



Our reference: SO-ENV-1329

29 November 2024

Your Ref: EA nr EM1/9/98/67

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Attention: Deputy Director: Environmental Impact Assessment

ENVIRONMENTAL AUTHORISATION EXTERNAL REPORT SUBMISSION

The Environmental Authorisation applicable for Sasol South Africa Limited, Sasolburg Operations was externally audited during October 2023. The external audit was conducted to comply to the requirement contained in Chapter 5 part 3 of the Environmental Impact Assessment Regulations.

Sub regulation 34 (6) of the regulations also requires the holder of the environmental authorisation to notify all potential and registered interested and affected parties of the submission of the report and make the report available on request to anyone and on a publicly accessible website, where available.

The external audit reports will be available on <https://www.sasol.com/esg/environmental-audit-reports>.

Sasolburg Operations appointed WSP to conduct the external audits on all Environmental Authorisations and accompanying Environmental Management Programs.

Sasolburg and Ekandustria Operations

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MS Solomon PM Vilakazi LB Zondo

Company Secretary: M du Toit

Attached, please find the compliance audit report for the establishment of the Replacement of several different distillation units and construction of single distillation unit, Environmental Authorisation with reference EM1/9/98/67, dated November 2023.

The Audit report noted sufficient mitigation of environmental impacts and level of compliance to the Environmental Authorisation and Environmental Management Program (EMPr) therefore no recommendations for improvement were made.

Further, in alignment with Chapter 5 Part 4 of the regulation, regulation 36 allows amendment to the impact management action of an EMPr to be affected immediately by the holder of the environmental authorisation and reflect it in the next environmental audit report. Annexure B contains the mitigations measures identified during the environmental impact assessment, for the operational phase of the project, defining the impact management outcome and impact management actions to enable compliance to this regulation.

No impact management outcome or impact management action requires amendment for the of Replacement of several different distillation units and construction of single distillation unit.

Yours faithfully

Signed by: Johann Van Wyk
Signed at: 2024-11-29 11:07:44 +02:00
Reason: I approve

Johann Van Wyk

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Annexure A

Audit report.

**Replacement of several different distillation units and construction of single distillation unit – ref
EM1/9/98/67**



Sasol South Africa Limited

SINGLE DISTILLATION UNIT ENVIRONMENTAL AUTHORISATION (REFERENCE: EM1/9/98/67) AND ENVIRONMENTAL MANAGEMENT PROGRAM

Compliance Audit Report: 31 October 2023





Sasol South Africa Limited

**SINGLE DISTILLATION UNIT
ENVIRONMENTAL AUTHORISATION
(REFERENCE: EM1/9/98/67) AND
ENVIRONMENTAL MANAGEMENT PROGRAM**

Compliance Audit Report: 31 October 2023

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Sasol South Africa Limited

**SINGLE DISTILLATION UNIT
ENVIRONMENTAL AUTHORISATION
(REFERENCE: EM1/9/98/67) AND
ENVIRONMENTAL MANAGEMENT PROGRAM**

Compliance Audit Report: 31 October 2023

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QUALITY CONTROL

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Signature				
Checked by	Matilda Mbazo	Matilda Mbazo		
Signature				
Authorised by	Anri Scheepers	Anri Scheepers		
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1 INTRODUCTION

1.1 TERMS OF REFERENCE

WSP Group Africa (Pty) Ltd (WSP), as an independent environmental consultant, was appointed by Sasol South Africa Limited (Sasol) to undertake an external environmental authorisation (EA) compliance audit of the Single Distillation Unit (SDU) against the commitments contained in the EA (reference number EM1/9/98/67) and compile an audit report according to the requirements of the National Environmental Management Act (No. 107 of 1998) (NEMA).

The details of the EA (initial Record of Decision (RoD) audited for compliance of the SDU, Sasol Midlands Site are provided below:

- Application for authorisation in terms of Section 22 of the Environmental Conservation Act, 1989 (Act No. 73 of 1989): The installation of a single Distillation Unit (SDU) at Schumann Sasol, Sasol Industries, Sasolburg, (Reference number: EM1/9/98/67), dated 27 September 1999 and issued by Free State Department of environmental Affairs and Tourism.

Sasol South Africa (Pty) Ltd applied to amend the EA (Reference number: EM1/9/98/67) as per Regulation 30(2) of GNR 326, 2014 Environmental Impact Assessment (EIA) Regulations to:

- Change the heading of the ROD;
- Change the applicant's details on the EA;
 - Owner of the EA
 - Contact details and address
- Change the person to whom the EA was issued; and
 - Contact person/Management
- Location.
 - Farm portion

This external audit was undertaken in accordance with Regulation 34 of the Environmental Impact Assessment (EIA) Regulations of 2014 (as amended).

1.2 SASOL SASOLBURG – SINGLE DISTILLATION UNIT OPERATION

The single SDU operation produces hard wax, medium wax and paraffins. A small amount of gases, consisting of light hydrocarbons (ethane, propane and butane), which are in the operation are released to the atmosphere and will be flared.

1.3 PROJECT TEAM

The project team is summarised in **Table 1-1** Curricula Vitae are included as **Appendix A**.

Table 1-1 – Details of the Audit Team

Audit Team	Role	Experience
Tshepho Mamashela	Auditor	BSc (Hons) Environmental Management MSc Environmental Science (in progress)
		6 Years' Experience
		6 Years' Experience Tshepho Mamashela is an Environmental Consultant currently working for WSP Group Africa at the Johannesburg, Waterfall office in the Environmental Planning and Advisory Department. She is an Environmental Management professional with over 5 years' experience in the private and public sector. Tshepho has experience in environmental management field with expertise in environmental impact assessment, environmental auditing, environmental management plans. She is registered with the Environmental Assessment Practitioners Association of South Africa (EAPASA: 2019/1846) and the South African Council for Natural Scientific Professions (SACNASP: 120878).
Matilda Mbazo	Auditor	BSc (Hons) Geography
		Matilda graduated from the University of Wits with a BSc honours in Geography in 2023 and is currently completing her MSc in Environmental Science. She has over a year's experience in environmental management and currently provides technical and strategic input on a diverse range project in environmental management and environmental compliance audits. She is a registered Candidate Environmental Assessment Practitioner (EAP) with EAPASA (2023/6394).
Anri Scheepers	Reviewer	BA (Hons) Geography
		15 Years' Experience
		Anri graduated from the University of Johannesburg with a BA honours in Geography in 2007. Anri has been involved in numerous mining and industrial projects in South Africa, and has experience with diamond, gold, platinum, chrome, coal and manganese mining and processing operations. Anri is qualified as a Lead Auditor and has undertaken legal compliance auditing, including environmental authorisations, waste management licences, water use licences and EMPs. In addition, she has undertaken general site assessments to determine compliance against local, provincial and national environmental legislation. Anri's roles and responsibilities include the management of Environmental Authorisation and Waste Management Licence processes (Basic Assessments and Scoping and Environmental Impact Assessment Reporting), Water Use Licence Application processes and auditing. She is registered with the Environmental Assessment Practitioners Association of South Africa (EAPASA: 2019/1528)

2 AUDIT SCOPE

WSP was appointed by Sasol to conduct the environmental compliance audit for the SDU. This report provides an overview of the level of compliance with the conditions contained in the EA. The site audit was undertaken on **31 October 2023** at the Sasol One, Sasolburg Plant.

The objective of the audit was to:

- Assess the level of compliance with the commitments of the EA (reference number EM1/9/98/67) for the SDU;
- Assess the extent to which the avoidance, management and mitigation measures provided for in the impact assessment for the operation of the SDU were implemented;
- Identify and assess any new impacts and risks that result from undertaking the activity;
- Critically evaluate the effectiveness of the impact assessment;
- Identify shortcomings in the impact; and
- Identify the need for any changes to the avoidance, management and mitigation measures provided for in the impact.

The EIA Regulations of 2014 (as amended) are considered applicable to the SDU operations. Regulation 34, of the EIA Regulations, provides for the auditing of an EA, EMPr and closure plan. Furthermore, Appendix 7 of the EIA Regulations outlines the required audit report content. The 2014 Regulations, as amended, refer to a minimum frequency of five years. This audit is designed to meet the requirements of Regulation 34 of the EIA Regulations, 2014. Table 2-1 indicates where the requirements of Section 34 and Appendix 7 are met within this audit report.

Table 2-1 - Regulation 34 and Appendix 7 of the EIA Regulations (2014)

Sub-Section	Requirement	Report Section Reference
34 (2)a	The environmental audit report must be prepared by an independent person with the relevant environmental auditing expertise.	Sub-section 1.3 CVs provided in Appendix A
34(2)b	The environmental audit report must provide verifiable findings, in a structured and systematic manner, on: (i) the level of performance against and compliance of an organisation or project with the provisions of the requisite environmental authorisation or EMPr and, where applicable, the closure plan; and (ii) the ability of the measures contained in the EMPr, and where applicable the closure plan, to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity;	Audit checklist tables provided in Section 4
Appendix 7, Section 3 of EIA Regulations		
3(a)	The environmental audit report must determine (a) the ability of the EMPr, and where applicable the closure plan, to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity on an ongoing basis and to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the closure of the facility; and	Section 4

Sub-Section	Requirement	Report Section Reference
3(b)	The environmental audit report must determine the level of compliance with the provisions of environmental authorisation, EMPr and where applicable, the closure plan.	Section 4
4(a)	Where the findings of the environmental audit report indicate: (a) insufficient mitigation of environmental impacts associated with the undertaking of the activity (b) insufficient levels of compliance with the environmental authorisation or EMPr the holder must, when submitting the environmental audit report to the competent authority submit recommendations to amend the EMPr or closure plan in order to rectify the shortcomings identified in the environmental audit report	Section 4
3(1)(a)	Details of- (i) the independent person who prepared the environmental audit report; and (ii) the expertise of independent person that compiled the environmental audit report.	Sub-section 1.3 CVs provided in Appendix A
3(1)(b)	A declaration that the independent auditor is independent in a form as may be specified by the competent authority.	Section 9
3(1)(c)	An indication of the scope of, and the purpose for which, the environmental audit report was prepared.	Sub-section 1.1 and Section 2
3(1)(D)	A description of the methodology adopted in preparing the environmental audit report.	Section 3
3(1)(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; and (iii) ensure compliance with the provisions of environmental authorisation, EMPr, and where applicable, the closure plan.	Section 4
3(1)(f)	A description of any assumptions made, and any uncertainties or gaps in knowledge.	Sub-section 2.2
3(1)(g)	A description of any consultation process that was undertaken during the course of carrying out the environmental audit report.	Sub-section 3.2
3(1)(j)	A summary and copies of any comments that were received during any consultation process.	Comments received during the consultation process were included as comments in the audit checklist tables in Section 4.
3(1)(k)	Any other information requested by the competent authority.	None requested

2.1 DISCLAIMER

This Report has been prepared by WSP on behalf and at the request of Sasol in terms of Regulation 34 of the EIA Regulations.

Unless otherwise agreed by us in writing, we do not accept responsibility or legal liability to any person other than the Client for the contents of, or any omissions from, this Report.

To prepare this Report, we have reviewed only the documents and information provided to us by the Client or any third parties directed to provide information and documents to us by the Client. We have not reviewed any other documents in relation to this Report and except where otherwise indicated in the Report.

The findings, recommendations and conclusions given in this report are based on the author's best scientific and professional knowledge, as well as available information. This report is based on survey and assessment techniques which are limited by time and budgetary constraints relevant to the type and level of investigation undertaken; WSP and its staff reserve the right to modify aspects of the report including the recommendations if and when new information may become available from on-going research or further work in this field or pertaining to this investigation.

Although WSP exercises due care and diligence in rendering services and preparing documents, WSP accepts no liability, and Sasol, by receiving this document, indemnifies WSP and its directors, managers, agents and employees against all actions, claims, demands, losses, liabilities, costs, damages and expenses arising from or in connection with the services rendered, directly or indirectly by the use of the information contained in this document.

This report must not be altered or added to without the prior written consent of the author. This also refers to electronic copies of this report which are supplied for the purposes of inclusion as part of other reports. Similarly, any recommendations, statements or conclusions drawn from or based on this report must make reference to this report. If this report is used as part of a main report, the report in its entirety must be included as an appendix or separate section to the main report.

2.2 ASSUMPTIONS

WSP noted the following assumptions and limitations during the audit:

- The information provided by Sasol is up to date and accurately represents the SDU;
- WSP viewed as much of the operational area as possible given the timeframe and access limitations; and
- Findings made within the previous external and internal audit reports are correct.

3 AUDIT METHODOLOGY

The International Organisation of Standardisation (ISO) 14010, ISO 14011 and ISO 14012 guideline documents were utilised as a template during the compliance audit process. This methodology ensures that the compliance audit was conducted in a systematic and independent manner that was documented and objectively evaluated to determine compliance to the EA commitments.

The audit process comprised the following:

- Confirmation of the audit checklist;
- Site inspection (**31 October 2023**);
- Review of documentation relevant to the commitments of the EA (e.g., records, permits/certificates/maintenance logs/monitoring results/previous reports, incident registers, etc.); and
- Compilation of an audit report.

3.1 AUDIT CHECKLIST

WSP compiled an audit checklist of the EA (reference number EM1/9/98/67), which was used as an auditing tool. Refer to **Section 4** for the audit checklist.

3.2 SITE INSPECTION AND INTERVIEW

An onsite inspection was conducted between **31 October 2023**, where findings and observations were recorded and are summarised in **Section 4**. Key personnel interviewed included:

- Suyen Van Zyl ; and
- Koketso Motaung .

3.3 INFORMATION CONSIDERED

Information related to the following categorises was reviewed, where required, and used to evaluate compliance.

- Air Emissions Licence (AEL) (reference number: FDDM-MET-2013-24-R1);
- Sasolburg and Ekandustria Operations Annual Emission Report (August 2022) to ensure compliance with the AEL conditions;
- Water Use Licence (WUL) (reference number: 14/C22K/FG/4958);
- Groundwater Quality Monitoring Report: WUL Compliance, Sasolburg Operations: February 2022 (WSP, May 2022)
- Integrated Water and Waste Management Plan (IWWMP) Rev 1 – report number: SO-env-1075 (Sasolburg Operations, December 2022) that includes the:
 - Stormwater Management Plan (SWMP);
 - Rehabilitation Strategy and Implementation Plan (RSIP);
 - Water Conservation and demand Management (WC/DM);
 - Malfunctions register;
 - Water management;
 - Groundwater management;
 - Waste management;
 - Contaminated Water and Wastewater Management;
 - Effluent Management; and
 - Land management.
- Storm Water management Plan Sasolburg Operations (File no: 27/2/2C222/6/4) (Sasolburg Operations, December 2021);
- Sasolburg and Ekandustria Operations ISO 45001:2018, ISO 9001:2015 and ISO 14001:2015 Recertification Audit Report (DQS Management Systems Solutions, November 2021);
- Environmental Standards;

- Health and Safety Standards and Audits;
- Procedure for the management of waste on the Sasolburg Operations' Sites (document number: SSP-S-014) (Sasolburg Operations, January 2020)
- The reporting, investigation and recording of environmental incidents (document number: SSP-S-013) (Sasolburg Operations, July 2019);
- Waste Management and Disposal Registers;
- Other related approvals.

3.4 ASSESSMENT EVALUATION METHODOLOGY

The consolidated report contains all commitments, which were formulated as part of the original and amended EA. Each commitment contained in the audit checklist was assessed by reviewing site documentation, interviewing employees and undertaking a site inspection. The application of the scoping report mitigation was assessed, and the level of compliance rated (compliance categories contained in **Table 3-1**). The compliance of each of the operations listed in **Section 1.2** was assessed.

Table 3-1 - Level of Compliance

Compliance Level	Definition
Compliant (C)	When an activity or commitment has been implemented, completed, is on-schedule or is maintained on an ongoing basis. Condition/mitigation measure/commitment has been achieved with evidence provided in the form of a document or site verification.
Non-compliant (NC)	When an activity or commitment has not been complied with in its entirety/certain aspects thereof have not been addressed. When a commitment has not been undertaken, not been completed according to plan, or where any unlawful actions have been identified. Non-compliant conditions are given target completion dates as follows: <ul style="list-style-type: none"> — Short term: 0 – 6 months. — Medium term: 6 – 12 months. — Long term: 12 - 18 months
Not applicable (N/A)	The condition, commitment and/or mitigation measure is not applicable or is to be revised in accordance with current practice. A "Not Applicable" finding is also noted in event where such condition, commitment and/or mitigation measure is not yet relevant but is still relevant for future activities.

4 AUDIT FINDINGS

4.1 ENVIRONMENTAL AUTHORISATION

Table 4-1 provides a compliance rating of the EA commitments that were used as the audit standard.

Table 4-1 - Audit Finding of the Environmental Authorisation (EM1/9/98/67)) dated 31 October 2023

Ref	Condition	Compliance Status	Findings	Recommendations
1.1 Special Conditions				
i.	The mitigation measures outlined in the scoping report must be implemented.	C	<p>Mitigation measures outlined in the scoping report are implemented on site.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> Onsite observation. Onsite verification from environmental specialist. 	None
ii.	All waste produced during the construction phase must be removed and disposed of in a proper and acceptable manner.	N/A	This condition is outside the audit period and therefore was not audited.	None.
iii.	Emission from SDU must be maintained within the acceptable emission	C	Sasolburg Operations has been granted the	None

Ref	Condition	Compliance Status	Findings	Recommendations
	standards as per Air Pollution Prevention Act.		<p>Atmospheric Emission Licence (AEL) by the Fezile Dabi Local Municipality.</p> <p>SASOL is required to submit its annual atmospheric emissions compliance report 60 days after the closure of its financial year end.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> Atmospheric Emission Licence (AEL) by Fezile Dabi Local Municipality. AEL License number: FDDM-MET-2013-24-R1 FY22 Annual Emission Report was submitted for reporting period from July 2021 – June 2022. Compliance with the AEL for the 	

Ref	Condition	Compliance Status	Findings	Recommendations
			Butanol Plant in this reporting period was concluded.	
iv.	The structure must meet the engineering standards and occupational health.	N/A	This condition is outside the audit period and therefore was not audited.	None
1.2 Standard Conditions				
i.	The applicant must advertise this record of decision.	N/A	This condition is outside the audit period and therefore was not audited.	None
ii.	The department must be informed when the construction resumes.	N/A	This condition is outside the audit period and therefore was not audited.	None
iii.	This record of decision does not exempt any person from the requirements of any provision of any other law and does not purport to interfere with rights of any person who may have interest on property.	N/A	Noted. This audit scope did not cover a legal review of compliance of the SDU and SSO with all statutory requirements and whether they were in possession and compliance of all the necessary permits,	None.

Ref	Condition	Compliance Status	Findings	Recommendations
			authorisations or any other official documents.	
2. Key factors for the decision				
i.	The applicant has complied with the regulations to the satisfaction of the department.	N/A	This condition is outside the audit period and therefore was not audited.	None.
ii.	There are no protected or red data plant and animal species on or near the site.	C	<p>No red data or other protected plant and animal species were identified during the audit, as the SDU process unit is in an industrial site.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> Onsite observation Environmental Impact Assessment of the Single Distillation Unit to be established at Schumann Sasol SA (Pty) Ltd (Scoping Report) (1999) 	None.

Ref	Condition	Compliance Status	Findings	Recommendations
iii.	No historical or cultural or archaeological sites found on the site.	C	<p>No historical, archaeological features or cultural sites were identified on or near the site during the audit. The SSO site was established and cleared prior to the construction of the SDU sphere and its conversion to a propylene sphere.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> Onsite observation Verbal confirmation 	None.
iv.	There are no sensitive areas (e.g., wetlands) on the site where the unit will be located.	C	<p>No sensitive areas were identified during the audit.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> Onsite observation Environmental Impact Assessment of the Single Distillation 	None.

Ref	Condition	Compliance Status	Findings	Recommendations
			Unit to be established at Schumann Sasol SA (Pty) Ltd (Scoping Report) (1999)	
v.	The unit will pose no visual impacts as the site is situated in an already industrialised area.	C	<p>The Auditor confirmed during the site audit that the site was located in the Sasol One Site and is already disturbed.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> Onsite observation Verbal confirmation Google Earth 	None.
vi.	There will be no effect in ground water, surface water, fauna and flora as the unit will be put in existing slab with the existing SCI factory.	C	The SDU plant is located within a concrete bund with a clean and contaminated stormwater management system and an emergency response control plan in place at the Sasol One	None.

Ref	Condition	Compliance Status	Findings	Recommendations
			<p>site. The SSO has an onsite water management system to control clean stormwater, and a water treatment management system to control and manage contaminated stormwater or effluent. Sasol One site is an industrial area and protocols were in place to ensure no effect and impact on the surface and groundwater, or vegetation.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> ■ Verbal Confirmation ■ Onsite observation ■ Procedure for the management of waste on the Sasolburg Operations Sites (document number SSP- 	

Ref	Condition	Compliance Status	Findings	Recommendations
			<p>S-014, 29 November 2020)</p> <ul style="list-style-type: none"> IWWMP (report number: SO-env-1075, December 2022) 	
vii.	Permission to operate the SDU plant has been granted by the air pollution control officer.	C	<p>Sasolburg Operations has been granted the Atmospheric Emission Licence (AEL) by the Fezile Dabi Local Municipality.</p> <p>SASOL is required to submit its annual atmospheric emissions compliance report 60 days after the closure of its financial year end.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> Atmospheric Emission Licence (AEL) by Fezile Dabi Local Municipality. AEL License 	None.

Ref	Condition	Compliance Status	Findings	Recommendations
			<p>number: FDDM-MET-2013-24-R1</p> <ul style="list-style-type: none"> FY22 Annual Emission Report was submitted for reporting period from July 2021 – June 2022. Compliance with the AEL for the Butanol Plant in this reporting period was concluded. 	
3. Duration and date of expiry				
	This ROD is valid for 5 years from the date of approval, unless the unit is modified and/or relocated, in which case it becomes invalid.	N/A	<p>The development started within the specified period and is currently operational.</p> <p>This condition is outside the audit period and therefore was not audited.</p>	None.
4. Appeal				
	An appeal under Section 35(3) of the Act, must be done in writing within 30	N/A	This condition is not applicable at	None

Ref	Condition	Compliance Status	Findings	Recommendations
	<p>days from the date on which this ROD was approved and should be directed to</p> <p>The MEC: DEAT</p> <p>Free State Province</p> <p>P O Box 264</p> <p>Bloemfontein</p> <p>9300</p>		<p>this stage as the site is in full operation and there are no appeals.</p> <p>This condition is outside the audit period and therefore was not audited.</p>	

4.2 SCOPING REPORT MITIGATIONS

Table 4-2 provides a compliance rating of the EA commitments that were used as the audit standard.

Table 4-2 – Scoping Report Mitigation Audit Findings

Ref	Condition	Compliance Status	Findings	Recommendations	Measures Implemented to Address Non-Compliance	Practicality of the EMPR Commitments	Is the Non-Compliance Administrative or will it have an impact	Historical/New Non-Compliance (Administrative measures)
Topography								
	Existing plants in the main SCI factory (Sasolburg) will surround the	C	The SDU is located around the main Sasol One Site plant. There is no vegetation as the area is fully paved.	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendations	Measures Implemented to Address Non-Compliance	Practicality of the EMPR Commitments	Is the Non-Compliance Administrative or will it have an impact	Historical/New Non-Compliance (Administrative measures)
	SDU process and therefore there will be no effect as regards this aspect of the environment.		No vegetation is affected by the operation of the SDU. <i>Evidence:</i> <ul style="list-style-type: none">Verbal ConfirmationOnsite observation					
Air Quality								
	Gaseous emissions to be produced from the SDU process that may have an effect on the air quality are as follows: <ul style="list-style-type: none">Flue gas to the atmosphereHydrocarbons to atmosphere.	C	Sasolburg Operations has been granted the Atmospheric Emission Licence (AEL) by the Fezile Dabi Local Municipality. SASOL is required to submit its annual atmospheric emissions compliance report 60 days after the closure of its financial year end. <i>Evidence:</i> <ul style="list-style-type: none">Atmospheric Emission Licence (AEL) by Fezile Dabi Local Municipality. AEL License number: FDDM-MET-2013-24-R1 FY22Annual Emission Report was submitted for reporting period from July 2021 – June 2022. Compliance with the	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendations	Measures Implemented to Address Non-Compliance	Practicality of the EMPR Commitments	Is the Non-Compliance Administrative or will it have an impact	Historical/New Non-Compliance (Administrative measures)
			AEL for the Butanol Plant in this reporting period was concluded.					
Surface water and ground water								
	During operation there will be no contamination of surface and groundwater. The site will be covered with concrete and necessary bund walls applied around storage tanks and therefore no contamination due to spillage, leaks or abnormal operating conditions.	C	<p>The SDU plant is located within a concrete bund with a clean and contaminated stormwater management system and an emergency response control plan in place at the Sasol One site. The SSO has an onsite water management system to control clean stormwater, and a water treatment management system to control and manage contaminated stormwater or effluent. Sasol One site is an industrial area and protocols were in place to ensure no effect and impact on the surface and groundwater.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> Verbal Confirmation Onsite observation Procedure for the management of waste on the Sasolburg 	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendations	Measures Implemented to Address Non-Compliance	Practicality of the EMPR Commitments	Is the Non-Compliance Administrative or will it have an impact	Historical/New Non-Compliance (Administrative measures)
			<p>Operations Sites (document number SSP-S-014, 29 November 2020)</p> <ul style="list-style-type: none"> IWWMP (report number: SO-env-1075, December 2022) 					
Liquid effluent								
	<p>A new stormwater and oil sewage system around the plant is planned. Spills and leaks around the tanks will be contained by adequate bunding. Adequate bunding meaning the bund wall is sufficient to contain the product of tank with the largest capacity.</p>	C	<p>The SDU plant is located within a concrete bund with a clean and contaminated stormwater management system and an emergency response control plan in place at the Sasol One site. The SSO has an onsite water management system to control clean stormwater, and a water treatment management system to control and manage contaminated stormwater or effluent. Sasol One site is an industrial area and protocols were in place to ensure no effect and impact on the surface and groundwater.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> Verbal Confirmation 	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendations	Measures Implemented to Address Non-Compliance	Practicality of the EMPR Commitments	Is the Non-Compliance Administrative or will it have an impact	Historical/New Non-Compliance (Administrative measures)
			<ul style="list-style-type: none"> Onsite observation Procedure for the management of waste on the Sasolburg Operations Sites (document number SSP-S-014, 29 November 2020) IWWMP (report number: SO-env-1075, December 2022). 					
	Stormwater and oily sewer systems will go directly to SCI Water Systems, who are in possession of an approved permit and comply to the requirements of the final effluent permit issued by the Department of Water Affairs and Forestry (DWAF).	C	<p>All stormwater and effluent discharge are managed through the Storm Water Management Plan (SWMP) in the IWWMP.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> Verbal communication SWMP in the IWWMP <p>Ref: SO-env-929 DWA file number 27/2/2/C222/6/4</p>	None.	N/A	N/A	N/A	N/A
	If a spill should occur during loading, it is not likely that to	C	The area around the SDU plant was bunded and has a spill detector that notifies the Digital Control System	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendations	Measures Implemented to Address Non-Compliance	Practicality of the EMPR Commitments	Is the Non-Compliance Administrative or will it have an impact	Historical/New Non-Compliance (Administrative measures)
	penetrate through the concrete but will congeal on the paving and can thus be cleared up and disposed of as solid waste.		<p>(DCS) in the case of a spill. Contaminated wastewater or effluent developed is managed in accordance with the IWWMP and SWMP. An emergency response control plan was in place should a spill occur at the sphere. No spills were recorded at the sphere.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> Onsite communication SWMP in the IWWMP Ref: SO-env-1075 DWA file number 27/2/2/C222/6/4 					
Solid waste								
	Solid effluent resulting from the SDU will be wax samples taken and sample cups. There may actually be fewer samples, because of the simplified process. Wax leaks on flanges	C	<p>Furnace maintenance happens every four years. The last one was in March 2021 and there was no coke formation. Coke was last removed from the furnace in 2016.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> Onsite observation Verbal confirmation 	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendations	Measures Implemented to Address Non-Compliance	Practicality of the EMPR Commitments	Is the Non-Compliance Administrative or will it have an impact	Historical/New Non-Compliance (Administrative measures)
	and valves can occur. Maintenance will be done regularly to prevent leakages.							
	<p>Coke formation can occur in the furnace, but this will be minimal. It is estimated that the furnace will be cleansed once every two years and the process by which the furnace will be decoked is called pigging.</p> <p>It is estimated that the furnace will be cleansed once every four years and the process by which the furnace will be decoked is called pigging.</p>	C	<p>Furnace maintenance happens every four years. The last one was in March 2021 and there was no coke formation. Coke was last removed from the furnace in 2016.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> Onsite observation Verbal confirmation 	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendations	Measures Implemented to Address Non-Compliance	Practicality of the EMPR Commitments	Is the Non-Compliance Administrative or will it have an impact	Historical/New Non-Compliance (Administrative measures)
Soil								
	There is a negligible effect on the soil because the plant will be built within the Sasol one site. The modern technology of the SDU process should reduce the possibility of soil pollution significantly	C	<p>The area around the SDU plant is fully paved and bunded and has a spill detector that notifies the Digital Control System (DCS) in the case of a spill. Contaminated soil is managed in accordance with the IWWMP and SWMP. An emergency response control plan was in place should a spill occur at the sphere. No spills were recorded at the sphere.</p> <p><i>Evidence:</i></p> <p>Onsite observation</p>	None.	N/A	N/A	N/A	N/A
Noise								
	Noise generated by the electric motors on the SDU will have a low impact	C	<p>Double hearing protection is a requirement at the SDU plant. Noise surveys are conducted annually years.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> Onsite observation 	None.	N/A	N/A	N/A	N/A



Ref	Condition	Compliance Status	Findings	Recommendations	Measures Implemented to Address Non-Compliance	Practicality of the EMPR Commitments	Is the Non-Compliance Administrative or will it have an impact	Historical/New Non-Compliance (Administrative measures)
			Environmental noise surveys documents					

5 PROGRESS AGAINST PREVIOUS AUDIT FINDINGS

The previous compliance audit report against the consolidated EA and EMPr was compiled by the Northwest University CEM in 2018. A comparison in the change of compliance rating from the 2018 and 2023 audits are provided in **Figure 5-1** and **Table 5-1** below, and provides a summary of the audit findings for the previous and current audits (2018 and 2023). The 2023 audit identified zero non-compliant conditions.

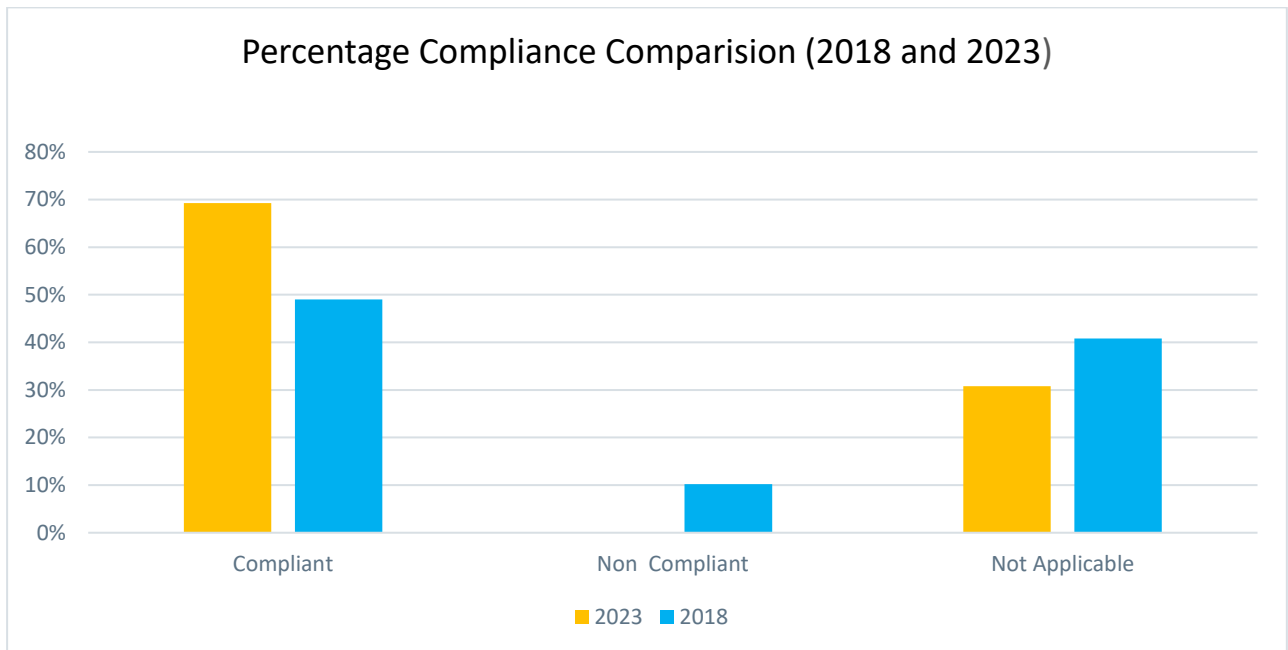


Figure 5-1 - Percentage comparison of Environmental Authorisation compliance levels from 2018 to 2023

Table 5-1 - Progress against previous findings

Ref	Commitment	2018 Status	2018 Finding	2023 Status	2023 Finding
EA Conditions					
1.2 Standard conditions					
	The applicant must advertise this record of decision.	NC	The RoD was advertised in 2000. However, no proof of this could be provided. Thus, a historic non-compliance. A correction attempt was made, i.e. evidence observed: Historical Declaration - Constructional Phase – Replace Several Distillation Units, dated 17-08-02.	N/A	This condition is outside the audit period and therefore was not audited.

6 SUMMARY OF THE AUDIT FINDINGS

6.1 SUMMARY OF THE SDU EA FINDINGS

The audit findings of the EA have been summarised into the following categories: compliance, non-compliance and not applicable. The overall audit findings concerning compliance to the EA conditions are provided in Table 6-1 and Figure 6-1 below. The percentage of compliance against all the conditions was 50% (Figure 6-2). However, with only applicable conditions it was 100% for this audit.

Table 6-1 - Summary of EA Compliance Audit Findings

Section of the EA	No. Commitments	C	NC	N/A
EA Condition of Approval	0	0	0	0
Special Conditions	4	2	0	2
Standard Conditions	3	0	0	3
Key factors for the decision	7	6	0	1
Duration and date of expiry	1	0	0	1
Appeal	1	0	0	1
Total	16	8	0	8
Total Percentage		50%	0%	50%
Percentage Compliance with Applicable Conditions	100%			

Figure 6-2 illustrates the number/count contribution of the findings of the EA conditions per section while Figure 6-2 presents the total proportion of compliance for the EA.

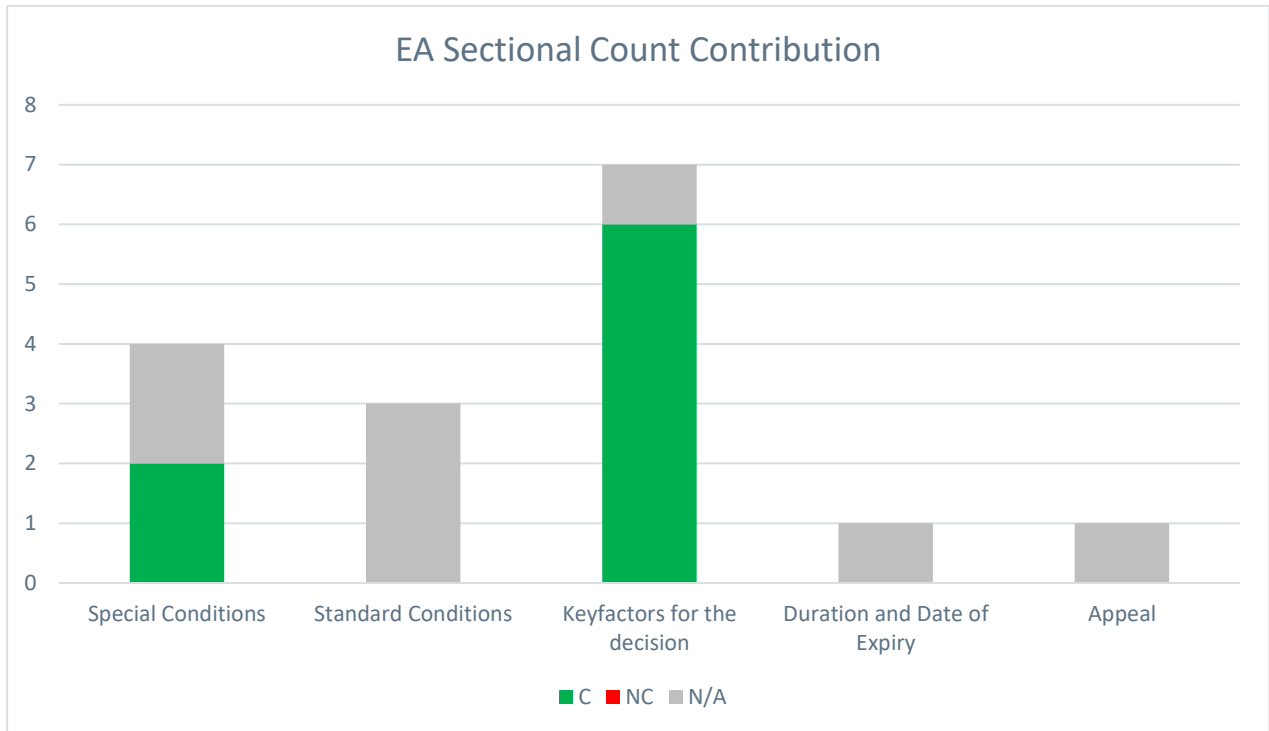


Figure 6-1 - Number/Count contribution of findings made to the EA conditions per section

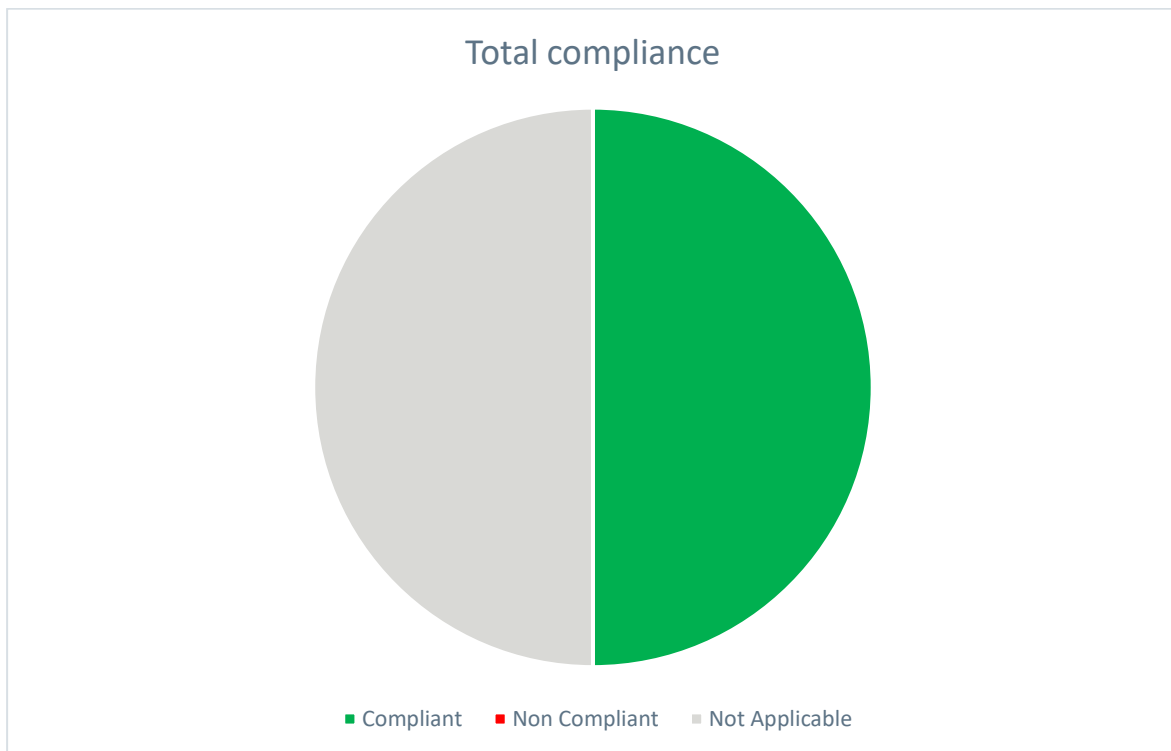


Figure 6-2 - Overall count findings on compliance to the EA commitments

6.2 SUMMARY OF SCOPING REPORT MITIGATIONS FINDING

The audit findings of the Scoping Report Mitigation have been summarised into the following categories: compliance, non-compliance and not applicable. Table 6-2 summarizes the Scoping Report Mitigation compliance audit findings per section, and this is graphically presented in Figure 6-3. The percentage of compliance against all the conditions was 100% for this audit and graphically presented in **Figure 6-4**.

Table 6-2 - Summary of Scoping Mitigation Compliance Audit Findings

Section of the EA	No. Commitments	C	NC	N/A
Topography	1	1	0	0
Air Quality Emissions	1	1	0	0
Surface Water and Groundwater	1	1	0	0
Effluent Treatment and Disposal	3	3	0	0
Solid waste	2	2	0	0
Soil	1	1	0	0
Noise	1	1	0	0
Total	10	10	0	0
Total Percentage		100%	0%	0%
Percentage Compliance with Applicable Conditions	100%			

Figure 6-3 illustrates the number/count contribution of the findings of the EA conditions per section while Figure 6-4 presents the total proportion of compliance for the EA.

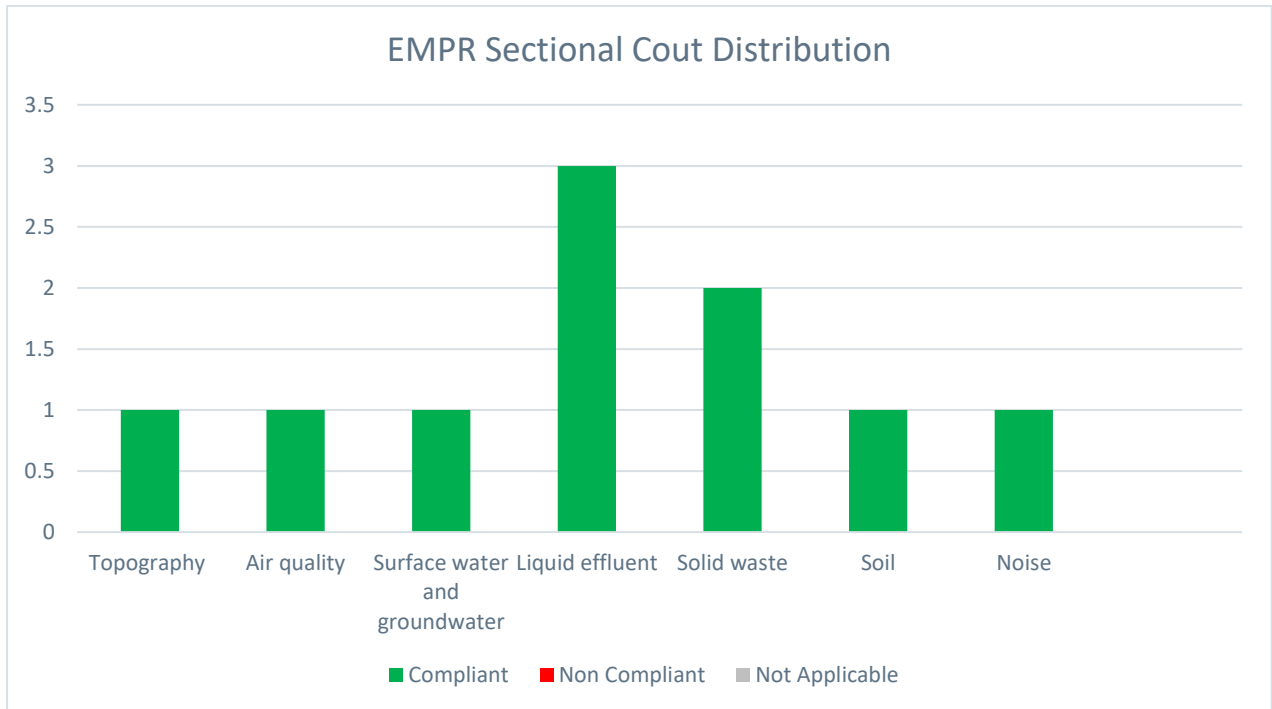


Figure 6-3 – Number/Count contribution of findings made to the Scoping Report Mitigation Commitments per Section

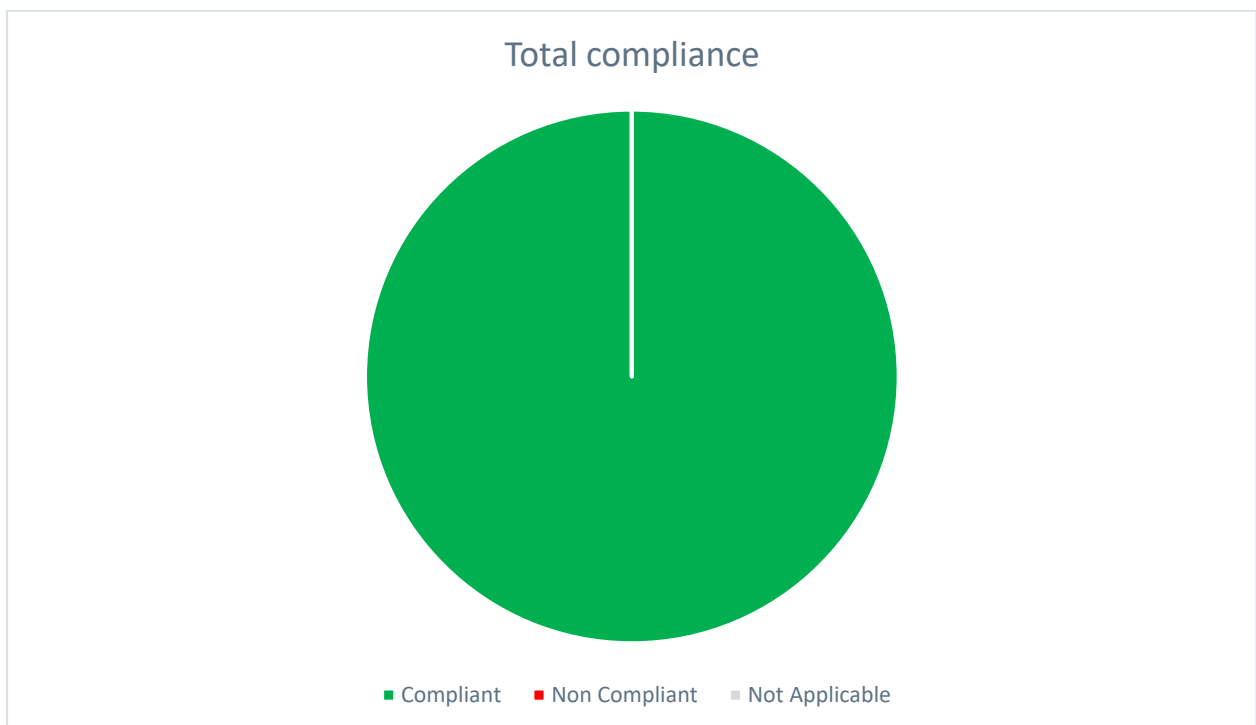


Figure 6-4 - Overall count findings on compliance to the Scoping Report Mitigation Commitments

7 RECOMMENDATIONS

Zero non-compliances of the EA and scoping report mitigations was noted during the audit. Sasol is commended for achieving 100% compliance for the EA and scoping report mitigation audit and is urged to continue to implement the environmental mitigation measures within the EA and Scoping report. In addition, Sasol should continue to implement their EMS for their onsite operations and to identify new environmental risks due to changes in operations, and address these when identified on site.

Sasol is advised to continue with their comprehensive EMS and strategy for detecting environmental risks and resolving incidents and non-compliances identified on site, and to utilize the audit report as an indicator of all areas that need attention.

8 CONCLUSION

Regulation 34 and Appendix 7 of the EIA Regulations 2014 (as amended) requires an assessment of the adequacy and effectiveness of the EA as part of the audit scope, as follows:

- Assess the level of compliance with the conditions of the EA.

The EA compliance audit has identified that the EA commitments remain applicable, and the EA is considered effective. As such, WSP does not recommend any amendment of the EA as it is sufficient in managing environmental impacts.

WSP do acknowledge that Sasol has systems in place which are considered to be more robust for monitoring compliance and implementing changes than through the EA audit; this includes the annual audit of each business unit to meeting the ISO 14001 standards. New impacts and risks are continually identified and assessed by Sasol's Environmental Department, which assesses environmental risks and drives improvement implementation. This Department facilitates Environmental Risk Assessments per business unit to ensure that gaps are addressed through implementation of mitigation measures via an Integrated Management System.

In conclusion, WSP recommends that Sasol continues to operate each business unit under an Environmental Management System and meet the licence compliance conditions (EA, EMP, WUL, AEL, etc). This is effective for mitigation against any gaps in the scoping report mitigations and to regularly identify new environmental impacts and risks that should be addressed on site.

9 DECLARATIONS

9.1 INDEPENDENT AUDITOR DECLARATION

Appendix 7 of GNR 982 refers to the need for the independent auditor to declare his/her independence of the holder of the EA.

NAME OF INDEPENDENT AUDITOR: _____Tshepho Mamashela_____

UNDERTAKING

I, _____Tshepho Mamashela_____, the undersigned and duly authorized thereto, by WSP, have studied Sasol's Single Distillation Unit Operations and compared the operations to the approved EA and Scoping report mitigations and compiled this report to the best of my knowledge. This section should be read with **Section 3 and 4**.

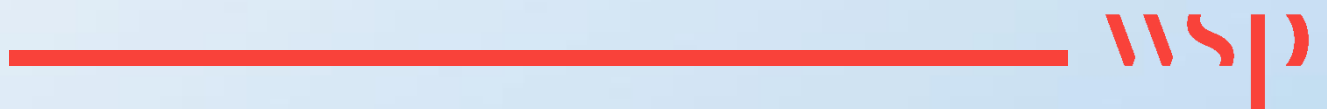
Signed at _____Midrand_____ on this the _____22 January_____2024

SIGNATURE OF INDEPENDENT AUDITOR

SIGNED IN LINE WITH THE REQUIREMENTS OF NEMA, GNR 982, APPENDIX 7, AS PUBLISHED UNDER THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NO. 107 OF 1998), AS AMENDED, READ WITH GNR SECTION 55 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002.

Appendix A

AUDIT TEAM CV





Tshepho Mamashela

Earth & Environment - Environmental Consultant

CAREER SUMMARY

Tshepho Mamashela is an Environmental Consultant currently working for WSP Group Africa at the Johannesburg, Waterfall office in the Environmental Planning and Advisory Department. She is an Environmental Management professional with over 5 years' experience in the private and public sector. Tshepho has experience in environmental management field with expertise in environmental impact assessment, environmental auditing, environmental management plans.



<1 years with WSP

6 years of experience

Area of expertise

Environmental Management
Environmental Impact Assessment
Compliance Auditing

Language

English

EDUCATION

Bachelor of Science (Honours), Environmental Management, University of South Africa	2019
Bachelor of Science, Geography, University of Pretoria	2017

ADDITIONAL TRAINING

Esri ArcGIS Basic	2019
Esri ArcGIS Standard	2019

PROFESSIONAL MEMBERSHIPS

EAPASA – Environmental Assessment Practitioner Association of South Africa- Registration No. 2019/18	2019
	2022
SACNASP – South African Council for Natural Scientific Professional - Certified Natural Scientist – Registration No. 120878	2021

PROFESSIONAL HISTORY

WSP Group Africa (Pty) Ltd	2023 - present
Mills and Otten	2023 – 2023
Environmental Consultant International	2021 -2022
Esri South Africa	2019 -2020
Limpopo Department of Economic Development Environment and Tourism	2018 -2019



Tshepho Mamashela

Earth & Environment - Environmental Consultant

Mabyoko Environmental Projects

2017 -2018

PROFESSIONAL EXPERIENCE

Environmental Impact Assessment Process

McCormick Property Development, Development of a New Shopping Centre, Motor City, Private Hospital and Housing in Dan Limpopo Province, South Africa

2023

EAP

Compile the Scoping Report and the Environmental Impact Report.

Cubisol Investments, Replacement of an existing sewer pipeline BA Gauteng Province, South Africa

2023

EAP

Compile the BA report and conduct public participation.

L Gromer, Expansion of egg processing facility, North West, South Africa

2023

EAP

Compile the BA.

Engen Petroleum, Upgrade and Expansion of the Engen Impala Filling Station, Limpopo, South Africa

2023

EAP

Compile the BA report, application forms and conduct public participation.

African Realty Trust, Construction of six in-stream storage dams at Letaba Estate, Limpopo, South Africa

2022

EAP

Assisted with compiling scoping report, application and related public participation documents.

Garonga Safari Camp, S24G Application for Garonga Safari Camp, Limpopo, South Africa

2021/2022

EAP

Assisted with compiling scoping report, application and related public participation documents.

McCormick Property Developers, Development of shopping centre and filling station at Madombizha, Limpopo Province, South Africa

2018/2019

Case officer

Review the BA for decision making process.

KHPJ Property Developers, Mixed-use development at Tiyani-B, Limpopo Province, South Africa

2018

Case Officer

Review the Scoping Report and Environmental Impact Report for decision making process.

Thulamela Local Municipality, Demarcation of 500 sites at Maphefeni, Limpopo Province, South Africa
Year from/to

2018

Review the Scoping Report and Environmental Impact Report for decision making process.



Tshepho Mamashela

Earth & Environment - Environmental Consultant

L. P Mogobobye Hydraulics, Filling station at Sifikile Village, Bojanala, North West Province, South Africa

2017/2018

EAP

Assisted in compiling the BA and supporting documentation including application forms and public participation material.

Compliance Auditing

Total Energies, Filling Moutse Mall Filling Station, Limpopo Province, South Africa

2023

Environmental Control Officer

Provided Environmental Control Officer (ECO) services by conducting monthly EMPr and EA audit for the construction of the filling station.

Sasol, Sasol Ammonia Storage Facility Upgrade, Free State Province, South Africa

2023

Environmental Control Officer

Provided Environmental Control Officer (ECO) services by conducting monthly EMPr and EA audit for the construction of the ammonia storage facility.

Cubusol Investment, Soshanguve Mall Upgrade, Gauteng Province, South Africa

2023

Environmental Control Officer

Provided Environmental Control Officer (ECO) services by conducting monthly EMPr and EA audit for the construction of the mall.

Alley Road, Residential Construction at Meyerton, Gauteng Province, South Africa

2023

Environmental Control Officer

Provided Environmental Control Officer (ECO) services by conducting monthly EMPr and EA audit for the construction of the residential complex.

Lynx Construction Group, Thatchfield Mall Construction, Gauteng, South Africa

2023

Environmental Control Officer

Provided Environmental Control Officer (ECO) services by conducting monthly EMPr and EA audit for the construction of the mall.

Emfuleni Estate Homeowners Association, Annual Water Use License Compliance, Free State Province, South Africa

2023

Environmental Control Officer

Provided Environmental Control Officer (ECO) services by conducting annual WUL audit.

Engen Petroleum, Annual Compliance Audit for Gauteng Site, Gauteng Province, South Africa

2023

Environmental Control Officer

Provided Environmental Control Officer (ECO) services by conducting monthly EMPr and EA audit for the operation of the filling stations. The following filling station were audited:

- Engen Hazeldene Convenience
- Engen Vega Service Station
- Engen Silver Lakes Convenience



Tshepho Mamashela

Earth & Environment - Environmental Consultant

- Engen R511 Tanganani
- Engen Wierda Park Motors
- Engen Lombardy Convenience Centre
- Engen Country View Service

Matilda Mbazo

Earth and Environment, Environmental Planning & Advisory, Intern

CAREER SUMMARY

Matilda Mbazo graduated from Monash South Africa with a BSc in Social Sciences (cum laude) in 2021 and completed her BSc Hons in Geography at University of Witwatersrand in 2022. Matilda is currently pursuing her MSc in Environmental Sciences at University of Witwatersrand. Matilda is an Intern in the Environmental Planning and Advisory Division of WSP Group Africa based in the Waterfall office. Matilda has less than a year experience in the environmental field and currently provides technical and strategic input on a diverse range project in the environmental management field, including environmental audits.



1 < years with WSP

Language

Afrikaans, English, Tswana, Ndebele, and Zulu

EDUCATION

Monash South Africa – Bachelor's degree in Social Sciences	3 years
University of Witwatersrand - Bachelor of Science Honours (Geography)	1 year
University of Witwatersrand – Master of Science (Environmental Sciences)	current

PROFESSIONAL HISTORY

WSP - Graduate Consultant	current
WSP - Intern	2023
WSP - Vacation Student	2021 - 2022
IIE MSA - Administration Assistant	2020 - 2021
Cotton On Group - Sales Associate	2020 - 2021

PROFESSIONAL EXPERIENCE

FFS Chloorkop Fired Heater

July 2022 to June 2023

ECO: EA and EMPR Compliance Audit

Environmental Auditor : EA and EMPr Annual Compliance Audit

Sasol South Africa Limited, Sasol Sasolburg EA Audits, South Africa

October 2022 to October 2023

Environmental Auditor



At the Sasol One Complex in Sasolburg, nine unit operations were subject to an external compliance audit against their EA and EMPr criteria.

South 32: Wessels and Mamatwan Mine, EA and EMPr Audits

November 2023

Environmental Auditor : EA and EMPr Compliance Audit

Dissertations and Research Projects

Department of Geography, Archaeology and Environmental Studies, University of Witwatersrand, Master of Science Dissertation.

2023-2024

To quantify the interactive effects of extreme drought, fire frequency, and mega-herbivory on tree density in a Marula-Knobthorn savanna using Geographic Information Systems and Remote Sensing.

Department of Geography, Archaeology and Environmental Studies, University of Witwatersrand, Bachelor of Science (Geography), Research Project

2022

Assessment of flood impact at the Hennops river, streaming from Tembisa to Centurion, using Remote Sensing and Geographic Information System.



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Magwa Crescent West, Waterfall City
Midrand, 1685
South Africa

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Annexure B – Replacement of Single Distillation Unit

Environmental Management Programme Operational Phase

Mitigations measures identified during the environmental impact assessment, for the operational phase of the project, defining the impact management outcome and impact management actions to enable compliance to this regulation.

Impact management objective	Impact management Action
1. Air Quality The authorised activity included the replacement of existing furnaces with new Furnaces B 2400 A of the SDU. B2801 will remain. Gaseous emissions to be produced from SDU process that may have an effect on the air quality are: Flue gas to the atmosphere Hydrocarbons to atmosphere However the overall project has a very positive effect compared to before.	1. 1 Emissions of CO ₂ in the fuel gas will be monitored. Emission from SDU must be maintained within the acceptable emission standard as per The Air Emission License.
2. Surface water and ground water During normal Operations of the SDU there will be no contamination of surface water. The potential for leaks will be less because less equipment will be used. Mitigation measures ensure no contamination due to spillage, leaks, or abnormal operating conditions.	2.1 The site will be covered with concrete with stormwater and process effluent drains around the plant.
	2.2 The necessary bund wall will be applied to the storage tanks and therefore no contamination due to spillage, leak or abnormal operating conditions will occur.
	2.3 Stormwater and process sewers will go directly to Sasol Operations Effluent Management which is operated within the requirements of a valid Water Use License.
3. Liquid effluents The stormwater and oily sewers will go directly to the Sasol South Africa Ltd, acting through its Sasolburg Operations wastewater treatment	3.1 WAKSOL A or hot condensate (after it was flushed through equipment during start-up and shutdown) will be sent to an off-spec tank where it will be loaded and from there

<p>(Bio works facility) and operated within the current valid Water Use licence.</p> <p>If a spill should occur during loading it is not likely to penetrate through but will congeal on the concrete on the paving and can thus be cleared up and disposed of as solid wax waste</p>	<p>send to Natref to be cracked to fuel. Therefore, no liquid effluent will be lost in the sewer system during normal shutdowns and start-ups.</p>
	<p>3.2 If a spill occurs during loading, it is not likely to penetrate through the concrete but will congeal on the paving and can be cleared and disposed as solid waste.</p>
	<p>3.3 WAKSOL or hot condensate (used to clean the distilled column) will be sent to Natref</p>
	<p>3.4 When it is necessary to clean the structured packing of the distillation column, the column will be flushed with Waksol or hot condensate and the flushing liquid is sent to Natref. The column is further steamed with a biodegradable cleaning agent. The steam removes any residue on the packing. the steam will pass through the steam injectors and condensate.</p>
	<p>3.5 The hydrocarbon and water mixture resulting from the steam cleaning activity is then separated in a three -phase separator. The water containing a small number of alcohols an oil will be sent to Solvents (section 500) - Section 500 is outside the scope of this activity and operated separately.</p>
	<p>3.6 The light hydrocarbons gasses) will be flared.</p>
<p>4.Solid waste</p> <p>Solid effluent form SDU will be wax samples and wax cups.</p> <p>Wax leaks on the flanges and valves can occur</p> <p>Coke formation in the furnace will be minimal.</p> <p>No chemicals are involved</p>	<p>4.1 Solid residual from the SDU will be disposed of via the appropriate legislated waste disposal procedures.</p>
	<p>4.2 Maintenance will be done on a regular basis to prevent leakages on flanges and valves</p>

	4.3 Coke formation in the furnace will be minimal. The coke formation will be removed after visual inspection is done to assess if it is required. No chemicals are involved.
5. Soil There is a negligible effect on the soil because the plant will be built within the Sasol one site. The modern technology of the SDU process should reduce the possibility of soil pollution significantly	5.1 The SDU is on an existing site with concrete floor.
6. Noise Noise generated by the electric motors on the SDU will have a low impact due to the replacement of three units with one.	6.1 Compliance to noise regulations are being monitored