSA's annual performance report.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EMPr	2011_4.10.3.1.2	The audits shall review and report on the auditing requirements detailed in each section of this management plan.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EMPr	2011_4.10.3.2	Pre-construction	Noted	Noted	
EMPr	2011_4.10.3.2.1	The pre-construction audit shall check the following: • The EMPr has been approved by PASA and all reporting requirements (described in Activity 4.10.2) have been complied with; • The Contractor has received a copy of the EMPr, understands the content, the content of the EMPr is aligned with the vessel's standard operating procedures, and has agreed to its implementation; and • The Contractor has the necessary equipment and protocols in place and staff on the vessel are suitably trained to implement the monitoring requirements outlined in the EMPr.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
EMPr	2011_4.10.3.3	3 During construction audit	Noted	Noted	
EMPr	2011_4.10.3.3.1	The audit during construction shall check the following: • Monitoring is being undertaken in accordance with the requirements described in this EMPr for the variables summarised in Activity 3.10.1. • Monitoring data are retained and all deviances reported correctly in the Monthly Reports. • Incidents, where relevant, have been reported as per the incident reporting and investigating requirements (see Activity 3.9). • Observations made on the rig and service vessels check commitments to good housekeeping and waste management protocols, and • General audit measures.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_4.10. 3.4	Post-construction Audit	Noted	Noted	
EM Pr	2011_4.10. 3.4.1	The post-construction audit shall check the following: • All records comply with EMPr requirements and are stored in an accessible and logical manner.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
4.10.4 Record keeping					
EM Pr	2011_4.19. 4.1	All records shall be retained for 5 years.	N/A	N/A	No construction activities were undertaken within the production right during the audit period. The 5 year retention period has expired.
EM Pr	2011_4.19. 4.2	The following records shall be maintained as part of the EMPr and cross-referenced for auditing purposes: • Environmental Notification; and • Quarterly reports.	N/A	N/A	No construction activities were undertaken within the production right during the audit period.
SECTION 5: EMPR FOR OPERATIONS					
ACTIVITY 5.1. LEAK/ SPILL PREVENTION					
5.1.1 Subsea Infrastructures Maintenance and Monitoring Objectives: • To check the integrity of all pipe work and equipment on the platform and sea bed in a systematic and scheduled manner to minimise the risk of rupture or leakage which could cause pollution of the sea. • To replace, repair and maintain all pipe work and equipment on the platform and sea bed in a systematic and scheduled manner to minimise the risk of rupture or leakage which could cause pollution of the sea. • To detect any leaks or ruptures so that they can be repaired speedily. • To formally and critically evaluate the circumstances of any ruptures and leaks in order to plan for prevention of recurrence.					
EM Pr	2011_5.1.1 .1	All undersea structures including pipe works and valves shall be subject to scheduled inspection and maintenance as per the flow diagram below: See Figure 5.1.1	N	0	The EMPr requires that inspection schedules should ensure inspection at intervals of no greater than 5 years. The auditee noted that inspections on the subsea infrastructure are undertaken at certain intervals determined using a risk based programme. The Risk Based Sub-sea Inspection Record lists the Ikhwezi (FO Field) sub-sea infrastructure as

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					requiring inspection with an ROV every 5 years. The schedule notes that these pipelines were last surveyed in December 2014, and as such are overdue. No other sub-sea inspections on the FO Field were recorded to have taken place in the last 5 years as required by the EMPr. Based on engagements with the auditee, it is understood that the wells have been shut-in but the pipelines have not been flushed. This presents a potential risk of release of hydrocarbons should the pipeline containment be compromised.
EM Pr	2011_5.1.1.2	The results of the scheduled inspections surveys shall be subject to systematic, documented review.	N	0	No evidence of systematic, documented review was provided.
EM Pr	2011_5.1.1.3	Any repairs shall be reported in The Monthly Report	N	0	No evidence was provided that the repairs undertaken have been included in the Monthly Reports.
EM Pr	2011_5.1.1.4	Any leak or spill of liquids, be they on the surface or sub-sea, shall be regarded as an incident and/ or emergency and dealt with according to the incident procedure below (see Activity 5.7.1).	N/A	N/A	PetroSA provided the 'PetroSA INCIDENT MANAGEMENT SYSTEM - Group Procedure (PetroSA; 2018). This procedure specifically includes the release from secondary containment, of a potentially hazardous or toxic agent to the ecosystem or natural resources. Incidents are recorded via a computer based system. The list of recorded incidents spanning the audit period was provided. Spills are recorded in the incident register. No spills directly rated to the FO Field were noted in the Incident Register.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
5.1.2 Interaction with Shipping					
EM Pr	2011_5.1.2.1	Service Vessels Objectives: • To ensure that professional and seaworthy certification is appropriate to requirements. • To inform the Masters of the supply and transport vessels of the actions to be taken to minimise environmental damage and the actions to be taken in the event of such damage occurring. • To check that the requisite actions are taken and that they are effective in minimising environmental damage.	Noted	Noted	
EM Pr	2011_5.1.2.1.1	All contracts with service providers shall require compliance by the service provider with the EMPrs. The contracts shall specifically require that the service provider complies with all relevant legislation and indemnifies PetroSA of any shared liability in the event that the service provider contravenes legislation in spite of being required to adhere to the EMPr. PetroSA reserves the right to inspect operations on the service-provider's vessel to assess compliance. Deviations from the PetroSA procedures shall be deemed breach of contract.	N	2	No contracts were provided to the auditor. PetroSA provided feedback that confirmed that the requirement to comply with the conditions of the EMPr were not expressly incorporated into the contracts for the vessels and helicopters service providers. Some of the operational procedures provided to the auditor demonstrate operational control and management but do not , on their own, evidence the contractual requirements of this audit condition. No signed service agreement/purchase order/contract that contains an EMPr compliance clause referencing the specific EMPr(s) applicable to the scope was provided. PetroSA confirmed that the requirement for service providers to comply with all relevant legislation was included in both the vessel and helicopter service providers contracts.
EM Pr	2011_5.1.2.2	Other Shipping in the Area Objectives: • To ensure that provisions prescribed by SAMSA to ensure that the	Noted	Noted	

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		structures and associated vessels are “visible” to marine traffic and aircraft have been implemented. • To ensure that the provisions are effective in maintaining “visibility” of the structures and associated vessels.			
EM Pr	2011_5.1.2.2.1	All measures prescribed by SAMSA to minimise the risks of collision of marine traffic with the offshore structures must be implemented and maintained.	Y	4	The relevant hydrographic chart was reviewed. The FO field is specifically demarcated in these charts. The FO field consists only of subsea infrastructure and consequently there is an inherently low risk for collision with marine traffic and offshore structures. Further the FO wells (suspended and abandoned) are reflected in the latest Notice to Mariners.
EM Pr	2011_5.1.2.2.2	Measures to be implemented include: • Maintenance of safety and exclusion zones; • Maintenance of standard watch procedures; • Issue navigational warnings if visibility of structures is diminished (e.g. power outages or failure of fog horn); • Radio communication to alert approaching vessels; • Use of Flares and Sirens where necessary; • Recording of interactions with vessels in the installation log book; and • Collisions, near misses or other transgressions with associated pollution risks will be treated as incidents and handled according to the procedure detailed under Activity 5.7.	N/A	N/A	The relevant hydrographic chart was reviewed. The FO field is specifically demarcated in these charts. The FO field consists only of subsea infrastructure and consequently there is an inherently low risk for collision with marine traffic and offshore structures. No service vessels directly related to the FO field were observed during the audit.
5.1.3 Workshops and Repairs Objectives: • To manage the workshops in a manner that minimises the risk of liquids polluting the sea and to expedite clean up of any such spillages that do occur. • To minimise the risk of polluting the environment during repairs and maintenance on the vessel or platform.					
EM Pr	2011_5.1.3.1	All fuels, greases, oils and other chemicals shall be stored and handled as per chemical handling procedures specified in PetroSA standard operating procedures and summarised in the chemical handling procedures below (see Activity 5.3).	N/A	N/A	There are no permanent operational workshops associated with the FO Field. The FA Platform serves the operational aspects of the connected fields. The FA

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					Platform operates under a distinct EMPR and is audited separately.
EM Pr	2011_5.1.3.2	Repair and servicing of loose equipment or machinery shall be undertaken only in the workshops or within areas of the vessel or installation which has drainage dedicated to containing spilled liquid and suspended debris.	N/A	N/A	There are no permanent operational workshops associated with the FO Field. The FA Platform serves the operational aspects of the connected fields. The FA Platform operates under a distinct EMPR and is audited separately.
EM Pr	2011_5.1.3.3	Where repair of equipment or machinery must take place in situ, precautions appropriate to the location must be taken to minimise the risk of spills or loss of objects overboard.	N/A	N/A	There are no permanent operational workshops associated with the FO Field. The FA Platform serves the operational aspects of the connected fields. The FA Platform operates under a distinct EMPR and is audited separately. No evidence was observed to indicate that any insitu repair activities were undertaken within the FO Field during the audit period.
EM Pr	2011_5.1.3.4	Any spills of liquids shall be treated as an incident and handled according to the procedure detailed under Activity 5.7.1 below.	N/A	N/A	Incidents are recorded via a computer based system. The list of recorded incidents spanning the audit period was provided. Spills are recorded in the incident register. No spills associated with the FO Field were noted.
EM Pr	2011_5.1.3.5	Any loss of objects overboard shall be treated as an incident and handled according to the procedure detailed under Activity 5.7.2 below.	N/A	N/A	PetroSA provided the 'PetroSA INCIDENT MANAGEMENT SYSTEM - Group Procedure (PetroSA; 2018). This procedure specifically includes the loss of property as an incident. Incidents are recorded via a computer based system. The list of recorded incidents spanning the audit period was provided. No incidents related to dropped objects or objects lost overboard were recorded in

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					the incident register. No objects were lost overboard during the audit.
ACTIVITY 5.2. POLLUTION PREVENTION - SUPPORT SERVICES					
5.2.1 Support Services Objectives: • To minimise the risk of objects being lost overboard during transit or transfer. • To retrieve objects which have fallen overboard before they pose a risk to the environment or shipping. • To log the existence and location of fallen objects for future reference/ action. • To notify interested parties of the existence and location of un-retrieved fallen objects. • To minimise disturbance to large marine fauna from helicopter flights.					
EM Pr	2011_5.2.1.1	Existing PetroSA and aviation service providers' procedures, such as the Materials Handling & Transport and Marine Support Services procedures, shall be implemented to minimise the risk of objects and chemical substances being dropped overboard, during cargo transfer, leaking from storage containers and during handling.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels. The FA Field is connected via subsea pipelines to the FA Platform. The FA Platform operates under a distinct EMPR and is audited separately.
EM Pr	2011_5.2.1.2	Helicopter transfers to and from offshore installations shall fly at a minimum height of 500m above sea level and shall not hover or circle over whales, dolphins, sharks, turtles or aggregations of seabirds.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels. The FO Field is connected via subsea pipelines to the FA Platform.
EM Pr	2011_5.2.1.3	Helicopter flight logs will be kept to demonstrate compliance with set flight paths.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels. The FO Field is connected via subsea pipelines to the FA Platform.
ACTIVITY 5.3. CHEMICAL STORAGE AND HANDLING Objectives: • To handle and store chemicals in such a way as to minimise the risk of spillage or leakage. • To dispose of expired chemicals in an environmentally responsible and legal manner. • To respond to any spills and or leaks in such a way that environmental damage does not occur. • To formally evaluate any spills or leaks in order to plan for prevention of recurrence.					
5.3.1 Measures for Chemical Storage and Handling					
EM Pr	2011_5.3.1.1	A chemical register shall be maintained by the facility which will detail: • All chemicals used and stored by the facility;	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		• Chemical characterisation of each chemical including SABS class and hazard rating; • Specific storage handling or disposal requirements for each chemical including Personal Protective Equipment; • Emergency response actions for each chemical; and • The process used to verify the information contained in the register.			consequently no chemical storage facilities. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.3.1 .2	All containers of hazardous liquids shall be stored inside impermeable bunds (portable or fixed) which have a total capacity of 110% of the total amount liquid stored inside them. This shall apply both in store-rooms and in situations where containers have been temporarily moved from the store room to a position close to where the contents are being used for convenience.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no chemical storage facilities. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.3.1 .3	All chemicals shall have current Material Safety Data Sheets (MSDS) prominently displayed at the location of storage and use.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no chemical storage facilities. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.3.1 .4	Incompatible chemicals shall not be stored in the same location.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no chemical storage facilities. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.3.1 .5	Personnel using chemicals shall be trained in their use, disposal and clean-up.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no chemical storage facilities. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_5.3.1 .6	Any chemicals which are used at a location distant from their storage shall be transported in drip trays.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no chemical storage facilities. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.3.1 .7	Expired chemicals shall be labelled as waste and treated in accordance with the disposal requirements specified in their MSDS.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no chemical storage facilities. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.3.1 .8	Any liquid spills of more than 5 litres shall be treated as an incident and handled according to the incident procedure detailed under Activity 5.7.1 below.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no chemical storage facilities. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.3.1 .9	Any loss of chemicals overboard shall be treated as an incident and handled according to the procedure detailed under Activity 5.7.1.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no chemical storage facilities. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
ACTIVITY 5.4. SOLID WASTE MANAGEMENT Objectives: • To prevent any waste from entering the marine environment except for macerated galley waste and macerated and treated sewage waste. • To reduce the amount of waste disposed to landfill by reducing waste generation and maximising recycling and reuse. • To comply with waste management legislation. • To dispose of all solid waste in an environmentally responsible manner.					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
5.4.1 Solid Waste Management Measures					
EM Pr	2011_5.4.1 .1	The facility shall review its waste management on an annual basis using the hierarchy depicted below (source http://www.envirowise.gov.uk/uk/our-services/resource-efficiency.html). This shall be a formal, documented review of all wastes, and results shall be reported to MANCO. The program shall document waste reduction targets for the forthcoming year.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.4.1 .2	Waste Management Hierarchy: See Figure 5.4.1	Noted	Noted	
EM Pr	2011_5.4.1 .3	The facility shall develop and maintain a Waste Register which shall detail: • Each waste produced by the facility; • Their source; • Their SABS class and hazard rating; • Their disposal methods; and • Any specific precautions or legislative requirements.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.4.1 .4	Waste Register: See Figure 5.4.2.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.4.1 .5	The Waste Register shall be reviewed and updated annually.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					approved EMPr that must be complied with.
EM Pr	2011_5.4.1.6	Waste shall be segregated into the following categories. Recyclables shall be stored separately as shall hazardous waste. See Figure 5.4.3.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.4.1.7	All wastes shall be handled according to the flow diagram below while awaiting transport to disposal sites.: See Figure 5.4.4	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.4.1.8	No waste may be stored for more than 30 days on any facility without formal permission from DEA.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.4.1.9	Wastes shall be stored in sealed containers or bags and protected from the environment according to specifications for storage in the Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste published by Department of Water Affairs and Forestry in 1998.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_5.4.1.10	Incompatible waste may not be stored in the same location (see the hazard ratings for wastes in the Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste published by Department of Water Affairs and Forestry in 1998 for compatibility).	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.4.1.11	Galley waste shall be macerated at sea to pieces smaller than 25mm and deposited overboard in accordance with MARPOL requirements, or disposed to landfill onshore.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.4.1.12	Sewage shall be treated as per Activity 5.5.5.3.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.4.1.13	Waste removal from the platform or vessel shall be handled according to the following flow diagram. See Figure 5.4.5	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.4.1.14	The offshore facility shall develop and maintain a waste manifest system which details:	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		• The quantities of all wastes leaving the facility. • The date upon which they left. • The date upon which they were received by the disposal facility. • Proof of correct disposal by the landfill site (safe disposal certificate for hazardous waste).			consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.4.1 .15	A safe disposal certificate shall be issued for each load of hazardous waste.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.4.1 .16	The safe disposal certificate shall be filed in the waste manifest.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.4.1 .17	The volumes of each waste type generated and disposed as well as the disposal site and method shall be reported in The Monthly Report.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.4.1 .18	Waste disposal records shall be stored for submission to the Waste Management Officer should the Officer at DEA require it.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.4.1.19	All personnel shall receive regular training on the handling and management of waste.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
ACTIVITY 5.5. DISCHARGE OF EFFLUENT Objectives: • To contain any effluents which could pose a threat to the marine environment. • To treat any effluents before discharge in order to minimise damage to the marine environment. • To comply with legislative obligations for effluent discharge.					
5.5.1 Produced Water					
EM Pr	2011_5.5.1.1	No produced water may be discharged to the sea unless the oil concentration is below 40 ppm. FOOTNOTE: Limit specified in a Pollution Safety Certificate issued by SAMSA on 23/01/2008. In contrast PARCOM 1/17/1 stipulates that no produced water may be discharged to the sea unless the oil concentration is below 100 ppm, further discharged produced water oil content should be managed such that the monthly mean concentration is equal to or less than 40ppm.)	N	2	The FO well field has no surface infrastructure, platforms, or vessels and consequently no vessel related liquid wastes, including deck drainage, bilge water, sewage, are generated, stored or disposed of. With regards to produced water, the FO Field is connected via subsea pipelines to the FA Platform. All produced water generated by the FO wellfield therefore is directed to the FA Platform for treatment and discharge. Daily produced water discharge records were provided. During the audit period discharge volumes peaked in July 2015 and gradually tapered off towards February 2024. No produced water has

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					been generated or consequently discharged from the FA Platform since the platform shut down in February 2024. Following a review of available monitoring results and incident registers during the audit period a few incidents were noted where produced water was discharged above the thresholds - Incident 4773- 1st December 2017, Incident 7685-10 November 2019.
EM Pr	2011_5.5.1.2	Oil concentration of produced water shall be monitored continuously automatically and concentrations logged daily. In the event of breakdown of automatic measurements, manual measurements shall be made at least twice daily until equipment is repaired.	N	2	The FO Field is connected via subsea pipelines to the FA Platform. All produced water generated by the FO wellfield therefore is directed to the FA Platform for treatment and discharge. The platform produced water management system was equipped with an automatic online analyser. Whenever the content exceeds 40ppm, the system diverts automatically to the interceptor tank, for further cleaning. It is noted that the online analysers stopped functioning in November 2019. Alternative means were implemented to avoid uncontrolled discharge, including diverting produced water to shore for further testing and treating via the export pipelines. This process ceased in November 2022. Since November 2022 until the platform ceased generating produced water in 2024 the produced water was directed through the onboard water treatment systems and discharged without pre-emptive testing for oil

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					content. Ad hoc samples were however collected and sent to the onshore testing facilities for retrospective confirmation of oil content.
EM Pr	2011_5.5.1.3	In the event that the oil concentration reaches or exceeds 40 ppm the root cause of exceedance shall be investigated and rectified.	Y	4	As noted in comments for condition 5.5.1.1, two instances of exceedances of oil content of produced water at the FA Platform were noted during the period that the online analyser was functional (up to November 2019). Both Incident 7685 and 4773 were recorded on the incident management system and incident investigations including root cause and corrective actions were completed.
EM Pr	2011_5.5.1.4	The systems controlling the produced water discharges must be kept in good working order.	N	2	As noted in EMPR condition 5.1.2, the online analyser has not been functional since November 2019. Prior to this the online analyser was maintained and functioned according to specification.
EM Pr	2011_5.5.1.5	The monitoring results shall be filed and retained for 5 years.	Y	4	The results of monitoring that was undertaken over the preceding 5 years was presented in the monthly and quarterly reports.
EM Pr	2011_5.5.1.6	The concentration of oil in produced water as determined in Activity 5.5.1.2 shall be reported in The Monthly Report.	N	2	The produced water discharge records indicate that produced water was last discharged in February 2024. No record of the monitoring results were included in the February or March 2024 Monthly reports. Earlier monthly reports do present graphical results.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_5.5.1.7	Any discharges of produced water at or exceeding 40 ppm oil concentration shall be treated as an incident, reported and investigated accordingly.	Y	4	Following a review of available monitoring results and incident registers during the audit period a few incidents were noted where produced water was discharged above the thresholds - Incident 4773- 1st December 2017, Incident 7685-10 November 2019. These incidents were captured and addressed through the PetroSA incident management procedure.
5.5.2 Deck & Bilge Water					
EM Pr	2011_5.5.2.1	No deck or bilge water may be discharged to the sea unless the oil concentration is below 15 ppm (MARPOL standard).	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no deck or bilge water is produced directly from this field.
EM Pr	2011_5.5.2.2	Oil concentration of discharged bilge and deck water shall be monitored continuously automatically and concentrations logged daily. In the event of a breakdown of automatic measurements then manual measurements shall be made twice daily until equipment is repaired.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no deck or bilge water is produced directly from this field.
EM Pr	2011_5.5.2.3	In the event that the discharged oil concentration exceeds 15 ppm the root cause of exceedance shall be investigated and rectified.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no deck or bilge water is produced directly from this field.
EM Pr	2011_5.5.2.4	The concentration of oil in bilge water as determined in Activity 5.5.2.2 shall be reported in The Monthly Report.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no deck or bilge water is produced directly from this field.
EM Pr	2011_5.5.2.5	The monitoring results shall be filed and retained for 5 years.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no deck or bilge water is produced directly from this field.
5.5.3 Sewage					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_5.5.3 .1	Sewage shall be comminuted before discharge to the sea in accordance with MARPOL standards.	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no sewage is produced directly from this field.
ACTIVITY 5.6. GASEOUS EMISSIONS Objectives: • To reduce the volumes of green house gases emitted.					
5.6.1 Gaseous Emissions					
EM Pr	2011_5.6.1 .1	Maintain all refrigeration equipment in accordance with the scheduled maintenance program to minimise Freon release.	N/A	N/A	The FO well field has no surface infrastructure, platforms, vessels, refrigeration units, or flares and consequently no gaseous emissions are generated. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.6.1 .2	Any accidental releases of Freon shall be treated as incidents, and in addition to normal incident reporting, shall be reported to DEA.	N/A	N/A	The FO well field has no surface infrastructure, platforms, vessels, refrigeration units, or flares and consequently no gaseous emissions are generated. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.
EM Pr	2011_5.6.1 .3	Incidents shall be reported to DEA	N/A	N/A	The FO well field has no surface infrastructure, platforms, vessels, refrigeration units, or flares and consequently no gaseous emissions are generated. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_5.6.1.4	The volume of gas flared on a daily basis shall be reported in The Monthly Report.	N	2	The FO well field has no surface infrastructure, platforms, or vessels and consequently does not include an dedicated flaring equipment. However, gas flared at the FA platform could originate from any of the connected fields. Review of random monthly reports notes that the volume of gas flared at the FA Platform is not itemised and reported. Flare volumes are however recorded in a separate register. Flaring volumes were recorded and presented to the auditor from January 2015 to May 2024.
ACTIVITY 5.7. INCIDENTS & EMERGENCY REPORTING & MANAGEMENT Objectives: • To provide a coherent, planned response to any incident which could adversely affect the environment. • To improve response time and efficiency of the plans and the activities of staff members through drills and test runs. • To provide a process for the management of an incident or emergency depending upon the severity of the occurrence. • To minimise the risk of loss of solid objects overboard and to expedite the retrieval (if possible) of any objects which fall overboard. • To log the existence and location of fallen objects for future reference/action. • To notify interested parties of the existence and location of un-retrieved fallen objects. • Through post-emergency evaluations, minimise the risk of a recurrence of the incident.					
5.7.1 Liquid Spills or Leaks					
EM Pr	2011_5.7.1.1	Any incident shall be managed according to the procedure outlined in the flow diagram below. This diagram summarises the PetroSA procedures specified for incident management and oil spill contingency management. PetroSA documents should be consulted for more details on procedures and reporting instructions.	N/A	N/A	Incidents are recorded via a computer based system. The list of recorded incidents spanning the audit period was provided. No environmental incidents associated with the FO Field were specifically recorded in the incident register. Other production related incidents are however captured in the register. It is therefore the auditors understanding that there were no

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					environmental incidents at the FO field specifically.
EM Pr	2011_5.7.1.2	Liquid Incident Reporting & Management. See Figure 5.7.1	Noted	Noted	
EM Pr	2011_5.7.1.3	The incident and the results of the investigation shall form part of The Monthly Report.	N/A	N/A	Environmental Incidents are included as a reportable item in the monthly reports. It is noted that the results of the incident investigations are not included in the monthly reports. However, as noted in 5.7.1.3, no environmental incidents were reported for the FO field.
EM Pr	2011_5.7.1.4	Check and update the contact details in the oil spill contingency plan every 6 months or on notification by government or other key organisations.	N	2	The latest revision on the OSCP is dated February 2023. A selection of the contact details provided were checked and verified to be correct. It is suggested that the list be amended to include the National Sea Rescue Emergency number- 087 094 9774.
5.7.2 Materials and Equipment Lost Overboard					
EM Pr	2011_5.7.2.1	If a solid object falls overboard, the incident shall be managed according to the flow diagram below.	N/A	N/A	The FO well field has no surface infrastructure, platforms, vessels. No objects dropped overboard were reported on in the monthly reports provided. No dropped objects were recorded in the Incident register. No dropped objects associated with the last wells drilled (i.e. F-O9, F-O10, F-O11, and F-O12) were noted in the latest Notice to Mariners.
EM Pr	2011_5.7.2.2	Dropped Object Incident Response. See Figure 5.7.2	Noted	Noted	
EM Pr	2011_5.7.2.3	Any incidents shall be reported in The Monthly Report.	N/A	N/A	The FO well field has no surface infrastructure, platforms, vessels. No

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					objects dropped overboard were reported on in the monthly reports provided. No dropped objects were recorded in the Incident register. No dropped objects associated with the last wells drilled (i.e. F-O9, F-O10, F-O11, and F-O12) were noted in the latest Notice to Mariners.
ACTIVITY 5.8. STAKEHOLDER ENGAGEMENT Objectives: • To provide regular feedback to the stakeholder forum. • To establish and maintain a register of stakeholders. • To receive, process and respond to inputs from external and internal stakeholders.					
5.8.1 Stakeholder Engagement					
EM Pr	2011_5.8.1 .1	A stakeholder feedback process as detailed in the flow diagram below shall be maintained. See Figure 5.8.1	N	2	No formal stakeholder engagement register or grievance register was available and consequently the stakeholder feedback process as required is not being implemented. The only stakeholder engagement record provided was the onboard radio log. This logs interactions with other vessels in and around the safety zone of the platform. The Agulhas Forum is specifically defined as a engagement mechanism in the EMPR. The most recent Agulhas Forum meeting for which minutes are provided was in February 2019. At this meeting it was discussed and agreed with all stakeholders that the terms of reference for the Forum be reviewed. The outcome of this investigation was not provided to the

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					auditor and no further Agulhas Forum meetings have been held.
EM Pr	2011_5.8.1.2	Any feedback from stakeholders concerning offshore operations shall be reported in The Monthly Report.	N/A	N/A	No evidence of stakeholder feedback during the audit period was provided. The monthly report does not include a sub-section on stakeholder feedback. The quarterly report does include a section on Stakeholder Engagement, however this remains unchanged since February 2019 when the last Agulhas Forum Meeting was held.
ACTIVITY 5.9. ENVIRONMENTAL TRAINING AND AWARENESS Objectives: • To equip all personnel on the platform/ rig etc to perform their duties in an environmentally responsible manner through regular training. • To raise environmental awareness through feedback on environmental performance and any changes in legislation of best practices.					
5.9.1 Environmental Training and Awareness					
EM Pr	2011_5.9.1.1	A matrix detailing environmentally related training shall be developed in consultation with the Operations Environmental Leader This shall detail elements of this Environmental Management Programme that are appropriate to each work area on the facility.	Y	4	The FO Field does not have any dedicated operational staff. The fields are all operated by the FA Platform staff. The environmental training matrix for 2025 was provided. The matrix included the following topics: Waste Segregation, FA Platform Environmental Incident, Lesson learned from previous incidents, and NEMA Section 30. The matrix defines the target audience/ work area. In respect of the current status of the Platform, the key EMPR elements are catered for.
EM Pr	2011_5.9.1.2	Toolbox talks shall be used to discuss environmental awareness and to report back on environmental performance applicable to the specific work area.	Y	4	The FO Field does not have any dedicated operational staff. The fields are all operated by the FA Platform staff. Environmental awareness training and

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					toolbox talks are reported in the monthly SHEQ reports. Toolbox talk topics included in the monthly reports reviewed in the audit included: Litter control, housekeeping, noise, waste management, environmental incidents.
EM Pr	2011_5.9.1.3	Deviations of procedure by staff members shall initiate a retraining exercise.	N/A	N/A	The PetroSA Incident Management System- Group Procedure (PetroSA; 2017) does list 'any deviations from set policies; standards, procedural requirements and specification(non-conformance)' as an incident. Training is also explicitly listed as a corrective action for consideration. No environmental incidents associated with the FO Field were specifically recorded in the incident register.
EM Pr	2011_5.9.1.4	Repeated deviations from procedures after retraining shall result in disciplinary procedures being instituted against the offender(s).	N/A	N/A	No environmental incidents associated with the FO Field were specifically recorded in the incident register.
ACTIVITY 5.10. SYSTEM ADMINISTRATIVE REQUIREMENTS Objectives: • To provide a comprehensive and coherent system which accesses and stores information pertinent to environmental management from diverse sources to verify responsible environmental practices. • To provide a formal platform for reporting on environmental performance. • To monitor and audit environmental performance against pre-determined criteria. • To use formal management reviews to continuously improve the system itself and thereby environmental performance as a whole.					
5.10.1 Monitoring. The following parameters shall be monitored:					
EM Pr	2011_5.10.1.1	Produced water discharge: oil concentration to ensure <40 ppm (see Activity 4.5.1.2).	N	2	Please refer to evaluation presented in condition 5.5.1. Since November 2022 until the platform ceased generating produced water in 2024 the produced water was directed through the onboard

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					water treatment systems and discharged without pre-emptive testing for oil content. Ad hoc samples were however collected and sent to the onshore testing facilities for retrospective confirmation of oil content.
EM Pr	2011_5.10.1.2	Produced water discharge: volumes discharged.	Y	4	Daily produced water discharge records were provided. During the audit period discharges peaked in July 2015 and gradually tapered off towards February 2024. No discharge volumes have been recorded since February 2024. The field ceased operations in February 2024.
EM Pr	2011_5.10.1.3	Bilge water discharge: oil concentrations to ensure <15ppm (see Activity 4.5.2.2).	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no deck or bilge water is produced directly from this field.
EM Pr	2011_5.10.1.4	Flare emissions: Gas volume flared (see Activity 4.6.1.4).	Y	4	Please refer to evaluation presented in condition 5.5.2. Review of random monthly reports notes that the volume of gas flared is not itemised. Flare volumes are however recorded in a separate register. Flaring volumes were recorded and presented from January 2015 to May 2024.
EM Pr	2011_5.10.1.5	Solid waste production and disposal (refer Activity 4.4.1.17).	N/A	N/A	The FO well field has no surface infrastructure, platforms, or vessels and consequently no waste is generated, stored, or disposed of. The FO Field is connected via subsea pipelines to the FA Platform. The FA Platform has its own approved EMPr that must be complied with.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EMPr	2011_5.10.1.6	Marine biodiversity – colonisation of structures by alien taxa: using existing ROV footage and underwater photography surveys of biological communities on the offshore structures and sections of pipelines to monitor possible development of populations of large (>20 mm) alien species. (Biodiversity Convention). Any visual footage of marine growth / feature on infrastructure should be distributed to relevant marine ecologists for further investigation.	N	0	The required marine biodiversity monitoring was not undertaken.
EMPr	2011_5.10.1.7	Monitoring results shall be retained for 5 years.	Y	4	In instances where monitoring was undertaken, the results thereof were available.
EMPr	2011_5.10.1.8	Monitoring results shall be reported in The Monthly Report.	N	2	The FO Field is connected to the FA Platform via sub-sea pipelines and has no FO dedicated surface infrastructure. Monitoring results for all fields connected to the FA Platform are reported on in consolidated monthly and quarterly reports. The monthly report includes numerous indicators, and specifically: waste generated, produced water, drainage water, incidents, training, and marine observations. It was noted that certain monthly reports did not include monitoring results for the FA Platform deck and bilge water discharges (e.g. February 2024).
5.10.2 Auditing					
EMPr	2011_5.10.2.1	The EMPr shall be subject to an internal audit on an annual basis. This constitutes the annual performance report.	N	2	The last annual internal performance assessment report is dated January 2021 and covers the period 1 April 2019 to 31 March 2020.
EMPr	2011_5.10.2.2	The EMPr shall be subject to an external verification audit on a three yearly basis.	N	2	The last external verification audit was undertaken by RMS, dated June 2023. No evidence was provided that the

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					external audit was undertaken for the preceding period. The audit period is not clearly indicated in the RMS report.
EMPr	2011_5.10.2.3	The audits shall review and report on the auditing requirements detailed in each section of this EMPr.	Y	4	Both the internal and external audits include a checklist and compliance evaluation of all of the EMPR requirements.
5.10.3 Reporting					
EMPr	2011_5.10.3.1	The following reports shall be compiled and submitted: See Figure 4.10.1. includes: - Monthly Internal; - Quarterly PASA; - Quarterly DEA; - Annual PASA; and - Annual PetroSA EXCO	N	2	Monthly SHEQ reports were provided. The content of the monthly reports does not align fully with the stipulated requirements. The latest quarterly PASA Report was reviewed. The content of the quarterly report aligns with the stipulated requirements. Proof of submission of the 2025 quarterly reports to PASA was provided. No evidence of the DEA reports was provided.
5.10.4 Record keeping					
EMPr	2011_5.10.4.1	All records shall be retained for 5 years.	N	2	Records up to and beyond 5 years were available for certain aspects. For other requirements as listed in 5.10.4.2 no documentation was available.
EMPr	2011_5.10.4.2	The following records shall be maintained as part of the EMPr. The records may be filed in another system such as the SHEQ system. The requirements of this EMPr are satisfied if the required documents are cross-referenced for auditing purposes. • Effluent discharge volumes; • Effluent discharge quality results; • Effluent quality exceedances; • Incident reports; • Air quality monitoring; • ROV imagery of subsea conditions;	Noted	Noted	

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		• Water manifests and waste characterisation; • Waste production and disposal analyses; • Training records; • Prosecutions/ notices of non-compliance; • Stakeholder inputs and the review thereof; • Audit reports; • Results of management reviews; • Weekly, monthly and annual internal reports; • Planned maintenance reports / logs; • All previous EMPrs; • All EIAs and application for environmental authorisations; and • Any correspondence with permitting authorities such as PASA, DEA, SAMSA, etc.			
5.10.5 EMPr Review and Revision					
EM Pr	2011_5.10.5.1	The EMPr shall be subject to annual review by senior management. 1. The review shall consider the following information: • Monthly monitoring records; • Training records; • Audit reports; • Enforcement records; • Feedback from stakeholders; and • Revisions to system documents. 2. The management review shall consider whether: • All significant aspects of and risks to compliance have been identified, documented and assigned performance criteria; • There are any significant aspects of or risks to compliance which are no longer appropriate and can be removed; • Performance criteria are being met or whether other actions are required; and • The EMPr as implemented during the preceding year facilitates compliance with its' objectives and legal obligations, and if not what amendments are required.	N	0	No evidence of EMPR annual review by senior management provided.
EM Pr		The review by senior management shall be documented and the document retained for 5 years.	N	0	No documented senior management review was provided.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
ACTIVITY 5.11. DECOMMISSIONING Objectives: • To keep stakeholders informed of the F-O Gas Field decommissioning process. • To safely remove or abandon wells and infrastructure in order to minimise the risk of marine pollution. • To ensure the location and type of any dropped objects or equipment remaining on the seabed is recorded. • To prepare an Environmental Risk Assessment that provides a record for future reference. • To apply for a closure certificate.					
5.11.1 Notification of Stakeholders					
EM Pr	2011_5.11.1.1	5.11.1.1 Notify PASA, DEA, fishing stakeholders and other marine users of the commencement of decommissioning activities.	N/A	N/A	No imminent plans to commence decommissioning.
EM Pr	2011_5.11.1.2	5.11.1.2 Information regarding decommissioning activities should be communicated to SA Navy Hydrographic office so that they can be issued on Notices to Mariners and all necessary maritime communications followed to ensure marine users are kept informed of restrictions on fishing and other marine uses. A Notice to Mariners should provide: • the co-ordinates of decommissioning activities; • an indication of the decommissioning timeframes; • a special note on the hazards posed by decommissioning activities.	N/A	N/A	No imminent plans to commence decommissioning.
EM Pr	2011_5.11.1.3	5.11.1.3 Notify fishing stakeholders and other marine users of the completion of production activities and the location of abandoned infrastructure. Information regarding abandoned infrastructure should be communicated to the SA Navy Hydrographic office so that they can be indicated on Notices to Mariners and marked on relevant charts.	N/A	N/A	No imminent plans to commence decommissioning.
EM Pr	2011_5.11.1.4	5.11.1.4 Submit an application for a closure certificate (see Activity 5.11.3.7) to PASA within 180 days of the end of production in the F-O Gas Field. The application shall be accompanied by the Closure Plan (see Activity 5.11.3.6), Environmental Risk Assessment (see Activity 5.11.3.5) and Final Performance Assessment Report (see Activity 5.10.3).	N/A	N/A	No imminent plans to commence decommissioning. Based on feedback from PetroSA the production operations are effectively in a state of care and maintenance.
5.11.2 Well and Gas Field Abandonment					
EM Pr	2011_5.11.2.1	5.11.2.1 Safely abandon the wells in accordance with Activity 3.11.2 (see Section 3).	N/A	N/A	No imminent plans to commence decommissioning. See section 3.11.2 regarding the existing abandoned wells.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EMPr	2011_5.11.2.2	5.11.2.2 Remove SSXT, lost equipment and, as far as is practicable, SSIV assembly, TIFs, metering skids, flowlines, MEG pipelines and umbilicals. The process of determining the practicability of removing this infrastructure is presented in Figure 5.11.1 below..	N	2	No imminent plans to commence decommissioning. PetroSA has commissioned various studies to identify and cost various decommissioning, rehabilitation and closure strategies. Costs have been estimated to implement the decommissioning, rehabilitation and closure. Risks have been identified and accounted for in associated cost contingencies. It is noted in Section 3.11.2 that according to available information 1 well (namely F-O1) has been abandoned. According to the records the well head has been removed and therefore buy implication the SSXT has been removed. F-O1 was never include in the connected production network and therefore would not have included pipelines and associated infrastructure. Evidence that the risk appraisal process presented in figure 5.11.1 was followed for this well was not provided.
EMPr	2011_5.11.2.3	5.11.2.3 Abandoned infrastructure should be mapped and documented, and records retained by PetroSA indefinitely.	N/A	N/A	No imminent plans to commence decommissioning. This is a duplication of condition Refer to evaluation of condition 3.11.2.4.
5.11.3 Post Production Survey, Risk Assessment and Application for Closure					
EMPr	2011_5.11.3.1	5.11.3.1 Undertake a seabed survey to check for dropped objects and state of seabed post- production and prepare a report. The survey should document the following as far as possible:	Noted	Noted	No imminent plans to commence decommissioning.
EMPr	2011_5.11.3.2	5.11.3.2 Validation of the removal of infrastructure, as per EMPr provisions;	N/A	N/A	No imminent plans to commence decommissioning.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EM Pr	2011_5.11.3.3	5.11.3.3 The presence and characteristics of any abandoned infrastructure, dropped objects, waste or other materials; and	N/A	N/A	No imminent plans to commence decommissioning.
EM Pr	2011_5.11.3.4	5.11.3.4 The report should describe the state of the seabed and any observable object.	N/A	N/A	No imminent plans to commence decommissioning.
EM Pr	2011_5.11.3.5	5.11.3.5 A detailed Environmental Risk Assessment shall be undertaken for submission for approval and issuance of a Closure Certificate, consistent with the MPRDA. This assessment shall include at least the following information: • Description and location of all abandoned infrastructure; • Results of seabed survey; • Results of Risk Assessment; and • Any further monitoring requirements.	N/A	N/A	No imminent plans to commence decommissioning.
EM Pr	2011_5.11.3.6	5.11.3.6 A Closure Plan shall be prepared in terms of Section 43(3)(d) of the MPRDA.	N/A	N/A	No imminent plans to commence decommissioning.
EM Pr	2011_5.11.3.7	5.11.3.7 Compile an Application for Closure and submit to PASA within 180 days of the end of production. The application shall be accompanied by the Risk Assessment Report (see Activity 5.11.3.5), Closure plan (see Activity 5.11.3.6) and Final Performance Assessment Report (see Activity 5.10.3).	N/A	N/A	No imminent plans to commence decommissioning. Based on feedback from PetroSA the production operations are effectively in a state of care and maintenance.

7.1.2 ENVIRONMENTAL AUTHORISATION

The compliance evaluation of the EA is provided in Table 2. The conditions were rated according to the compliance evaluation criteria described in 6.2.

Table 2: Compliance evaluation of the relevant EA conditions.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
ENVIRONMENTAL AUTHORISATION: FO GAS FIELD (13/10/2011) - approved: up to 14 wells, sub-sea infrastructure, and 39km connector pipeline.					
Scope of Authorisation					
EA	EA_1	Authorisation of the activity is subject to the conditions contained in this authorisation, which form part of the	Noted	Noted	

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		environmental authorisation and are binding on the holder of the authorisation.			
EA	EA_2	The holder of the authorisation is responsible for ensuring compliance with the conditions contained in this environmental authorisation. This includes any person acting on the holderl s behalf, including but not Limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the authorisation.	Noted	Noted	
EA	EA_3	The activities authorised may only be carried out at the property as described above.	Y	4	The FO Field is located within the extent defined in the environmental authorisation- verified by overlaying the hydrographic chart and defined co-ordinates.
EA	EA_4	Any changes to, or deviations from, the project description set out in this authorisation must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further authorisation in terms of the regulations.	N/A	N/A	No deviations from the activities listed in the authorisation were noted.
EA	EA_5	This activity must commence within a period of three (3) years from the date of issue. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.	Y	4	The environmental authorisation was issued in October 2011. Based on the available wellbore schematics provided numerous wells were drilled between 1989 and 2015. Since the issuance of the EA (October 2011) at least 4 wells were drilled commencing January 2013, within the defined 3 year validity period.
EA	EA_6	Commencement with one activity listed in terms of this authorisation constitutes commencement of all authorised activities.	Noted	Noted	Refer to evaluation of condition 5 above.
EA	EA_7	This authorisation does not negate the holder of the authorisation's responsibility to comply with any other statutory	Noted	Noted	

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		requirements that may be applicable to the undertaking of the activity.			
EA	EA_8	Relevant legislation that must be complied with by the holder of this authorisation includes, inter Archaeological remains, artificial features and structures older than 60 years are protected by National Heritage Resources Act, 1999 (Act 25 of 1999), Should any archaeological artefacts be exposed during excavation for the purpose of construction, construction in the vicinity of the finding must be stopped immediately. A registered Heritage Specialist must be called to the site for inspection. Under no circumstances shall any heritage material be destroyed or removed from the site and the relevant heritage resource agency must be informed about the finding. Heritage remains uncovered or disturbed during earthworks must not be disturbed further until the necessary approval has been obtained from the South African Heritage Resources Agency and/or any of their delegated provincial agencies, Relevant provisions of International Marine Pollution Conventions International Convention for the Prevention of Pollution from Ships, 1973/1978 (MARPOL)'} Amendment of the International Convention for the Prevention of Pollution from Ships, 1973/1978 (MARPOL) (Bulletin 567 2/08); International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 (OPRC Convention); United Nations Convention on Law of the Sea, 1982 (LOSC); o Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (the London Convention) and the 1996 Protocol (the Protocol); Relevant provisions of other International Legislation o International Commission on Radiological Protection (ICRC); o International Atomic Energy Agency ('AEA) Regulations for the	Noted	Noted	It is beyond the scope of this audit to undertake a complete legal compliance audit against these and other legislative provisions. PetroSA should ensure compliance with all relevant legal provisions.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		Safe Transport of Radioactive Materiel 1984; Relevant provisions of other South African legislation Carriage of Goods by Sea Act, 1986 (Nor 1 of 1986); 0 Dumping at sea Control Act, 1980(N0. 73 of 1980); o Hazardous Substances Act, 1983 and Regulations (No. 85 of 1983); Marine Living Resources Act, 1998 (NC 18 of 1998); 0 Marine Traffic Act, 1981 (No, 2 of 1981); Marine Pollution (Control and Civil Liability) Act, 1981 (No. 6 of 1981); Marine Pollution (Prevention of Pollution from Ships) Act, 1986 (No. 2 of 1986); Marine Pollution (Intervention) Act, 1987 (No. 65 of 1987); Maritime Safety Authority Act, 1998 (No. 5 of 1998); Maritime Safety Authority Levies Act, 1998 (No. 6 of 1998); Maritime Zones Act 1994 (No. 15 of 1994); Merchant Shipping Act, 1951 (No. 57 of 1951); Mine Health and Safety Act, 1996 (No. 29 of 1996); National Environmental Management: Air Quality Act, 2004 (No. 39 of 2004); National Environmental Management: Biodiversity Act, 2004 (No. 10 of 2004); National Environmental Management: Integrated Coastal Management Act, 2008 (No. 24 of 2008); o National Environmental Management: Waste Act, 2008 (No. 59 of 2008); National Heritage Resources Act, 1999 (No, 25 of 1999); National Nuclear Energy Regulator Act, 1999 (No. 47 of 1999); o National Ports Act, 2005 (No. 12 of 2005); Nuclear Energy Act, 1999 (No. 46 of 1999); Occupational Health and Safety Act, 1993 (No. 85 of 1993) and Major Hazard Installation Regulations; 0 Sea-Shore Act, 1935 (No. 21 of 1935); Sea Birds and Seals Protection Act, 1973 (No. 46 of 1973);			

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		0 Ship Registration Act, 1998 (No. 58 of 1998); Water Act, 1998 (No. 36 of 1998); and 0 Wreck and Salvage Act, 1995 (No, 94 of 1995).			
EA	EA_9	The holder of an environmental authorisation has the responsibility to notify the competent authority of any alienation, transfer and change of ownership rights in the property on which the activity is to take place.	Noted	Noted	No information suggesting the alienation, transfer or change of ownership rights were observed.
Notification of authorisation					
EA	EA_10	The holder of the authorisation must notify every registered interested and affected party, in writing and within 12 (twelve) calendar days of the date of this environmental authorisation, of the decision to authorise the activity.	N/A	N/A	This falls outside of the audit period.
EA	EA_11	The notification referred to must - 11.1. specify the date on which the authorisation was issued; 11.2. inform the interested and affected party of the appeal procedure provided for in Chapter 7 of the Environmental Impact Assessment (EIA) Regulations, 2010; 11.3. advise the interested and affected party that a copy of the authorisation will be furnished on request; and 11.4. give the reasons for the decision.	N/A	N/A	This falls outside of the audit period.
Management of the activity					
EA	EA_12	The Environmental Management Programme (EMPr) for the construction submitted as part of the application for environmental authorisation is hereby approved. The requirements of the EMPr forms part of the conditions of the authorisation.	Noted	Noted	
EA	EA_13	The applicant must comply with the approved EMPr.	Noted	Noted	
Monitoring					
EA	EA_14	The applicant must appoint a suitably experienced Environmental Control Officer (ECO) for the development that will have the responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in this authorisation	N/A	N/A	EA_19 requires the appointment of the ECO for the development phase only and not operational phase.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		are implemented and to ensure compliance with the provisions of the EMPr.			
EA	EA_15	The ECO shall be appointed before commencement of any authorised activity.	N/A	N/A	EA_19 requires the appointment of the ECO for the development phase only and not operational phase.
EA	EA_16	Once appointed, the name and contact details of the ECO must be submitted to the Director.' Compliance Monitoring of the Department	N/A	N/A	EA_19 requires the appointment of the ECO for the development phase only and not operational phase.
EA	EA_17	The ECO shall keep record of all activities on site, problems identified] transgressions noted and a task schedule of tasks undertaken by the ECO,	N/A	N/A	EA_19 requires the appointment of the ECO for the development phase only and not operational phase.
EA	EA_18	The ECO must submit a bi-annual environmental compliance report to the Department, attention the Director: Compliance Monitoring, which indicates compliance with the conditions of the environmental authorisation and the requirements of the EMPr.	N/A	N/A	EA_19 requires the appointment of the ECO for the development phase only and not operational phase.
EA	EA_19	The ECO shall remain employed until all activities in respect of development of the gas field are completed and the development is ready for operation.	N/A	N/A	EA_19 requires the appointment of the ECO for the development phase only and not operational phase.
EA	EA_20	Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and competent authority in respect of this development	Y	4	In instances where monitoring was undertaken, the results thereof were available to the auditor.
Recording and reporting to the Department					
EA	EA_21	All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this authorisation, must be submitted to the Director: Compliance Monitoring at the Department.	Noted	Noted	
EA	EA_22	The holder of the authorisation must submit an environmental audit report upon completion of the construction and rehabilitation activities.	N/A	N/A	The FO Field has been in operation during the audit period. The last external verification audit was undertaken by RMS, dated June 2023. No evidence was provided that the external audit was undertaken for the preceding period. The audit period is not clearly indicated in the RMS report.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EA	EA_23	The environmental audit report must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the environmental authorisation conditions as well as the requirements of the EMP,	Y	4	This Regulation 34 Audit and the RMS audit undertaken in 2023, includes the specified information.
Commencement of the activity					
EA	EA_24	The authorised activity shall not commence within twenty (20) days of the date of signature of the authorisation.	N/A	N/A	Compliance with this condition falls outside of the audit period.
EA	EA_25	An appeal under section 43 of the National Environmental Management Act (NEMA), Act 107 of 1998 (as amended)} does not suspend an environmental authorisation or exemption, or any provisions or conditions attached thereto, or any directive, unless the Minister, MEC or delegated organ of state directs otherwise.	Noted	Noted	
Notification to authorities					
EA	EA_26	Fourteen (14) days written notice must be given to the Department that the activity will commence. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence. This notification period may coincide with the period contemplated in 22 above.	N/A	N/A	Compliance with this condition falls outside of the audit period.
Operation of the activity					
EA	EA_27	Fourteen (14) days written notice must be given to the Department that the activity operational phase will commence.	N/A	N/A	It is the auditors understanding that production from the FO field commenced prior to the current audit period (first gas was achieved in December 2014).
EA	EA_28	The applicant must compile an operational EMP for the operational phase of the activity or alternatively, if the applicant has an existing operational environmental management system, it must be amended to include the operation of the authorised activity.	Y	4	The approved EMPr (Section 5) addresses operational phase activities.
Site closure and decommissioning					
EA	EA_29	Should the activity ever cease or become redundant, the applicant shall undertake the required actions as prescribed by legislation at the time and comply with all relevant legal	Noted	Noted	The field is currently in care and maintenance.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		requirements administered by any relevant and competent authority at that time.			
Specific conditions					
EA	EA_30	Communication channels must be set up with the fishing industry operating off the South Coast, particularly for longlining and trawling. This would involve pre-drilling I construction notification and regular updates on the progress of the development.	N/A	N/A	The drilling and construction phase is complete.
EA	EA_31	Appropriate notices must be distributed timeously to mariners, A Notice to Mariners should provide: the co-ordinates of the well drilling and infrastructure installation activities; • an indication of the construction timeframes; • location reports of the drilling unit and installation vessels; • an indication of the 500 m safety zone around the drilling unit and installation vessels; and e a special note on any hazard posed by the anchor chains and anchors.	Y	4	The drilling and construction phase is complete. It is noted that the gas field wells are listed in the latest Notice to mariners. The wells are also identified on the relevant hydrographic chart of the area.
EA	EA_32	A Notice to Mariners must be released at the end of construction informing all key stakeholders that the drilling unit and installation vessels are off location.	N/A	N/A	The drilling and construction phase is complete and falls outside of the audit period.
EA	EA_33	The SAN Hydrographer must be notified regarding the positions of any suspended / abandoned infrastructure in order to inform the fishing industry of such obstructions through Navigation Warnings.	Y	4	It is noted that the gas field wells are listed in the latest Notice to mariners. The wells are also identified on the relevant hydrographic chart of the area.
EA	EA_34	The Applicant must ensure adequate maintenance of diesel motors and generators in order to minimise the volume of soot and unburnt diesel released to the atmosphere.	N/A	N/A	The drilling and construction phase is complete. The field does not operate any diesel motors or generators.
EA	EA_35	The Applicant must provide training and awareness to crew members of the need for thorough cleaning up of any spillages immediately after they occur in order to minimise the volume of contaminants washing off decks.	N/A	N/A	The field is in operational phase. There are no platforms or facilities at which spills could occur. The FA platform is operated under a separate EMPr.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EA	EA_36	The final positioning of the wells and other subsea infrastructure must avoid any known sensitive habitats, such as rocky outcrops and any other structural habitat feature, and any cultural heritage material identified during the seabed survey.	N/A	N/A	The field is in operational phase. The infrastructure positioning should have been audited during the planning and construction phases.
EA	EA_37	The Applicant must minimise non-essential lighting on all platforms to reduce nocturnal faunal attraction; however, such measures should not undermine work safety aspects or concerns,	N/A	N/A	The FO Field does not include any platforms or surface infrastructure.
EA	EA_38	All flight paths for service flights to platforms must be pre-planned to ensure that no flying occurs over seal and seabird colonies, coastal reserves, marine islands or estuarine systems.	N/A	N/A	The FO Field does not include any platforms or surface infrastructure.
EA	EA_39	The final design of the proposed onshore drilling and completion fluids plant must comply with applicable SANS codes (including SANS 10089-1, SANS 10131, SANS 10108, etc,) and guidelines or equivalent internationally recognised codes of good design and practice.	N/A	N/A	The drilling and completions fluids plant was erected prior to the audit period. The facility is not currently in use. No hazardous or dangerous substances are reported to be stored at the site. Compliance with the design requirements should have been verified prior to construction of the facility and as such falls outside the scope of this audit period. Compliance with this requirement must be confirmed prior to any future use of the facility.
EA	EA_40	The Applicant must implement monitoring and management measures in accordance with normal well control practise to assist in the detection and control of uncontrolled releases,	N	0	The FO wells have been shut-in and are not currently monitored.
EA	EA_41	PetroSA and the selected Contractor must ensure that there is an Oil Spill Response Plan in place to deal with accidental hydrocarbon spills prior to the commencement of the drilling programme.	N/A	N/A	Compliance with this condition was required prior to commencement of drilling, which falls outside of the audit period. However, with reference to the evaluation of EMPR Condition 5.7.1.4, the FA Platform and associated fields (including the FO Field) are addressed by the current OSCP.
EA	EA_42	An appropriate monitoring and control programme must be developed for alien invasive marine species. The programme must, at a minimum, take the following into consideration during the production phase: • All underwater inspections of infrastructure (ROV and SAT	N	0	No invasive marine species monitoring or control programme was provided.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		diver) should be used as opportunities to acquire footage (close-ups and stills) of marine life associated with the infrastructure; • Any visual footage of marine growth / features on infrastructure should be distributed to relevant authorities and marine ecologists to investigate the presence of potential invasive species; and • Should species of concern be detected: the spread thereof must be monitored over time and where possible, mitigation measures must be developed to contain the spread of alien species.			
General					
EA	EA_43	A copy of this authorisation must be kept at the property where the activity will be undertaken. The authorisation must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who works or undertakes work at the property.	Y	4	The FO Field does not include any surface infrastructure. The PetroSA team was able to provide the EA and EMPR when requested.
EA	EA_44	In terms of Regulation 43 of the regulations, 2010, the Department reserves the right to amend the conditions of this environmental authorisation should the need arise.	Noted	Noted	
EA	EA_45	Where any of the applicant's contact details change, including the name of the responsible person where the applicant is a juristic person, the physical\ or postal address and/or telephonic details, the applicant must notify the Department as soon as the new details become known to the applicant.	N	0	The details of the applicant/ holder on the EA are incorrect and require amendment.
EA	EA_46	The holder of the authorisation must notify the Department, in writing and within 48 (forty eight) hours] if any condition of this authorisation cannot be or is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance. Non-compliance with a condition of this authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the regulations.	N	0	As noted in this audit, certain conditions of the EA have not been adhered to. No proof of notification to the authority was provided.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EA	EA_47	National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the applicant or his successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the applicant with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.	Noted	Noted	

7.2 FINDINGS OF THE AUDIT

The key findings of the audit are presented in Table 3.

Table 3: Key audit findings.

Finding Ref #	EA / EMPr Ref #'s	Findings (summarised)	High-level recommendations / options
1	EMPr 5.1.1.1, 5.1.1.2, 5.1.1.3	Subsea integrity programme: risk-based ROV inspections overdue; no evidence of systematic review of inspection results; and repairs not reflected in Monthly Reports.	Undertake scheduled monitoring and inspections as per the risk-based programme, document reviews of findings, and include any remedial actions and rationale in routine internal reporting.
2	EMPr 5.1.2.1.1	Service-provider contracts do not explicitly require compliance with the applicable EMPr(s); evidence of signed clauses referencing the EMPr is absent.	When contracts are renewed or varied, consider including clear EMPr compliance clauses and cross-references to the specific EMPr sections applicable to scope. Mechanisms should be defined and implemented to ensure that service providers and contractors has clear understanding of EMPr requirements and are contractually bound thereto.
3	EMPr 5.5.1.1, 5.5.1.2, 5.5.1.4, 5.5.1.6	Produced water management gaps: historical exceedances of oil-in-water; continuous analyser out of service since Nov 2019; reliance on ad hoc/retrospective sampling; some months lack report-back on oil concentration.	Consider a fit-for-purpose monitoring approach for any future discharges, with contingency actions and consistent monthly disclosure. The effluent monitoring and discharge control systems need to be adapted to reduce the risk of discharge of contaminated water.
4	EMPr 5.6.1.4, 5.10.1.1, 5.10.1.8, 5.10.3.1	There are opportunities to improve the administrative and reporting systems to better align with the EMPr requirements: Gas flaring volumes not itemised in Monthly Reports, although a separate flare register exists; certain monitoring items (e.g., produced water oil concentration) and monthly content are occasionally absent or not fully aligned with EMPr reporting structure.	Consider a one-page monthly compliance checklist mapped to EMPr reporting items to support completeness and internal assurance.
5	EMPr 5.8.1.1	Stakeholder feedback process not maintained; no active register; Agulhas Forum minutes last in Feb 2019.	Consider proportionate stakeholder engagement for the current project status (e.g., periodic updates via agreed channels) and a simple grievance/feedback log.

Finding Ref #	EA / EMPr Ref #'s	Findings (summarised)	High-level recommendations / options
6	EMPr 5.10.1.6; EA 42	No evidence of alien/invasive marine species monitoring using available ROV/diver footage, as contemplated in EMPr/EA.	Consider integrating opportunistic biodiversity observations into any future subsea surveys, with a light screening by a marine ecologist and simple data archiving. Implement the required monitoring.
7	EMPr 5.10.2.1, 5.10.2.2, 5.10.5.1	Audit and management review cadence: last internal performance assessment noted for 2019/20; evidence of external audits not continuous; no documented annual senior management EMPr review.	Consider re-establishing a simple audit and review calendar (internal, external, management review) proportionate to current operational status. If possible align with current EMPR requirements or amend EMPr requirements.
8	EA 45, EA 46	EA administrative obligations: applicant details require update; no evidence of 48-hour notifications for known non-compliances.	Consider confirming the current holder details with the authority and agreeing a pragmatic notification approach for legacy non-compliances (if required).
9	EMPr 3.11.2.1, 3.11.3.2, 3.12.2.2.4	Well abandonment/suspension documentation: partial evidence of cement plug integrity testing; gaps in certain well completion/suspension records; close-out report content and proof of submission not fully aligned.	Consider a targeted document reconciliation for FO wells (abandoned/suspended), noting any gaps and feasible sources, and recording reasonable assumptions where records are irretrievable.
F-13	EA 40	Operational monitoring and control for uncontrolled releases: FO wells are shut-in and not currently monitored against the EA monitoring/control intent.	Consider documenting the current project status for well/field status, including how risks of uncontrolled release are monitored or otherwise managed.

Where applicable, recommendations presented in Table 3 above to address the key findings have been included in the recommended amendments and changes to the EMPr in Section 7.3.2.

7.3 CONTINUED ADEQUACY OF THE EMPR

The latest approved EMPr provided by PetroSA was evaluated (CCA Environmental (Pty) Ltd, 2011). As per the requirements of Regulation 34(3) of the EIA Regulations (GNR982), the environmental audit report contemplated in sub-regulation (1) must determine- the ability of the EMPr, to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity on an ongoing basis. The continued adequacy of the EMPr is discussed in this section of the report.

7.3.1 EMPR EVALUATION

The evaluation of the adequacy of the EMPr considers the following:

1. Compliance with the EMPr content requirements defined in Appendix 4 of the EIA Regulations (GNR982);
2. Review of latest compliance audit findings;
3. Review of the authorised activities to confirm that all relevant impacts have been identified and adequately assessed, and that relevant impact management outcomes and actions are adequate.

4. Review of the EMPr to confirm adequate measures to ensure compliance with the provisions of the EMPr.

The remaining sub-sections present the evaluation and consequent recommendations.

7.3.1.1 COMPLIANCE WITH NEMA EMPR REQUIREMENTS

Appendix 4 of the NEMA EIA Regulations provides for the requirements of an EMPr in compliance with Section 24N of the NEMA. Table 4 below provides a breakdown of the prescribed requirements, an evaluation of compliance with the current EMPr, and recommendations to address shortcomings. Note that this evaluation aims to check whether the prescript of the regulations are included in the current EMPr and does not aim to evaluate the completeness or adequacy thereof. The adequacy of the EMPr impact management outcomes and actions are evaluated in Section 7.3.1.3.

Table 4: NEMA EIA Regulations Appendix 4 Evaluation.

Requirement		Evaluation	Recommendations
NEMA Regulation 982 (2014) Appendix 4			
Appendix 4(1)(1)(a):	Details of – i. The EAP who prepared the EMPr; and ii. The expertise of that EAP to prepare an EMPr, including a curriculum vitae;	Included in Cover page	None
Appendix 4(1)(1)(b):	A detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;	Included in Section 1.4 and 2	None
Appendix 4(1)(1)(c):	A map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers;	Not included.	Suggested that a map be provided of regional marine protected areas, and critical habitats as defined in the National Marine Spatial Biodiversity Plan.
Appendix 4(1)(1)(d):	A description of the impact management outcomes, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified though the environmental impact assessment process for all phases of the development including – i. Planning and design; ii. Pre-construction activities; iii. Construction activities;	Included in sections 3, 4, and 5.	None

Requirement		Evaluation	Recommendations
	iv. Rehabilitation of the environment after construction and where applicable post closure; and v. Where relevant, operation activities;		
Appendix 4(1)(1)(f):	A description of proposed impact management actions, identifying the manner in which the impact management outcomes contemplated in paragraphs (d) will be achieved, and must, where applicable, include actions to – i. Avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation; ii. Comply with any prescribed environmental management standards or practices; iii. Comply with any applicable provisions of the act regarding closure, where applicable; ands iv. Comply with any provisions of the Act regarding financial provisions for rehabilitation, where applicable.	Included in section 3,4, and 5. It is noted that in some cases the impact management actions do not reflect current legislative updates.	Review and update relevant Impact Management Actions in relation to updated legislative requirements.
Appendix 4(1)(1)(g):	The method of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Each activity under Sections 3, 4, and 5 provide guidance on auditing compliance. Sections 3.12, 4.10, and 5.10 provide the systems administration requirements, including the auditing and reporting obligations.	The auditing requirements in the EMPr should be amended to reflect the NEMA Regulation 34 requirements and associated transitional provisions as well as the relevant amendments to the MPRDA. Since the implementation of the one-environmental-system, there is no longer a Performance Assessment obligation under the MPRDA.

Requirement		Evaluation	Recommendations
Appendix 4(1)(1)(h):	The frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Frequencies for monitoring are included in the relevant sections of the EMPr	None
Appendix 4(1)(1)(i):	An indication of the persons who will be responsible for the implementation of the impact management actions.	Responsibilities for implementation are included in the relevant sections of the EMPr	None
Appendix 4(1)(1)(j):	The time periods within which the impact management actions contemplated in paragraph (f) must be implemented;	Time periods are provided for the relevant management actions	None
Appendix 4(1)(1)(k):	The mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);	Each activity under Sections 3, 4, and 5 provide guidance on auditing compliance. Sections 3.12, 4.10, and 5.10 provide the systems administration requirements, including the auditing and reporting obligations.	The auditing requirements in the EMPr should be amended to reflect the NEMA Regulation 34 requirements and associated transitional provisions as well as the relevant amendments to the MPRDA. Since the implementation of the one-environmental-system, there is no longer a Performance Assessment obligation under the MPRDA.
Appendix 4(1)(1)(l):	A program for reporting on compliance, taking into account the requirements as prescribed by the Regulations;	Sections 3.12, 4.10, and 5.10 provide the systems administration requirements, including the auditing and reporting obligations.	None
Appendix 4(1)(1)(m):	An environmental awareness plan describing the manner in which – i. The applicant intends to inform his or her employees of any environmental risk which may result from their work; and ii. Risks must be dealt with in order to avoid pollution or the degradation of the environment; and	Section 3.3, 4.3 and 5.3 include environmental awareness and training requirements.	None

Requirement		Evaluation	Recommendations
Appendix 4(1)(1)(n):	Any specific information that may be required by the competent authority.	It is noted that the conditions of the RoD are not explicitly captured in the EMPr. These are however audited independently and therefore do not need to be included in the EMPr.	None

7.3.1.2 **AUDIT FINDINGS AND RECOMMENDATIONS**

The audit findings and relevant recommendations are presented in Section 7.2. The following are specifically noted in relation to the EMPr:

- A review of the legislative references in the EMPr need to be undertaken to update the EMPr to align with current legal requirements;
- A review of the reporting requirements of the EMPr should be undertaken to align with the current operational procedures (including reporting scope and frequency).

Where compliance with the EMPr is not reasonable or practical based on current operations, these requirements should be amended to align. Care must be undertaken to ensure that defined impact management outcomes and objectives are still achieved.

7.3.1.3 **ADEQUACY OF IMPACT MANAGEMENT**

An evaluation of the current EMPr, and the ability of the measures contained in the EMPr to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity was undertake. The approach taken included:

- Consideration of the impacts identified and presented in the EMPr, and to determine whether any additional impacts and associated management outcomes and actions should be included.
- Consideration of the current impact management actions, their adequacy and potential changes to align with good international industry practice (GIIP).

It is the opinion of the auditor that in general, the EMPr is relevant and appliable to the activities and the associated impacts and risks. It is however the auditors opinion that certain activities and associated impacts are not sufficiently provided for and should be supplemented. These are detailed in Table 5. The holder must consider these shortcomings when submitting recommendations to amend the EMPr.

Table 5: Identified shortcomings.

EMPr Section	Comments	Recommendations
5.7.1.4.	Condition 5.7.1.4 of the EMPr requires the regular update of the contact details of the OSCP. This condition does not speak to the content or revision of the remainder of the OSCP. The OSCP provided is in draft form and is outdated. This plan also relies on the oil spill drift modelling that was done for the E-BK wellfield. The E-BK	It is suggested that a condition is added to the EMPR which requires that the OSCP aligns with South Africa's National Contingency Plan, as well as other relevant legal requirements. It is recommended that PetroSA engage the relevant authorities (including SAMSA,

EMPr Section	Comments	Recommendations
	wellfield is located further offshore than the FA Platform, and in the opinion of the auditor is not representative for the prediction of oil fate and relevant environmental impacts for several spill simulations (including worst-case scenario, such as blowout from an oil well). Consideration should be given to reviewing the risk assessment component of the OSCP and if necessary, providing a more relevant Oil Spill drift model to inform the risk assessment and associated response strategies. Further the EMPr currently doesn't require approval of the OSCP.	DFFE, and PASA), and / or a suitably qualified and independent marine ecology specialist to determine the need for a updated oil spill drift model.
Activity 5.6	The current EMPr does not address the potential fugitive release of Greenhouse Gases from the wells and associated sub-sea infrastructure. The EMPr does provide for leak detection and repair in the construction (well drilling and pipelines) phase only. The potential release during operational or care and maintenance phases are not addressed. Greenhouse Gases have been declared as priority pollutants (GN710, 2017). The National greenhouse Gas Reporting Regulations identify persons who are required to report on GHG emissions. Fugitive emissions from oil and natural gas installations are identified as data provider and need to report on these emissions.	Address the monitoring, control and reporting of GHG emissions from the FO Field and associated infrastructure. Reference should be made to the legal GHG reporting obligations, as well as identifying opportunities for reduction of GHG emissions. Such measures could include avoiding continuous venting or flaring, use of high efficiency flares, and implementing a leak detection and repair system.
Section 2,3, 5	It is noted that the current FO wellfield is not in operation. Whilst the current EMPr does provide impact management outcomes or actions pertaining to well drilling and completion, the risks associated with operational phase workovers or well interventions are not specifically identified. Key risks and considerations for well workovers or intervention could include: • Well barrier verification and acceptance criteria for specific subsea interventions, to avoid unintended releases; • Management of workover/completion fluids, flowback and returns to prevent or minimize discharges to sea; and • Workover or intervention-specific monitoring, reporting and per-well environmental close-out.	In the event that interventions / well workovers are likely to be undertaken in the FO field, it is suggested that explicit provision and control for these activities be addressed in the EMPr. This could involve amending the EMPr to cater for these activities and where applicable link these activities to existing controls contained in the EMPr (e.g. in the drilling and completion EMPr). Specific consideration should be given to the following: • Scope and activities: define intervention or workover types and update EMPr activity descriptions. • Barrier management: pre-emptive verification of existing barrier integrity.

EMPr Section	Comments	Recommendations
		• Fluids/returns: mechanisms to manage and dispose of fluids. • Well control- including blowouts and necessary infrastructures and controls (e.g. BOP's). • Seabed integrity: pre-/post-job ROV surveys. • Navigational warnings and notices. • Monitoring and reporting.
Sections 3 and 10	Condition 18 of the Environmental Authorisation states: "The ECO must submit a bi-annual environmental compliance report to the Department, attention the Director: Compliance Monitoring, which indicates compliance with the conditions of the environmental authorisation and the requirements of the EMPr". Condition 5.10.2.1. of the EMPr states: " The EMPr shall be subject to an internal audit on an annual basis. This constitutes the annual performance report". Condition 5.10.2.2. of the EMPr states: "The environmental management plan shall be subject to an external verification audit on a three yearly basis.". Condition 10.3.1 of the EMPr includes a diagram outlining the reporting requirements. This diagram includes the requirement for annual performance assessment reports to be submitted to PASA. Both the EMPr requires annual Performance Assessments. The EA requires bi-annual audits by the ECO. It is the opinion of the auditor, that there is a current obligation on PetroSA to undertake a NEMA Regulation 34 Audit (independent) on an annual basis, aligned with the stipulated performance assessment cycle in the EMPr.	The competent authority should be engaged to confirm whether the NEMA Regulation 34 Audits should be undertaken on an annual basis, bi-annually, or every third year.

7.3.1.4 **ADEQUACY OF COMPLIANCE MECHANISMS**

It is necessary to evaluate the ability of the EMPr to ensure compliance with the provisions of EMPr. The EMPR provides clear mechanisms for reporting and auditing, including annual internal and external audits. It is however noted that some of the reporting requirements in the EMPr need to be reviewed/ rephrased as they still refer to 'performance assessments' and reporting to the DEA. The MPRDA requirements for Performance Assessments have been repealed and the DEA (now DFFE) is no longer the relevant competent authority for environmental matters associated with offshore production.

7.3.2 EMPR SHORTCOMINGS AND RECOMMENDATIONS

It is the auditors opinion that the 2011 EMPr does, in large part, sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity on an ongoing basis. However, certain shortcomings have been identified in the preceding sections of this audit report which should be amended. It is the auditors suggestion that the holder should consider the findings of this audit and prepare recommendations for amendment to the EMPr, as provided for in Regulation 34 (4) of the EIA Regulations. Such recommendations must be subjected to a public participation process together with the amended EMPr.

8 CONCLUSION

EIMS was appointed to undertake the Environmental Audit to assess compliance with the conditions of the 2011 EA (Department of Environmental Affairs, 2011) and associated EMPr (CCA Environmental (Pty) Ltd, 2011). A straight compliance of 33% and a weighted compliance of 58% was achieved against the requirements of the EMPr. A straight and weighted compliance of 67% was achieved against the requirements of the EA.

It is the auditors opinion that the 2011 EMPr does, in large part, sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity on an ongoing basis. However, certain shortcomings have been identified in the preceding sections of this audit report which should be amended.

PetroSA is reminded of the requirements of Regulations 34 of the EIA Regulations, 2014 with regards to findings of the adequacy of the EMPr and access to the audit report. Regulation 34 states:

4) *"Where the findings of the environmental audit report contemplated in sub-regulation (1) indicate-*
    a) *insufficient mitigation of environmental impacts associated with the undertaking of the activity; or*
    b) *insufficient levels of compliance with the environmental authorisation or EMPr and, where applicable the closure plan;*

    the holder must, when submitting the environmental audit report to the competent authority in terms of sub-regulation (1), submit recommendations to amend the EMPr or closure plan in order to rectify the shortcomings identified in the environmental audit report.

5) *When submitting recommendations in terms of sub-regulation (4), such recommendations must have been subjected to a public participation process, which process has been agreed to by the competent authority and was appropriate to bring the proposed amendment of the EMPr and, where applicable the closure plan, to the attention of potential and registered interested and affected parties, including organs of state which have jurisdiction in respect of any aspect of the relevant activity and the competent authority, for approval by the competent authority.*

6) *Within 7 days of the date of submission of an environmental audit report to the competent authority, the holder of an environmental authorisation must notify all potential and registered interested and affected parties of the submission of that report, and make such report immediately available-*
    a) *to anyone on request; and*
    b) *on a publicly accessible website, where the holder has such a website."*

9 ASSUMPTIONS, LIMITATIONS AND GAPS IN KNOWLEDGE

The following assumptions, limitations and gaps in knowledge apply to the audit:

- The information contained in this report was sourced from information and data supplied by third parties that is assumed to be complete, valid and true.
- This report is based on information available at the time of the assessment. The information, data, observations and evidence on what this report is based is beyond the control of EIMS and may change without notice. EIMS will not be liable for any loss or damage which may arise directly or indirectly because of such changes.
- Where reference is made to legislation or other statutory provisions in this report the original legislation or other statutory provisions will always take precedence, and the reader is directed to revert to the original legislation or statutes.
- The audit was limited to the approved EA (Department of Environmental Affairs, 2011) and associated EMPr (CCA Environmental (Pty) Ltd, 2011) for production in the FO production area. The audit only considered compliance and EMPr adequacy in respect of current activities (i.e. care and maintenance/ operations).
- The audit covers a 10-year period, which limits the feasibility of a fully comprehensive review of all activities and records. Findings are based on documentation provided by the facility, assessed on a sampled basis. No site inspection as undertaken as the approved activities are sub-sea wells and infrastructure. All findings and recommendations should therefore be interpreted in light of these constraints.
- A comprehensive legal compliance audit is beyond the scope of this audit.

10 REFERENCE LIST

CCA Environmental (Pty) Ltd. (2011, May). Environmental Management Programme for the F-O Production Area.

Department of Environmental Affairs. (2011, October 13). *Environmental Authorisation: Proposed development of the F-O Gas Field in Licence Block 9*. Pretoria, Gauteng, South Africa.

Lwandle Technologies (Pty) Ltd. (2010, February). Environmental Management Programme for the FA-EM Production Area.

Petroleum Agency South Africa. (2011, May 6). Approval of Addendum to the environmental management programme (EMPR) in terms of the requirements of the Minerals and Petroleum Resources Development Act, 2002 (Act no28 of 2002). . Cape Town, South Africa.