ENVIRONMENTAL IMPACT MANAGEMENT SERVICES

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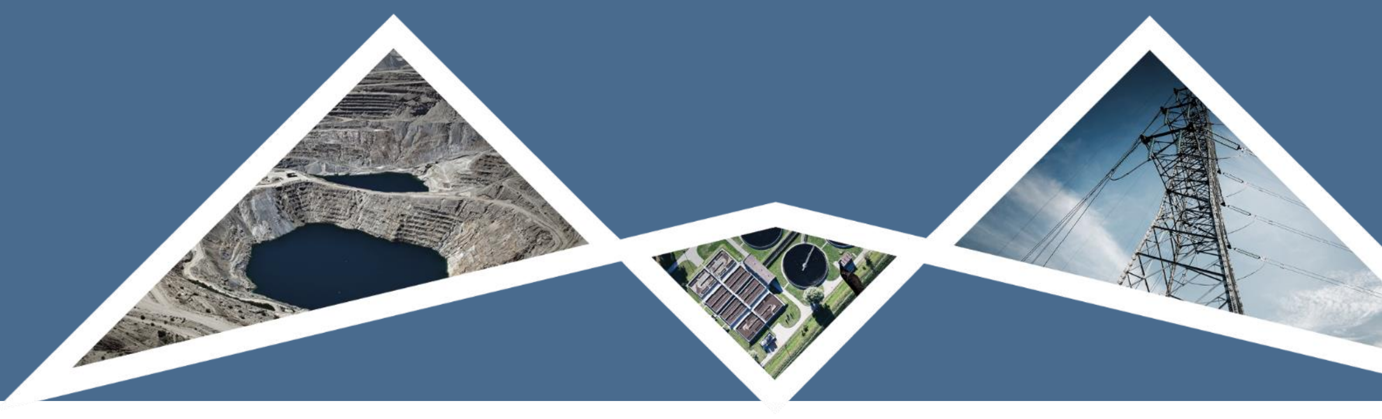
ENVIRONMENTAL AUDIT REPORT

PETROSA OFFSHORE PRODUCTION RIGHT: ORIBI-ORYX PRODUCTION AREA



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	NAME	SIGNATURE	DATE
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REVISION AND AMENDMENTS

REVISION DATE:	REV #	DESCRIPTION
2026/08/04	ORIGINAL DOCUMENT	Audit Report

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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 Record of Decision (RoD[1]) and Environmental Management Programme (EMPr) for the Oribi/Oryx 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 RoD and associated EMPr. **This audit report is relevant to the Oribi/Oryx Production Area and associated RoD and EMPr** (PASA ref: 12/4/1106/2/2/2).

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 environmental authorisation, 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 2010 - 2025. The scope of the audit is to assess compliance with the requirements of the RoD and EMPr for the Oribi/Oryx 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 total of 114 conditions (commitments) were identified in the EMPr[2]. 51 of these conditions were considered not applicable to the current phase of the project. Of the applicable conditions 12 were regarded as being fully compliant, 36 non-compliant and the remaining 15 as partially complaint. Utilising this scoring system, a total **straight compliance** score of **10,05%** was obtained for the EMPr and a **weighted compliance** score of **30,95%.**

A total of 15 conditions (commitments) were identified in the RoD[3]. 5 of these conditions were considered not applicable to the current phase of the project. Of the applicable conditions 1 was regarded as being fully compliant, 2 non-compliant and the remaining 7 as partially complaint. Utilising this scoring system, a total **straight compliance** score of **10,00%** was obtained for the RoD and a **weighted compliance** score of **45,00%.**

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 2010 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.

[1] Please note that the EIA and subsequent approval of the EMPR predates the requirement for an Environmental Authorization under the National Environmental Management Act.
[2] The applicable EMPr is dated February 2010 and is compiled by Lwandle Technologies
[3] The applicable EA is dated 20 April 2011 (12/4/1/06/2/2/2)

1 INTRODUCTION

The Petroleum Oil and Gas Corporation of South Africa (Pty) Ltd (PetroSA) is the holder of a 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 Record of Decision (RoD) and associated Environmental Management Programme (EMPr). 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 RoD and EMPr must, for the period during which the RoD and EMPr remain valid, ensure that the compliance with the conditions of the EMPr and RoD are audited.

This report aims to comply with these obligations to audit compliance with the RoD 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-EM and Oribi/Oryx. Each of these areas has its own RoD and associated EMPr. **This audit report is relevant to the Oribi/Oryx Production Area and associated RoD and EMPr.** Oribi/Oryx is located approximately 140 km south-west of Mossel Bay. The mining lease area measures 83.5 km^2. Production rights expired in January 2023 and are currently awaiting PASA decision on the renewal. Oribi-Oryx stopped production in March 2013. PetroSA requested time from PASA to re-study the field for potential production re-entry as PetroSA believe that there is still remaining production potential in the block.

There are five production wells associated with Oribi-Oryx (

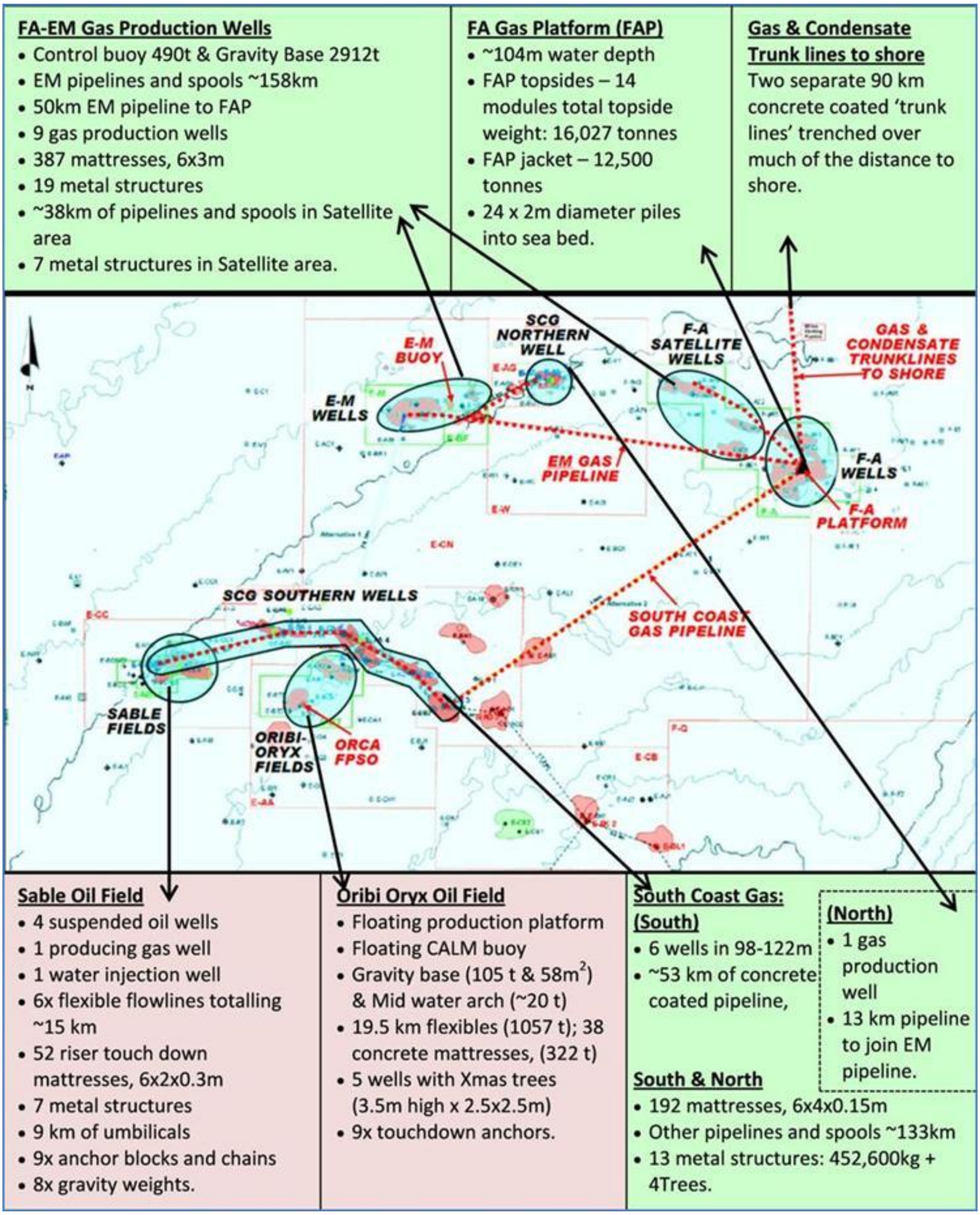

Figure 1). The associated ORCA platform was removed from the field in March 2013. Only wells remain, which are now linked to the FA platform. Wells E-AR02P, E-AR03P, E-BT01P, E-BT1 and E-BT5 were online until March 2013, except E-BT1 which was shut-in (i.e. in suspension but not decommissioned) in March 2000. All five Oribi/Oryx wells are currently shut-in. Figure 2 provides a locality map showing the location and extent of the production right and the Oribi/Oryx Production area.

An Record of Decision (RoD) was issued in 2006 for the Oribi / Oryx production area. The current approved EMPr prepared by Lwandle Technologies (Pty) Ltd in February 2010 caters for the impact management outcomes and actions applicable to offshore production activities for the Oribi/Oryx production area.

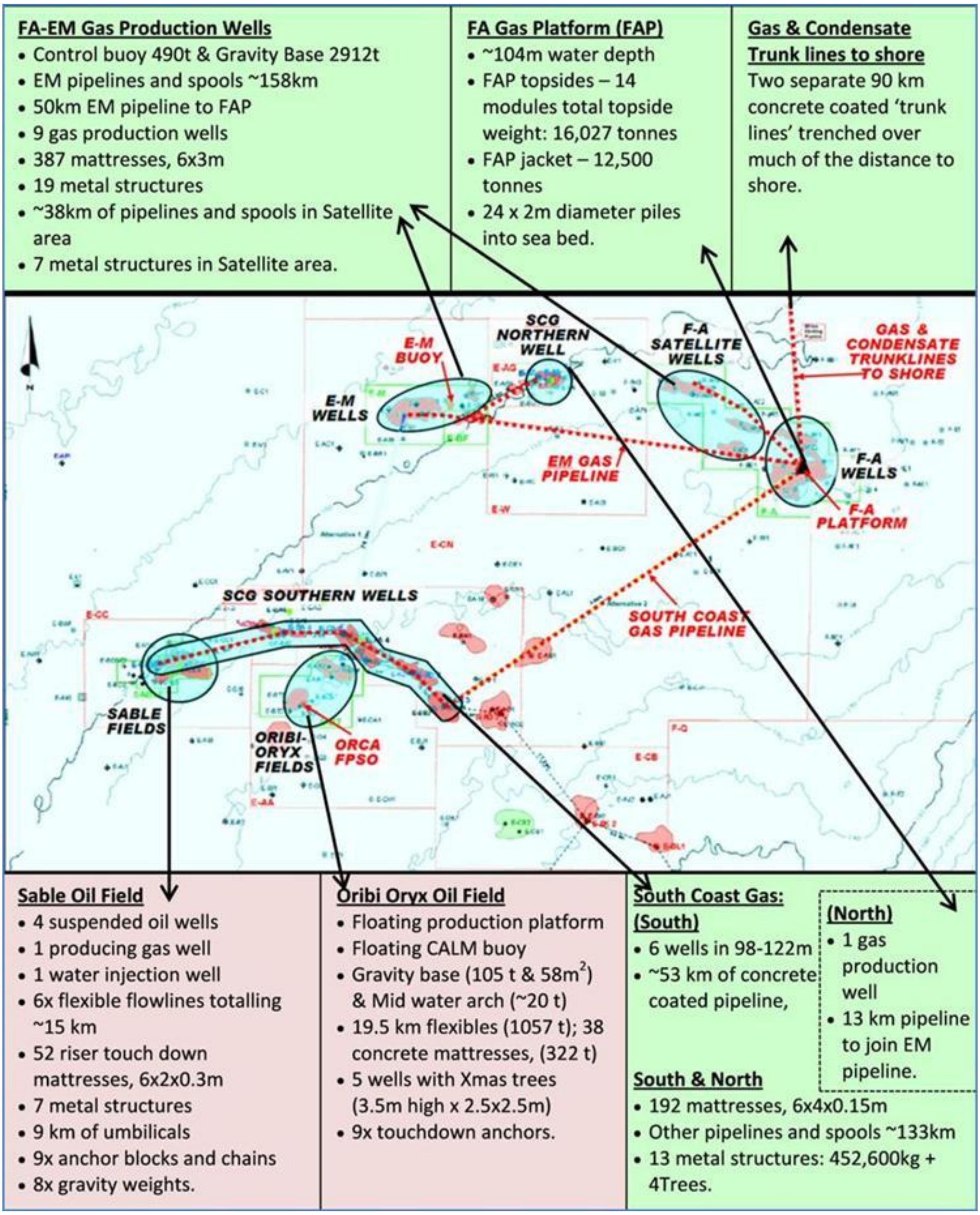

Figure 1: PetroSA Wells and Subsea Network

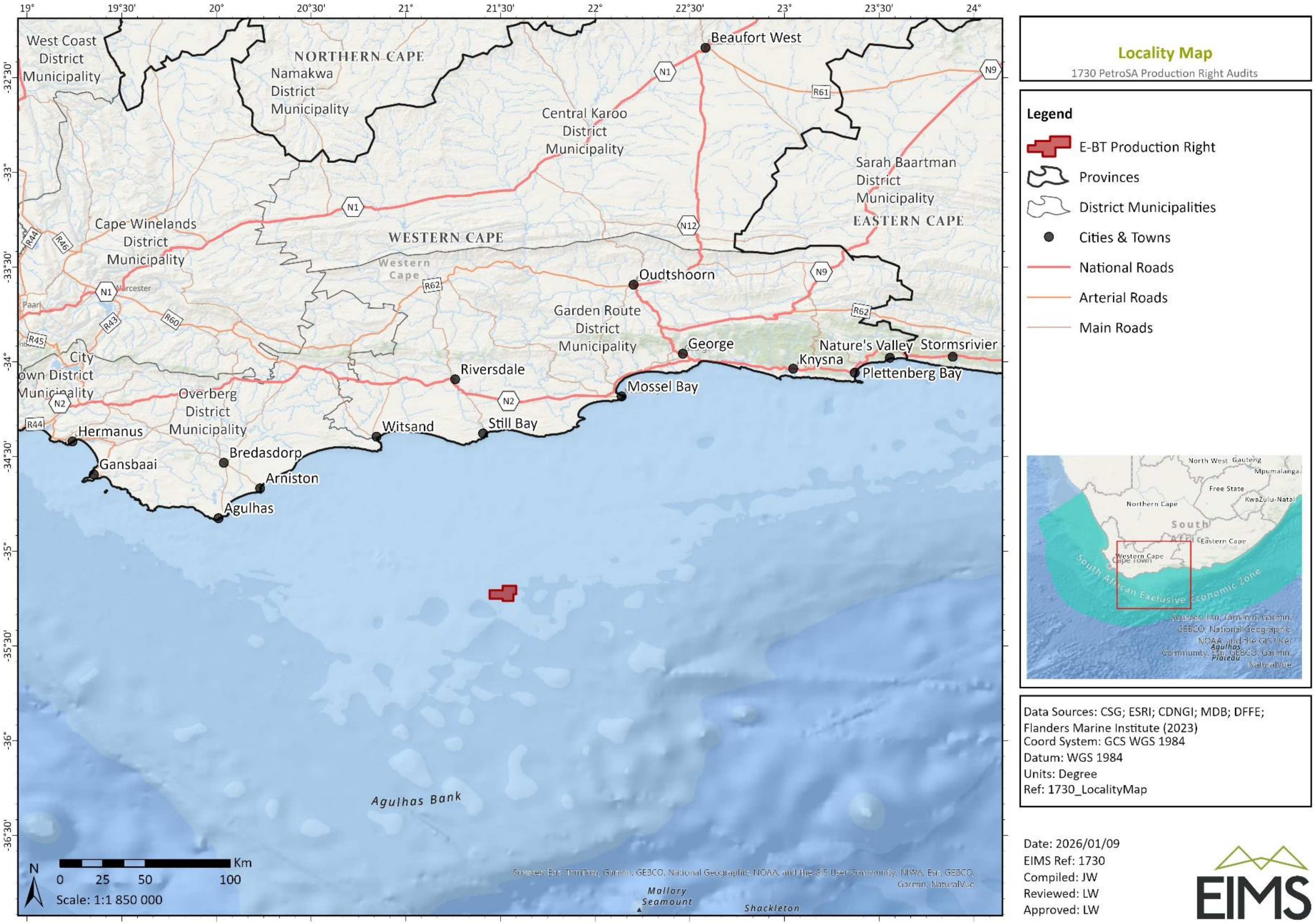

Figure 2: Locality map.

3 LEGISLATIVE FRAMEWORK

Regulation 54(a)(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 54 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 John von Mayer from EIMS.

4.1 EXPERTISE OF THE AUDITOR

Mr John von Mayer is a senior consultant at EIMS and has been involved in numerous significant projects the past 17 years. He has experience in Project Management, small to large scale Environmental Impact Assessments, Environmental Auditing, Water Use Licensing, and Public Participation. He is a Registered Professional Natural Scientist (400336/11) with the South African Council Natural and Scientific Professions (SACNASP) as well as a registered EAPASA Environmental Practitioner (2019/1247).

4.2 DECLARATION OF INDEPENDENCE

*I, **John von Mayer**, 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 RoD 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 RoD 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 RoD & 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 since the last NEMA Regulation 34 Audit or MPRDA Performance Assessment. The period of assessment for the Oribi/Oryx audit is 2010 – 2025.

The scope of this audit is defined as follows:

- Compliance with the requirements of the 2006 RoD in so far as it relates to ongoing production activities during the audit period (2010 – 2025); and
- Compliance with the requirements of the approved EMPr (Lwandle Technologies,2010) in so far as it relates to ongoing production activities during the audit period (2010 – 2025).

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 RoD 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 approved RoD and EMPr. Findings from the audit that did not relate to an RoD 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.
- Not Verified: Where the auditor could not confirm compliance due to insufficient, incomplete or unavailable evidence, the term "Not Verified" has been used as an evidentiary status. This does not constitute a formal compliance rating and does not replace the rating categories defined above. Where the absence of evidence relates to a condition that requires active implementation, record keeping, labelling, monitoring or reporting, the auditor may, depending on the nature of the condition and the available evidence, rate the condition as Partially Compliant or Non-Compliant. "Not Verified" is therefore used only to explain the evidentiary basis for the finding and should not be interpreted as confirmation of compliance.

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 RoD and EMPr requirements, the compliance evaluation results, a summary of findings, and an analysis of the ongoing adequacy of the EMPr.

A total of 114 conditions (commitments) were identified in the EMPr[4]. 51 of these conditions were considered not applicable to the current phase of the project. Of the applicable conditions 12 were regarded as being fully compliant, 36 non-compliant and the remaining 15 as partially complaint. Utilising this scoring system, a total **straight compliance** score of **10,05%** was obtained for the EMPr and a **weighted compliance** score of **30,95%.**

A total of 15 conditions (commitments) were identified in the RoD. 5 of these conditions were considered not applicable to the current phase of the project. Of the applicable conditions 1 was regarded as being fully compliant, 2 non-compliant and the remaining 7 as partially complaint. Utilising this scoring system, a total **straight compliance** score of **10,00%** was obtained for the RoD and a **weighted compliance** score of **45,00%.**

[4] The applicable EMPr is dated February 2010 and is compiled by Lwandle Technologies

7.1 COMPLIANCE EVALUATION

The compliance evaluation of the EMPr and RoD is provided in Table 1 and Table 2 respectively. 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
Activity 1: ACTIVITY 1. LEAK/ SPILL PREVENTION					
Activity 1.1: Subsea Infrastructures Maintenance and Monitoring					
EMPr	2010_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.	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 . From the Risk Based Sub-sea Inspection Record it does not appear that any subsea inspections for Oribi/Oryx field took place.
EMPr	2010_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.
EMPr	2010_1.1.3	Any repairs shall be reported in The Monthly Report	N/A	N/A	No repairs specific to Oribi/Oryx were noted in the latest subsea inspection report and subsea inspections for Oribi/Oryx are overdue. According to the risk based programme the Oribi/Oryx subsea inspections are overdue.
EMPr	2010_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 (Activity 7.1).	Y	4	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.
Activity 1.2: Interaction with Shipping					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EMPr	2010_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	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.
Activity 1.2.2: Other Shipping in the Area					
EMPr	2010_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.	N	2	No proof could be provided regarded navigational warnings related to the ORCA platform during the period that the ORCA was operational. Of the date that the ORCA was decommissioned there is no surface infrastructure associated with the Oribi / Oryx Field. Abandoned and suspended well heads are presented in the annual notice to mariners.
EMPr	2010_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 • Collisions, near misses or other transgressions	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No proof of navigational warnings and radio communications could be provided for pre-2013 activities for the ORCA Platform, which was only decommissioned in March 2013.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		with associated pollution risks will be treated as incidents and handled according to the procedure detailed under Activity 7.			
Activity 1.3: Workshops and repairs					
EMPr	2010_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 (Activity 3).	Noted	Noted	Verified through subsequent conditions in Section 1.3.
EMPr	2010_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	Not verified	Compliance could not be verified. Production was ceased in 2013 and there is no reasonable of feasible manner of verify compliance with this condition retrospectively.
EMPr	2010_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	Not verified	Compliance could not be verified. Production was ceased in 2013 and no repair or servicing reports were available for pre-2013 activities at the ORCA platform to verify this condition and there is no reasonable of feasible manner of verify compliance with this condition retrospectively.
EMPr	2010_1.3.4	Any spills of liquids shall be treated as an incident and handled according to the procedure detailed under Activity 7.1 below.	Y	4	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.
EMPr	2010_1.3.5	Any loss of objects overboard shall be treated as an incident and handled according to the procedure detailed under Activity 7.2 below	Y	4	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 the incident register.
ACTIVITY 2. POLLUTION PREVENTION - SUPPORT SERVICES					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EMPr	2010_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.	Y	4	PetroSA provided copies of the following procedures: Foreign Object Debris and Dropped Object Programme (Indwe; 2025), Flight Operations Manual (Indwe; 2021), Helicopter Operations Emergency Call Out and Response Procedure (PetroSA; 2025). The procedures do include operational measures to prevent objects, tools, components, materials, from being released, dislodged, or lost from helicopters or associated equipment.
EMPr	2010_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	Not verified	The Flight Operations Manual (Indwe; 2021) only requires a minimum flight altitude of 1500 ft (457.2 m) outside of the controlled airspace. No other data was available to verify this condition and there is no reasonable of feasible manner of verify compliance with this condition retrospectively.
EMPr	2010_2.1.3	Helicopter flight logs will be kept to demonstrate compliance with set flight paths.	N	0	No flight logs were provided for activities at the ORCA platform before 2013.
ACTIVITY 3. CHEMICAL STORAGE AND HANDLING					
Activity 3.1: Measures for Chemical Storage and Handling					
EMPr	2010_3.1.1	A chemical register shall be maintained by the facility which will detail: o All chemicals used and stored by the facility o Chemical characterisation of each chemical including SABS class and hazard rating o Specific storage handling or disposal requirements for each chemical including Personal Protective Equipment o Emergency response actions for each chemical	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No chemical register could be provided for pre-2013 activities at the ORCA platform .

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		o The process used to verify the information contained in the register			
EMPr	2010_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	Not verified	Oribi-Oryx operations stopped in 2013 and operating staff was released. No proof was provided regarding chemical storage conditions at ORCA platform prior to 2013.
EMPr	2010_3.1.3	All chemicals shall have current Material Safety Data Sheets (MSDS) prominently displayed at the location of storage and use	N/A	Not verified	Oribi-Oryx operations stopped in 2013 and operating staff was released. No chemical storage is currently taking place. No MSDS were provided for pre-2013 activities to verify this condition and there is no reasonable of feasible manner of verify compliance with this condition retrospectively.
EMPr	2010_3.1.4	Incompatible chemicals shall not be stored in the same location	N/A	Not verified	Oribi-Oryx operations stopped in 2013 and operating staff was released. No waste or chemical register was available for pre-2013 activities at ORCA platform.
EMPr	2010_3.1.5	Personnel using chemicals shall be trained in their use, disposal and clean-up.	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No training information was available for pre-2013 activities at ORCA platform.
EMPr	2010_3.1.6	Any chemicals which are used at a location distant from their storage shall be transported in drip trays.	N/A	Not verified	Oribi-Oryx operations stopped in 2013 and operating staff was released. No information is available for pre-2013 activities to verify compliance with this condition and there is no reasonable of feasible manner of verify compliance with this condition retrospectively.
EMPr	2010_3.1.7	Expired chemicals shall be labelled as waste and treated in accordance with the disposal requirements specified in their MSDS	N/A	Not verified	Oribi-Oryx operations stopped in 2013 and operating staff was released. . No information is available for pre-2013 activities to verify compliance with this condition and there is no reasonable of feasible manner of verify compliance with this condition retrospectively.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EMPr	2010_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 7.1 below	N/A	Not verified	Oribi-Oryx operations stopped in 2013 and operating staff was released. No information is available for pre-2013 activities to verify this condition and there is no reasonable of feasible manner of verify compliance with this condition retrospectively.
EMPr	2010_3.1.9	Any loss of chemicals overboard shall be treated as an incident and handled according to the procedure detailed under Activity 7.1.	N/A	Not verified	Oribi-Oryx operations stopped in 2013 and operating staff was released. No information is available for pre-2013 activities to verify this condition.
ACTIVITY 4. SOLID WASTE MANAGEMENT					
Activity 4.1: Measures necessary for Solid Waste Management					
EMPr	2010_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	0	Formal annual waste management review is not carried out. Operations ceased in 2013 and no waste management records are available for pre-2013 activities at the ORCA platform.
EMPr	2010_4.1.2	Waste Management Hierarchy- see Figure 1.	Noted	Noted	This is not an auditable condition.
EMPr	2010_4.1.3	The facility shall develop and maintain a Waste Register which shall detail: o Each waste produced by the facility o Their source o Their SABS class and hazard rating o Their disposal methods o Any specific precautions or legislative requirements	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No waste registers could however be provided for pre-2013 activities at the ORCA platform.
EMPr	2010_4.1.4	Waste Register: see Figure 2.	Noted	Noted	This is not an auditable condition.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EMPr	2010_4.1.5	The Waste Register shall be reviewed and updated annually	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No waste registers could however be provided for pre-2013 activities at ORCA platform.
EMPr	2010_4.1.6	Waste shall be segregated into the following categories. Recyclables shall be stored separately as shall hazardous waste. See Figure 3.	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No monthly reports, waste registers or disposal records could however be provided for pre-2013 activities at the ORCA platform.
EMPr	2010_4.1.7	All wastes shall be handled according to the flow diagram below while awaiting transport to disposal sites. See Figure 4.	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No monthly reports, waste registers or disposal records could however be provided for pre-2013 activities.
EMPr	2010_4.1.8	No waste may be stored for more than 30 days on any facility without formal permission from DEA.	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No monthly reports, waste registers or disposal records could however be provided for pre-2013 activities to verify this condition.
EMPr	2010_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	Not verified	Oribi-Oryx operations stopped in 2013 and operating staff was released. No waste storage specifications were available for pre-2013 activities to verify this condition and there is no reasonable of feasible manner of verify compliance with this condition retrospectively.
EMPr	2010_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	Not verified	Oribi-Oryx operations stopped in 2013 and operating staff was released. No monthly reports, waste registers or disposal records could however be provided for pre-2013 activities to verify this condition and there is no reasonable of feasible manner of verify compliance with this condition retrospectively.
EMPr	2010_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	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No monthly reports, waste registers or disposal records could however be provided for pre-2013 activities.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EMPr	2010_4.1.12	Sewage shall be treated as per Section 5.3.	Noted	Noted	Already verified under condition 5.3.
EMPr	2010_4.1.13	Waste removal from the platform or vessel shall be handled according to the following flow diagram. See Figure 5.	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No monthly reports, waste registers or disposal records could however be provided for pre-2013 activities.
EMPr	2010_4.1.14	The offshore facility shall develop and maintain a waste manifest system which details: § 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)	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No waste manifest was available for pre-2013 activities
EMPr	2010_4.1.15	A safe disposal certificate shall be issued for each load of hazardous waste.	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No proof of disposal certificates were provided for pre-2013 activities.
EMPr	2010_4.1.16	The safe disposal certificate shall be filed in the waste manifest	N/A	Not verified	Oribi-Oryx operations stopped in 2013 and operating staff was released. No waste manifest was available for pre-2013 activities to verify this condition.
EMPr	2010_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	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No Monthly reports, waste registers or disposal records could however be provided for pre-2013 activities.
EMPr	2010_4.1.18	Waste disposal records shall be stored for submission to the Waste Management Officer should the Officer at DEA require it.	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No waste registers or disposal records could however be provided for pre-2013 activities.
EMPr	2010_4.1.19	All personnel shall receive regular training on the handling and management of waste	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No training information was available for pre-2013 activities.
ACTIVITY 5. DISCHARGE OF EFFLUENT					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
Activity 5.1: Produced Water					
EMPr	2010_5.1.1	No produced water may be discharged to the sea unless the oil concentration is below 40ppm. 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 100ppm, further discharged produced water oil content should be managed such that the monthly mean concentration is equal to or less than 40ppm.	N	2	All produced water was treated and discharged overboard. The oil content was monitored pre-2013 by sampling and analysing in the onboard lab 4 times a day. Later on an online analyser was also installed. Daily average oil concentrations were reported in the daily production report, however copies of these reports are not available. The information presented was provided through discussion with the auditee
EMPr	2010_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	All produced water was treated and discharged overboard. No produced water monitoring records relating to oil concentrations are available for pre-2013 activities. The oil content was monitored pre-2013 by sampling and analysing in the onboard lab 4 times a day. Daily average oil concentrations were reported in the daily production report, however copies of these reports are not available
EMPr	2010_5.1.3	In the event that the oil concentration reaches or exceeds 40ppm the root cause of exceedance shall be investigated and rectified	N/A	Not verified	All produced water was treated and discharged overboard. No records are available with respect to investigations regarding exceedances of the oil concentrations and no monthly reports were available for pre-2013 activities to verify this condition.
EMPr	2010_5.1.4	The systems controlling the produced water discharges must be kept in good working order	N	2	All produced water was treated and discharged overboard. No produced water monitoring records are available for pre-2013 activities. The oil content was monitored pre-2013 by sampling and analysing in the onboard lab 4 times a day. Later on an online analyser was also installed. Daily average oil concentrations were reported in the daily production report, however no service reports are in place for pre-2013

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					activities at the ORCA platform to confirm if the systems were kept in working order.
EMPr	2010_5.1.5	The monitoring results shall be filed and retained for 5 years.	N/A	N/A	Not applicable since operations stopped in 2013, which is over 5 years ago.
EMPr	2010_5.1.6	The concentration of oil in produced water as determined in 5.1.2 shall be reported in The Monthly Report	N	0	No monthly reports are available for pre-2013 activities at the ORCA platform
EMPr	2010_5.1.7	Any discharges of produced water at or exceeding 40ppm oil concentration shall be treated as an incident, reported and investigated accordingly.	N/A	Not verified	No data is available for pre-2013 activities at the ORCA platform to verify adherence to this condition.
Activity 5.2: Deck & Bilge Water					
EMPr	2010_5.2.1	No deck or bilge water may be discharged to the sea unless the oil concentration is below 15ppm (MARPOL standard)	N	0	All deck & bilge water was collected, treated and discharged overboard. No data is available for pre-2013 activities at the ORCA platform relating to discharges of deck and bilge water.
EMPr	2010_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	0	All deck & bilge water was collected, treated and discharged overboard. No data is available for pre-2013 activities at the ORCA platform relating to discharges of deck and bilge water.
EMPr	2010_5.2.3	In the event that the discharged oil concentration exceeds 15ppm the root cause of exceedance shall be investigated and rectified.	N/A	Not verified	All deck & bilge water was collected, treated and discharged overboard. No data is available for pre-2013 activities at the ORCA platform relating to discharges of deck and bilge water to verify compliance to this condition
EMPr	2010_5.2.4	The concentration of oil in bilge water as determined in 5.1.2 shall be reported in The Monthly Report	N	0	Oil concentrations were not provided for pre-2013 activities at the ORCA platform

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EMPr	2010_5.2.5	The monitoring results shall be filed and retained for 5 years.	N/A	N/A	Not applicable since operations stopped in 2013, which is over 5 years ago.
Activity 5.3: Sewage					
EMPr	2010_5.3.1	Sewage shall be comminuted before discharge to the sea in accordance with MARPOL standards.	N	0	No sewage disposal records or procedures were available for pre-2013 activities at ORCA platform.
ACTIVITY 6. GASEOUS EMISSIONS					
Activity 6.1: Gaseous Emissions					
EMPr	2010_6.1.1	Maintain all refrigeration equipment in accordance with the scheduled maintenance program to minimise Freon release.	N	0	No maintenance records for refrigeration equipment were available for pre-2013 activities at the ORCA platform to verify this condition
EMPr	2010_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	Not verified	No records regarding incidents of refrigerant releases were available for pre-2013 activities to verify this condition
EMPr	2010_6.1.3	Incidents shall be reported to DEA.	N/A	N/A	This condition is a duplication of what is required by condition 6.1.2.
EMPr	2010_6.1.4	The volume of gas flared on a daily basis shall be reported in The Monthly Report	N	2	No monthly reports were available. There was no flare metering, so the gas volumes were calculated from the metered oil volumes and the Gas-Oil-ratio of each reservoir. Gas flared calculated volumes were provided.
ACTIVITY 7. INCIDENTS & EMERGENCY REPORTING & MANAGEMENT					
Activity 7.1: Liquid Spills or Leaks					
EMPr	2010_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	N	2	PetroSA Incident Management System – Group Procedure (QAL/PR/COR/002, Revision 02, 2017/11/13, authored by M. Mokhothu and approved by G. Vena) aligns well with the process flow in Figure 1. However, no incident records are

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		and oil spill contingency management. PetroSA documents should be consulted for more details on procedures and reporting instructions.			available for pre-2013 activities to confirm how the incidents were managed.
EMPr	2010_7.1.2	Liquid Incident Reporting & Management- see Figure 1.	Noted	Noted	Noted. Related to 7.1.1 above.
EMPr	2010_7.1.3	The incident and the results of the investigation shall form part of The Monthly Report	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No monthly reports are available for pre-2013 activities.
EMPr	2010_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 however the scope of this OSCP does not include the oribi/oryx field. 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.
Activity 7.2: Materials and Equipment Lost Overboard					
EMPr	2010_7.2.1	If a solid object falls overboard, the incident shall be managed according to the flow diagram below.	N/A	Not verified	No monthly reports or incident registers were available for pre-2013 activities to confirm objects lost overboard management or actions at the ORCA platform.
EMPr	2010_7.2.2	See Figure 2. -Dropped Object Incident Response	Noted	Noted	This is not an auditable condition.
EMPr	2010_7.2.3	Any incidents shall be reported in The Monthly Report.	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No monthly reports were available for pre-2013 activities.
ACTIVITY 8. STAKEHOLDER ENGAGEMENT					
Activity 8.1: Stakeholder Engagement					
EMPr	2010_8.1.1	A stakeholder feedback process as detailed in the flow diagram below shall be maintained. See Figure 1.	N	0	No proof of stakeholder engagements were provided to the auditors

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EMPr	2010_8.1.2	Any feedback from stakeholders concerning offshore operations shall be reported in The Monthly Report	N/A	Not verified	No functional stakeholder feedback process is in place to be able to verify this condition.
ACTIVITY 9. ENVIRONMENTAL TRAINING AND AWARENESS					
Activity 9.1: Environmental Training and Awareness					
EMPr	2010_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 plan that are appropriate to each work area on the facility.	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No training matrix was provided for pre-2013 activities
EMPr	2010_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.	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No proof of toolbox talks was provided for pre-2013 activities.
EMPr	2010_9.1.3	Deviations of procedure by staff members shall initiate a retraining exercise	N/A	Not verified	Oribi-Oryx operations stopped in 2013 and operating staff was released. It is not clear if any deviations of procedure took place prior to 2013.
EMPr	2010_9.1.4	Repeated deviations from procedures after retraining shall result in disciplinary procedures being instituted against the offender(s)	N/A	Not verified	Oribi-Oryx operations stopped in 2013 and operating staff was released. It is not clear if any deviations of procedure took place prior to 2013.
ACTIVITY 10. SYSTEM ADMINISTRATIVE REQUIREMENTS					
Activity 10.1: Monitoring The following parameters shall be monitored:					
EMPr	2010_10.1.1	Produced water discharge: oil concentration to ensure <40ppm. Section 5.1.2	N	2	Oribi-Oryx operations stopped in 2013 and operating staff was released. Produced water volumes were provided however oil concentrations of the produced water were not

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					made available. Since November 2022 until the FA platform ceased generating produced water in 2024 the produced water from Oribi/Oryx was directed through the onboard 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.
EMPr	2010_10.1.2	Produced water discharge: volumes discharged	Y	4	Produced water volumes were provided for the audit period.
EMPr	2010_10.1.3	Bilge water discharge: oil concentrations to ensure <15ppm. Section 5.2.2	N	0	Deck and bilge water is not applicable to the current situation and only relevant to the FA platform, which has a separate EMPr and audit requirement. No records are available for the ORCA platform for pre-2013 activities.
EMPr	2010_10.1.4	Flare emissions: Gas volume flared Section 6	Y	4	Gas flared volumes were provided. There was no flare metering, so the gas volumes were calculated from the metered oil volumes and the Gas-Oil-ratio of each reservoir.
EMPr	2010_10.1.5	Solid waste production and disposal (refer Section 4.17)	N	0	No waste disposal records are available for the ORCA platform for pre-2013 activities.
EMPr	2010_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).	N	0	The required marine biodiversity monitoring was not undertaken.
EMPr	2010_10.1.7	Monitoring results shall be retained for 5 years.	Y	4	Monitoring results for certain aspects were available, such as volumes of produced water, however other results were not available, such as oil concentrations of the produced water. In instances where monitoring was undertaken, the results thereof were available.
EMPr	2010_10.1.8	Monitoring results shall be reported in The Monthly Report	N	0	Oribi-Oryx operations stopped in 2013 and operating staff was released. No monthly reports for pre-2013 activities.
Activity 10.2: Auditing					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EMPr	2010_10.2.1	The environmental management plan 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 ending March 2020.
EMPr	2010_10.2.2	The environmental management plan 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 external audit was undertaken for the preceding period. The audit period is not clearly indicated in the RMS report.
EMPr	2010_10.2.3	The audits shall review and report on the auditing requirements detailed in each section of this management plan	Y	4	The RMS Audit includes a checklist and compliance evaluation of all of the EMPR requirements.
Activity 10.3: Reporting					
EMPr	2010_10.3.1	The following reports shall be compiled and submitted (see Figure): - Monthly Internal Report (see figure for content). - Quarterly PASA Report (see figure for content). - Quarterly DEA Report (see figure for content). - Annual Performance Assessment Report (PASA). - Annual PetroSA EXCO Report (see figure for content).	N	2	No monthly reports were available for pre-2013 activities. No quarterly reports were provided either. Annual performance assessments were provided and proof of submission of PASA was also provided for these, however the last PAR report was dated 2023, and the previous PAR report was submitted in 2009. No annual PetroSA EXCO report was provided to the auditors.
Activity 10.4: Record keeping					
EMPr	2010_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 10.4.2 no documentation was available.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EMPr	2010_10.4.2	The following records shall be maintained as part of the Environmental Management Plan. The records may be filed in another system such as the SHEQ system. The requirements of this Environmental Management Plan are satisfied if the required documents are cross-referenced for auditing purposes. • Effluent discharge volumes • Effluent discharge quality results • Effluent quality exceedances • ROV imagery of subsea conditions • 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 • Any correspondence with permitting authorities such as PASA, DEA, SAMSA etc	N	2	Records up to and beyond 5 years were available for certain aspects. For other requirements as listed in 10.4.2 no documentation was available.
Activity 10.5: Review and Revision					
EMPr	2010_10.5.1	The environmental management plan shall be subject to annual review by senior management. 1. The review shall consider the following information: • Monthly monitoring records	N	0	No proof of annual review of the EMPr by senior management was provided.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		• Training records • Audit reports • Enforcement records • Feedback from stakeholders • 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. • The Environmental Management Plan as implemented during the preceding year facilitates compliance with its' objectives and legal obligations, and if not, what amendments are required			
EMPr	2010_10.5.2	The review by senior management shall be documented and the document retained for 5 years.	N	0	No documented senior management review was provided.
ACTIVITY			**11.**		**DECOMMISSIONING**
Activity 11.1: Identification of Decommissioning Strategy					
EMPr	2010_11.1.1	The process followed to identify reasonable and sensible decommissioning solutions is illustrated in the diagram below.- See Figure.	Y	4	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

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					been identified and accounted for in associated cost contingencies.
Activity 11.2: Decommissioning Strategy for FA-EM Production Area & Framework for Annual Evaluation and Reporting to PASA.					
EMPr	2010_11.2.1	Options for decommissioning with estimated (stand-alone) costs, safety, technical feasibility, monitoring and energy use are presented in the table below. These shall be revisited each year as indicated in the flow sheet above. See Table.	Y	4	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.
EMPr	2010_11.2.2	Preferred decommissioning options: Based on the evaluation conducted, the preferred decommissioning options for the infrastructure components of the Oribi-Oryx production area are summarised in the table below. Associated cost estimates are given for which financial provision shall be made by PetroSA; the costs assume that there will be a single mobilisation of marine equipment with the cost for this included in the umbilical and metal fitting cost. The estimated consolidated cost for decommissioning is ZAR 405 million;- See Table.	Noted	Noted	This is not an auditable condition.
EMPr	2010_11.2.3	Decommissioning options including costs shall be updated annually for submission to PASA.	Y	4	The latest determination of the financial provisions required for decommissioning, rehabilitation and closure was done in 2025 (DNV, 2025) and represents a year ending 2024 cost.
Activity 11.3: Financial Provision					
EMPr	2010_11.3.1	PetroSA shall provide for its closure commitments in the form of a liability provision, which is reflected in the balance	N	0	PetroSA provided the annual financial statements for PetroSA Rehabilitation (Non-Profit Company), which is a company engaged to hold assets on behalf of PetroSA and

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		sheet as the best estimate of the expenditure required to settle the obligation at the projected end of life of the field.			apply and invest its income, to make distributions for the decommissioning and rehabilitation of oil and gas fields. Based on a review of the available information the estimated decommissioning costs (DNC, 2025) exceed the financial provisions
EMPr	2010_11.3.2	Reporting of Financial Provision • Proof of Financial Provision will be provided to PASA in the following manner: o A copy of the insurance certificate for the year will be provided on the renewal date of each year, and o The annual revision of the closure provision will be submitted together with the annual Performance Assessment reports.	Y	4	Proof of submission of the 2024 and 2025 FP to PASA was provided. Proof of insurance certificates was provided.
Activity 11.4: Application for a Closure Certificate					
EMPr	2010_11.4.1	Detailed engineering specifications shall be developed for decommissioning options	N/A	N/A	Required 12 months prior to cessation of Production- it is expected that this applies to 12 months preceding the relinquishment or closure of the Production Right. Currently all wells are shut-in but have not yet been decommissioned or closed.
EMPr	2010_11.4.2	A suite of preferred decommissioning options shall be selected based upon environmental and technical considerations.	N/A	N/A	Required 12 months prior to cessation of Production- it is expected that this applies to 12 months preceding the relinquishment or closure of the Production Right. Currently all wells are shut-in but have not yet been decommissioned or closed.
EMPr	2010_11.4.3	A detailed environmental impact assessment of the preferred decommissioning option(s) shall be undertaken for application for approval, consistent with the MPRDA and NEMA amongst others.	N/A	N/A	Must occur when preceding conditions are triggered. Currently all wells are shut-in but have not yet been decommissioned or closed.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EMPr	2010_11.4.4	A detailed Closure Plan shall be compiled and submitted to PASA.	N/A	N/A	Required 6 months prior to cessation of Production- it is expected that this applies to 6 months preceding the decommissioning activities.
EMPr	2010_11.4.5	A seabed survey shall be undertaken to validate the Closure Plan	N/A	N/A	This is only required for decommissioning / closure . Currently all wells are shut-in but have not been decommissioned.
EMPr	2010_11.4.6	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 contain at least the following information: • Description and location of all abandoned infrastructure; • Results of seabed survey; • Results of Risk Assessment; • Any further monitoring requirements.	N/A	N/A	This is only required for decommissioning / closure . Currently all wells are shut-in but have not been decommissioned.
EMPr	2010_11.4.7	Submit a Final Performance Report to PASA including, inter alia: proof of environmental notification and communication with HydroSAN and other users of the sea; and the results of relevant quarterly reports. See Figure.	N/A	N/A	This is only required for decommissioning / closure . Currently all wells are shut-in but have not been decommissioned.
EMPr	2010_11.4.8	Auditing specifications 1. The above steps have been completed 2. The detailed performance criteria of the post decommissioning audit will be detailed in the environmental authorisations.	Noted	Noted	This is only required for decommissioning / closure . Currently all wells are shut-in but have not been decommissioned.

Table 2: Compliance evaluation of the relevant RoD conditions.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
3.1. Specific Conditions.					
EA	ROD_3.1.1	The applicant must ensure that all production operations are carried out and managed in accordance with the approved EMPr and this ROD conditions. Deviation from the EMPr and ROD conditions may lead to the cancellation and suspension of production right in terms of section 47(1) of the MPRDA, and any non-compliance must be reported to the Agency.	N	2	Not all operations were carried out in accordance with the EMPr and ROD conditions and no non-compliance records were made available to the auditors for pre-2013 activities.
EA	ROD_3.1.2	Blow out prevention equipment on the production wells, and integrity of pipelines must be inspected regularly and inspection results included on the monitoring reports.	N	2	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. According to the risk based programme the Oribi/Oryx subsea inspections are overdue.
EA	ROD_3.1.3	The suitability of existing flight paths must be determined to prevent disturbance to marine fauna, seabird and seals' colonies.	Y	4	Flight path received did not appear to cross any observable seabird or seal colonies.
EA	ROD_3.1.4	The holder shall at all times keep records of all hazardous waste disposed ashore including safe disposal certificates authenticated by a registered waste disposal site.	N	0	No hazardous waste records or disposal certificates for pre-2013 ORCA platform activities were provided
EA	ROD_3.1.5	Ongoing monitoring of the produced and bilge water discharges, gaseous emission from flaring activity, waste generated and disposed of, etc. must be undertaken and results reported to the Agency as part of quarterly and annual EMPr performance assessment reports.	N	2	Monitoring for certain aspects was made available, such as produced water. No waste disposal or gas flared records for the ORCA platform for pre-2013 activities were provided. Certain information is provided in the annual PARs however no quarterly reports were provided.

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EA	ROD_3.1.6	All waste types generated aboard must be handled and managed in according to the measures and requirements provided for on the EMPr, MARPOL 73/78, 1972 London Convention, Marine Pollution (Prevention of Pollution from Ships) Act, 1986 (Act No. 2 of 1986)	N	0	No waste records were available for the ORCA platform for pre-2013 activities.
EA	ROD_3.1.7	Consultation with the Department of Environmental Affairs - Air Quality Directorate must be undertaken to determine the need to obtain the registration certificate as flaring of gas is a scheduled process in terms of Second Schedule of Atmospheric Pollution Prevention Act 45 of 1965 and the National Environmental Management — Air Quality Act 39 of 2004. The outcomes of consultation process must be communicated to the Agency.	N/A	N/A	The platform operates both a high pressure and a low pressure flare system. Activity 2.1 of the activities listed under the NEMAQA lists a trigger threshold of 50MW heat input for combustion installations associated with the petroleum industry. Activity 2.1 is however only applicable to a refinery setting and not a standalone flare for safety control purposes outside of such a setting. It is understood that this ROD requirement stems from the 2010 version of the NEMAQA listed activities which may have applied to the flare, but that such list was subsequently amended in 2013 to restrict the activity to refinery installations. It is the auditors view that this condition is not applicable based on the current legislative requirements.
EA	ROD_3.1.8	Existing communication channels to inform all other potential marine users of the production well locations, timing and the excluded safety zones must be maintained by means of Radio Navigation Warnings, notices, and through South African Navy Hydrographic Office. Furthermore, an ongoing consultation with I&AP's and other stakeholders i.e. the fishing industry, relevant authorities, NGOs, etc. by means of the Agulhas forum must be maintained.	N	2	Agulhas Forum Meetings were held during the operation of the ORCA facility. No proof of additional navigational warnings were provided.
EA	ROD_3.1.9	The operator must annually review the allocated financial provision and submit a revised quantum based on environmental	N	2	PetroSA provided the annual financial statements for PetroSA Rehabilitation (Non-Profit Company), which is a company engaged to hold assets on behalf of PetroSA and

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
		liability and risk assessment in accordance with section 41 (3) of the MPRDA.			apply and invest its income, to make distributions for the decommissioning and rehabilitation of oil and gas fields. Based on a review of the available information the estimated decommissioning costs (DNC, 2025) exceed the financial provisions. Written acknowledgement of receipt of the annual financial provision was received from PASA.
EA	ROD_3.1.10	The operator must at all times prevent environmental incidents by developing and reviewing standard operating and emergency preparedness procedures and continuously testing their effectiveness. All environmental incidents must be reported to the Agency within 24 hours of their occurrence and must be addressed with immediate effect. The Agency must be kept informed of the remedial measures taken to manage its closure and prevent recurrence of similar incidence.	N	2	PetroSA does have various standard operating procedures. Drills and muster exercises are included as a sub-section in the Monthly SHEQ reports. Evidence was provided that environmental incidents are recorded on the incident management system and are reported to PASA, albeit not within the specified 24 hours.
EA	ROD_3.1.11	The decommissioning strategy developed has been noted, however, the operator is required to develop a detailed decommissioning plan 12 months prior to the end of life of production operation. Furthermore, during decommission stage, infrastructure such as subsea equipment on the seabed, support structures for floating installations, pipelines with PLEMS/UTAs/riser anchor bases, flow lines and umbilical and wells shall be removed in such a way that there are no significant adverse effects to the marine environment and shall take into account safety to other marine users, financial implications, compliance with national and international regulatory obligations, etc.	N/A	N/A	There is no plan to implement decommissioning within the next 24 months.
3.2. Standard Conditions.					

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
EA	ROD_3.2.1	Quarterly environmental monitoring reports and annual EMPr performance assessment reports must be submitted to the Agency.	N	2	No quarterly monitoring reports were available. Proof of submission of EMPr PAR reports to PASA was provided, however last PAR was done in 2023, and before that in 2009.
EA	ROD_3.2.2	International and South African laws regulating any activities taking place at sea must be adhered to. These include the 1973/1978 International Convention for the Prevention of Pollution from Ships (MARPOL), the 1982 United Nations Convention on Law of the Sea (LOSC); the 1972 Convention on the International Regulations for Preventing Collisions at Sea (COLREGS), National Environmental Management: Air Quality Act 39 of 2004, Marine Living Resources Act 18 of 1998, Sea Birds and Seals Protection Act 46 of 1973, etc.	Noted	Noted	The requirement for an AEL is noted in ROD condition 3.1.7 above, however this would apply to the FA platform only (for which a separate EMPr is in place) and is not relevant to the Oribi-Oryx production area alone.
EA	ROD_3.2.3	In terms of section 43(1), it must be noted that the holder of the right remains responsible for any environmental liability, pollution or ecological degradation and management thereof, until the Minister has issued a closure certificate.	Noted	Noted	This is not an auditable condition.
EA	ROD_3.2.4	In case of cancellation, cessation, relinquishment or completion of drilling operations, the applicant is required in terms of section 43(4) to make an application for closure certificate within 180 days of the occurrence of any of the above instances and this must be accompanied by a prescribed environmental risk report as per MPRD Regulation 60.	N/A	N/A	It is understood that the intention of this condition was related to cancellation, cessation, relinquishment or completion of Production [not drilling] operations. This aligns with the requirements of Section 43 of the MPRDA. It is noted that all Oribi/oryx wells were shut-in in 2013. No definitive plans to re-commence production have been provided to the auditor. It is suggested that PetroSA consider the future plans for the facility and production field and either commence with closure or alternatively consider applying for care and maintenance, as is provided for under

Type	Ref #	Condition	Compliance Y/N	Compliance Rating	Comments/ Verification
					Regulation 16 of the NEMA Financial Provisioning Regulations.

7.2 FINDINGS OF THE AUDIT

The key findings of the audit are presented in .

Table 3: Key audit findings.

Finding Ref #	RoD / EMPR Ref #'s	Findings	Recommendations
1	**Subsea Inspections**		
	2010_1.1.1 2010_1.1.2 ROD_3.1.2	It does not appear that any subsea inspections for Oribi/Oryx field took place.	Inspections on the subsea infrastructure should be extended to include an inspection of the Oribi Oryx field. The inspections should be undertaken at the intervals specified in the risk based programme and should be documented.
2	**Contracts with Service Providers**		
	2010_1.2.1.1	The requirement to comply with the conditions of the EMPr were not expressly incorporated into the contracts for the vessels and helicopters service providers	All contracts to service providers should include a requirement
3	**Outstanding documentation**		
	2010_1.2.2.1 2010_1.2.2.2 2010_2.1.3 2010_3.1.1 2010_3.1.2 2010_3.1.4 2010_3.1.5 2010_4.1.1 2010_4.1.3 2010_4.1.5 2010_4.1.6 2010_4.1.7 2010_4.1.8 2010_4.1.11 2010_4.1.13 2010_4.1.14 2010_4.1.15 2010_4.1.17 2010_4.1.18 2010_4.1.19 2010_5.1.1 2010_5.1.2 2010_5.1.4 2010_5.1.6 2010_5.2.1 2010_5.2.2	Documentation is not available for many operational aspects during the period that the ORCA was operational (i.e. pre-2013). These include: • Proof of navigational warnings • Flight logs • Chemical registers • Training information • Waste management records and waste registers • Monthly reports • Waste manifests and disposal certificates • Produced water oil concentrations • Sewage disposal records • Incident records	Due to the fact that no recent external audits had been undertaken the audit period under consideration for this Oribi Oryx audit was 2010 – 2025. Very few records and data were available for pre-2013 activities when the ORCA was operational. It is suggested that PetroSA conduct regular audits as per the requirements of the RoD and EMPr in order to ensure no reoccurrence of this issue.

Finding Ref #	RoD / EMPR Ref #'s	Findings	Recommendations
	2010_5.2.4 2010_5.3.1 2010_6.1.1 2010_6.1.4 2010_7.1.1 2010_7.1.3 2010_7.2.3 2010_9.1.1 2010_9.1.2 2010_10.1.1 2010_10.1.3 2010_10.1.5 2010_10.1.8 2010_10.4.1 2010_10.4.2 ROD_3.1.4 ROD_3.1.6		
4	**Oil Spill Contingency Plan**		
	2010_7.1.4	The latest revision on the OSCP is dated February 2023 however the scope of this OSCP does not include the oribi/oryx field.	The OSCP should be updated to include the Oribi Oryx field. 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	**Stakeholder Engagement**		
	2010_8.1.1	No proof of stakeholder engagements were provided to the auditors	A stakeholder feedback process as detailed in the flow diagram in the EMPr should be maintained and records kept as proof of consultation.
6	**Biodiversity Monitoring**		
	2010_10.1.6	The required marine biodiversity monitoring was not undertaken.	Using existing ROV footage and underwater photography surveys of biological communities on sections of pipelines to monitor possible development of populations of large alien species should be undertaken.
7	**Auditing**		
	2010_10.2.1 2010_10.2.2	The last annual internal performance assessment report is dated January 2021 and covers the period ending March 2020. External audits are also not up to date.	Internal and external audits should be undertaken at the intervals stipulated in the EMPR and RoD.

Finding Ref #	RoD / EMPR Ref #'s	Findings	Recommendations
		No annual PetroSA EXCO report was provided to the auditors.	
8	**Annual Review of EMPr**		
	2010_10.5.1 2010_10.5.2	No proof of annual review of the EMPr by senior management was provided.	The EMPr should be reviewed annually by senior management and the review should be documented.
9	**Financial Provisioning**		
	2010_11.3.1 ROD_3.1.9	Based on a review of the available information the estimated decommissioning costs (DNC, 2025) exceed the financial provisions	The financial provision amount should reflect the actual estimated decommissioning costs.
10	**Quarterly Reporting**		
	ROD_3.1.5 ROD_3.2.1	No quarterly reports were provided.	Quarterly environmental monitoring reports and annual EMPr performance assessment reports must be submitted to the Agency.
11	**Incident Notifications**		
	ROD_3.1.10	Evidence was provided that environmental incidents are recorded on the incident management system and are reported to PASA, albeit not within the specified 24 hours.	All incidents should be reported to PASA within 24 hours.

7.3 CONTINUED ADEQUACY OF THE EMPR

The latest approved EMPr provided by PetroSA was evaluated (Lwandle Technologies (Pty) Ltd, February 2010). 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 Section 1.2	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 1.6	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;	A layout map included in Section 2.1, however no sensitives are included	It is 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; iv. Rehabilitation of the environment after construction and where applicable post closure; and v. Where relevant, operation activities;	Included in sections 1- 6 of the EMPr.	None

Requirement		Evaluation	Recommendations
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 sections 1- 6 of the EMPr.	None
Appendix 4(1)(1)(g):	The method of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Methods for monitoring are included in the relevant sections of the EMPr.	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)(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

Requirement		Evaluation	Recommendations
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);	Monitoring mechanisms are provided for the relevant management actions.	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;	Included in Section 10.2 of the EMPr.	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	Included in Section 9,1 of the EMPr.	None
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 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

This section aims to present the findings of an evaluation of the current EMPr's and the ability of the measures contained in the EMPr's to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity. 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
7.1.4.	Condition 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 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 a number of 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 and 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.	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; that risk assessment and response strategies are informed by a representative oil spill drift model; and that such is approved by the relevant authorities.
Activity 6	The current EMPr does not address the release of Greenhouse Gases from the FA Platform and associated sub-sea infrastructure and well fields. 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 FA Platform and associated infrastructure. Reference should be made to the legal GHG reporting obligations, as well as identifying opportunities for reduction of GHG emission. Such measures could include avoiding continuous venting or flaring, use of high efficiency flares, and implementing a leak detection and repair system.
Sections 2, 3, 5	It is noted that the current Oribi-Oryx 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	In the event that interventions / well workovers are likely to be undertaken in the Oribi-Oryx 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

EMPr Section	Comments	Recommendations
	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.	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. • 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 & 10	Condition 3.2.1 of the RoD states: "….annual EMPr performance assessment reports must be submitted to the Agency". Condition 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 ROD and the EMPr require annual Performance Assessments. 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. This would however be misaligned with Condition 10.2.2 of the EMPr.	The competent authority should be engaged to confirm whether the NEMA Regulation 34 Audits should be undertaken on an annual basis or every third year.

EMPr Section	Comments	Recommendations

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.

7.3.2 EMPR SHORTCOMINGS AND RECOMMENDATIONS

It is the auditors opinion that the 2010 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.

Recommended amendments to the EMPr are presented in Section 7.3.1.3 above.

8 CONCLUSION

EIMS was appointed to undertake the Environmental Audit to assess compliance with the conditions of the 2006 RoD and associated updated EMPr completed by Lwandle Technologies (Pty) Ltd in 2010.

A total of 114 conditions (commitments) were identified in the EMPr[5]. 51 of these conditions were considered not applicable to the current phase of the project. Of the applicable conditions 12 were regarded as being fully compliant, 36 non-compliant and the remaining 15 as partially complaint. Utilising this scoring system, a total **straight compliance** score of **10,05%** was obtained for the EMPr and a **weighted compliance** score of **30,95%.**

A total of 15 conditions (commitments) were identified in the RoD[6]. 5 of these conditions were considered not applicable to the current phase of the project. Of the applicable conditions 1 was regarded as being fully compliant, 2 non-compliant and the remaining 7 as partially complaint. Utilising this scoring system, a total **straight compliance** score of **10,00%** was obtained for the RoD and a **weighted compliance** score of **45,00%.**

It is the auditors opinion that the 2010 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.

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] The applicable EMPr is dated February 2010 and is compiled by Lwandle Technologies
[6] The applicable EA is dated 20 April 2011 (12/4/1/06/2/2/2)

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 2006 RoD and associated approved 2010 EMPr for production in the Oribi/Oryx 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 15-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. The site inspection was conducted recently, and any observations informing this audit reflect current conditions only and may not represent historical site circumstances. All conclusions should therefore be interpreted in light of these constraints.
- A comprehensive legal compliance audit is beyond the scope of this audit.

10 REFERENCE LIST

Lwandle Technologies (Pty) Ltd. (2010, February). Environmental Management Programme for the Oribi Oryx Production Area.