



Our reference: SO-ENV-1352

29 November 2024

Your Ref: EA nr E/02/38

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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.

Attached, please find the compliance audit report for the establishment of VCM Expansion Project, Environmental Authorisation with reference E/02/38, dated November 2023.

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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 VCM Expansion Project VCM Expansion Project.

Yours faithfully

Signed by: Johann Van Wyk  
Signed at: 2024-12-04 12:34:56 +02:00  
Reason: I approve

*Johann Van Wyk*

**Johann van Wyk**  
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**Annexure A**

**Audit report.**

**VCM Expansion Project- Ref :E/02/38**



Sasol South Africa Ltd

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**EXPANSION OF THE VINYL CHLORIDE  
MONOMER (VCM) ENVIRONMENTAL  
AUTHORISATION (REF. NO: E/02/38) AND  
ENVIRONMENTAL MANAGEMENT PROGRAMME  
AUDIT**

Compliance Audit Report: November 2018 -  
October 2023





Sasol South Africa Ltd

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# **EXPANSION OF THE VINYL CHLORIDE MONOMER (VCM) ENVIRONMENTAL AUTHORISATION (REF. NO: E/02/38) AND ENVIRONMENTAL MANAGEMENT PROGRAMME AUDIT**

Compliance Audit Report: November 2018 - October 2023

**TYPE OF DOCUMENT (VERSION) CONFIDENTIAL**

**PROJECT NO. 41106358**

**DATE: NOVEMBER 2023**



Sasol South Africa Ltd

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# **EXPANSION OF THE VINYL CHLORIDE MONOMER (VCM) ENVIRONMENTAL AUTHORISATION (REF. NO: E/02/38) AND ENVIRONMENTAL MANAGEMENT PROGRAMME AUDIT**

Compliance Audit Report: November 2018 - October 2023

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Checked by	Tshepho Mamashela	Tshepho Mamashela		
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# 1 INTRODUCTION

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## 1.1 TERMS OF REFERENCE

WSP Group Africa (Pty) Ltd (WSP), as an independent environmental consultant, was appointed by Sasol South Africa Ltd (Sasol) to undertake an external environmental compliance audit of the commitments contained in the Environmental Authorisation (EA) (reference number E/02/38) of the expansion of the Vinyl Chloride Monomer (VCM) and the Environmental Management Programme (EMPr), as well as to compile an audit report according to the requirements of the National Environmental Management Act (No. 107 of 1998) (NEMA).

The details of the EA (initially Record of Decision (RoD)), its amendment and the EMPr audited for compliance of the VCM plant at the Sasol Midlands Site are provided below:

- EA for the VCM plant expansion is located at the Sasol Midlands site in Sasolburg (reference number: E/02/38), dated 19 September 2003 and issued to Monomers, a division of Sasol by the then Department of Tourism, Environmental and Economic Affairs (now the Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEA));
- The amendment of the EA for the VCM plant expansion located at the Midlands site (on the Sasol One site) in Sasolburg (reference number: E/02/38), dated 29 March 2018 and issued to Monomers, a division of Sasol by the DESTEA. The amendments include:
  - Change of the brief description of the activity;
  - Change of the applicant;
    - Owner of the EA
    - Contact details and address.
- EMPr included in the Scoping Report dated 22 July 2002.

## 1.2 SASOL SASOLBURG – VCM PLANT EXPANSION

SASOL intends to boost its yearly PVC manufacturing capacity from 40 000 tpa to 200 000 tpa to meet the long-term demand for PVC in the Sub-Saharan African market. To achieve this goal, the VCM plant capacity had to be raised from its existing 165 ktpa capacity to roughly 205 ktpa.

Since the proposed project is an expansion, the plant's basic operation has not changed. To reach the increased capacity necessary, the VCM factory has expanded by the installed new equipment. The proposed PVC plant upgrades would include the upgrading of utility facilities and equipment to increase production.

The changes on the plant included:

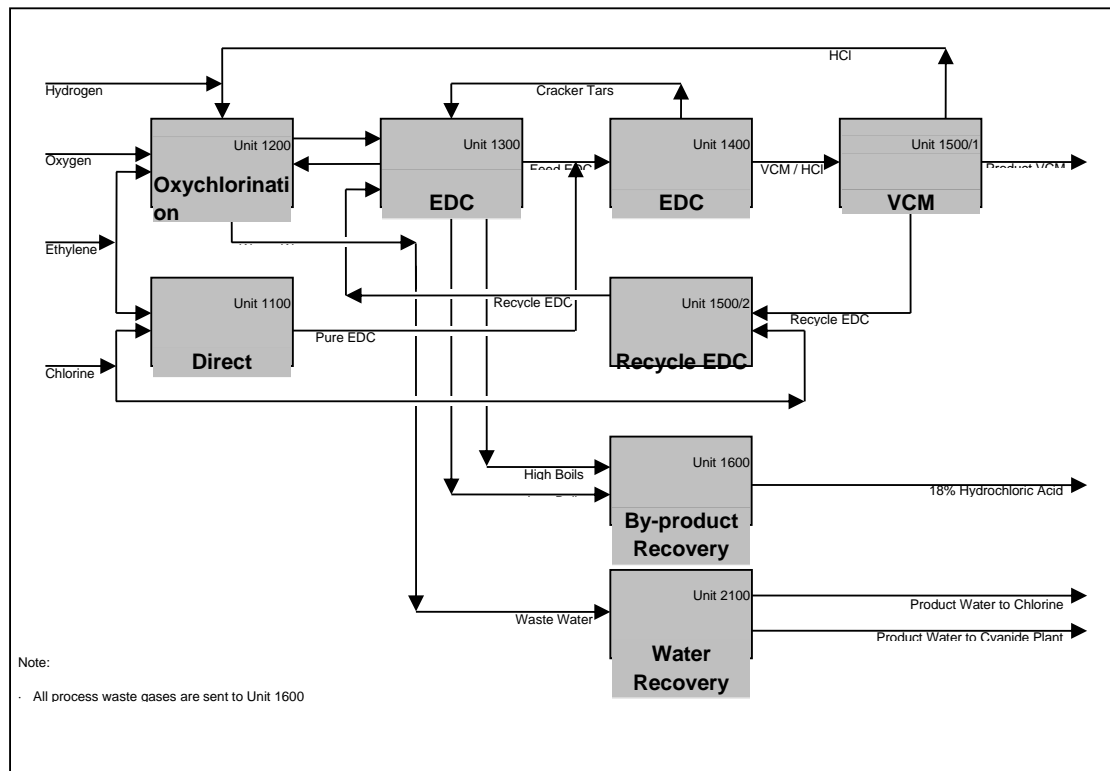
- Unit 1100 – Direct Chlorination
  - Install Air Cooler (No increase in CW usage)
  - Uprate pump
- Unit 1200 – Oxy Chlorination

- Modify Oxy Reactor Internals
- Uprate safety relief valve capacities (steam)
- Install new catalyst filter.
- Unit 1300 – EDC Purification
  - Install new feed distributor systems on all 3 distillation columns.
  - Replace feed trays on High Boils Column
  - Add additional exchanger
  - Change operating conditions – High Boils Column
- Unit 1400 – EDC Cracking
  - Add EDC Heater
  - Remove existing Super-heaters
  - Add airblower fan for furnace
  - Increase Furnace Stack length by 6m.
  - Replace furnace coils and coil supports
  - Add Air Cooler – prevent CW usage increasing.
  - Change top nozzles on Quench Tower.
- Unit 1500 – VCM Purification
  - Replace bottom 17 trays on HCl column.
  - Replace distributor pipes on HCl and VCM columns
  - Add exchanger
  - Replace pressure vessel – DM1502
  - Modify/ replace pumps
  - Increase Reactor residence time
  - Replace eductors
  - Increase capacity of Refrigeration compressor.
- Unit 1700 – Storage of Products
  - Add additional 1000 m<sup>3</sup> Dry EDC Storage Tank and supporting installations.
- Unit 1800 – Cooling Water
  - No changes planned to the Cooling Towers and CW circulation pumps. The following new coolers will be added:
    - EA 1503 C
    - EA 1508 B
    - EA 1306 B
    - New Propylene Condenser
    - EA 1102 will be removed

The installation of Air Coolers in Units 1100 and 1400 compensates for the water used by these new exchangers.

The main feed sources for the VCM plant are chlorine, oxygen, hydrogen and ethylene. Since the technology is existing, no new chemical substances will be introduced due to the proposed project. The product from VCM is used as feed for the PVC facility and here there will therefore also be no additional chemicals involved.

**Figure 1-1** depicts the positioning of the various units in the VCM Plant. As can be seen, all the units are already in place, and all of the planned alterations will be made to this existing facility.



**Figure 1-1 - Diagram of the VCM Plant**

## 1.3 PROJECT TEAM

Tshepho Mamashela and Matilda Mbazo completed a site inspection of the VCM plant against the EA conditions (reference: E/02/38) at the Sasol Midlands on **25 October 2023**.

The draft external audit report was compiled in November 2023 and finalised in November 2023. This report was then submitted to the DESTEA, by Sasol, in 2024.

Quality assurance is a critically important part of WSP's consulting services which aim to ensure both delivery of high-quality work and provide legal and commercial protection to the company. Quality assurance of this audit report was undertaken by Anri Scheepers.

The project team is summarised in **Table 1-1** and 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
		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	Review	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 VCM plant expansion is located at the Sasol Midlands site in Sasolburg. This report provides an overview of the level of compliance with the conditions contained in the EA and EMP as indicated in **Section 1.1**. The site audit was undertaken on **25 October 2023** at the Sasol Midlands Site, Sasolburg Plant.

The objective of the audit was to:

- Assess the level of compliance with the commitments of the EA for the VCM Expansion;

- Assess the level of compliance with the commitments of the EMPr that was submitted as part of the Scoping Report for the licencing of the conversion of the VCM Expansion, as agreed and approved by DESTEA;
- Assess the extent to which the avoidance, management and mitigation measures provided for in the EMPr for the operation of the VCM Expansion was implemented;
- Identify and assess any new impacts and risks that result from undertaking the activity;
- Critically evaluate the effectiveness of the EA;
- Identify shortcomings in the EA and EMPr; and
- Identify the need for any changes to the avoidance, management and mitigation measures provided for in the EA and EMPr conditions.

The EIA Regulations are considered applicable to the VCM Expansion plant operations. Regulation 34, of the EIA Regulations, provides for the auditing of an environmental authorisation, EMPr and closure plan. Furthermore, **Appendix 7** of Government Notice Regulation (GNR) 982 outlines the required audit report content. The 2014 Regulations, as amended, refer to a minimum audit 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.	<b>Sub-section 1.3</b> and CVs provided in <b>Appendix A</b>
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 <b>Section 4</b>
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	<b>Section 4</b>
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.	<b>Section 4</b>
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>Section 4</b>

Sub-Section	Requirement	Report Section Reference
	<p>(b) insufficient levels of compliance with the environmental authorisation or EMPr</p> <p>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</p>	
a	<p>Details of-</p> <p>(i) the independent person who prepared the environmental audit report; and</p> <p>(ii) the expertise of independent person that compiled the environmental audit report.</p>	<p><b>Sub-section 1.3</b></p> <p>CVs provided in <b>Appendix A</b></p>
b	A declaration that the independent auditor is independent in a form as may be specified by the competent authority.	<b>Sub-section 9</b>
c	An indication of the scope of, and the purpose for which, the environmental audit report was prepared.	<b>Sub-section 1.1 and Section 2</b>
d	A description of the methodology adopted in preparing the environmental audit report.	<b>Section 3</b>
e	<p>An indication of the ability of the EMPr, and where applicable, the closure plan to-</p> <p>(i) sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity on an on-going basis;</p> <p>(ii) sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the closure of the facility; and</p> <p>(iii) ensure compliance with the provisions of environmental authorisation, EMPr, and where applicable, the closure plan.</p>	<b>Section 4</b>
f	A description of any assumptions made, and any uncertainties or gaps in knowledge.	<b>Sub-sections 2.1 and 2.2</b>
g	A description of any consultation process that was undertaken during the course of carrying out the environmental audit report.	<b>Sub-section 3.2</b>
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.
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.

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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 AND LIMITATIONS

WSP noted the following assumptions and limitations during the audit:

- The information provided by Sasol is up to date and accurately represents the Sasol Sasolburg operations;
- WSP viewed as much of the operational area as possible given the timeframe and access limitations;
- Findings made within the previous audit reports are correct; and
- Site photographs were not provided in the audit report due to the onsite Sasol Sasolburg policy that disallows any photographs being taken on site. Where conditions were deemed compliant, and the evidence cited was onsite observations and verbal confirmation, these findings were observed by the Auditors.

This report has been prepared by WSP at the request of Sasol and the Terms of Reference as detailed in **Section 1.1**.

### 3 AUDIT METHODOLOGY

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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 (**25 October 2023**);
- Review of documentation relevant to the commitments of the EA and EMPr (e.g., records, permits, certificates, maintenance logs, monitoring results, previous audit reports, specialist reports (where available and applicable), etc.); and
- Compilation of an audit report.

#### 3.1 AUDIT CHECKLIST

WSP compiled a checklist of the EA and EMPr commitments, which was used as an auditing compliance tool. Refer to **Table 4.1** and **Table 4.2** for the audit checklist.

#### 3.2 SITE INSPECTION AND INTERVIEWS

An onsite inspection was conducted on **25 October 2023** where findings and observations were recorded and are summarised in **Section 4**. Key personnel interviewed during the audit included:

- Suyen Van Zyl; and
- Vuyo Mabombo.

#### 3.3 INFORMATION CONSIDERED

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

- Scoping Report of the Vinyls Expansion Project dated 22 July 2002
- EA amendment for the VCM Expansion plant at the Sasol Midlands site in Sasolburg (reference number: E/02/38), dated 29 March 2018
- Air Emissions Licence (AEL) (reference number: FDDM-MET-2013-24-R1) dated 01 April 2019 and expires 31 March 2023);
- Sasolburg and Ekandustria Operations Annual Emission Report (August 2022) to ensure compliance with the AEL conditions;
- Environmental Noise Survey for Sasol Sasolburg (ref no:24539 Rev 01 SR) BY Gijima dated 23,27 and 30 May 2019;
- External Audit of EAs/RoD/EMP: Expansion of VCM Plant (E/02/38) document reference: CEM 2018/141 (November 2018);
- Sasol Noise survey and impact assessment for hearing (Reference no: SO-152-2020-TM-N) dated 16 March 2021);
- Sasol Noise exposure verification and assessment for hearing conservation purposes (Reference no: SO-056-2021-TM-N) dated 07 April 2022;

- 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, 2022);
  - 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);
- 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);
- Noise survey and impact assessment for hearing conservation purposes, Sasolburg Operations Wax, Solvents and Chemicals, Cresol, S4300 (Sasol Approved Inspection Authority for Occupational Hygiene, March 2021);
- Waste Management and Disposal Registers;
- Environmental Standards;
- Health and Safety Standards and Audits;
- Other related approvals documents.

### 3.4 ASSESSMENT EVALUATION METHODOLOGY

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

**Table 3-1 Levels 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.

Compliance Level	Definition
	Condition/mitigation measure/commitment has been achieved with evidence provided in the form of a document or site verification.
<b>Non-compliant (NC)</b>	<p>When an activity or commitment has not been complied with in its entirety/certain aspects thereof have not been addressed.</p> <p>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:</p> <ul style="list-style-type: none"> <li>■ Short term: 0 – 6 months.</li> <li>■ Medium term: 6 – 12 months.</li> <li>■ Long term: 12 - 18 months.</li> </ul>
<b>Not applicable (N/A)</b>	<p>The condition, commitment and/or mitigation measure is not applicable or is to be revised in accordance with current practice.</p> <p>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.</p>

## 4 AUDIT FINDINGS

### 4.1 ENVIRONMENTAL AUTHORISATION

Table 4-1 below provides the compliance of Sasol with the conditions within the EA and amendments to the EA.

**Table 4-1 - Environmental Authorisation (reference: E/02/38 dated 23 October 2003) and Amendment (reference: E/02/38 dated 29 March 2018) Audit Findings.**

Ref.	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person
<b>1. Brief Description of the Activity</b>				
	<p>Sasol South Africa (Pty) Ltd acting through its Sasolburg Operation intends to expand its VCM (Vinyl Chloride Monomer) plant's nameplate capacity from 165 to 205 kilotonnes per annum. This capacity expansion will exclusively effect changes on plant equipment without changing the technology. Changes on the plant will be affected on the:</p> <ul style="list-style-type: none"> <li>Direct Chlorination Unit Oxy-Chlorination Unit EDC Purification Unit</li> <li>EDC Cracking Unit</li> <li>VCM Purification Unit Storage of products Units Cooling Water Unit</li> <li>The Polyvinyl Chloride (PVC) will also increase capacity by:</li> </ul> <p>(i) installing a new chilling unit,</p>	<b>C</b>	<p>Sasol One personnel confirmed that the stated description of the activity is the exact processes at VCM Expansion Plant. The Scoping report was provided as evidence that further explains the description of the activity.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> <li>Onsite observation</li> <li>Verbal confirmation</li> <li>Scoping Report of the Vinyl's Expansion Project dated 22 July 2002</li> </ul>	None.

Ref.	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person
	(ii) adding a new centrifuge unit and (iii) replacement of existing pumps,			
<b>2. Location</b>				
	The work will be done within Sasol Site, on subdivisions of the farm Driefontein No. 2 and Zandfontein No. 259 in the administrative district of Sasolburg. The area on which work will be done is already being used for chemical processes.	<b>C</b>	The Auditor observed that the work is executed within Sasol Midlands site for chemical processes. <i>Evidence:</i> ■ Onsite Observation	None.
<b>3. Applicant</b>				
	Mr. Louis Fourie, SVP Sasolburg Operations Sasol South Africa (Pty) Ltd acting through its Sasolburg Operation, PO Box 1 Sasolburg, 1947, Tel: 016 960 8001	<b>C</b>	The applicant details were amended in 2018 by the DESTEA. <i>Evidence:</i> ■ EA amendment for the VCM Expansion plant at the Sasol Midlands site in Sasolburg (reference number: E/02/38), dated 29 March 2018. ■ Verbal confirmation.	None.
<b>4. Special Conditions</b>				
(i)	Underground soil must be the first to backfill and topsoil last, for supporting revegetation	<b>N/A</b>	Noted. This condition is outside the audit period and refers to a construction phase requirement and was therefore not audited.	None.

Ref.	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person
(ii)	The Chief Air Pollution Control Officer (CAPCO) from National Department of Environmental Affairs and Tourism must be consulted to revise the existing air permit.	C	<p>The revised air permit is currently under the operating AEL for Sasol.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> <li>Verbal Confirmation</li> <li>Air Emissions Licence (AEL) (reference number: FDDM-MET-2013-24-R1) dated 01 April 2019 and expires 31 March 2023</li> </ul>	None.
(iii)	Report on capacities of all relevant existing effluent treatment plants, must be submitted to the Department of Tourism, Economic and Environmental Affairs before commencing with construction. This will assist with retrospective judgments on the decision.	N/A	Noted. This condition is outside the audit period and refers to a construction phase requirement and was therefore not audited.	None.
(iv)	Plant equipment with noise level exceeding 85 dB. must be fitted with silencers. All such equipment shall have noise level not exceeding 85 dB., after fitment.	C	<p>Sasol staff confirmed that the noise levels of the plant do not exceed 85dBA. Staff were required to wear ear plugs and ear protection equipment when in noisy environments.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> <li>Sasol Noise survey and impact assessment for hearing (Reference no: SO-152-2020-TM-N) dated 16 March 2021)</li> <li>Sasol Noise exposure verification and assessment for hearing conservation purposes (Reference no: SO-056-2021-TM-N) dated 07 April 2022)</li> <li>Onsite Observation</li> </ul>	None.

Ref.	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person
(v)	Where less skill is required, employment opportunities must by preference be given to local labour.	N/A	Noted. This condition is outside the audit period and refers to a construction and pre-commencement phase requirement and was therefore not audited.	None.
(vi)	Waste removal specialist must remove any hazardous waste produced.	N/A	Noted. This condition is outside the audit period and refers to a construction and pre-commencement phase requirement and was therefore not audited.	None.
<b>5. Standard Conditions</b>				
(i)	The applicant must advertise the authorization of this specific activity in terms of Environment Conservation Act, 1989 (Act 73 of 1989): Schedule 1 of the Government Gazette No. R1182. Proof of this advertisement must be submitted to this department within 14 days from the date of this authorization.	N/A	Noted. The advertisement of the RoD was considered for the pre-construction and construction phase; therefore, this condition is outside the audit period and was not audited.	None.
(ii)	This record of decision does not exempt any person from the requirements of any other controlling authority or from any provision of any other law and does not purport to interfere with the rights of any person who may have an interest in the property.	N/A	Noted. This audit scope did not cover a legal review of compliance of the N-base removal unit and SSO with all statutory requirements and whether they were in possession and compliance of all the necessary permits, authorisations or any other official documents.	None.
(iii)	The authorised activity, including site preparation, may not commence before the statutory appeal period expires. The 30 days appeal period starts from the date of advertisement of this Record of Decision.	N/A	Noted. This condition is outside the audit period and refers to a construction and pre-commencement phase requirement and was therefore not audited.	None.
(iv)	A copy of this authorization and a copy of the relevant Scoping Report shall be available at the site office at all times. Staff members and contractors shall be conversant with its content.	C	A hardcopy of this authorisation and the relevant Scoping Report was readily available in the area manager's office that manages the VCM facility. An electronic copy of the EA and scoping report was available on the Sasol	None.



Ref.	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person
			intranet that was available to staff within the Sasol SHE department.  <i>Evidence:</i> ■ Onsite Observation	
(v)	The Department must be granted access to the property at any time to investigate any possible environmental impacts that may be caused by this development	N/A	Noted. The department has not visited the VCM Expansion plant facility during the audit period.	None.
(vi)	The record of compliance/non-compliance with the conditions of this authorisation must be in good order. Such record should be available to this Department within seven (7) days from the date of written request from this Department.	C	Records of compliance/non-compliance with conditions of this authorisation were kept in good condition and were readily available, therefore, should be readily available should the Department require them. No request was made by the Department during the audit period for records or documents. In addition, the previous audit was provided with the records of compliance/non-compliance with conditions of this authorisation.  <i>Evidence:</i> ■ Onsite Observation ■ External Audit of EAs/RoD/EMP: Expansion of VCM Plant (E/02/38) document reference: CEM 2018/141 (November 2018).	None.
(vii)	Non-compliance with, or any deviation from the conditions of this authorisation as set out in the Record of Decision, is regarded as an offence and will be dealt with in terms of Section 29, 30 and /or 31A of the Act.	C	Noted. No deviations from the stated conditions within the EA were noted during this audit.	None.

Ref.	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person
(viii)	The Department may change, add or amend any of the conditions mentioned in this authorisation, if in the opinion of the Department, it is environmentally justifiable.	C	<p>The Department authorised one amendment to the EA to date. The last amendment was authorised in March 2018.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> <li>EA amendment for the VCM Expansion plant at the Sasol Midlands site in Sasolburg (reference number: E/02/38), dated 29 March 2018.</li> </ul>	None.
<b>6. Key factors for Decision</b>				
(i)	Environmental impacts will be minimal as the activity will be within active industrial land.	C	<p>The Auditor identified that there was no effect on the environment as the site is within an industrial area.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> <li>Onsite Observation</li> </ul>	None.
(ii)	There is no evidence of items of historical or cultural importance in and around the proposed I site.	C	<p>The Auditor identified that there was no evidence of items of historical in and around the proposed site. In addition, the site is within an industrial area. However, there is an unclaimed gravesite which could be of cultural importance.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> <li>Onsite Observation</li> </ul>	None.
(iii)	Public participation was conducted to the satisfaction of the Department of Tourism, Environmental and Economic Affairs.	C	<p>Sasol personnel confirmed that there was no negative socio-economic impacts associated with the operations of the VCM Expansion plant.</p> <p><i>Evidence:</i></p>	None.

Ref.	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person
			<ul style="list-style-type: none"> <li>Verbal Confirmation</li> <li>Onsite observation</li> </ul>	
<b>7. Duration and date of expiry</b>				
	The permit is valid for as long as: (a) Development shall have started within 3 years from the date of issue of the Record of Decision	N/A	Noted. This condition is outside the audit period and refers to a requirement prior to commencement and was therefore not audited. The RoD was issued in 2003.	None.
	The permit is valid for as long as: (b) The development does not pose any environmental hazard.	C	<p>The VCM plant expansion does not pose any environmental hazard.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> <li>Onsite Observation</li> </ul>	None.
<b>8. Appeal</b>				
	<p>Should this record of decision be queried, an appeal under section 35(3) of the act, must be done in writing within 30 (thirty) days from the date on which this record of decision was approved and must be directed to:</p> <p>The MEC: Department of Environmental Affairs and Tourism Free State Province</p> <p>P.O. Box 20801</p> <p>Bloemfontein,</p> <p>9300</p>	N/A	Noted. This condition is outside the audit period and refers to a requirement prior to commencement and was therefore not audited. The facility was operational.	None.



## 4.2 ENVIRONMENTAL MANAGEMENT PROGRAMME

**Table 4-2** below provides the compliance of Sasol with the conditions within the EMP that were included in the Scoping Report for the Conversion of LPG Sphere to Propylene Project at the Sasol Polymers on the Sasol One site in Sasolburg, dated 13 February 2004.

**Table 4-2 - Environmental Management Programme Audit Findings**

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person	Measures Implemented to Address Non-Compliance	Practicality of the EMP Commitments	Is the Non-Compliance Administrative or will it have an impact	Historical/New Non-Compliance (Administrative measures)
<b>7.2.1 Land and Soil</b>								
	The development will take place on the Sasol Polymers site (PVC and VCM sites specifically) on an already developed industrial area.	<b>C</b>	The Polymers site is located on a developed industrial site at Sasol Midlands.  <i>Evidence:</i> ■ Onsite Observation	None.	N/A	N/A	N/A	N/A
	Excavation will be required during construction for foundations. Excavated soil will be used as backfill as far as possible. Excess soil and building rubble will be disposed of at a recognised disposal site as per existing procedure.	<b>N/A</b>	Noted. This condition is outside the audit period and refers to a construction phase requirement and was therefore not audited.	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person	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)
	The impact on the land in soil is therefore minimal.	C	<p>There is little to no possibility of impact in soil on the VCM Expansion plant.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> <li>Onsite Observation</li> </ul>	None.	N/A	N/A	N/A	N/A
<b>7.2.2 Surface and ground water</b>								
	No new effluents will be generated by the proposed project. Additional effluent similar to the current quality will be handled by the existing effluent treatment facilities. Storm water will also be routed to existing storm water sewers. Therefore, there will be no contamination of the surface and groundwater.	C	<p>All effluent at Sasol is sent to the effluent control dam and handles by the Utilities and Water Works Department at Sasol, therefore there is no contamination of the surface and groundwater.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> <li>Onsite Observation</li> <li>Integrated Water and Waste Management Plan (IWWMP) Rev 1 – report number: SO-env-1075 (Sasolburg Operations, December 2022).</li> </ul>	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person	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)
	Storm water will also be routed to existing storm water sewers. Therefore, there will be no contamination of the surface and groundwater.	C	<p>All storm water on the Midlands site is routed to the storm water sewers.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> <li>Onsite Observation</li> <li>Integrated Water and Waste Management Plan (IWWMP) Rev 1 – report number: SO-env-1075 (Sasolburg Operations, December 2022).</li> </ul>	None.	N/A	N/A	N/A	N/A
<b>7.2.3 Air Quality</b>								
	Due to the capacity increase, there will be a marginal increase in air emissions. These emissions will however be similar in composition to existing emissions and the levels will comply with the standards required by the air permit from the National Department of Environmental Affairs and Tourism. The impact on air quality will therefore be minimal."	C	<p>All emissions are as per the requirements stipulated in the AEL.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> <li>Air Emissions Licence (AEL) (reference number: FDDM-MET-2013-24-R1) dated 01 April 2019 and expires 31 March 2023.</li> </ul>	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person	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)
	The impact on air quality will therefore be minimal.	C	<p>There is little to no possibility of impact in air quality on the VCM Expansion plant.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> <li>Onsite Observation</li> </ul>	None.	N/A	N/A	N/A	N/A

#### 7.2.4 Effluent

##### 7.2.4.1 Liquid effluents

	<p>All new equipment and systems will be designed to similar standard as the existing facilities. Existing design standard includes items such as closed sampling connection systems, double mechanical seals on pumps, etc. Contaminated effluent will be treated to prevent discharge of effluent that exceeds the guaranteed specifications to the effluent systems. As mentioned, all effluents will be handled by the existing effluent treatment facilities. Studies have been performed to ensure that the system can accommodate the</p>	C	<p>All equipment and systems adhere to the design standards outlined in the Scoping report and align with existing facilities specifications. These existing facilities and design standard encompass pumps equipped with single seals.</p> <p>All effluent on site is routed to the effluent control dam therefore, therefore pressure is minimised on site to prevent significant impacts.</p>	None.	N/A	N/A	N/A	N/A
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Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person	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)
	additional load. No significant impact on the environment is therefore expected.		<i>Evidence:</i> <ul style="list-style-type: none"> <li>Onsite Observation</li> <li>Integrated Water and Waste Management Plan (IWWMP) Rev 1 – report number: SO-env-1075 (Sasolburg Operations, December 2022).</li> <li>Verbal Confirmation</li> </ul>					
	As mentioned, all effluents will be handled by the existing effluent treatment facilities. Studies have been performed to ensure that the system can accommodate the additional load. No significant impact on the environment is therefore expected.	C	<p>All effluent on site is routed to the effluent control dam therefore, therefore pressure is minimised on site to prevent significant impacts.</p> <i>Evidence:</i> <ul style="list-style-type: none"> <li>Onsite Observation</li> <li>Integrated Water and Waste Management Plan (IWWMP) Rev 1 – report number: SO-env-1075 (Sasolburg Operations, December 2022).</li> </ul>	None.	N/A	N/A	N/A	N/A

#### 7.2.4.2 Solid effluent



Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person	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)
	Solid waste generated during construction will be handled by existing disposal routes.	N/A	Noted. This condition is outside the audit period and refers to a construction phase requirement and was therefore not audited.	None.	N/A	N/A	N/A	N/A
	Domestic waste will, as per current procedure, be disposed of at the Licenced landfill site. No new solid effluent will be produced by the process. The additional solid waste produced due to the increase in capacity will be similar in composition to that of the existing waste. It will be handled and disposed of in a similar fashion and therefore no significant impact on the environment is expected.	C	Domestic and operational waste is be disposed of through a licenced waste service provider selected on Sasol's Hub system.  <i>Evidence:</i> <ul style="list-style-type: none"><li>Onsite Observation</li><li>Waste manifests and certificates</li></ul>	None.	N/A	N/A	N/A	N/A
<b>7.5.2 Fauna and Flora</b>								
	There will be no significant effect on the biological environment as the proposed project is within an existing industrial site, with little or no existing flora and fauna.	C	The Polymers site is located on a developed industrial site at Sasol Midlands.  <i>Evidence:</i> <ul style="list-style-type: none"><li>Onsite Observation</li></ul>	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person	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)
<b>7.2.6 Visual</b>								
	The proposed project is placed within an established industrial area and will therefore not result in any additional visual impact.	<b>C</b>	<p>The Polymers site is located on a developed industrial site at Sasol Midlands, therefore has no additional visual impact.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> <li>Onsite Observation</li> </ul>	None.	N/A	N/A	N/A	N/A
<b>7.2.7 Noise</b>								
	The proposed air coolers may cause additional noise, but the levels will be within industrial specifications."	<b>C</b>	<p>The proposed air coolers may cause additional noise, but the levels are within industrial specifications. Occupational noise monitoring is done to ensure that noise is within the occupational noise limits.</p> <p><i>Evidence:</i></p> <ul style="list-style-type: none"> <li>Verbal Confirmation</li> <li>Environmental Noise Survey for Sasol Sasolburg (ref no:24539 Rev 01 SR)</li> </ul>	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person	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)
			BY Gijima dated 23,27 and 30 May 2019;					
<b>7.2.8 Socio-economy</b>								
	A few temporary jobs will be available during construction. +/- 10 temporary jobs will also be created during the initial production phase for a limited time frame.	N/A	Noted. This condition is outside the audit period and refers to a construction and pre-commencement phase requirement and was therefore not audited.	None.	N/A	N/A	N/A	N/A
<b>7.2.9 Health, Safety and Risk Assessment</b>								
	An internal SASOL's risk study, namely FMEA (Failure Mode Effect Analysis) will be conducted on the proposed project. This is a study where the whole project and all the equipment involved is reviewed in detail by the engineering design and operation team, and potential failures or departures in the normal mode of operation are assessed. Safety procedures are developed to	N/A	Noted.	None.	N/A	This condition is not practical to the EMPr as DESTEA has no mandate over Occupational Health and Safety. Sasol has a dedicated H & S department.	N/A	N/A

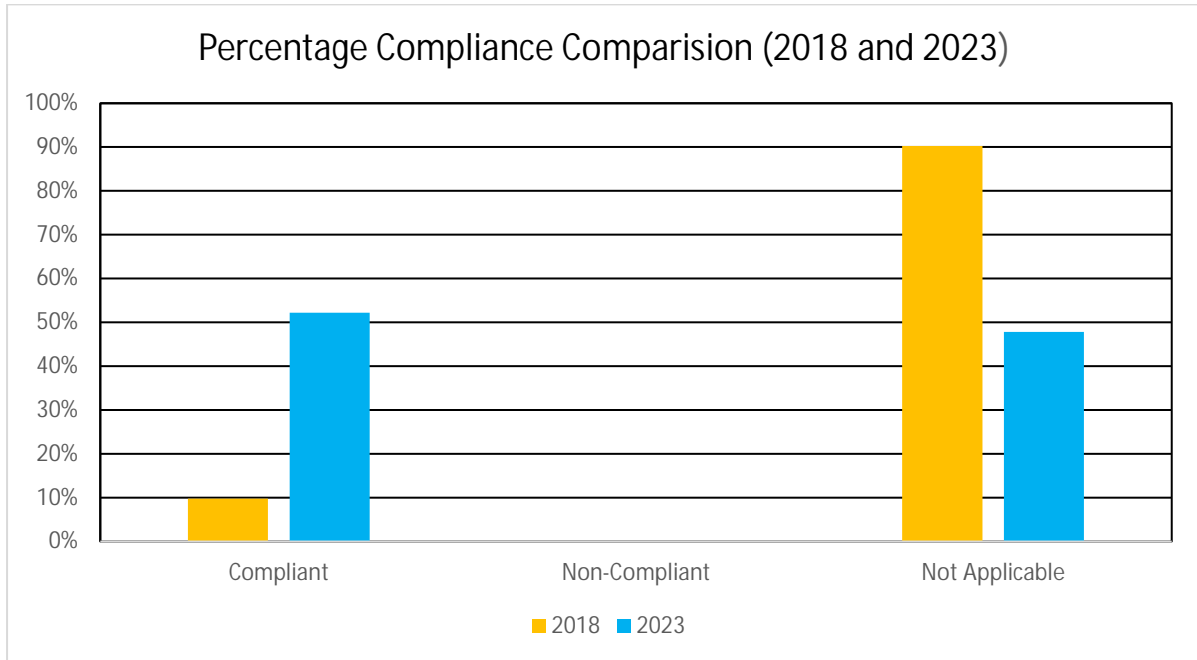
Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person	Measures Implemented to Address Non-Compliance	Practicality of the EMPR Commitments	Is the Non-Compliance Administrative or will it have an impact	Historical/New Non-Compliance (Administrative measures)
	cancel or ameliorate the effects of such equipment malfunctions / operator error(s).							
	During the construction phase, strict safety rules will apply for welding / grinding. All contractors working on the site will undergo safety training as per SASOL existing procedure. Each contracting company would have a safety representative who will undertake regular inspections of the workplace, to enforce the wearing of protective clothing and to ensure compliance with all relevant safety rules. All contractors and employees would furthermore be made aware of the existing emergency procedures and responsibilities where applicable.	N/A	Noted. This condition is outside the audit period and refers to a construction and pre-commencement phase requirement and was therefore not audited.	None.	N/A	N/A	N/A	N/A
	Before handling, it will be ensured that engineering controls are operating, and that protective equipment requirements and personal hygiene measures are being followed.	C	The digital control system has designated personnel to ensure operating engineering controls and personnel onsite are not allowed onsite without corrective PPE.	None.	N/A	N/A	N/A	N/A



Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe and Responsible Person	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)
			<i>Evidence:</i> ■ Onsite Observation					

## 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 Error! Reference source not found. below, and provides a summary of the audit findings for the previous and current audits (2018 and 2023).



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

## 6 SUMMARY OF THE AUDIT FINDINGS

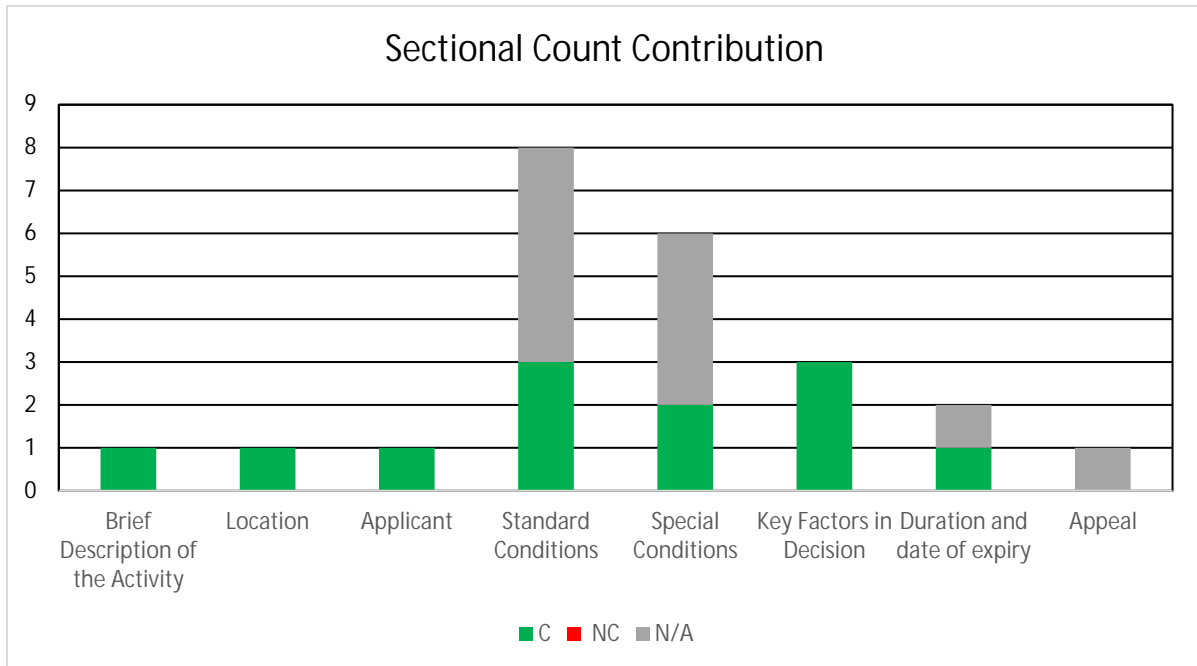
### 6.1 SASOL SASOLBURG VCM EXPANSION EA COMPLIANCE

The audit findings have been summarised into the following categories: compliance, non-compliance and not applicable. The overall audit findings concerning compliance to the EA conditions are listed in **Table 6.1** below.

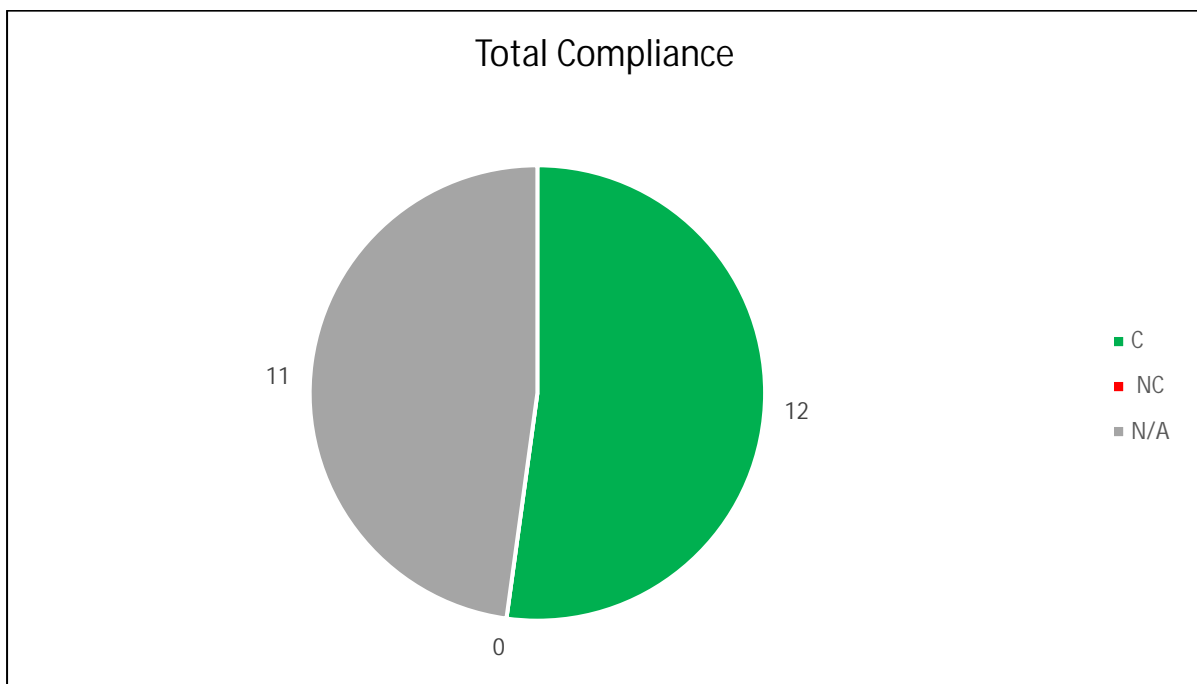
**Table 6-1** - Summary of EA Compliance Audit Findings

Section of the EA	No. Commitments	C	NC	N/A
Brief Description of the Activity	1	1	0	0
Location	1	1	0	0
Applicant	1	1	0	0
Standard Conditions	8	3	0	5
Special Conditions	6	2	0	4
Key Factors in Decision	3	3	0	0
Duration and date of expiry	2	1	0	1
Appeal	1	0	0	1
Total	23	12	0	11
Total Percentage		52%	0%	48%
Percentage Compliance with Applicable Conditions	100%			

**Figure 6-1** 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.



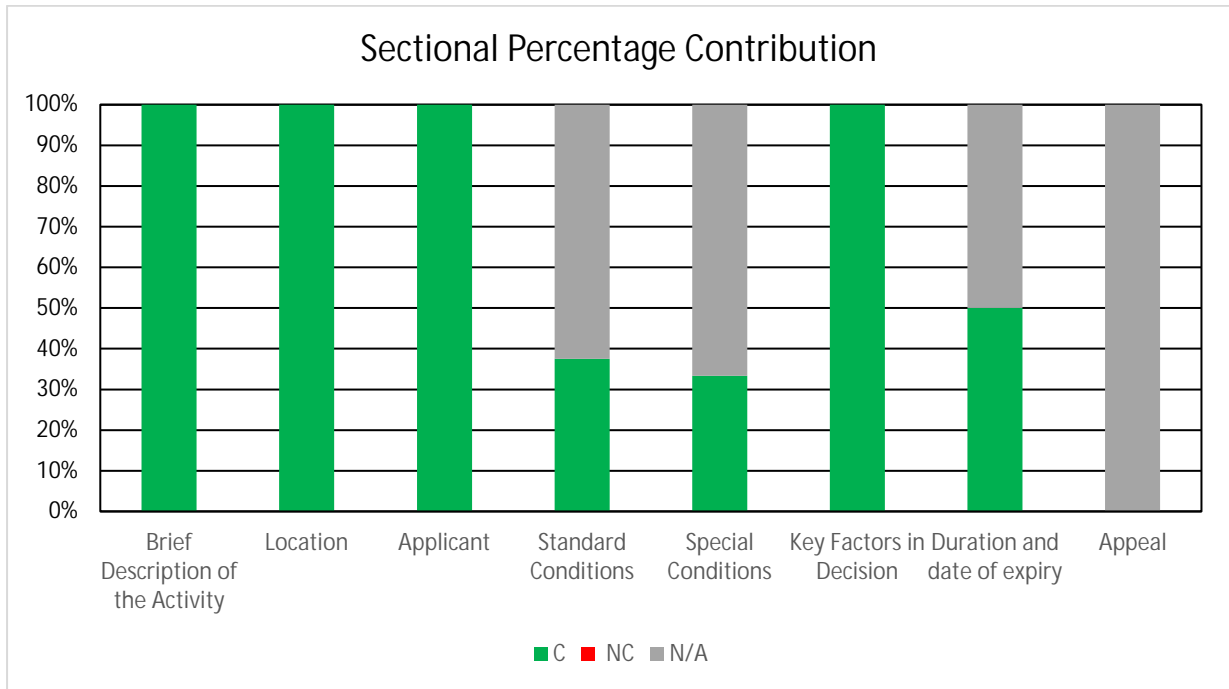
**Figure 6-1 - Number/Count contribution of findings made to the EA conditions per section**



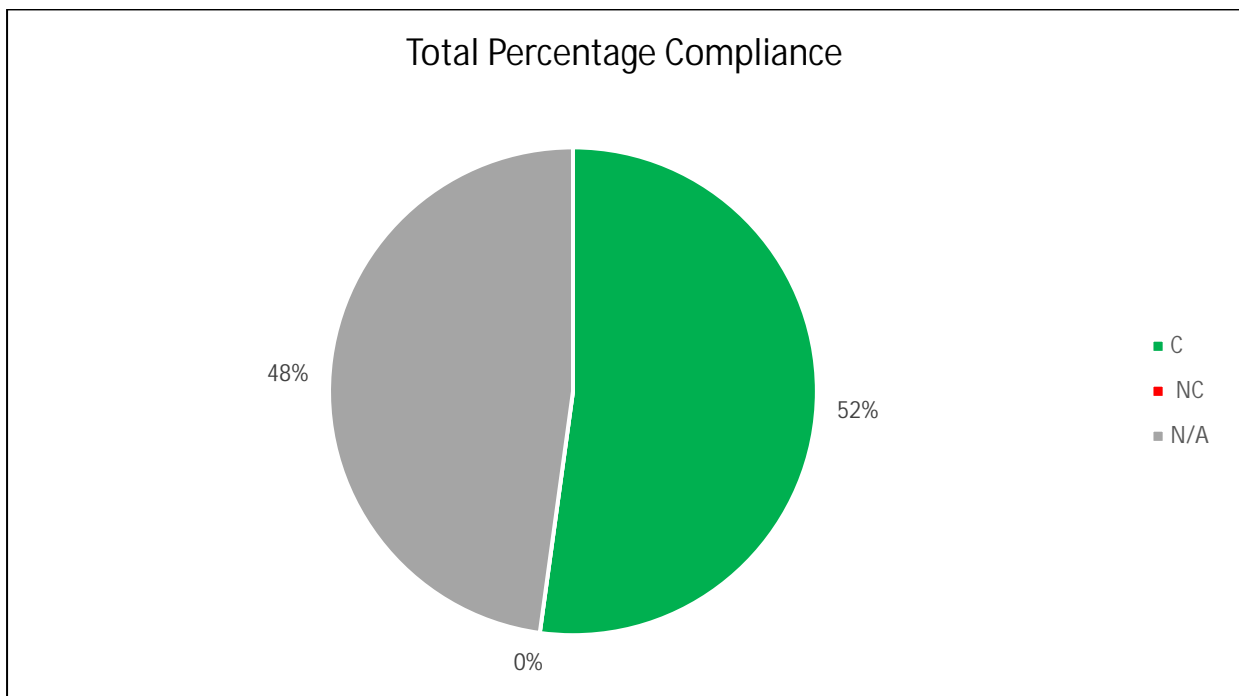
**Figure 6-2 - Overall count findings on compliance to the EA commitments**

**Figure 6-3** illustrates the percentage contribution of the findings of the EA commitments and **Figure 6-4** presents the total percentage compliance for the facility.





**Figure 6-3 - Percentage contribution of findings made to the EA Commitments per Section**



**Figure 6-3 - Overall percentage findings on compliance to the EA Commitments**

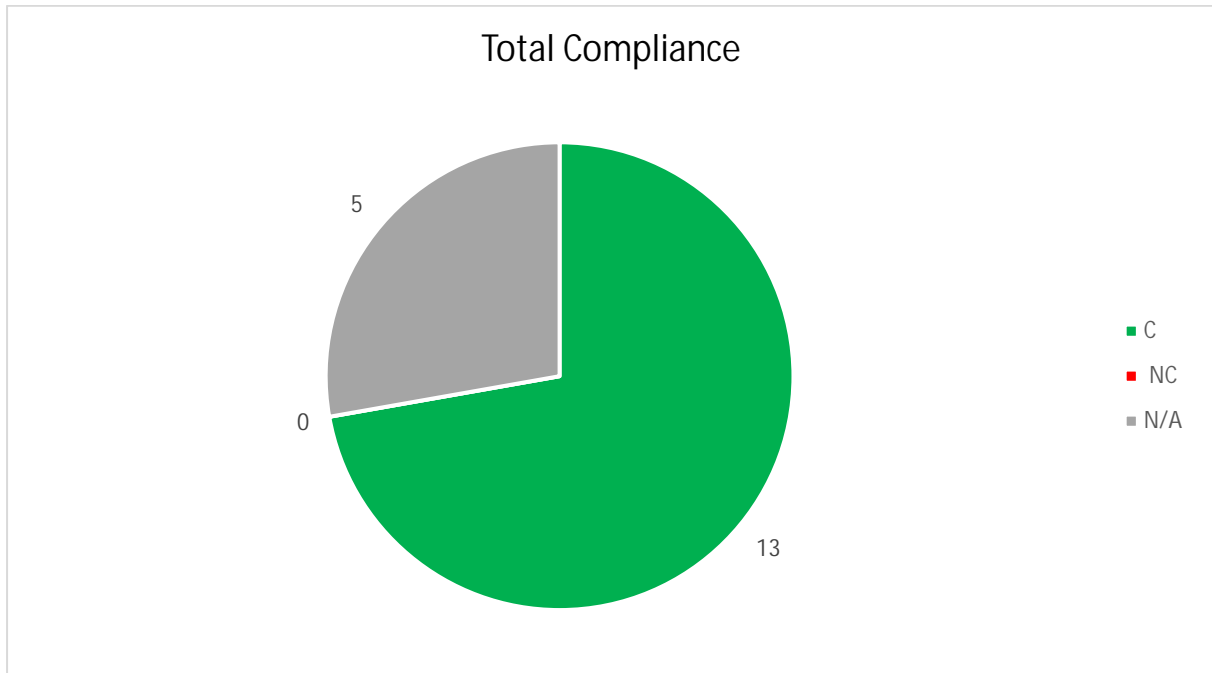
## 6.2 SASOL SASOLBURG VCM EXPANSION EMPR COMPLIANCE

The audit findings have been summarised into the following categories: compliance, non-compliance and not applicable. The overall audit findings concerning compliance to the EMPr conditions are listed in **Table 6-2** below.

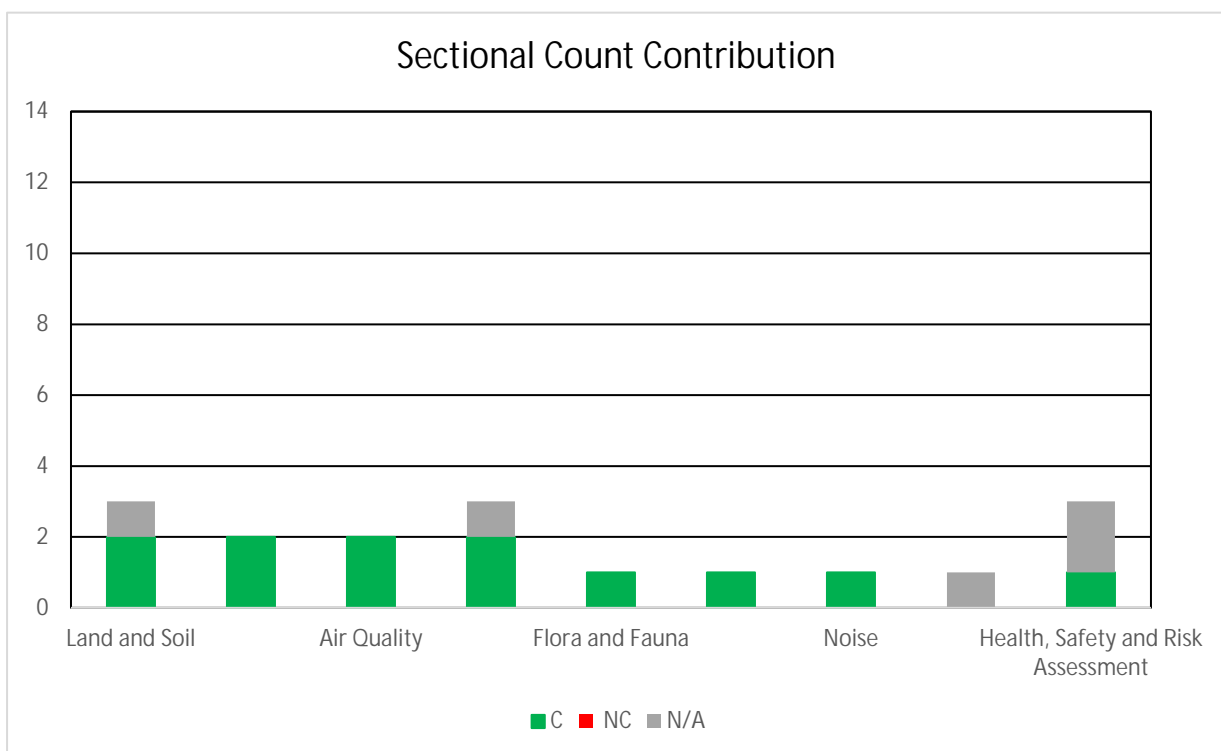
**Table 6-2 - Summary of EMPr Compliance Audit Findings**

Section of the EMPr	No. Commitments	C	NC	N/A
Land and Soil	3	2	0	1
Surface Water and Ground Water	2	2	0	0
Air Quality	2	2	0	0
Effluents	4	2	0	1
Flora and Fauna	1	1	0	0
Visual	1	1	0	0
Noise	1	1	0	0
Socio-economy	1	0	0	1
Health, Safety and Risk Assessment	3	1	0	2
Total	18	13	0	5
Total Percentage		72%	0%	28%
Percentage Compliance with Applicable Conditions	100%			

**Figure 6-4** presents the total proportion of compliance for the facility and **Figure 6-5** illustrates the number/count contribution of the findings of the EMPr per section.

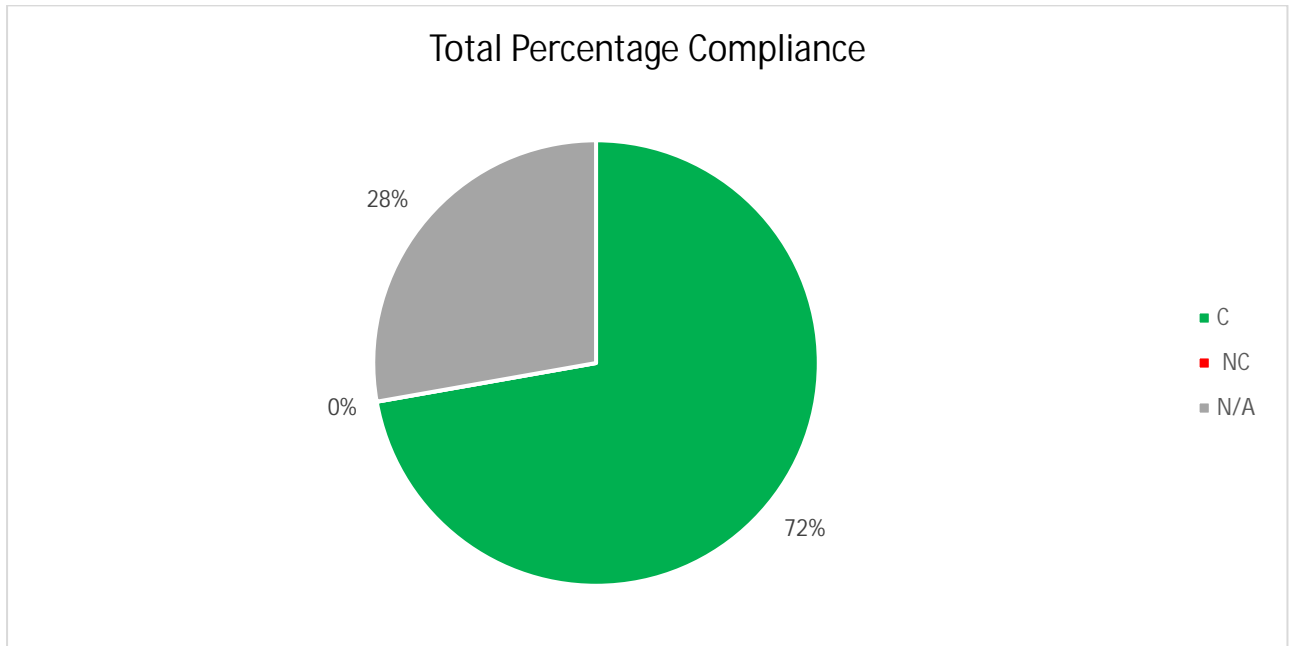


**Figure 6-4 - Overall count findings on compliance to the EMPr Commitments**

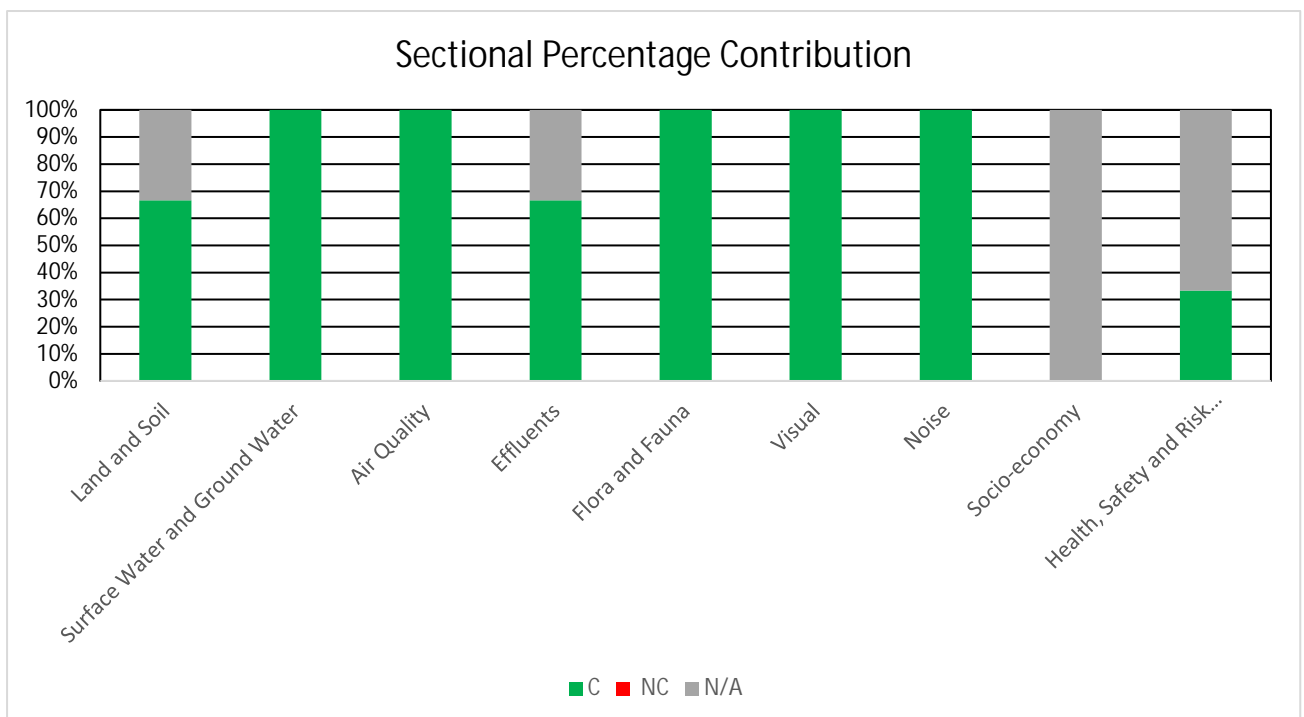


**Figure 6-5 - Number/Count contribution of findings made to the EMPr Commitments per Section**

**Figure 6-6** presents the total percentage compliance for the facility and **Figure 6-7** illustrates the percentage contribution of the findings of the EMPr commitments.



**Figure 6-6 - Overall percentage findings on compliance to the EMPr Commitments**



**Figure 6-7 - Percentage contribution of findings made to the EMPr Commitments per Section**

## 7 RECOMMENDATIONS

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No non-compliance of the EA and the EMP conditions was noted during the audit. Sasol is commended for achieving 100% for the EA and EMP audit and is urged to continue to implement the environmental mitigation measures within the EA and EMP. 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

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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 and to regularly identify new environmental impacts and risks that should be addressed on site.

## 9 DECLARATIONS

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### 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: \_\_\_\_\_Matilda Mbazo\_\_\_\_\_

#### UNDERTAKING

I, \_\_\_\_\_Matilda Mbazo\_\_\_\_\_, the undersigned and duly authorized thereto, by WSP, have studied Sasol VCM Facility and compared the operations to the approved EMPr and compiled this report to the best of my knowledge. This section should be read with **Section 2**.

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.

# Appendix A

## AUDITOR CVS







## 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.



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**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.



## 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



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South Africa

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# 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 Outcome	Impact Management Action
<b>1.Surface and ground water</b> No new effluents will be generated by the proposed project. Additional effluent like the current quality will be handled by the existing effluent treatment facilities. Storm water will also be routed to existing storm water sewers. Therefore, there will be no contamination of the surface and groundwater.	1.1 Operational compliance is measured against the existing WUL.
<b>2. Air Quality</b> Due to the capacity increase there will be a marginal increase in air emissions. These emissions will however be similar in composition to existing emissions and the levels will comply with the standards required by the air permit from the National Department of Environmental Affairs and Tourism. The impact on air quality will therefore be minimal.	2.1. Operational compliance is measured against the current AEL
<b>3. Liquid effluents</b> All new equipment and systems will be designed to similar standard as the existing facilities. Existing design standard includes items such as closed sampling connection systems, double mechanical seals on pumps, etc. Contaminated effluent will be treated to prevent discharge of effluent that exceeds the guaranteed specifications to the effluent systems. As mentioned, all effluents will be handled by the existing effluent treatment facilities. Studies have been performed to ensure that the system can accommodate the additional load. No significant impact on the environment is therefore expected.	3.1. Closed sampling collection points  3.2 Self containing pumps (example double mechanical seals) to prevent leaking on pumps.  3.3 Treatment of effluent to prevent discharge of effluent that exceeds the guaranteed specification to effluent system.
<b>4. Solid effluent</b> Domestic waste will, as per current procedure, be disposed of at the Licenced landfill site. No new solid effluent will be produced by the process. The additional solid waste produced due to the increase in	4.1 General and operational waste will be disposed of through a licenced waste service provider

capacity will be similar in composition to that of the existing waste. It will be handled and disposed of in a similar fashion and therefore no significant impact on the environment is expected.	
<b>5. Noise</b> The proposed air coolers may cause additional noise, but the levels will be within industrial specifications.	5.1. The proposed air coolers may cause additional noise, but the levels will be within industrial specifications. Occupational noise monitoring is done to ensure that noise is within the occupational noise limits