Our reference: SO-ENV-1332

29 November 2024

Your Ref: EA nr Exemption 53

Department of Economic, Small Business Development, Tourism and Environmental Affairs
113 Saint Andrews Street,
St Andrews Building
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Bloemfontein
9301
Free State

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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 November 2022. 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 Installation of 2 HSP storage tanks on Sasol one site with reference Exemption 53, dated May 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 Installation of 2 HSP storage tanks on Sasol one site.

Yours faithfully

Signed by: Johann Van Wyk
Signed at:2024-11-29 11:54:17 +02:00
Reason:I approve

Johann Van Wyk

Johann van Wyk
Senior Manager Environment and Product Stewardship (acting)

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Sasol South Africa Ltd

HSP ENVIRONMENTAL AUTHORISATION (REFERENCE: EXEMPTION 53) AND ENVIRONMENTAL MANAGEMENT PROGRAMME

Compliance Audit Report: November 2019 - March 2023

SASOL SASOLBURG EA AUDITS
MAY 2023
SASOL SASOLBURG EA AUDITSMay 2023Confidential

CONFIDENTIAL

Sasol South Africa Ltd

HSP ENVIRONMENTAL AUTHORISATION (REFERENCE: EXEMPTION 53) AND ENVIRONMENTAL MANAGEMENT PROGRAMME

Compliance Audit Report: November 2019 - March 2023

TYPE OF DOCUMENT (VERSION) CONFIDENTIAL

PROJECT NO. 41104347

OUR REF. NO. SASOL SASOLBURG EA AUDITS

DATE: MAY 2023

Sasol South Africa Ltd

HSP ENVIRONMENTAL AUTHORISATION (REFERENCE: EXEMPTION 53) AND ENVIRONMENTAL MANAGEMENT PROGRAMME

Compliance Audit Report: November 2019 - March 2023

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QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
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Date	30 May 2023			
Prepared by	Matilda Mbazo			
Signature				
Checked by	Ian Malloy			
Signature				
Authorised by	Anri Scheepers			
Signature				
Project number	41104347			
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SIGNATURES

PREPARED BY

Matilda Mbazo

Assistant Consultant

REVIEWED BY

Ian Malloy
Senior Environmental Consultant

This Environmental Authorisation Audit report (Report) has been prepared by WSP Group Africa (Pty) Ltd (WSP) on behalf and at the request of Sasol South Africa (Client), to comply with the environmental audit requirements provided for in Regulation 34 of the EIA Regulations, 2014.

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, except where otherwise indicated in the Report.

PRODUCTION TEAM

SASOL SASOLBURG

SHE: Environment Specialist	Suyen Van Zyl
Area Manager	Anuisha Govender
Area Operator	Jerry Motloung

WSP

Auditor	Matilda Mbazo
Lead Auditor	Ian Malloy
Project Director/ Quality Assurance	Anri Scheepers

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AUDITOR CVS

1 INTRODUCTION

1.1 TERMS OF REFERENCE

WSP Group Africa (Pty) Ltd (WSP) as an independent environmental consultant was appointed by Sasol Chemicals, a division of Sasol South Africa Limited, to undertake an external environmental compliance audit of the commitments contained in the Environmental Authorisation (EA) (reference number: Exemption 53) of the two High Sulphur Pitch (HSP) storage tanks at the Merisol Plant within Sasol One site and to compile an audit report according to the requirements of the National Environmental Management Act (No. 107 of 1998), as amended (NEMA).

The details of the EA (initially Record of Decision (RoD)) and the Environmental Management Programme (EMPr) audited for compliance of the HSP tanks at the Sasol One Site are provided below:

- EA for the HSP Tanks located at the Merisol division (on the Sasol One site) in Sasolburg (reference number: Exemption 53), dated 21 August 2001, issued by the Department of Environmental Affairs and Tourism, Free State (DEAT-FS) now the Department of Economic Development, Small Business Development, Tourism and Environmental Affairs (DESTEA);
- EMPr for the HSP Unit at the Monomers division at the Sasol One site, Sasolburg, dated 22 May 2001. The EMPr was completed as part of the Environmental Impact Assessment (EIA) report that was submitted to the DEAT-FS .

Sasol South Africa applied to the DESTEA to amend the EA (reference number: Exemption 53) as per the National Environmental Management Act, 1998 (act 107 of 1998) and the 2014 Environmental Impact Assessment Regulations. Details of the four amendments are provided below:

- Change the applicant details (owner of the EA and address) of the EA
- Change of brief description of the activity
- Change of Location
- Change of contact person.

The latest amendments were included in the audit checklist in section 4.

1.2 SASOL SASOLBURG – HSP STORAGE TANK FACILITY

High sulphur pitch (HSP) is produced as the bottoms product from the E4331 de-pitcher column situated on the Merisol plant.

HSP is a dark coloured, highly viscous fluid with a strong phenolic odour that mainly consists of a mixture of phenol, cresols, high boiling tar acids, sulphur and nitrogen compounds. The product is toxic and corrosive and releases a toxic vapour at elevated temperatures. Vapours at elevated temperatures are flammable and HSP has a flash point of around 90°C. This product can be harmful to aquatic life, even in low concentrations. It is, however, biodegradable and can be effectively treated in biological effluent treatment works. At temperatures below 50°C, HSP crystallises and its viscosity increases exponentially. Phase reversal can be achieved by heating. The material seems to vulcanise irreversibly at temperatures above 110°C.

Although this is a dangerous substance, Sasol has handled it in a responsible manner since 1992 and no serious injuries and incidents were reported since its establishment and operation on site.

The caustic soda solution was used as a scrubber medium to remove any potential vapours from the proposed HSP storage tanks. A caustic-water solution is a slightly turbid, colourless viscous liquid with no apparent odour. It is corrosive, toxic and has a low volatility and is non-combustible. When heated to decomposition, toxic vapours are released. This product is neutralised readily by reaction with the natural carbon dioxide in the atmosphere and will not persist in the environment.

The locality map of the HSP unit is provided in **Figure 1-1** below.

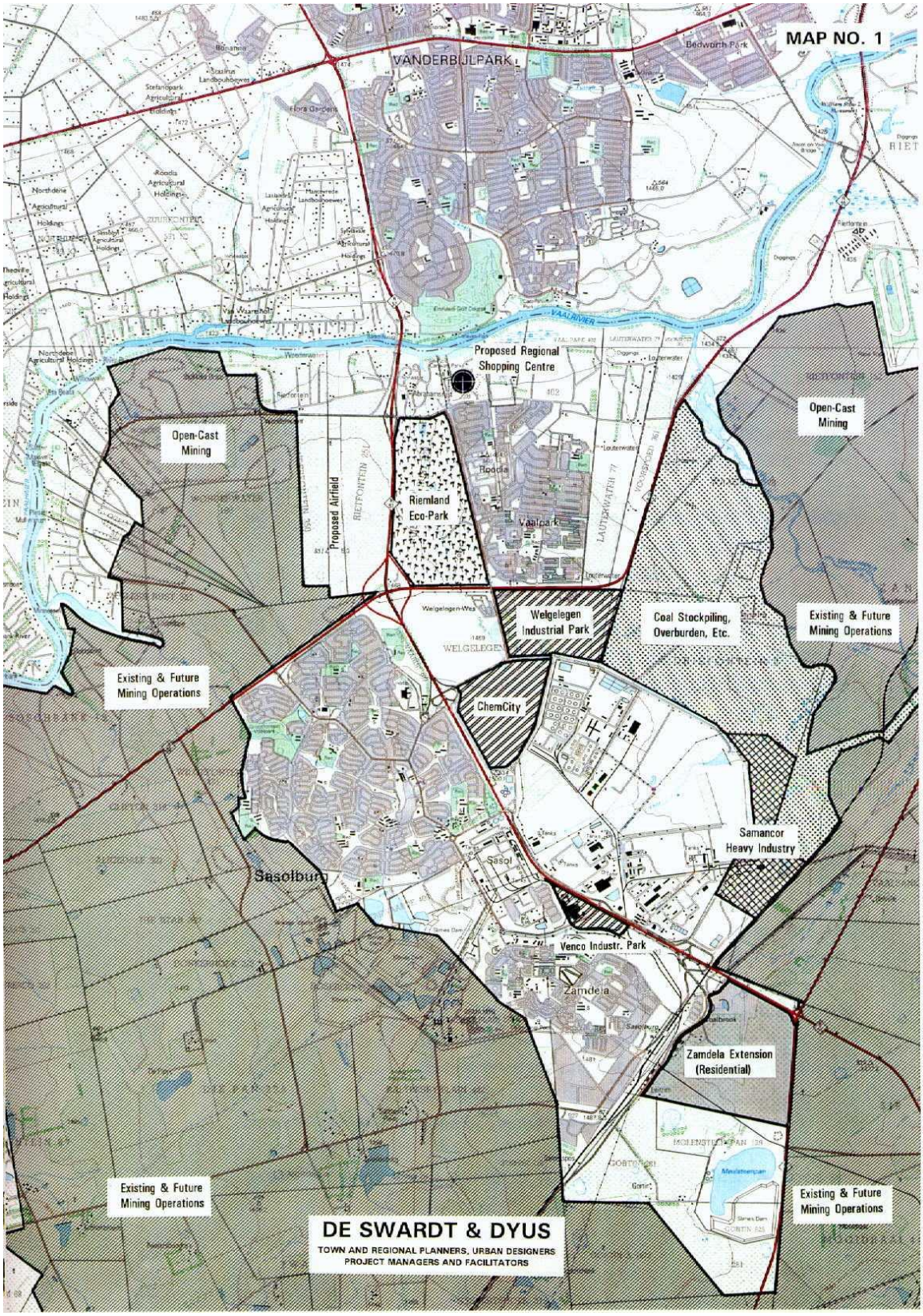

Figure 1-1 - Location map of the HSP Facility within Sasol One

1.2.1 PROCESS DESCRIPTION

High sulphur pitch (HSP), the bottoms product from the E4331 de-pitcher column (at Merisol) is continuously run down to Section 7100, located in the tank farm area of the SCI Infrachem site, for storage. From here it is transferred by means of a road tanker to storage tanks at Section 6900 (Thermal Oxidation) before being incinerated in an existing and licensed incinerator. These storage tanks are relatively small, which means that incineration is carried out in semi-batches. Intermediate storage is therefor required to serve as buffer capacity between the continuous and semi-batch processes.

Due to a preferred maintenance philosophy, it has been decided to build two parallel tanks, each equal to half of the total required volume. The tanks will have a relatively large height to diameter ratio. This will minimise the occurrence of stagnant regions, facilitate the agitation of the contents and promote internal heat transfer.

A constant flow of nitrogen at 2,7 barg will occupy the space above the fluid level to suppress vapour formation. A caustic scrubber will be used to clean up HSP vapours originating from the storage and road loading facilities. Purged vapour leaving the scrubbing unit will be vented to the atmosphere via a strategically placed stack; in order to minimise environmental, health and safety impacts.

1.3 PROJECT TEAM

Ian Malloy and Matilda Mbazo completed a site inspection of the HSP Storage Tank Facility against the EA conditions (Exemption 53) at the Sasol One Site on 29 March 2023.

The draft external audit report was compiled in April 2023 and finalised in May 2023. This report will be submitted to the DETSEA by Sasol in 2023.

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
Ian Malloy	Auditor	BEng Chemical BEng (Hons) Environmental MEng Water Engineering (in progress)
		Nine Years' Experience
		Ian is a Senior Environmental Consultant at WSP with over 9 years' experience in the environmental management industry. Ian graduated from the University of Stellenbosch with a BEng in Chemical Engineering in 2016 and a BEng Hons in Environmental Engineering in 2019. He is currently completing a MEng in Water Engineering. Ian has specialised in waste planning, environmental management and auditing, and environmental engineering. Ian has been involved in numerous waste and water management, and construction related projects in South Africa. The projects

		completed include EIAs, Water Use Licence (WUL) and Waste Management Licence (WML) Applications, amendment processes, developing IWMPs for District and Local Municipalities, developing EMPrs, conducting environmental compliance audits of EAs, EMPrs, WULs, and WMLs, conducting GRAP 17 and 19 assessments of landfill sites, and sampling and monitoring of groundwater and marine water.
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 Master's in Environmental Science. She has 1 year experience in environmental management and currently provides technical and strategic input on a diverse range project in environmental management and environmental compliance audits.
Anri Scheepers	Review	BA (Hons) Geography
		15 Years' Experience
		Anri graduated from the University of Johannesburg with a BA honours in Geography in 2007 and has 15 years' work experience. 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

2 AUDIT SCOPE

WSP was appointed by Sasol to conduct the environmental compliance audit for the HSP Storage Tank Facility established at Sasol Operations. This report provides an overview of the level of compliance with the conditions contained in the EA (Exemption 53) and EMPr as indicated in **Section 1.1**. The site audit was undertaken on 29 March 2023 at the Sasol One Site, Sasolburg Plant.

The objective of the audit was to:

- Assess the level of compliance with the commitments of the EA for the HSP Storage Tank Facility;
- Assess the level of compliance with the commitments of the EMPr that was submitted with the Environmental Impact Assessment (EIA) Report for the licencing of the HSP Storage Tank Facility, as agreed by DESTEA as well as the approved amendments of the EMPr;
- Assess the extent to which the avoidance, management and mitigation measures provided for in the EMPr for the operation of the HSP Storage Tank Facility unit were 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.

The EIA Regulations are considered applicable to the HSP Facility 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.	**Sub-section 1.3** CV's of auditors are 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,	Audit checklist tables provided in **Section 4.**

	management and mitigation of environmental impacts associated with the undertaking of the activity;	
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**
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 and 7**
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 of auditors provided in **Appendix A**
b	A declaration that the independent auditor is independent in a form as may be specified by the competent authority.	**Section 8**
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**
d	A description of the methodology adopted in preparing the environmental audit report.	**Section 3**
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**

f	A description of any assumptions made, and any uncertainties or gaps in knowledge.	**Sub-sections 2.1** and **2.2**
g	A description of any consultation process that was undertaken during the course of carrying out the environmental audit report.	**Sub-section 3.2**
j	A summary and copies of any comments that were received during any consultation process.	Comments received during the consultation process were included as findings and 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.

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 AND LIMITATIONS

WSP noted the following assumptions and limitations during the audit:

- The information provided by Sasol was 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 were correct;
- 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 provided was onsite observation and verbal confirmation to support the findings; this was 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

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 (29 March 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. **Table 4-1** provides a compliance rating of the EA commitments (Exemption 53 dated 21 August 2001)that were used as the audit standard.

Table 4-1Table 4-2 below provides the compliance of Sasol with the conditions within the EMPr that were included in the Environmental Impact Assessment Report for the upgrade of the HSP Storage Facility at the Phenolics Plant within the Sasol One site in Sasolburg, dated 22 May 2001.

Table 4-2

3.2 SITE INSPECTION AND INTERVIEWS

An onsite inspection was conducted on 29 March 2023, where findings and observations were recorded and are summarised in Section **4**. Key personnel interviewed included:

- Suyen Van Zyl
- Anushia Govender
- Jerry Motloung

3.3 INFORMATION CONSIDERED

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

- External Audit of RoD/EMP: G&U, Installation of two High Sulpher Pitch (HSP) Storage Tanks at the Merisol Plant (Ref: CEM 2019/007) dated July 2019
- EIA Report of the Upgrade of the HSP Storage Facility, rev 1 (Sastech Environmental and Risk Engineering, 22 May 2001)
- Information Regarding HSP Scrubber, ref: Exemption 53 , document number: SO-env-318 (Sasol, 20 December 2017)
- 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-929 (Sasolburg Operations, December 2021) that includes the:
  - Stormwater Management Plan (SWMP, 2021);
  - 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; and
- Various email correspondence.

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.

	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: — 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 (Exemption 53 dated 21 August 2001)that were used as the audit standard.

Table 4-1 - Environmental Authorisation (Exemption 53 dated 21 August 2001) and subsequent Amendments: Audit Findings

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & Responsible Person
1.Activity				
1.1	Sasol South Africa Ltd, proposes to install 2 (two) HSP (High Sulphur Pitch) storage tanks at the Phenolics Plant within Sasol site. The HSP is a heavy, viscous product of fractional cracking, disposed off by incineration. HSP is temporarily stored at high temperatures in a 6000 m^3 continuously agitated tank before final disposal. Due to improving operations, the amount of HSP produced, is by far less than the tank design. Further, reduced HSP yields caused increased viscosities which also caused solidification of HSP. The HSP tank is cleaned during a statutory shutdown. Solid HSP makes cleaning the tank difficult. Installation of another properly designed	**N/A**	Noted. The auditor noted that the stated activity has not changed.	None.

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & Responsible Person
	tank is proposed to make the cleaning process easier.			
2. Decision				
2.1	The scoping report for the above-mentioned development is accepted and permission for the installation of 2 (two) storage tanks on Sasol South Africa Ltd site has been granted.	**N/A**	Noted. The two (2) HSP storage facility tanks was confirmed on site. *Evidence*: ▪ Onsite observation ▪ Verbal confirmation.	None.
3. Special Conditions				
3.1	Where less skill is required, employment opportunities created during construction, must by preference be given to local labour.	**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 is operational.	None.
3.2	Once the scrubber design shall have been finalised, details regarding quantity, frequency, duration and composition of the scrubber emissions, must be made available to the Department of Environmental Affairs and Tourism.	**C**	The auditor was provided with proof of submission to the Department of Environmental Affairs and Tourism of the details regarding quantity, frequency, duration and composition of the scrubber emissions. *Evidence*: ▪ Information Regarding HSP Scrubber, reference number: Exemption 53, document number: SO-env-318 (Sasol, 20 December 2017)	None.
4. Standard Conditions				

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & Responsible Person
4.1	The applicant must advertise the authorisation of this specific activity In terms of Section 22 of the 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 authorisation.	**N/A**	Noted. The advertisement of the RoD was considered for the pre-construction and construction phase; this condition is outside the audit period and therefore was not audited.	None.
4.2	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. The audit scope did not cover a legal review of compliance of the HSP and SSO with all statutory requirements and whether they were in possession of all the necessary permits, authorisations or any other official documents.	None.
4.3	A copy of this authorisation 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 the EA and relevant Scoping Report was available at the Senior Manager's office at all times. An electronic copy of the EA and scoping report was available on the Sasol intranet that was available to staff within the Sasol SHE department. All staff members and contractors received environmental awareness training. Proof of training was provided during the site audit. Senior staff members at the HSP facility were conversant with the contents of the EA and were responsible for implementing relevant conditions within the EA. In addition, the plant manager and foreman were present during the audit and provided evidence for the compliance of conditions within the EA and EMPr.	None.

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & Responsible Person
			Evidence: ▪ Onsite Observation ▪ Verbal confirmation.	
4.4	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 HSP facility during the audit period.	None.
4.5	The records of compliance/non-compliance with conditions of this authorisation must be kept in good order. Such records 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. *Evidence*: ▪ Onsite Observation ▪ External Audit of RoD/EMP: G&U, Installation of 2 High Sulphur Pitch (HSP) Storage Tanks at the Merisol Plant, document reference: CEM 2019/007 (July 2019)	None.
4.6	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 31Aof the Act.	**N/A**	Noted. No deviations from the stated conditions within the EA were noted during this audit.	None.

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & Responsible Person
4.7	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	The Department authorised four amendments to the EA to date. The last amendment was authorised in October 2019.	None.
5. Key factors in the decision				
5.1	Slight, positive socio-economic conditions are going to be inflicted by the development.	N/A	Noted.	None.
5.2	Environmental disturbance during the development is minimum as the development is going to be on the industrially active area.	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.
6. Duration and date of expiry				
6.1	The permit is valid for as long as: (a) Development shall have started within 5 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 facility was operational.	None.
6.2	The permit is valid for as long as: (b) The development does not pose itself as an environmental hazard.	C	Mitigation measures were in place and implemented to ensure the facility does not pose itself as an environmental hazard.	None.
7. Appeal				
7.1	Should this record of decision be queried, an appeal under section 35(3) of the Act, may be done in writing within 30 (thirty) days from the	N/A	Noted. This condition is outside the audit period and refers to a requirement prior to commencement and	None.

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & Responsible Person
	date on which this record of decision was advertised and must be directed to: The MEC; Department of Environmental Affairs and Tourism Free State Province P.O. Box 264, Bloemfontein, 9300.		was therefore not audited. The facility was operational.	

4.2 ENVIRONMENTAL MANAGEMENT PROGRAMME

Table 4-2 below provides the compliance of Sasol with the conditions within the EMPr that were included in the Environmental Impact Assessment Report for the upgrade of the HSP Storage Facility at the Phenolics Plant within the Sasol One site in Sasolburg, dated 22 May 2001.

Table 4-2 - Environmental Management Programme: Audit Findings

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & 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)
1. Land, Soil and Groundwater								
1.1	The tanks will be situated within a bunded area with a concrete floor. Soil and groundwater pollution will therefore be prevented.	C	Sasol one site is an industrial site and the tanks were situated within bunds with concrete floors. Spills or leaks that could occur within the bund were contained and managed according to IWWMP, stormwater management plan and the contaminated water and wastewater management plans. Contaminated stormwater is treated at the onsite Bioworks. No soil and groundwater	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & 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)
			pollution were recorded for the HSP tanks. *Evidence:* ▪ IWWMP ▪ Onsite Observation					
1.2	The spent caustic-water solution from the scrubber will be processed together with that originating from the existing E4331 caustic scrubbing system. It will be pumped via Merisol's dirty water sump to an intermediate tank. In this tank the effluent will be sampled and tested for total phenolic content before being sent to Section 1900 (Phenosolvan plant) for processing.	**C**	The caustic scrubbing system produces spent caustic soda for Sasol. The audit revealed that the high organic water (HOW) effluent is handled in the Phenosolvan Plant along with the used caustic soda. The low organic water (LOW) effluent is transported to the Bio works for processing and reused following treatment. According to the environmental authorization, this condition is compliant. *Evidence*: ▪ Onsite Observation	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & 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)
			▪ Verbal Confirmation					
1.3	At the loading facility, all spills are contained within a bunded area and collected in a sump. This is a closed system, which means that there is no threat regarding storm water contamination. The liquid is either (depending on the analysis) incinerated (existing permitted operation) or treated at the Phenosolvan plant.	C	Smalls spills at the loading facility were contained and collected in a bag, stored in an impermeable hazardous waste bin and disposed of as hazardous waste material. The hazardous waste was collected by a hazardous waste service provider. Rainwater accumulated in the bund and sump at the loading bay were pumped to the HOW system. Spills from the HSP tanks were discharged into the HOW effluent, which was treated at the Phenosolvan Plant. The LOW effluent is transported to the Bioworks for processing and reuse following treatment.	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & 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)
			Evidence: ▪ Onsite Observation ▪ Verbal Confirmation					
2. Air Quality								
2.1	A 5-10% caustic soda scrubbing column will be constructed at the proposed storage tanks to minimise the impact of potential air emissions.	C	The caustic soda scrubbing column was constructed at the proposed storage tanks. *Evidence*: ▪ Onsite Observation	None.	N/A	N/A	N/A	N/A
2.2	The gas stream exiting the scrubber will have a typical composition of 96% N_2 and over 3,9% H_2O. Total phenolic content will be less than 10 ppm and other water insoluble organic compounds will be less than 50ppm.The vent rate of the scrubber will be approximately 152kg/h.	C	The gas stream exiting the scrubber was not monitored as it does not form part of the AEL for the Sasol One site and there was no legislated requirement to monitor the stack emissions. The Sasol Air emissions department measures the scrubber to comply with the EA. The design intent of the scrubber was to	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & 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)
			have continuous nitrogen purge and to be in continuous operation except during planned maintenance periods. The designed flow rate was on average 20m³/h and instantaneous maximum of 40m³/h. The composition of the emitted stream typically contains approximately SO_3 of 38 mg/Nm³ and NO_x below detectable levels. VOC concentrations was also below the detection limit, with the exception of Toluene, at approximately 0.8mg//Nm³. *Evidence*: ■ Information Regarding HSP Scrubber (Ref: SO-env-318) dated 20 December 2017.					

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & 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)
2.3	The capacity of the scrubbing unit has not been finalised yet, therefore details regarding quantity, frequency, duration and compositions of the emissions are not yet certain. Once these figures have been finalised, it will be forwarded to FS-DEAT	C	The auditor was provided with proof of submission to the Department of Environmental Affairs and Tourism. *Evidence*: ▪ Information Regarding HSP Scrubber (Ref: SO-env-318) dated 20 December 2017.	None	N/A	N/A	N/A	N/A
3. Surface Water Quality and Utilisation								
3.1	No surface water will be utilised in this project. There will also be no effect on surface water quality as a result of this project	C	There was no surface water utilised during the operational phase. Therefore, there is no effect of water quality. *Evidence*: ▪ Onsite Observation ▪ Verbal Confirmation	None.	N/A	N/A	N/A	N/A
4. Solid Waste								

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & 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)
4.1	No additional solid wastes (from the current Merisol scenario) will be generated as a result of this project.	**C**	No additional solid wastes from the HSP Facility were generated. General waste generated by staff were contained and collected by a waste service provider for disposal. *Evidence:* ▪ Onsite observation ▪ Verbal Confirmation ▪ Waste manifests and registers	None.	N/A	N/A	N/A	N/A
4.2	The current method of disposing solid domestic waste generated during the construction period is by sending it to the Sasolburg municipal solid waste-dumping site.	**N/A**	This condition is outside the audit period and refers to a requirement during the construction phase and was therefore not audited. The facility is operational.	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & 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)
4.3	Solid HSP in the tanks will be dug out and placed into suitable containment to be collected by a waste contractor for treatment and safe disposal.	C	The HSP in the tanks was collected by a waste contractor for treatment and disposal. *Evidence*: ▪ Onsite Observation ▪ Verbal Confirmation ▪ Waste manifests and registers	None.	N/A	N/A	N/A	N/A
4.4	The clean up and re-commissioning of the existing tank will be handled as a separate project and does not fall within the scope.	N/A	This condition is outside the audit period and refers to a requirement during the construction phase and was therefore not audited. The facility is operational.	None.	N/A	N/A	N/A	N/A
5. Liquid Waste								
5.1	The spent caustic solution will be processed with the High organic waste (HOW) effluent at the Phenolics Plant. After treatment, Light organic waste (LOW) effluent is	C	The caustic scrubbing system produces spent caustic soda for Sasol. The audit revealed that the HOW effluent is handled in the Phenosolvan Plant along	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & 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)
	co-treated at the Bio works or removed by a third-party waste management service provider for safe disposal.		with the used caustic soda. The LOW effluent was transported to the Bio works for processing and reused following treatment. *Evidence*: ▪ Onsite Observation ▪ Verbal Confirmation					
6. Transportation of Products								
6.1	Vapour releases during loading of the product will be captured at the loading facility and directed to the new scrubbing system.	**C**	All vapours from the HSP during loading of tankers were captured in the vacuum pump of the HSP tanks. There are minimal vapour releases during loading as vapours were captured. Tankers were designed to contain vapours during loading due to minimal space for the pipe, therefore making it a suitable fit to avoid losing product. *Evidence:*	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & 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)
			▪ Onsite Observation ▪ Verbal Confirmation					
6.2	The high sulphur pitch product will be collected by a waste contractor for treatment and safe disposal.	C	The HSP was safely and adequately contained onsite collected by a third-party hazardous waste service provider that treated and disposed of the HSP in compliance with current legislation. *Evidence:* ▪ Onsite observation ▪ Verbal Confirmation ▪ Waste manifests and registers ▪ Procedure for the management of waste on the Sasolburg Operations' Sites (document number: SSP-S-014)	None.	N/A	N/A	N/A	N/A
7. Effect on Fauna and Flora								

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & 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)
7.1	There is no effect on this aspect of the environment, as the plant is to be established within an existing industrial area.	**C**	The HSP storage tanks were established within the Sasol One site which was within an industrial zoned area. There was no additional impact on fauna and flora during construction. *Evidence*: ▪ Onsite Observation	None.	N/A	N/A	N/A	N/A
8. Socio-Economic Effects								
8.1	During the construction phase of this expansion project, temporary jobs will be created. The total amount of jobs will depend on contractor requirement.	**NA**	This condition is outside the audit period and refers to a requirement during the construction phase and was therefore not audited. The facility is operational.	None.	N/A	N/A	N/A	N/A
9. Legal and Policy Requirements								

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & 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)
9.1	As regards legal requirements, this process does not fall into the Scheduled Processes of the Atmospheric Pollution Prevention Act, 1965.	**N/A**	This process does not fall into the Scheduled Processes of the Atmospheric Pollution Prevention Act, 1965. *Evidence*: ▪ EIA of the Upgrade of the HSP Storage Facility dated 22 May 2001.	None.	N/A	N/A	N/A	N/A
9.2	This process falls under the activities for which an EIA is required in terms of the Environment Conservation Act, since HSP contains phenol, cresols, xylenols and phenosulphonic acid which are listed as hazardous substances in the SABS Code 0228: Identification & Classification of Dangerous Substances and Goods.	**C**	The establishment and operation of the HSP tanks were authorised by the DESTEA in August 2001. *Evidence*: ▪ EIA of the Upgrade of the HSP Storage Facility dated 22 May 2001 ▪ ROD (reference number: Exemption 53) (August 2001)	None.	N/A	N/A	N/A	N/A

Ref	Condition	Compliance Status	Findings	Recommendation, Timeframe & 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)
10.3	This EIA has been executed in line with Sasol Technology Health, Safety and Environmental policy. Sasol Technology is an ISO 14001 certified company	**N/A**	This condition is outside the audit period and refers to the development of the EIA prior to submitting the EIA application and report to the DESTEA. The facility is operational.	None.	N/A	N/A	N/A	N/A

5 PROGRESS AGAINST PREVIOUS EA AUDIT FINDINGS

The previous compliance audit report against the consolidated EA and EMPr was compiled by the Northwest University CEM in 2019. A comparison in the change of compliance percentage rating of the EA from the 2019 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 (2019 and 2023). The 2023 audit identified zero non-compliant condition.

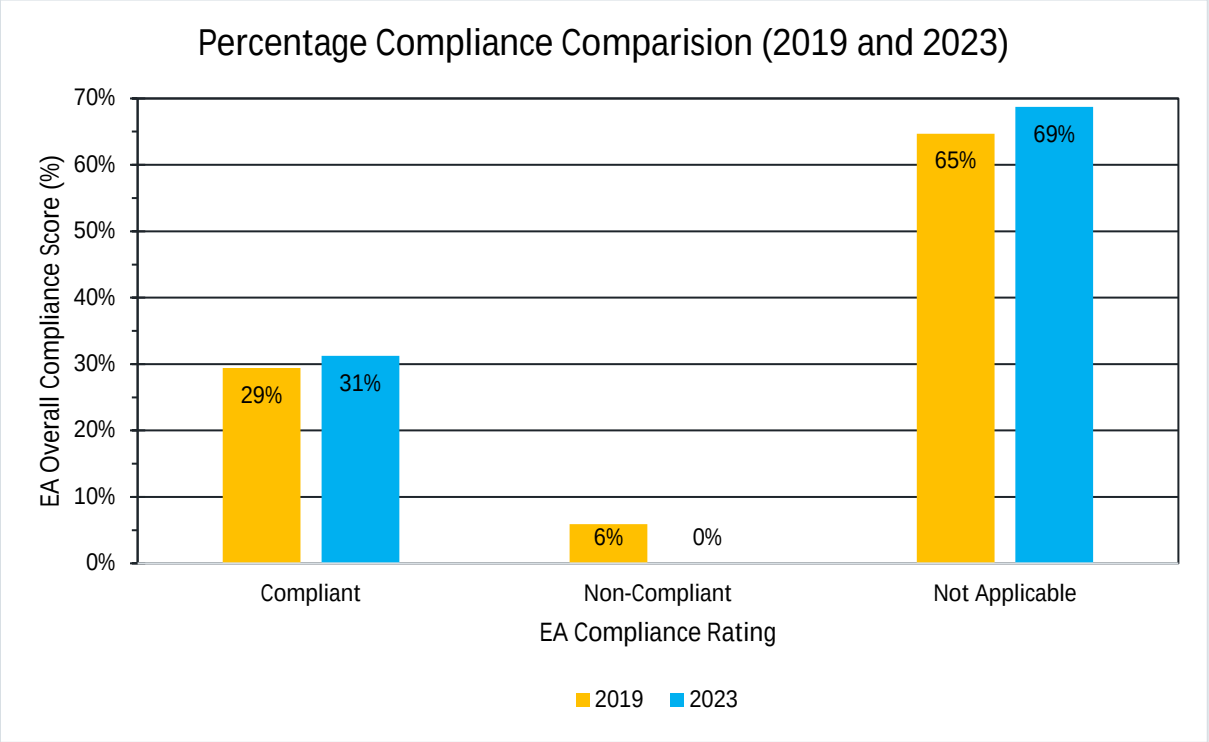

Figure 5-1 – Percentage comparison of Environmental Authorisation compliance levels from 2019 to 2022

Table 5-1 – Progress against previous findings

Ref	Commitment	2019 Status	2019 Finding	2023 Status	2023 Finding
EA Conditions					
Standard Conditions					
(iii)	Staff members and contractors shall be conversant with its content.	NC	Evidence was found that training material and an assessment questionnaire was developed to make staff conversant with the content of the environmental authorisation. However, evidence was also found that only 5 staff members have completed the training, while some have not completed the training as yet. In addition, evidence was found that contractors are not currently trained on the content of the environmental authorisation, as this is not included in the contractor's induction training Sasolburg Operations Induction Phenolics (Creosol, TNPE, Phenol Plants).	C	All staff members and contractors received environmental awareness training. Proof of training was provided during the site audit. Senior staff members at the HSP facility were conversant with the contents of the EA and were responsible for implementing relevant conditions within the EA. In addition, the plant manager and foreman were present during the audit and provided evidence for the compliance of conditions within the EA and EMPr.
EMPr Conditions					
4. Solid Waste (condition 4.3 was amended in 2021. The condition was NC in 2019 and C in 2023)					
4.3	The solid HSP in the existing tank will be dug out and placed into bags to be incinerated at Section 6900	NC	The HSP product is not transported to section 6900 for incineration but collected by a waste contractor for treatment and disposal. Evidence was found that recommendations to amend the EMP to	-	

Ref	Commitment	2019 Status	2019 Finding	2023 Status	2023 Finding
	(same destination as the normal HSP route).		reflect the current practice had been formulated.		
4.3	Solid HSP in the tanks will be dug out and placed into suitable containment to be collected by a waste contractor for treatment and safe disposal.	-		C	The HSP in the tanks was collected by a waste contractor for treatment and disposal.
5. Liquid Waste (condition 5.1 was amended in 2021. The condition was NC in 2019 and C in 2023)					
5.1	The spent caustic solution will be sent to an existing and permitted caustic incinerator, located within the SCI Infrachem site. Here it will be incinerated according to permit conditions.	NC	Sasol generates spent caustic soda from the caustic scrubbing system. During the audit it was found that the spent caustic soda is not being incinerated on-site, but is processed with the HOW effluent at the Phenosolvan Plant. After treatment, the LOW effluent is sent to the Bioworks for processing and re- use. Evidence was found that recommendations to amend the EMPr had been formulated. Evidence was found of communication with DESTEA regarding their agreement on the appropriate public participation process required for the amendments of Environmental Authorisations and Environmental Management Plans. In similar communication with the DEA, the agreement has been received, but the agreement from the DESTEA is still outstanding, despite the first	-	

Ref	Commitment	2019 Status	2019 Finding	2023 Status	2023 Finding
			communication that was submitted in February 2019.		
5.1	The spent caustic solution will be processed with the High organic waste (HOW) effluent at the Phenolics Plant. After treatment, Light organic waste (LOW) effluent is co-treated at the Bio works or removed by a third-party waste management service provider for safe disposal.	-		C	The caustic scrubbing system produces spent caustic soda for Sasol. The audit revealed that the HOW effluent is handled in the Phenosolvan Plant along with the used caustic soda. The LOW effluent was transported to the Bio works for processing and reused following treatment.
6. Transportation of Products (condition 6.2 was amended in 2021. The condition was NC in 2019 and C in 2023)					
6.2	As per existing procedure the high sulphur pitch product will be transported via road tanker (within the SCI site) to section 6900 for incineration.	NC	The HSP product is not transported via road tanker to section 6900 for incineration but collected by a waste contractor for treatment and disposal. Evidence was found that recommendations to amend the EMPr had been formulated. Evidence was also found of communication with DESTEA regarding their agreement on the appropriate public participation process required for the amendments of Environmental Authorisations and Environmental Management Plans. In similar communication with the DEA, the	-	

Ref	Commitment	2019 Status	2019 Finding	2023 Status	2023 Finding
			agreement has been received, but the agreement from the DESTEA is still outstanding, despite the first communication that was submitted in February 2019.		
6.2	The high sulphur pitch product will be collected by a waste contractor for treatment and safe disposal.	-		C	The HSP was safely and adequately contained onsite collected by a third-party hazardous waste service provider that treated and disposed of the HSP in compliance with current legislation.

6 SUMMARY OF THE AUDIT FINDINGS

6.1 SASOL SASOLBURG HSP TANK FACILITY EA

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 as 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
Activity	1	0	0	1
Decision	1	0	0	1
Special Conditions	2	1	0	1
Standard Conditions	7	3	0	4
Key Factors in Decision	2	0	0	2
Duration date of Expiry	2	1	0	1
Appeal	1	0	0	1
Total	17	5	0	12
Total Percentage		29%	0%	71%
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.

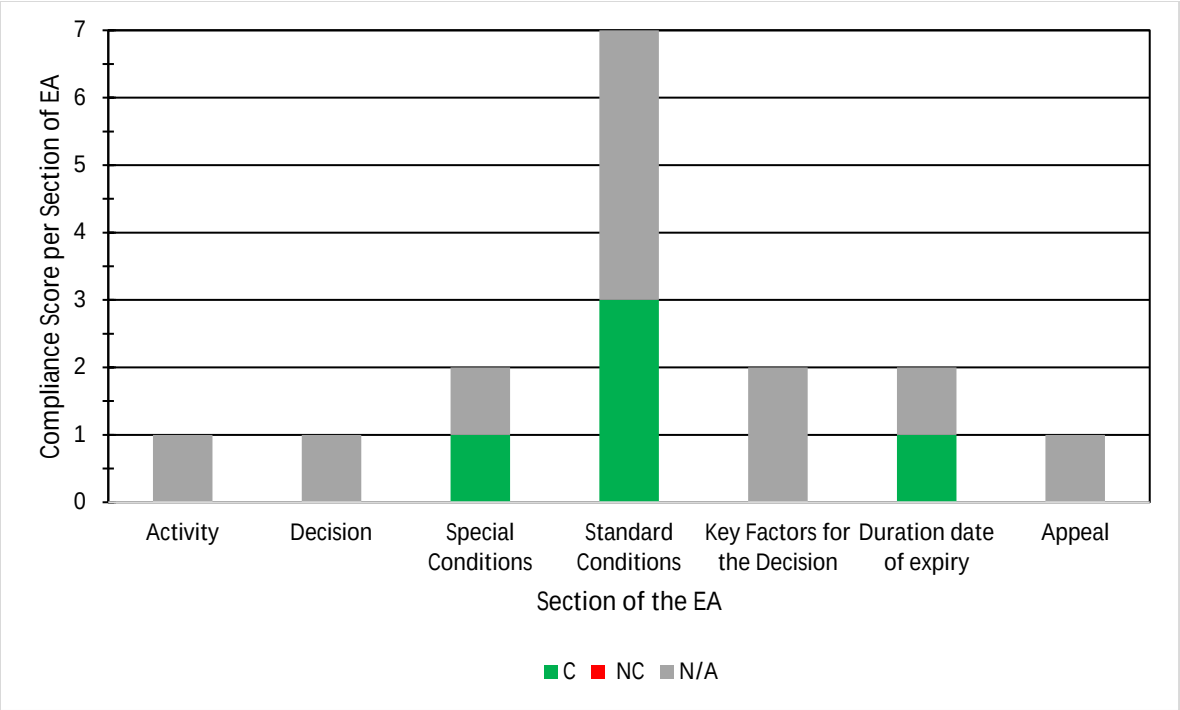

Figure 6-1 - Number/Count contribution of findings made to the EA conditions per section.

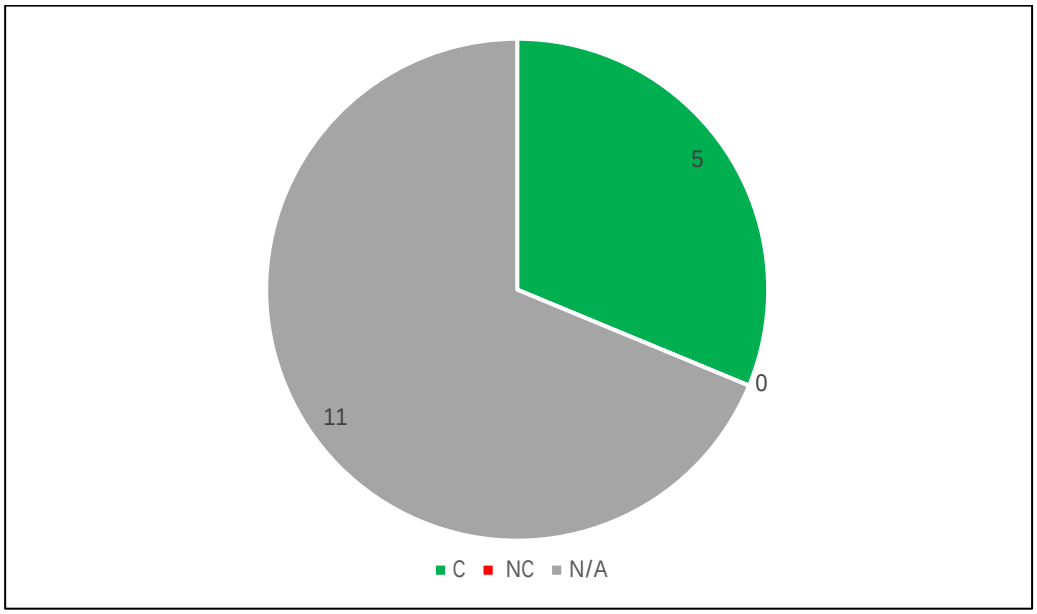

Figure 6-2 - Overall count findings on compliance to the EA commitments

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.

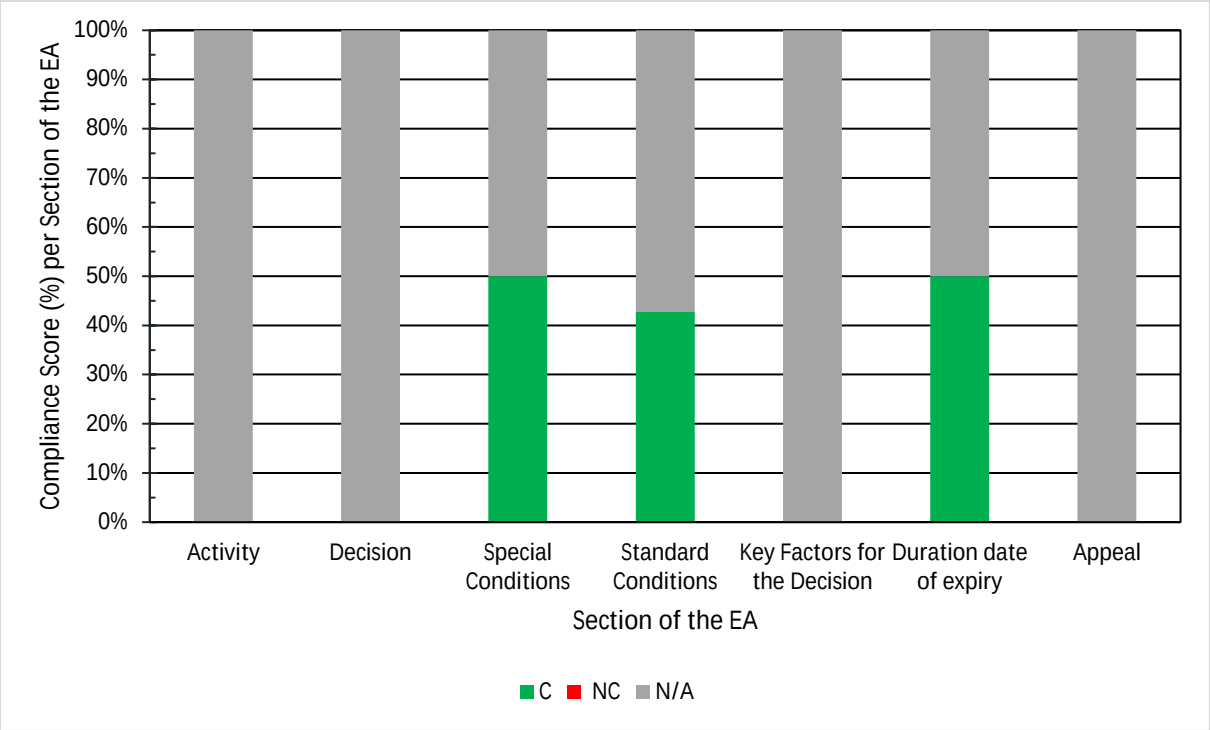

Figure 6-3 - Percentage contribution of findings made to the EA Commitments per Section

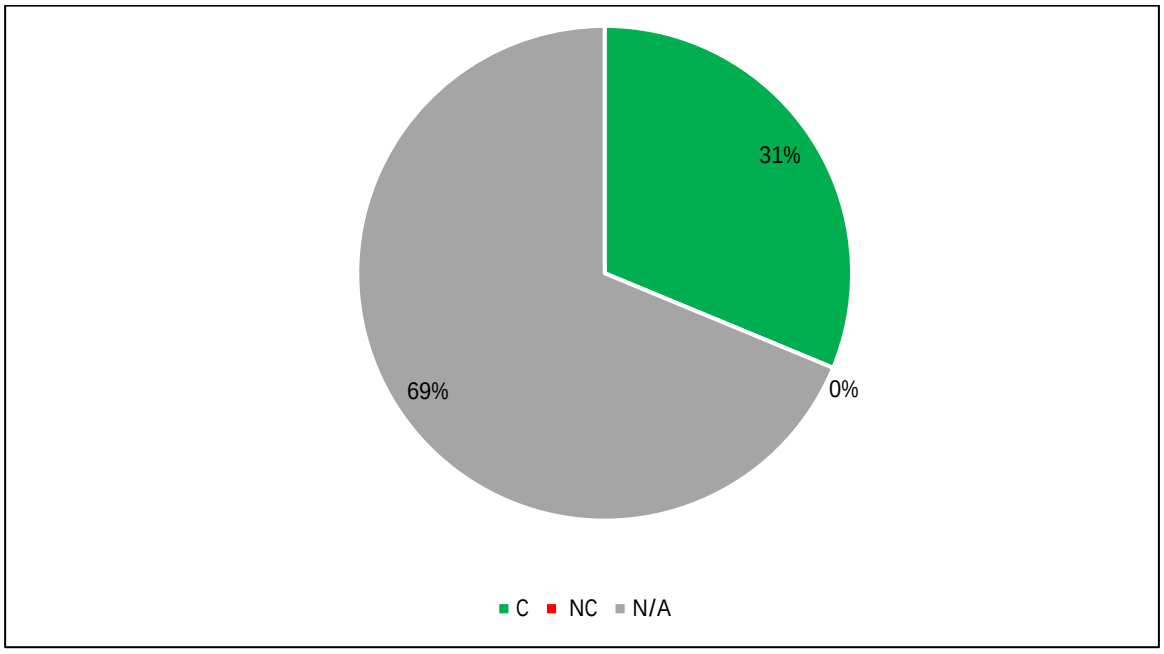

Figure 6-4 - Overall percentage findings on compliance to the EA Commitments

6.2 SASOL SASOLBURG HSP TANK FACILITY EMPR

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 as 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, Soil and Groundwater	3	3	0	0
Air	3	3	0	0
Surface Water Quality and Utilisation	1	1	0	0
Solid Waste	4	2	0	2
Liquid Waste	1	1	0	0
Transportation of Products	2	2	0	0
Effect on Fauna and Flora	1	1	0	0
Socio-economic Effects	1	0	0	1
Legal and Policy Requirements	3	1	0	2
Total	19	14	0	6
Total Percentage		74%	0%	24%
Percentage Compliance with Applicable Conditions	100%			

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

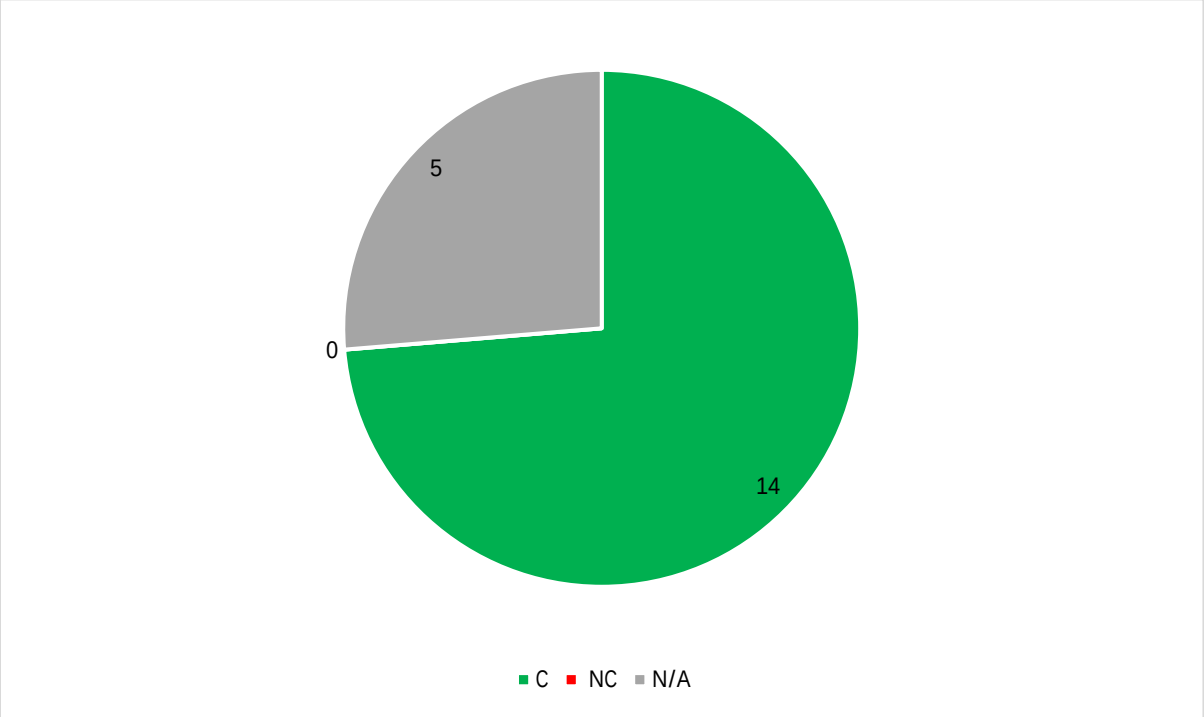

Figure 6-5 - Overall count findings on compliance to the EMPr Commitments

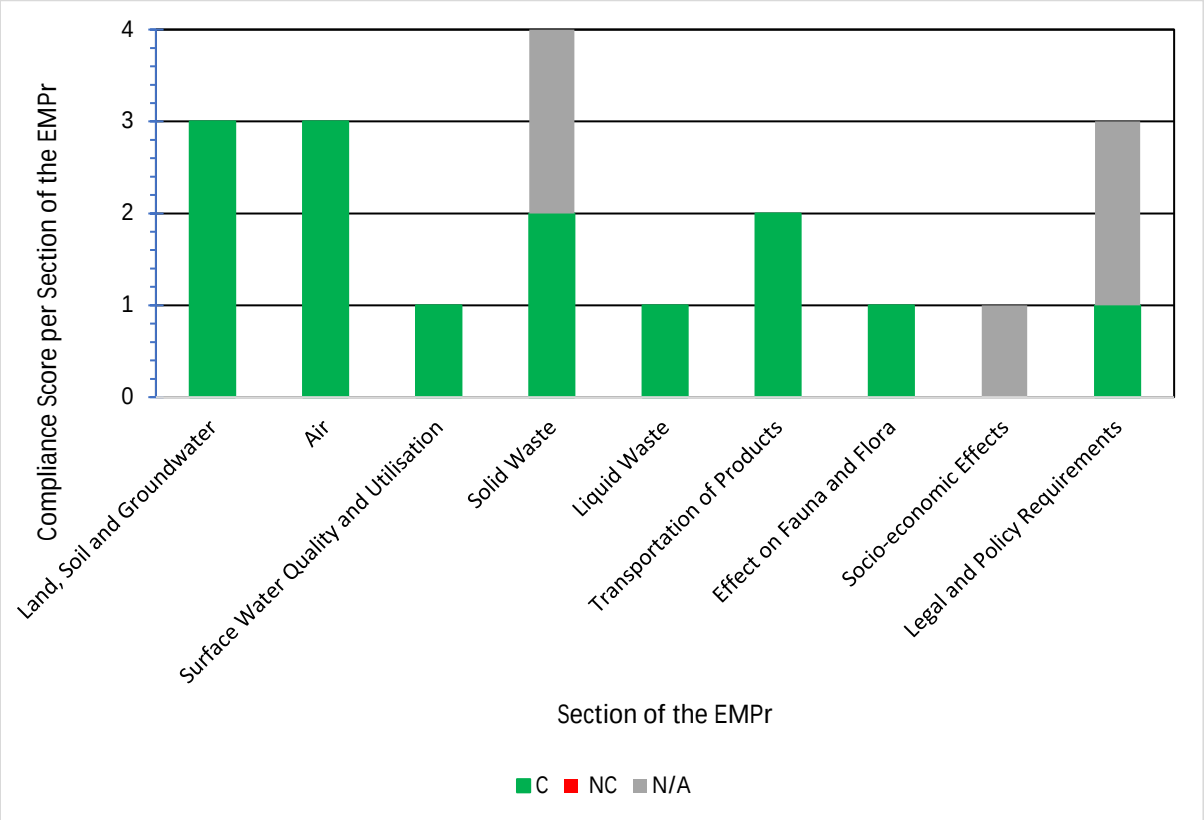

Figure 6-6 - Number/Count contribution of findings made to the EMPr Commitments per Section

Figure 6-7 presents the total percentage EMPr compliance for the facility and **Figure 6-8** illustrates the percentage contribution of the findings of the EMPr commitments.

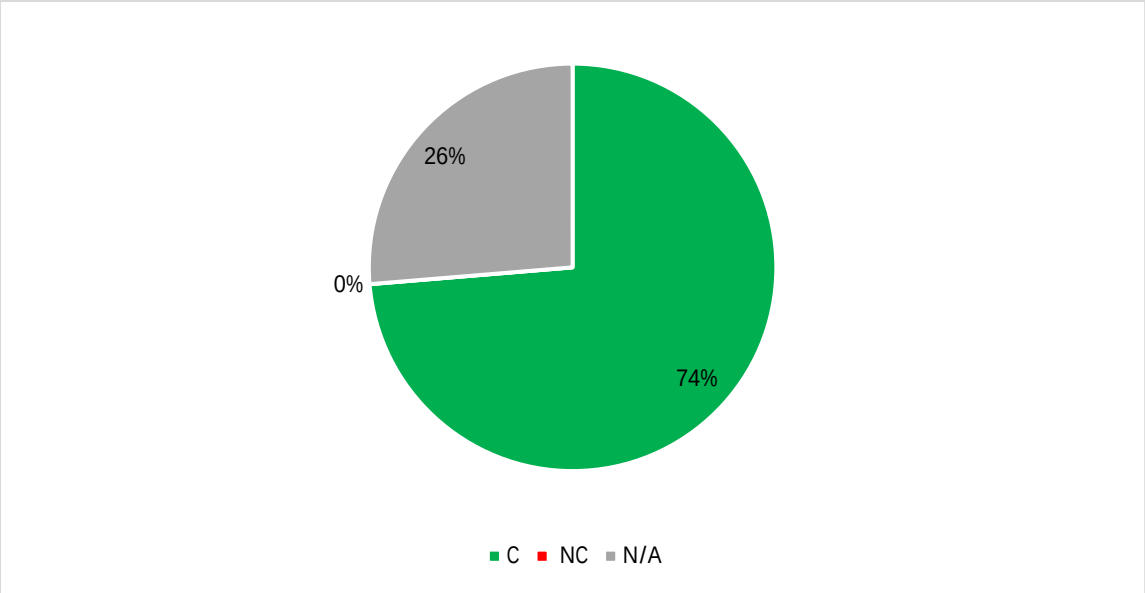

Figure 6-7 - Overall percentage findings on compliance to the EMPr Commitments

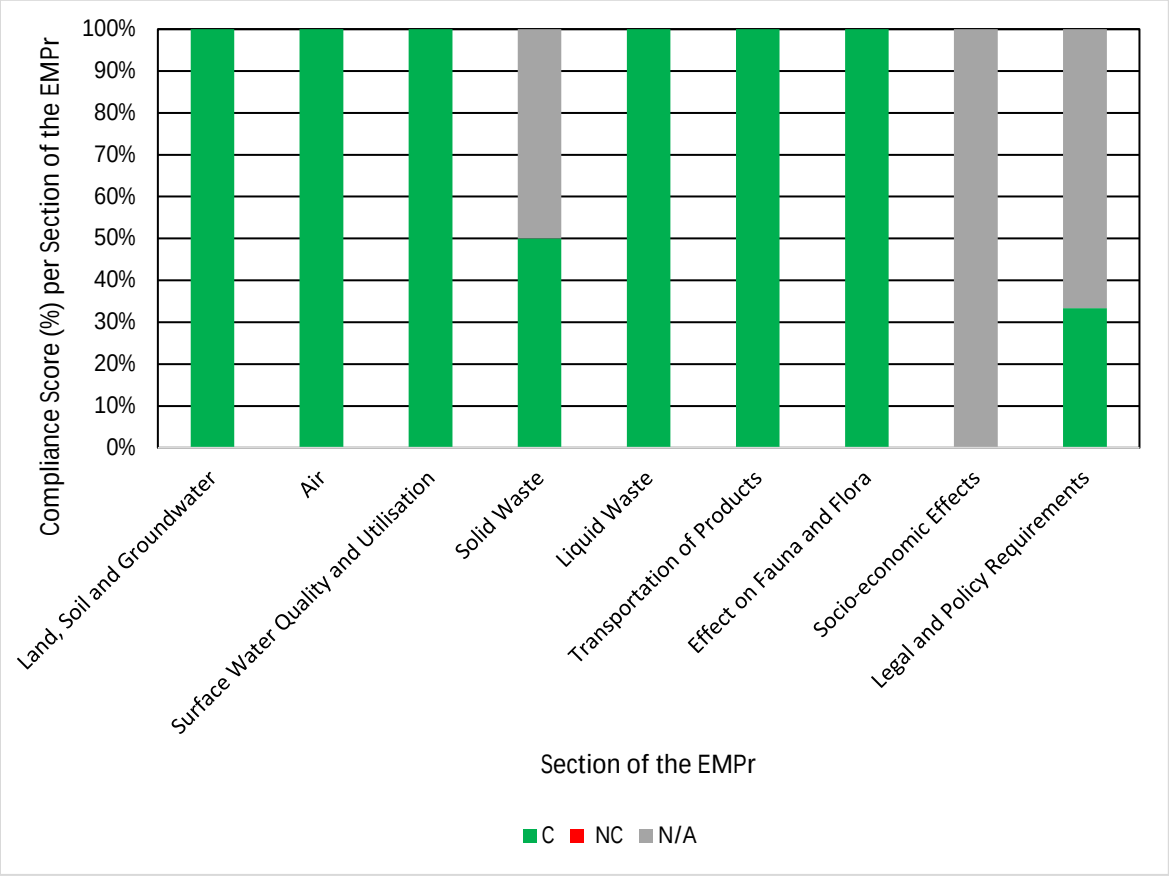

Figure 6-8 - Percentage contribution of findings made to the EMPr Commitments per Section

7 RECOMMANDATIONS

Zero non-compliance of the EA and EMPr conditions was noted during the audit. Sasol is commended for achieving 100% compliance for the EA and EMPr audit and is urged to continue to implement the environmental mitigation measures within the EA and EMPr. In addition, Sasol should continue to implement their EMS for the Sasol One Complex that includes the HSP unit and to identify new environmental risks 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 for the operational phase remain applicable, and the EA is considered effective. As such, WSP does not recommend any amendment of the EA as it was sufficient in managing environmental impacts. The ROD was issued to govern the construction phase as well as the operational phase 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; including the annual audit of each business unit to meeting the ISO 14001 standards.

New impacts and risks are continually identified and assessed by Sasol by its Environmental Department, which assesses environmental risks and drives improvement implementation. This Department facilitates Environmental Risk Assessments per business entity to ensure that gaps are addressed through implementation of mitigation measures via the Integrated Management System.

In conclusion, WSP recommends that Sasol continues to operate each business unit under their Environmental Management System and meet licence compliance (EMPr, WUL, EA etc). This is effective as mitigation against any gaps in the EMPr and to regularly identify new environmental impacts and risks.

9 DECLARATIONS

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: Ian Malloy

UNDERTAKING

I, Ian Malloy, the undersigned and duly authorized thereto, by WSP, have studied Sasol HSP 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 Sub-section 2.1.

Signed at Cape Town on this the 06 June 2023

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

Ian Malloy

Earth and Environment, Environmental Planning & Advisory, Senior Consultant

CAREER SUMMARY

Ian has ten years of working experience as an Environmental Consultant focussing on environmental management and auditing, waste planning, and environmental engineering. His key career and academic development are in the field of environmental management and engineering with a focus on waste, wastewater and water. The projects completed include Water Use Licence (WUL) and Waste Management Licence (WML) Applications, Environmental Impact Assessments (EIAs), Basic Assessments (BAs) and developing Environmental Management Programmes (EMPrs), developing IWMPs for District and Local Municipalities, WMPs for industry, conducting environmental compliance audits and GRAP 17 and 19 assessments of landfill sites.

<1 year with WSP

9 years of experience

Area of expertise

Waste Management and Planning

Environmental Management

Waste Management Licencing (WML)

Water Use Licencing (WUL)

Basic Assessment (BA)

Environmental Impact Assessment (EIA)

Development of Environmental Management Programmes (EMPr)

Compliance Auditing (EA, EMPr, WML, WUL)

Development of municipal Integrated Waste Management Plans (IWMPs)

Environmental Engineering (Wastewater Treatment and Waste Management)

GRAP 17 and 19 Assessments of Landfill Sites

Surface and Groundwater Monitoring

Language

English and Afrikaans

EDUCATION

Master of Water Engineering, University of Cape Town	2020 – 2023 (in progress)
Bachelor of Engineering (Honours), Environmental Engineering, University of Pretoria	2019
Bachelor of Chemical Engineering, Stellenbosch University	2016

ADDITIONAL TRAINING

Ian Malloy

Earth and Environment, Environmental Planning & Advisory, Senior Consultant

ISO 9001:2015 SAATCA registered lead auditor training course (Quality Management Systems) 2015

PROFESSIONAL MEMBERSHIPS

Registered as a Candidate Engineer: Engineering Council of South Africa (ECSA), Registration No: 2021204206 2020

Member of the Institute of Waste Management Southern Africa (IWMSA), Registration No: 30120185, Western Cape Branch Committee Member 2020

PROFESSIONAL HISTORY

WSP Group Africa (Pty) Ltd	November 2022 - present
GIBB Environmental (Pty) Ltd	2019 – 2022
GIBB (Pty) Ltd	2013 – 2019

PROFESSIONAL EXPERIENCE

Waste Management and Planning

District and Municipal Integrated Waste Management Plans and Waste Minimisation Plans

Garden Route District Municipality, Garden Route District Municipality Waste Minimisation Strategy, South Africa
2020 to 2021
Environmental and Waste Consultant
Develop waste minimisation strategies for the Garden Route District Municipality and the seven local municipalities.

Midvaal Local Municipality, Midvaal Local Municipality Integrated Waste Management Plan Review, South Africa
2020 to 2021
Environmental and Waste Consultant
Revision of the Midvaal Local Municipality Integrated Waste Management Plan (IWMP).

Vuthela iLembe LED Programme, Ilembe District Municipality IWMP, South Africa
2018 to 2020
Environmental and Waste Consultant
Development of the iLembe District IWMP and the revision of the KwaDukuza and Mandeni Local Municipality IWMPs.

Scoping Assessment for a regional landfill site for the iLembe District Municipality.

Ingquza Hill Local Municipality, Ingquza Hill Local Municipality IWMP, South Africa
2020 to 2021
Environmental and Waste Consultant
Development of the Ingquza Hill Local Municipality IWMP

Elundi Local Municipality, Elundi Local Municipality IWMP, South Africa
2015 to 2016
Junior Environmental and Waste Consultant
Development of the Elundini Local Municipality IWMP

Dr Ruth S Mompati District Municipality, Dr Ruth S Mompati District Municipality IMWP, South Africa
2015 to 2016

Ian Malloy

Earth and Environment, Environmental Planning & Advisory, Senior Consultant

Junior Environmental and Waste Consultant
Development of the Dr Ruth S Mompati District Municipality and the five Local Municipality IWMPs (Naledi, Mamusa, Greater Taung, Lewkwa-Teemane and Kagisano Molopo Local Municipalities)

Development Bank of South Africa, DBSA Material Recovery Facility Feasibility Assessment, South Africa
2020 to 2021
Environmental and Waste Consultant
Feasibility assessment for the development of small material recovery facilities across four Provinces (Eastern Cape, Northern Cape, Limpopo and Mpumalanga)

ECDC Hazardous Waste Facility Feasibility Study Phase 2, South Africa
2017
Environmental and Waste Consultant
Hazardous waste survey, feasibility study and cost analysis for the development of a hazardous waste facility in the Eastern Cape, south Africa

Landfill GRAP 17 and 19 Assessments

Kannaland Local Municipality, Kannaland Local Municipality GRAP 17 And 19 Assessments, South Africa
2019 to 2019
Environmental and Waste Consultant
GRAP 17 and GRAP 19 assessments of 4 landfill sites in municipality (Ladismith, Calitzdorp, Zoar and Van Wyksdorp Landfill Sites).

Nyandeni Local Municipality, Nyandeni Local Municipality GRAP 17 And 19 Assessments, South Africa
2019 to 2019
Environmental and Waste Consultant
GRAP 17 and GRAP 19 assessments of 1 landfill site and 1 transfer station in municipality.

Environmental Impact Assessment and Basic Assessment Process

Stellenbosch Local Municipality, Devon Valley Landfill Site (New Cell 4), South Africa
2021 to 2022
Environmental Consultant
Basic Assessment Process for the amendment of the Waste Management Licence for the development of a new cell at the Devon Valley Landfill Site in Stellenbosch, Western Cape, South Africa

Department of Forestry, Fisheries and Environment, Waste Management Licence Applications for Five Unlicenced Waste Disposal Facilities, North West, Mpumalanga and Eastern Cape, South Africa
2021 to 2022
Environmental Consultant
Environmental Impact Assessment and Basic Assessment Processes for the licencing of five (5) unlicenced Waste Disposal Facilities in the North West, Mpumalanga and Eastern Cape provinces, South Africa**.** Four (4) applications for operation Waste Management Licences (WMLs) and one (1) application for an operation to decommissioning WML.

Centurion Aerospace Village (CAV), CAV Sewer Pipeline, , South Africa
2021 to 2022
Environmental Consultant
Basic Assessment for the installation of a sewer pipeline to be connected to the existing municipality sewer services network, Centurion, City of Tshwane Metropolitan Municipality, Gauteng, South Africa.

Environmental Compliance Audits

Orion Engineered Carbons (Pty) Ltd, NUP and EMPr Audit for the storage of CBO in tanks at the Dom Pedro Facility at the Port of Port Elizabeth, South Africa

Ian Malloy

Earth and Environment, Environmental Planning & Advisory, Senior Consultant

2022 - 2023
Environmental Auditor
External compliance audit of the NUP (Noxious Use Permit) and EMPr for the storage of carbon black oil (CBO) in tanks at the Dom Pedro facility at the Port of Port Elizabeth.

Dekro Paints (Pty) Ltd, Dekro WML External Compliance Audit, Cape Town, South Africa
2023 to 2023
Environmental Auditor
External compliance audit of the waste management licence for the solvent recovery facility at the Dekro Paints facility in Kuilsriver, Cape Town.

Sasol Pipeline Operations, Sasol SNI and GNP Pipeline Audits, South Africa
2022 to 2022
Environmental Auditor
External compliance audit of the SNI and GNP pipeline against the EA, EMPr and WUL conditions

Sasol South Africa Limited, Sasol Sasolburg EA Audits, South Africa
2022 to 2022
Environmental Auditor
External compliance audit of nine unit operations against their EA and EMPr conditions at the Sasol One Complex in Sasolburg.

Langeberg Local Municipality, Langeberg Local Municipality Landfill External Audits, South Africa
2019 to 2022
Environmental Auditor
External annual audits of 3 landfill sites (Ashton, Bonnievale and Montagu) according to their waste management licence conditions

Kannaland Local Municipality, Kannaland Local Municipality Landfill External Audits, South Africa
2019 to 2019
Environmental Auditor
External audit of 4 landfill sites in the municipality according to waste management licence conditions

Environmental Management Plans and Environmental Control Officer

Orion Engineered Carbons (Pty) Ltd, Operational Environmental Management Programme (OEMPr) for the OEC Tanks Farms at Latita Tank Farm, Zone 7, Coega SEZ, Port of Ngqura, South Africa
2022 - 2023
Project Manager
Develop the OEMPr for the development of the OEC Tank Farm within the Latita Tank Farm in Zone 7, Coega SEZ, Port of Ngqura, Gqeberha, South Africa.

Eskom, Eskom Hotazel-Mothibistad 132 kV Power Line Installation with Associated Substations, South Africa
2017 to 2019
External Environmental Control Office
Monthly ECO audits for the construction of 132 kV power lines and substations in Hotazel and Kuruman in the Northern Cape.

Mott MacDonald, R61 Road Upgrade from Majola Tea to Tombo, South Africa
2015 to 2019
External Environmental Control Officer
Monthly ECO audits for the road upgrade and construction of the R61 road from Majola Tea to Tombo, Eastern Cape.

OR Tambo District Municipality and Amatole Water, King Sabata Dalinyebo Local Municipality Presidential Intervention Bulk Water Supply Infrastructure Upgrade Project title, South Africa

Ian Malloy

Earth and Environment, Environmental Planning & Advisory, Senior Consultant

2013 to 2019
External Environmental Control Officer
Coordinate all environmental management and auditing of all related bulk water supply projects. Undertake monthly ECO audits for the upgrade of the bulk water infrastructure within the King Sabata Dalinyebo Local Municipality. Projects included the construction of numerous reservoirs and installation of pipelines within the municipal area.

Eskom, Eskom Hombe and Taweni Substation with Associated 132 kV Power Lines, South Africa
2013 to 2016
External Environmental Control Officer
Monthly ECO audits for the construction of two 132 kV power lines and the Hombe and Taweni substations in the Eastern Cape.

Eskom, ESKOM GREATER MTHATHA POWER LINE, South Africa
2013 to 2014
External Environmental Control Officer
Monthly ECO audits for the construction of a 132 kV power line in Mthatha, Eastern Cape.

PD Naidoo & Associates, R61 Road Upgrade in Engcobo, South Africa
2013 to 2016
External Environmental Control Officer
Monthly ECO audits for the road upgrade and construction of the R61 road in Engcobo, Eastern Cape.

Dissertations and Research Projects

Department of Civil Engineering, University of Cape Town, Master of Engineering Dissertation.

2023

Utilisation of the Biomath protocol for calibration of a model based on biological sulfate reduction (BSR) for the treatment of coal mine drainage and Fischer-Tropsch Reaction Water. Conduct a global sensitivity analysis (GSA) and uncertainty analysis to calibrate the model, determine the most sensitive parameters in the prototype CSTR-BSR model developed by Dr. T. Harding and reduce the uncertainty of the results during the simulations (with the use of DHI West®).

Department of Chemical Engineering, Stellenbosch University, Bachelor of Engineering, Research Project

2016

Conduct laboratory experiments to investigate the factors that influence elution of gold from and adsorption of gold onto activated carbon. This was done to determine if gold can be transferred from fine to coarse activated carbon in solution during or after the carbon adsorption process to extract gold stored on fine activated carbon.

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 – Intern	present
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

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

October 2022 to June 2023

Environmental Auditor

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

Dissertations and Research Projects

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

2023

To quatify 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.

Building 1, Maxwell Office Park
Magwa Crescent West, Waterfall City
Midrand, 1685
South Africa

wsp.com

Annexure B – Construction of a new sulphuric acid offloading facility at Sasol one – ref (EMB/13/12/50)

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/objective	***Impact management action***
1.LAND, SOIL AND GROUNDWATER	1.1 The tanks will be situated within a bunded area with a concrete floor. Soil and groundwater pollution will therefore be prevented.
	1.2 The spent caustic-water solution from the scrubber will be processed together with that originating from the existing E4331 caustic scrubbing system. It will be pumped via **existing** dirty water sump to an intermediate tank. In this tank the effluent will be sampled and tested for total phenolic content before being sent to Section 1900 (Phenosolvan plant) for processing.
	1.3. At the loading facility, all spills are contained within a bunded area and collected in a slump. This is a closed system, which means that there is no threat regarding storm water contamination. The liquid is either disposed of a licenced third-party waste management company) or treated at the Phenosolvan plant.
2. AIR	2 Caustic soda scrubbing column will be constructed at the proposed storage tanks to minimise the impact of potential air emissions
	The current emission point does not have an AEL requirement and therefore emission sampling is done from as Duty of Care
3 SURFACE WATER QUALITY & UTILISATION	3.1 No surface water will be utilised in this project. There will also be no effect on surface water quality as a result of this project
4 SOLID WASTE	4.1 Solid HSP in the tanks will be dug out and placed into suitable containment to be collected by a waste contractor for treatment and safe disposal when required.
5 LIQUID WASTE	5.1 The spent caustic solution will be processed with the High organic waste (HOW)) effluent at the Phenolic Plant. After treatment, the Light organic waste (LOW) effluent is sent to the Bio works for treatment, or removed by a third party, waste management service provider for safe disposal
6 TRANSPORTATIONS OF PRODUCTS	6.1 Vapour releases during loading of the product will be captured at the loading facility and directed to the new scrubbing system.
	6.2 The high sulphur pitch product will be collected by a waste contractor for treatment and safe disposal.