

Audit of EMPR for Block 3A/4A, Exploration Right 12/3/283 off the West Coast of South Africa

External Environmental Compliance Audit Report of
the Environmental Management Programme (EMPr),
in accordance with Regulation 34 of the EIA
Regulations (2014) as amended

August 2023

savannah
environmental

t +27 (0)11 656 3237

f +27 (0)86 684 0547

e info@savannahsa.com

w www.savannahsa.com

Prepared for:



PetroSA

Petroleum Oil and Gas Corporation of South Africa (SOC) Ltd (PetroSA)

(Submitted electronically via email)

Prepared by:

savannah
environmental

REPORT DETAILS

Environmental Auditor	Carina de Ornelas
Title	: PetroSA Regulation 34 Audit of EMPR for Block 3A/4A, (Exploration Right 12/3/283 and EMPr Revision 01 (September 2014)), off the West Coast of South Africa
Authors	: Savannah Environmental (Pty) Ltd Carina de Ornelas Danie Brummer
Internal Review	Danie Brummer Jo-Anne Thomas
Client	: Petroleum Oil and Gas Corporation of South Africa (SOC) Ltd (PetroSA)
Report Revision	: Final
Date	: August 2023

When used as a reference this report should be cited as: Savannah Environmental (2023) External Environmental Compliance Report for PetroSA Regulation 34 Audit of EMPR for Block 3A/4A (Exploration Right 12/3/283 and EMPr Revision 01 (September 2014)), off the West Coast of South Africa

COPYRIGHT RESERVED

This technical report has been produced for Petroleum Oil and Gas Corporation of South Africa (SOC) Ltd (PetroSA). The intellectual property contained in this report remains vested in Savannah Environmental (Pty) Ltd. No part of the report may be reproduced in any manner without written permission from Savannah Environmental (Pty) Ltd or Petroleum Oil and Gas Corporation of South Africa (SOC) Ltd (PetroSA).

DECLARATION OF INTEREST

I, PD Brummer, declare that:

- » I act as the independent environmental auditor for the environmental compliance audit (August 2023).
- » I have performed the work relating to the audit in an objective manner, even if this results in views and findings that are not favourable to the applicant.
- » I declare that there are no circumstances that may compromise my objectivity in performing such work.
- » I have expertise in conducting independent environmental audits, including knowledge of NEMA, the 2014 EIA Regulations (GNR 326) and any guidelines that have relevance to the activity.
- » I have complied with NEMA, the 2014 EIA Regulations (GNR 326) and all other applicable legislation.
- » I have no, and have not engaged in, conflicting interests in the undertaking of the audit.
- » I have undertaken to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing – any decision to be taken with respect to the project by the competent authority; and – the objectivity of any report, plan or document prepared by myself for submission to the competent authority.
- » All the particulars furnished by me in this report are true and correct.
- » I realise that a false declaration is an offence in terms of Regulation 48 and is punishable in terms of section 24F of the Act.
- » I do not have and will not have any vested interest (either business, financial, personal or other) in the project other than remuneration for work performed.

PD Brummer

Name

August 2023

Date

ACRONYMS AND ABBREVIATIONS

CAA	Civil Aviation Authority
DEA	Department of Environmental Affairs (National)
DMR	Department of Mineral Resources
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
GHG	Greenhouse Gas
GIIP	Good International Industry Practise
I&AP	Interested and Affected Party
IPP	Independent Power Producer
MMO	Marine Mammal Observer
MW	Megawatts
NEMA	National Environmental Management Act (No. 107 of 1998)
NEM:BA	National Environmental Management: Biodiversity Act (No. 10 of 2004)
NHRA	National Heritage Resources Act (No. 25 of 1999)
O&M	Operations and Maintenance
OEMPr	Operational Environmental Management Programme
OHS	Occupational Health and Safety
PAM	Passive Acoustic Monitoring
PetroSA	Petroleum Oil and Gas Corporation of South Africa (SOC) Ltd
SAHRA	South African Heritage Resources Agency

TABLE OF CONTENTS

	PAGE
REPORT DETAILS.....	i
DECLARATION OF INTEREST	ii
ACRONYMS AND ABBREVIATIONS	iii
TABLE OF CONTENTS	iv
1. INTRODUCTION AND BACKGROUND	1
1.1. Project Background	1
2. OBJECTIVE OF THE AUDIT	4
3. PURPOSE AND SCOPE.....	5
4. OVERVIEW OF THE INDEPENDENT ENVIRONMENTAL AUDITORS	5
5. ASSUMPTIONS AND LIMITATIONS.....	6
6. APPROACH TO CONDUCTING THE AUDIT	6
6.1. Pre-audit planning	6
6.2. Conducting the Audit	6
6.3. Post Audit	7
7. FINDINGS OF THE AUDIT	7
8. AUDIT RESULTS AND RECOMMENDATIONS.....	18
8.1. Overview of Audit Findings	18
8.2. Conclusion.....	18
9. EVALUATION OF THE EMPR.....	18
9.1. Ongoing impact avoidance, management and mitigation	19
9.2. Closure impact avoidance, management and mitigation	19
9.3. Ensuring compliance with provisions of the EMP	19
10. CONCLUSIONS AND RECOMMENDATIONS	19
11. STAKEHOLDER CONSULTATION	19
11.1. Notification of all potential and registered interested and affected parties	19

APPENDICES

Appendix A: CVs of Independent Auditor/s and Report Reviewer

Appendix B: Advert of Report as Published

1. INTRODUCTION AND BACKGROUND

Savannah Environmental (Pty) Ltd has been appointed by Petroleum Oil and Gas Corporation of South Africa (SOC) Ltd (PetroSA) to undertake an external environmental compliance audit and prepare an external environmental compliance audit report in accordance with the requirements of Regulation 34 of the EIA Regulations, 2014, as amended, for the Exploration and geophysical surveys in Licence Block 3A/4A, Project name: PetroSA Regulation 34 Audit of EMPr for Block 3A/4A located off the West Coast of South Africa. The external environmental compliance audit was conducted to demonstrate PetroSA's compliance with the EMPr applicable to the project as detailed in Section 6 of this report.

1.1. Project Background

The Petroleum Oil and Gas Corporation of South Africa (SOC) Ltd (PetroSA) is the operator for an Exploration Right to undertake exploration and geophysical surveys in Block 3A/4A off the West Coast of South Africa. Block 3A/4A is a 25 332 km² license block located off the West Coast of South Africa in water depths ranging from 20 m to about 480 m. Block 3A/4A is in the third year of the Initial Period of the Exploration Right (ER). The ER was awarded in February 2021 and executed in December 2022. The work programme, which includes the licensing of approximately 4000 line km of vintage 2D seismic data, is currently awaiting approval by Petroleum Agency South Africa (PASA). The co-ordinates of Block 3A/4A are indicated in **Table 1.1**. Refer to **Figure 1.1**.

Table 1.1: Co-ordinates of Block 3A/4A exploration area off the West Coast of South Africa

POINTS	LATITUDE (SOUTH)				LONGITUDE (EAST)	
A	31°	00'	1.258"	S	16°	22' 56.924" E
B	31°	00'	1.218"	S	16°	45' 56.975" E
C	31°	00'	0.000"	S	17°	35' 00.000" E
D	31°	05'	0.000"	S	17°	35' 0 0.000" E
E	31°	05'	0.000"	S	17°	40' 00.000" E
F	31°	15'	0.000"	S	17°	40' 0 0.000" E
G	31°	15'	0.000"	S	17°	45' 00.000" E
H	31°	20'	0.000"	S	17°	45' 00.000" E
J	31°	20'	0.000"	S	17°	50' 00.000" E
K	31°	30'	0.000"	S	17°	50' 00.000" E
L	31°	30'	0.000"	S	17°	55' 0 0.000" E
M	31°	35'	0.000"	S	17°	55' 00.000" E
N	31°	35'	0.000"	S	18°	00' 00.000" E
P	31°	40'	0.000"	S	18°	00' 00.000" E
Q	31°	40'	0.000"	S	18°	05' 00.000" E
R	31°	50'	0.000"	S	18°	05' 00.000" E
S	31°	50'	0.000"	S	18°	10' 00.000" E
T	32°	40'	0.000"	S	18°	10' 00.000" E
U	32°	40'	0.000"	S	17°	45' 00.000" E
V	33°	00'	0.000"	S	17°	45' 00.000" E
W	33°	00'	0.866"	S	17°	39' 57.288" E
X	33°	00'	0.922"	S	16°	59' 57.193" E
Y	32°	30'	0.996"	S	16°	59' 57.138" E
Z	32°	30'	1.020"	S	16°	44' 57.104" E

POINTS	LATITUDE (SOUTH)				LONGITUDE (EAST)	
A1	31°	15'	1.169"	S	16°	44' 57.009" E
B1	31°	15'	1.211"	S	16°	14' 56.938" E
C1	31°	04'	1.254"	S	16°	14' 56.915" E
D1	31°	04'	1.244"	S	16°	22' 56.935" E

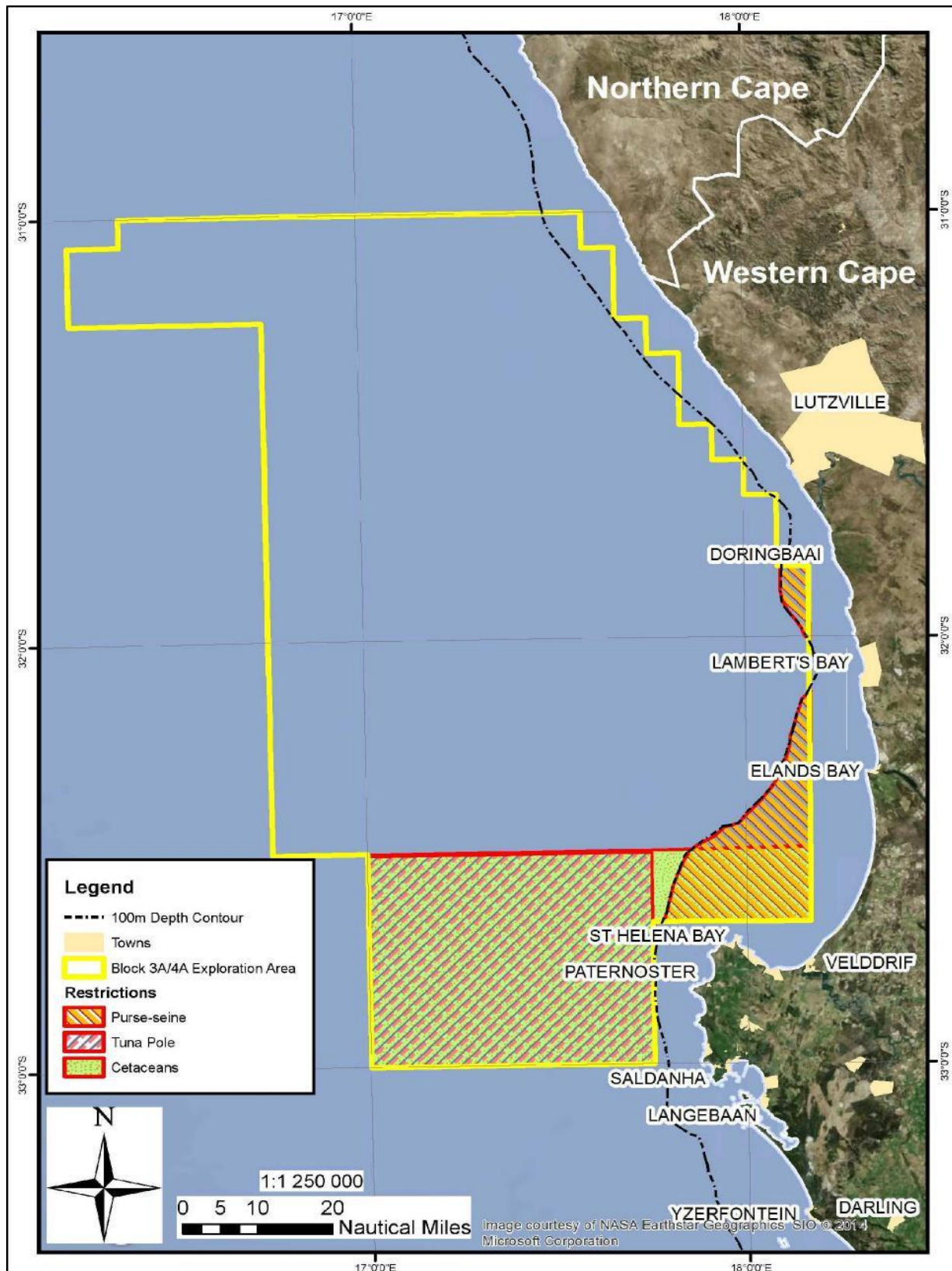


Figure 1.1: Location and Summary of geographical restrictions in Block 3A/4A

Acting as South Africa's national oil company, PetroSA undertakes exploration and production of oil and natural gas, sells petrochemical products to South Africa's major oil companies and exports petrochemical products to the international markets.

2. OBJECTIVE OF THE AUDIT

The objective of this environmental audit as contained in Appendix 7 of the 2014 Environmental Impact Assessment (EIA) Regulations (GNR 326) and Regulation 34 is to:

- » Report on:
 - * The level of compliance with the conditions of the EMPr.
 - * The extent to which the avoidance, management and mitigation measures provided for in the EMPr, achieve the objectives and outcomes of the EMPr.
- » Identify and assess any new impacts and risks as a result of undertaking the activity.
- » Evaluate the effectiveness of the EMPr.
- » Identify shortcomings in the EMPr.
- » Identify the need for any changes to the avoidance, management and mitigation measures provided for in the EMPr.

This Environmental Audit Report has been prepared in accordance with Appendix 7 of the 2014 EIA Regulations (GNR 326). An overview of the contents of the Environmental Compliance Audit Report, as prescribed by Appendix 7 of the 2014 EIA Regulations (GNR 326), and where the corresponding information can be found within the report is provided in **Table 1**.

Table 1: Summary of where the requirements of Appendix 7 of the 2014 EIA Regulations (GNR 326) are provided in this Environmental Compliance Audit Report.

Requirement	Location in Report
(a) Details of the – (i) Independent person who prepared the environmental audit report. (ii) Expertise of the independent person that compiled the environmental audit report.	Refer to Section 4 Refer to Appendix A
(b) A declaration that the independent auditor is independent in a form as may be specified by the competent authority.	Refer to Declaration of Interest Refer to Section 4
(c) An indication of the scope of, and the purpose for which, the environmental audit report was prepared.	Refer to Section 3
(d) A description of the methodology adopted in preparing the environmental audit report.	Refer to Section 6
(e) An indication of the ability of the EMPr, and where applicable, the closure plan to – (i) Sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity on an on-going basis. (ii) Sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the closure of the facility. (iii) Ensure compliance with the provisions of environmental authorisation, EMPr, and where applicable, the closure plan.	Refer to Section 10
(f) A description of any assumptions made, and any uncertainties or gaps in knowledge.	Refer to Section 5
(g) A description of any consultation process that was undertaken during the course of carrying out the environmental audit report.	Refer to Section 6

Requirement	Location in Report
(h) A summary and copies of any comments that were received during any consultation process.	Refer to Section 6
(i) Any other information requested by the competent authority.	N/A

3. PURPOSE AND SCOPE

This Environmental Audit has been conducted to determine PetroSA's compliance with applicable environmental management requirements, as per the requirements of Regulation 34 of the EIA Regulations, 2014, as amended (GNR 326). The scope of the Environmental Audit is confined to an assessment of those environmental management requirements contained within the project EMPr for the offshore operations at Block 3A/4A in the West Coast of South Africa.

4. OVERVIEW OF THE INDEPENDENT ENVIRONMENTAL AUDITORS

This independent environmental compliance audit was however undertaken by Danie Brummer and Carina de Ornelas (refer to **Table 2**), and reviewed by Jo-Anne Thomas (refer to **Table 3**).

Table 2: Details of the Independent Environmental Auditors for this Section 34 audit report.

	Danie Brummer	Carina de Ornelas
Position:	Compliance and Assurance Manager	Environmental Consultant
Company:	Savannah Environmental (Pty) Ltd	Savannah Environmental (Pty) Ltd
Qualification:	M.Sc. Environmental Science and Management	BA. Degree (Major in Geography) Environmental Management
Professional Registration:	Professional Natural Scientist (400166/11) (SACNASP) EAPASA (2020/1426)	
Experience:	16 years	1 Year
Contact:	011 656 3237	011 656 3237
Email:	danie@savannahsa.com	carina@savannahsa.com

Table 3: Details of the Report Reviewer.

Name:	Jo-Anne Thomas
Position:	Project Manager and Director
Company:	Savannah Environmental (Pty) Ltd
Qualification:	M.Sc. Botany
Professional Registration:	Professional Natural Scientist (400024/2000) (SACNASP)
Experience:	25 years
Contact:	011 656 3237
Email:	joanne@savannahsa.com

A signed Declaration of Interest confirming the auditors' independence is included in this Environmental Audit Report. CVs of the Independent Environmental Auditor and Report Reviewer are attached as **Appendix A** to this report.

5. ASSUMPTIONS AND LIMITATIONS

The following assumptions and limitations are applicable to this Environmental Audit Report:

- » It is assumed that the information provided during the desktop audit was accurate and true at the time of conducting the desktop audit.

6. APPROACH TO CONDUCTING THE AUDIT

6.1. Pre-audit planning

Prior to undertaking the audit, the scope and objectives of the audit were determined through a review of relevant information applicable to the project.

Following the review of existing information, an audit checklist was prepared for use as a tool during the audit to identify any issues of non-compliance and / or areas where action plans may be required to be implemented to address any identified issues of concern.

The audit checklist was prepared based on the licensing and management specifications contained within the following documentation:

- » Operation Environmental Management Programme (EMPr) for the offshore operations at Block 3A/4A in the West Coast of South Africa., Revision 01 (September 2014).

As the Exploration and geophysical surveys in Licence Block 3A/4A is currently not operational, and no construction activities have commenced to date (i.e. no authorised activities have commenced), all the conditions contained in the EMPr relating to commencement, construction, operation and decommissioning of the facility are not currently applicable. **As such, these conditions have been omitted from the audit checklist and are not shown or reported on in this report.** Should these activities commence in future, these conditions must be included into future audit checklists and reported on within the audit.

6.2. Conducting the Audit

As no activities have commenced to date, a desktop audit was conducted of the relevant and applicable EMPr conditions only. This included a review of all information relating to the compliance of relevant EMPr pre-construction conditions.

6.3. Post Audit

Following the audit, an Environmental Compliance Audit Report was compiled in accordance with the requirements of Appendix 7 of the EIA Regulations, 2014, as amended (GNR326). A copy of this Audit Report was submitted to the Petroleum Agency South Africa (PASA) in accordance with the requirements of Regulation 34(2)(d).

7. FINDINGS OF THE AUDIT

Compliance ratings were provided for each element of the audit checklist using the 4-point rating scale described below:

Compliance status	Rating	Description of compliance
Fully Compliant	3	Compliant with no further action required to maintain compliance
Compliant	2	Compliant apart from minor or immaterial recommendations to improve the strength internal controls to maintain compliance
Partially-Compliant	1	Major or material recommendations to improve the strength of internal controls to achieve compliance
Non-Compliant	0	Does not meet minimum requirements

Table 4 provide details of the findings of the audit.

Table 4: Audit Checklist for Compliance with the Conditions Contained in EMPr Revision 01 (September 2014).

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (0 – 3)	Audit Finding
Objective 1: Seismic surveys	All survey vessels must be fitted with Passive Acoustic Monitoring (PAM) technology. As a minimum, PAM technology must be used during the pre-watch period and when surveying at night or during adverse weather conditions and thick fog. The hydrophone streamer should ideally be towed behind the airgun array to minimise the interference of vessel noise and be fitted with two hydrophones to allow directional detection of cetaceans	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Implement a "soft-start" procedure of a minimum of 20 minutes duration when initiating seismic surveying. This build-up of power should occur in uniform stages to provide a constant increase in output. When surveying in inshore areas (<50 m depth), a "soft-start" procedure of 30 minutes' duration is recommended	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	All breaks in airgun firing of longer than 20 minutes must be followed by the 30 minute pre-shoot watch and a "soft-start" procedure of at least 20 minutes prior to the survey operation continuing. Breaks shorter than 20 minutes should be followed by a visual assessment for marine mammals within the 500 m mitigation zone (not a 30 minute pre-shoot watch) and a "soft-start" of similar duration. Where possible, "soft-starts" should be planned so that they commence within daylight hours;	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Airgun firing should be terminated if mass mortalities of fish as a direct result of shooting are observed (e.g. mass floating fish);	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Prior to the commencement of "soft starts" an area of 500-m radius around the survey vessel (exclusion zone) should be scanned (visually and using PAM technology) for the presence of diving seabirds, turtles, seals and cetaceans. There should be a dedicated pre-shoot watch of at least 60 minutes (to account for deep-diving species). "Soft starts" should be delayed until such time as this	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (0 – 3)	Audit Finding
	area is clear of diving seabirds, turtles and seals and in the case of cetaceans should not begin until 30 minutes after the animals depart the 500 m exclusion zone or 30 minutes after they are last seen;				
	Marine mammal (e.g. seabird, turtle, cetaceans, etc.) incidence and behaviour should be recorded by an on-board MMO. Any obvious mortality or injuries to marine mammals as a direct result of the survey should result in temporary termination of operations;	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Seismic shooting should be terminated when obvious negative changes to cetacean behaviour is observed from the survey vessel, or animals are observed within the immediate vicinity (within 500 m) of operating airguns and appear to be approaching the firing airgun;	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Any attraction of predatory seabirds (by mass disorientation or stunning of fish as a result of seismic survey activities) and incidents of feeding behaviour among the hydrophone streamers should be recorded by an on-board MMO	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Ensure that 'turtle-friendly' tail buoys are used by the survey contractor or that existing tail buoys are fitted with either exclusion or deflector 'turtle guards'	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Seismic surveys should be planned to avoid cetacean migration periods or winter breeding concentrations (June to end November) and ensure that migration paths are not blocked. However, as several of the large whale species are also abundant on the West Coast between September and February (inclusive), the best time of year to conduct seismic operations is late summer and early winter	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (0 – 3)	Audit Finding
	(end February – mid June), across the entire block. However, any surveys planned between December and end February should only be scheduled to operate in the northern section of the block, i.e. avoiding the southern portion of the block off Cape Columbine.				
	During night-time line changes low level warning airgun discharges should be fired at regular intervals in order to keep animals away from the survey operation while the vessel is repositioned for the next survey line	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	The use of the lowest practicable airgun volume should be defined and enforced and airgun use should be prohibited outside of the licence area	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Maintain the firing of low-power guns during line turns that encroach within a 5 nautical mile radius of Tripp seamount. On lines beyond that the low power guns can be stopped during turns, but the normal start-up procedure should nonetheless be maintained	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	All data recorded by MMOs should, as a minimum, form part of a survey close-out report. Furthermore, daily reports should be forwarded to the necessary authorities (e.g. DAFF, DEA, fishing bodies, NGO's, etc.) to advise them of interactions and compliance with the mitigation measure	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Marine mammal incidence data and seismic source output data arising from surveys shall be included as an appendix to the Close-out report to be submitted to PASA after completion of the survey and shall be made available on request to relevant government bodies and NGO's, if required (e.g. DAFF, Marine Mammal Institute, etc.).	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (0 – 3)	Audit Finding
	All data recorded by MMOs should, as a minimum, form part of a survey close-out report. Furthermore, daily reports should be forwarded to the necessary authorities (e.g. DAFF, DEA, fishing bodies, NGO's, etc..) to advise them of interactions and compliance with the mitigation measure	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
Objective 2: High Resolution Bathymetry Survey	On-board MMOs should conduct visual scans for the presence of cetaceans around the survey vessel prior to the initiation of any acoustic impulses	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Pre-survey scans should be limited to 15 minutes prior to the start of survey equipment	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Terminate the survey if any marine mammals show affected behaviour within 500 m of the survey vessel or equipment until the mammal has vacated the area	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Ensure that PAM is incorporated into all surveys	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Ensure an MMO is on-board the vessel to ensure compliance with mitigation measures during surveying.	PetroSA/MMOs and PAM operators	Pre-Construction	N/A	None of the authorised activities have

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (0 – 3)	Audit Finding
					been initiated at the site.
Objective 3: Seabed Sampling and Heatflow Measurements.	The final positioning of the sample sites must avoid existing seafloor infrastructure (including seafloor telecommunication cables) and any cultural heritage material identified during the multi-beam bathymetry survey.	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	If any cultural heritage material is found during sampling activities SAHRA should be notified immediately. If any cultural heritage material older than sixty years is to be disturbed a permit would be required from SAHRA.	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	No anchoring is permitted within 1 nautical mile of seafloor telecommunication cables.	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
Objective 4: Airborne Gravity and Magnetic Survey	Pre-plan flight paths (for mobilisation and demobilisation to and from the Exploration Area) to ensure that no flying occurs over coastal reserves, bird colonies, marine reserves or Important Bird Areas	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Extensive coastal flights (parallel to the coast within 1 nautical mile of the shore) should be avoided, particularly during the movement of migratory cetaceans (particularly baleen whales) from their southern feeding grounds into low latitude waters (June to November);	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	During mobilisation to and from the Exploration Area, aircraft should maintain a minimum altitude of at least 300 m above sea level	PetroSA	Pre-Construction	N/A	None of the authorised

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (0 – 3)	Audit Finding
					activities have been initiated at the site.
	An exemption permit shall be applied for from the Department of Environmental Affairs (DEA) for the entire survey area for aircraft to be able to approach to within 300 m of whales	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	The contractor should comply fully with aviation and authority guidelines and rules	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	All pilots must be briefed on ecological risks associated with flying at a low level parallel to the coast.	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
Objective 5: General	Ensure that the survey vessels are certified for seaworthiness via an internationally recognised marine certification programme (e.g. Lloyds Register, Det Norske Veritas)	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Ensure that collision prevention equipment is on-board the vessels, such as, radar, multi-frequency radio, foghorns, etc. Additional precautions include: <ul style="list-style-type: none"> » The chase boat; » The existence of an internationally agreed safety zone around the survey vessel; » Cautionary notices to mariners; and 	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (0 – 3)	Audit Finding
	» o Access to current weather service information.				
	The vessels are required to fly standard flags, lights (three all-round lights in a vertical line, with the highest and lowest lights being red and the middle light being white) or shapes (three shapes in a vertical line, with the highest and lowest lights being balls and the middle light being a diamond) to indicate that they are engaged in towing surveys and are restricted in manoeuvrability, and must be fully illuminated during twilight and night	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Report any emergency situation to SAMSA;	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Communication between all parties active in or planning future offshore activities within Block 3A/4A should be undertaken so that pre-planning can be done to prevent disruption to activities. The Operator would need to ensure that they notify all stakeholders timeously of their survey times	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Should any disagreement arise, PASA and / or the Department of Mineral Resources should be contacted;	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Ensure that a waste management plan is available for the vessel (required for any ship with a crew of more than 15 people).	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (0 – 3)	Audit Finding
	Discharge comminuted galley waste no closer than 3 nm from the coast. All food waste not comminuted to be discharged no closer than 12 nm from the coast. Vessels must be en-route; and	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Ensure that all waste disposal contractors are compliant with the relevant local bylaws and authority requirements in terms of municipal waste disposal.	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
Objective 6: Fisheries	Inform the sector of the safety protocols to adhere to and details of the survey area prior to commencement.	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Regular updates of the survey design must be communicated to vessels operating in the vicinity of Block 3A/4A;	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Fishing industry bodies and other key affected parties should be informed of the proposed survey activities and requirements with regards to the safe operational limits around the survey vessels prior to the commencement of the project. The following industrial bodies and affected parties include: <ul style="list-style-type: none"> » Department of Agriculture, Forestry and Fisheries; » Department of Environmental Affairs; » South African Tuna Association; » South African Tuna Long-Line Association; » Fresh Tuna Exporters Association; » South African Deep-Sea Trawling Industry Association; » South African Commercial Linefish Association; » West Coast and Peninsula Commercial Skiboat Association; » Shark Longline Association; 	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (0 – 3)	Audit Finding
	<ul style="list-style-type: none"> » South African West Coast Rock Lobster Association; » Transnet National Ports Authority (ports of Cape Town and Saldanha Bay); and » o South African Maritime Safety Association. 				
	Daily Navigational Warnings should be issued for the duration of the survey operations through the South African Naval Hydrographic Office.	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	A Fisheries Liaison Officer (FLO) should be present on board the survey vessels to facilitate communications with vessels in the vicinity of the survey vessel – any fishing vessel targets at a radar range of 24 nautical miles from the survey vessel should be called via radio and informed of the navigational safety requirements.	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Affected parties should be notified through fishing industry bodies when survey activities are complete and the vessel is off location.	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	Areas of high Tuna Pole fishing activity is due West of St Helena Bay between 32° 30' S and 33° S and 16° 45' E and 17° 45' E, which coincides with the southern portion of Block 3A/4A and this area should be monitored for the presence of tuna pole vessels during the survey via the Vessel Monitoring System unit at DAFF and via radar on board the survey vessel.	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	It is recommended that any exploration activities proposed to take place in this southern portion are timed to avoid peak Tuna Pole fishing activity (i.e. between November and February and May), as far as possible.	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	The surveys should commence in the northern-most extent of the block and then work southwards into the Small Pelagic Purse-Sein fishing grounds (highest fishing activity undertaken southwards of 31° 40'S and inshore of the 100 m depth contour).	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (0 – 3)	Audit Finding
	It is also recommended, depending on survey times, to commence with the North / South lines closer inshore and then move further offshore, thereby avoiding the main Small Pelagic Purse-Sein fishing activities from April to July.	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
	An “adaptive” management approach is recommended in order to minimise impacts by deciding on the best mitigation measures once specific survey dates are known and depending on the specific fishing activity being undertaken at the time.	PetroSA	Pre-Construction	N/A	None of the authorised activities have been initiated at the site.
Objective 6: Fisheries Research	Timing of the proposed surveys should avoid periods when research surveys are being conducted (i.e. mid-May to mid-June and mid-October to mid-December).	PetroSA	Pre-Construction	N/A	Noted. None of the authorised activities have been initiated at the site.
	Notify the managers of the research programmes regarding planned survey periods prior to commencements.	PetroSA	Pre-Construction	N/A	Noted. None of the authorised activities have been initiated at the site.

8. AUDIT RESULTS AND RECOMMENDATIONS

8.1. Overview of Audit Findings

The following recommendations are made for the PetroSA Regulation 34 Audit of EMPr for Block 3A/4A:

- » No activities have commenced thus far and therefore no activities could be audited leading to no current recommendations.

8.2. Conclusion

As activities for this project have not yet commenced, no audit findings could be provided at this point. An overall compliance percentage of the Exploration and geophysical surveys in Licence Block 3A/4A compliance with the conditions of the EA, and EMPr Revision 01 was calculated (refer to **Table 5**). The following compliance ratings are applicable in this regard:

- » A rating of 100%: best practice / full compliance.
- » A rating of >50%: compliance is satisfactory.
- » A rating of <50%: compliance is unsatisfactory.
- » A rating of 0%: nothing in place.
- » A rating of N/A: not applicable at this time (and therefore excluded from the overall compliance rating).

Overall, the Exploration and geophysical surveys in Licence Block 3A4A have not yet commenced and there were no conditions that could be audited. Legal requirements related to the activities have been identified at a broad scale.

Table 5: Overview of the Exploration and geophysical surveys in Licence Block 3A/4A overall compliance.

Compliance status	Rating	Description of compliance	EMPr	
			Results	%
Fully Compliant	3	Compliant with no further action required to maintain compliance.	N/A	N/A
Compliant	2	Compliant apart from minor or immaterial recommendations to improve the strength internal controls to maintain compliance.	N/A	N/A
Partially-Compliant	1	Major or material recommendations to improve the strength of internal controls to achieve compliance.	N/A	N/A
Non-Compliant	0	Does not meet minimum requirements.	N/A	N/A
TOTAL:			N/A	N/A

9. EVALUATION OF THE EMPr

As per Appendix 7 of the EIA Regulations, 2014 as amended (GNR 326)., an external audit report must include “an indication of the ability of the EMPr to:

- (i) sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity on an on going basis;

- (ii) Sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the closure of the facility; and
- (iii) Ensure compliance with the provisions of the EMPr;"

9.1. Ongoing impact avoidance, management and mitigation

Based on the audit outcomes and results reported above, the auditor is satisfied that the EMPr is sufficient and able to provide for the avoidance, management and mitigation of the environmental impacts associated with the undertaking of the activity on an ongoing basis once the activities commence, and that no further amendment or alteration to the EMPr is required in order to maintain this reliability of the EMPr provided that there are no changes or additional activities in the renewal work programme.

9.2. Closure impact avoidance, management and mitigation

The facility is not currently operational, and therefore no decommissioning activities are applicable to this audit. No further amendment or alteration to the EMPr is required currently.

9.3. Ensuring compliance with provisions of the EMP

Based on the audit outcomes and results reported above, the auditor is satisfied that the EMPr is sufficient and able to ensure compliance with the provisions of the environmental authorisation and EMPr, and that no further amendment or alteration to the EMP is required in order to maintain this reliability of the EMPr.

10. CONCLUSIONS AND RECOMMENDATIONS

This Chapter provides an overview of the results and recommendations of the environmental audit of the Exploration and geophysical surveys in Licence Block 3A/4A with the specifications of the project EMPr.

It should be noted that no significant non-compliances were recorded as part of the independent external environmental compliance audit. None of the listed activities has commenced and most of the planning phase requirements are therefore not yet applicable.

Recommendation: All the planning phase requirements should be complied with before any survey activities are initiated.

It is the opinion of the independent auditor that EMPr Revision 01 (September 2014), and its supporting documentation sufficiently provides for the avoidance, management and mitigation of environmental impacts associated with the project and ensures compliance with the provisions of EMPr Revision 01.

11. STAKEHOLDER CONSULTATION

11.1. Notification of all potential and registered interested and affected parties

In accordance with the requirements of Section 34(6) of the EIA Regulations, 2014 as amended (GNR 326), the following consultation must form part of the audit report submission:

- » 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.

In order to be remain compliant with these requirements, all potential and registered interested and affected parties have been notified of the submission of the external compliance audit report by: Nicolene Venter

- » The placement of an advertisement with a local newspaper, the Die Burger, on the 07 August 2023;
- » Uploading the audit report onto the Savannah Environmental website for download upon request: <http://www.savannahsa.com/public-documents/energy-generation/>.

APPENDIX A:
CVS OF INDEPENDENT AUDITORS AND REPORT REVIEWER

APPENDIX B:
ADVERT OF REPORT AS PUBLISHED