

	<b>Procedure</b>	<b>Medupi Power Station Project</b>
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Title: **Medupi Environmental Audit Procedure**

Document Identifier: **PPZ 200-38428**

Alternative Reference Number:

Area of Applicability: **Medupi Power Station Project**

Functional Area: **Environmental Management**

Revision: **07**

Total Pages: **13**

Review Period: **6 Monthly**

Disclosure Classification: **Controlled Disclosure**

Current Change Note **CN100132**

Compiled by	QA, Interface & Governance Review	Functional Responsibility	Authorized by
			
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Date: 16/02/2018	Date: 16.02.2018	Date: 16/02/2018	Date: 19/02/2018

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## 1. Introduction

### 1.1 Scope

This document describes the processes employed in planning, performing and reporting of Environmental Audits by the Team Medupi and the ECO on the Medupi Power Station project.

Environmental Audits covered within this procedure are:

- Audits of identified processes, procedures or risk; and
- Environmental compliance of the Project including Principal Contractors, in line with legal requirements.

This Procedure is applied by the TM Environmental Department and the ECO.

Principal Contractors, Suppliers or Consultants are not required to comply with the specific requirements of this Procedure. It is however, issued to Principal Contractors for Information.

### 1.2 Purpose

The purpose of this procedure is to describe the processes employed in planning, performing and reporting of Environmental Audits by the TM Environmental Department and ECO on the Medupi Power Station project.

Environmental Audits undertaken on the Medupi Power Station project have the following objectives;

- To evaluate environmental performance and environmental management practices against legal and other requirements;
- To determine conformance to the EMS and compliance to legal requirements as defined in the scope; and
- To proactively identify areas of non-conformity and non-compliance with the view to address such prior to incident, investigation or litigation. In this sense it should be viewed as means of implementation of Preventive Action.

### 1.3 Applicability

This document shall apply throughout Medupi Power Station Construction activities, excluding activities handed over to the client, Generation.

#### 1.3.1 Effective date

Authorization date will be the effective date

## 2. Normative/Informative References

### 2.1 Normative

Document Title	Document Number
Project Execution Plan	200-5919
Project Quality Plan	200-1679
Development and Change of Medupi QMS Documents	200 5665

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Document Title	Document Number
Document and Record Management Procedure	200-1680
Unit Construction Procedure Manual	200-163680
ISO/SANS 14001, Environmental Management Systems, Requirements with guidance for use	ISO 14001
ISO/SANS 19011, Guidelines for Auditing Management System	ISO 19011
Medupi Environmental Policy	200-73979
EMS Scope and Manual	200-73971
The Environmental Management Plan for the Medupi Coal-fired Power Station in the Lephalale Area, Limpopo Province – The Construction Phase	200-35208

Document Title	Document Number
Employer Policies and Procedures, Part 9 (Employer's Health, Safety & Environmental Requirements Schedule)	200-10609
HSE Audit Plan and Schedule (Template)	200-39016
Environmental Audit Schedule Register	200-74013
HSE Audit Report (Template)	200-39015
Procedure for the handling of HSE Non-conformities and Corrective and Preventive Action	200-38426
Preventive and Corrective Action Request	200-39011

## 2.2 Informative

- a) ISO 9001:2015
- b) ISO 14001:2014

## 2.3 Definitions

Term	Definition
Audit	Systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled.
Auditee	Organization being audited
Auditor	Person with the competence to conduct an audit
Audit Checklist	A "questionnaire" indicating specific requirements and acts as record of Audit. It ensures that an audit is conducted in a systematic and comprehensive manner and that adequate evidence is obtained.
Audit Client	Person/Organisation requesting the Audit, if such is not the Auditee
Audit Finding	Results of the evaluation of the collected audit evidence against audit criteria

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Lead Auditor	Person responsible for successful completion of the Audit Process
Non-conformity	Failure to comply with/and or deviate from any stipulated environmental requirements
Opportunity for Improvement	When the auditee is implementing measures to comply with environmental requirements or partially met the requirements.

## 2.4 Abbreviations

Abbreviation or Acronym	Description
ECO	Environmental Control Officer
EMS	Environmental Management System
ISO	International Standards Organisation
TM	Team Medupi
PC	Principle Contractor
PCA	Preventive and Corrective Action
WISPA	Web Integrated System of Process and Applications

## 2.5 Roles and Responsibilities

The parties or stakeholders responsible **(R)** and accountable **(A)** or to be consulted **(C)** and/or informed **(I)** relative to the implementation and maintenance of this QMS procedure are defined in the Procedure RACI Matrix documented below:

**Table 1: RACI Matrix**

Process Step/Activity	TM Construction Manager	TM Unit Area Manager	TM Contracts Manager	TM Environmental Manager	Environmental Practitioners	Principal Contractors	ECO
Compile and distribute Audit Program	I	I	I	A	R	I	R
Maintain Audit Register	I	I	I	I	C, I, A	I	R
Notify Auditee	I	I	C, I	I	A, R	I	R
Undertake Document Review			I	A	R	I	R
Compile Audit Protocols			I	A, C, I	R, I		R

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(Checklists)							
Undertake Audit fieldwork (including Opening and Closing Meetings)	I	I	I	A,C,I	R	C,I	R
Compile and distribute Audit Report (including PCA forms)	I	I	C,I	A,C,I	R	I	R
Audit finding follow-up	I	I	C,I	C,I	R, A	I	R

## 2.6 Related/Supporting Documents

The following quality records are utilised to record necessary process data required to verify process conformity/compliance:

- Environmental Audit Programme Environmental Audit Plan and Notification
- Audit Checklist
- Audit attendance registers
- Preventive and Corrective Action Forms or PCAR Register
- Environmental Audit Report

The revision status of Medupi project Quality Record templates is defined in the Medupi QMS Index LRD 200 – 47329 maintained by Medupi Quality Dept.

Retention and storage of records generated as a result of this document shall follow the process defined in the PPZ 200 1680 "Document and Record Management Procedure"

## 3. Procedure

### 3.1 Auditor Competence

- The (Lead) Auditor should have knowledge and experience of ISO 14001 and ISO 19011.
- Where knowledge and experience is lacking, training interventions will be applied through Environmental Training, Awareness and Competence Procedure (200 – 73973).
- Environmental Practitioners and ECO's, acting as Auditors, shall be competent in line with requirements of Section 4, Part 9 of the Employer Policies and Procedures.
- No Auditor shall audit his/her own work, and potential conflicts of interest shall be communicated to the Environmental Manager.

### 3.2 Environmental Auditor responsibilities

- TM Environmental Department is responsible for auditing principal contractors against the Operational Controls as per the audit programme.

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- The ECO is responsible for auditing principal contractors against the EMP on a quarterly basis. They also conduct compliance audit on the Ash Dump and associated infrastructure, on a monthly basis.
- The ECO also audit the project on legal requirements (e.g Environmental Authorisations/Permits/Licences/EMP) on an annual basis or as required.

### 3.3 Process description

#### 3.3.1 Audit Scheduling

- TM Environmental Department and the ECO shall prepare an Audit Programme prior to the onset of each financial year. This shows all the Environmental Audits planned for the project during the particular financial year. This Programme also includes all planned external audits which have an influence on the EMS.
- The Audit Programme will be updated as required and be distributed to the relevant managers.
- The Programme will be made available to the Medupi Assurance Manager.

#### 3.3.2 Audit Notification and Preparation

- The relevant Auditee shall be notified at least 1 (one) week in advance of the audit using the Environmental Audit Plan, Schedule and the audit checklist.
- Formally distribute the specific Environmental Audit Plan, Schedule and audit checklist via relevant Contract Manager to the Auditee.
- Obtain Auditee applicable work documents.
- Perform Document Review to prepare audit activities and establish an overview of the extent of the system documentation to detect possible gaps.

**Note: The ECO will utilise their own templates (with their company logo) for Audit Notification, Environmental Audit Finding Sheet and Audit Report.**

### 3.4 Conducting the Audit Activities

- An Opening Meeting will be held with the Auditee's management and/or those responsible for the functions/processes to be audited.
- The following is discussed at the Opening Meeting, which is chaired by the (Lead) Auditor;
  - Introduction of the Audit Team and their roles
  - Confirmation of the audit type, objective, scope and criteria
  - Confirmation of the Audit Plan and Schedule;
  - Confirmation of communication channels;
  - Confirmation of previous audit findings if applicable
  - Confirmation of the language to be used during the audit
  - Explanation of audit method and sampling
  - Explanation of method of reporting and follow-up protocols; and an opportunity for the auditee to ask questions.
- The (Lead) Auditor undertakes the audit (document review and fieldwork), following guidance from the Audit Checklist. The fieldwork consists of observations and interviews of sampled activities and persons at the relevant work areas. The fieldwork will focus on finding evidence of conformity/compliance to relevant requirements, as listed in the Audit Checklist.
- All findings (good practices, opportunities for improvement and non-conformances/conformities) shall be listed on the Audit Report.

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- All non-conformities/compliances (including those identified during Document Review) shall be recorded on the Preventive and Corrective Action Form (200-39012) or WISPA System.
- A Closing Meeting shall be held, attended by the Auditee and Client management and those responsible for the functions/processes to be audited.
- The following should be discussed at the Closing Meeting;
  - Present the summary of findings and explains the steps to close-out the findings;
  - Audit Findings Sheet (200-208814) must be signed as attached ;
  - Arrangements and logistics of reporting and follow-up; and
  - Attendance registers must be kept as records.

#### 3.4.1 Audit Reporting

The (Lead) Auditor will complete the Audit Report and the following sections thereof;

- Audit number;
- Audit scope;
- Auditee organisation name;
- Auditee name(s);
- Client organisation name;
- Date(s) of audit;
- Names of the Auditor(s);
- Executive Summary;
- Listing of audit non-conformities/compliances; and
- Listing of identified Good Practices and Opportunities for Improvement.

The (Lead) Auditor will attach the relevant Preventative and Corrective Action Form, which will become a part of the Audit Report in case the non-conformities/compliances are raised manually. The draft audit report will be submitted to the Auditee for comment within 14 days. The Auditee has 3 days to comment. The Final Audit Report should be issued within 2 days after commenting period. If it is delayed the reasons should be communicated to the auditee.

#### 3.4.2 Audit follow-up and closure

- Audit findings, listed in the relevant Preventative and Corrective Action reports shall be followed-up as per the requirements listed in the procedure for Handling of Environmental Non-conformities and Corrective and Preventive Action (200 - 38426)
- Opportunities for Improvement shall not be followed-up upon, but shall be used as input to the next audit of the Auditee.
- Once all Corrective Actions have been effectively implemented, the audit shall be listed as “closed” on the Environmental Audit Programme.

### 4. Process for Monitoring

#### 4.1 Key Performance Areas and Indicators

The following Key Performance Areas / Indicators (KPA's / KPI's) shall be measured, analysed and reported. The Process Owner shall be accountable, and assign the responsibility at the frequency as indicated below, documented as part of the QMS measurement, analysis and improvement initiative.

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Table 2: KPAs/KPIs

Key Performance Area	Key Performance Indicator	Measure Frequency	Responsibility	Records
Environmental audits undertaken	All Audits undertaken as required	Quarterly	Environmental Practitioners and ECO as per allocated Unit Area	Audit Reports
	Audit findings raised and cleared within timeframe stipulated	Monthly	Environmental Practitioners and ECO as per allocated Unit Area	Closed PCARs and updated action plan register
ISO 14001 conformity	Zero (0) internal or external findings in relation to this Procedure	As per audit schedule	Environmental Practitioners	Audit Reports
	Maintenance and improvement of audit scores	As per audit schedule	Environmental Practitioners	Audit Reports
Document control	Retain and store records generated as a result of this document as defined in the Procedure 200-1680 "Document and Record Management".	Annually or as required	EMS Co-ordinator	As generated by the procedure
Revision of Document	Revision requirements in line with Medupi Procedures PPZ 200 5665 "Development and Change of Medupi QMS Documents" and PPZ 200 1680 "Document and Record Management"	Annually or as required	Environmental Manager	New revised document

## 4.2 Document Review and Self-Assessment

### 4.2.1 Document Self-Assessment

The "Process Owner" identified on the front page of this document along with departmental personnel and the project QMS Engineer shall undertake a "self-check" review of the process defined in this document at six monthly intervals, commencing from the effective date of this document, to check:

- the process / procedure operational integrity
- process efficiency

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c) the level of stakeholder knowledge and implementation.

Participants and results of the “self-check” review shall be documented by the Process Owner in the “Self-Assessment Checklist” (***QMS Template No. QMS PTZ 200 - 75592***) included as an Appendix to this procedure which shall be issued to [medupiga@eskom.co.za](mailto:medupiga@eskom.co.za) by the Process Owner once completed.

Process Owner shall proceed with any revision requirements in line with Medupi Procedures

PPZ 200 5665 “Development and Change of Medupi QMS Documents” and PPZ 200 1680 “Document and Record Management”

#### 4.2.2 Revision Period

All QMS documents shall undergo a compulsory 3 year revision.

#### 4.3 Training Requirements

Personnel implementing this Procedure require training in no specific criteria other than the operational requirements of this procedure by the respective Process Owner and Line Managers.

#### 4.4 Acceptance

This document has been seen and accepted by:

Name	Designation
E Marell	Environmental Manager
B Janse Van Rensburg	Senior Construction Manager
P Dukashe	Project Director
B Mgidlana	Quality Manager

#### 5. Revisions

Date	Rev.	Compiler	Remarks
2018/01/28	07	M Boshomane	Annual Review including new ISO 14001:2015 changes and new document template
2015/10/14	06	L Ramono	Annual Review
2014/08/04	05	N Nengobela	Annual Review

#### 6. Development Team

The following people were involved in the development of this document:

- M Boshomane
- M Sebonego
- Emile Marell

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## Appendix A – Process Self-Assessment Checklist

## A.1 Process Self-Assessment Checklist

Discipline: <b>Environmental Management</b>		Applicable Document No.: PPZ 200 -				Self Assessment Date: / /	
Item No	Ref Section	Self-Assessment Question	Compliant			Comment	
			Yes	Part	No		
1	5.3.1	Does an Audit Programme of the current financial year exist?					
2	5.3.2	Audit Notification and Preparation					
3	5.3.2	Are auditees notified at least 1 (one) week advance of the audit using the HSE Audit Plan and Schedule?					
4	5.3.2	Are the HSE Audit Plan and Schedule formally distributed via Document Control to the Auditee?					
5	5.3.2	Is a copy of the Audit Checklist available?					
6	5.3.2	Was Auditee applicable work documents obtained?					
7	5.3.2	Was document reviews undertaken and findings recorded on audit checklist?					
8	5.3.3	Was opening meeting held?					
9	5.3.3	Was the following discussed? • Confirmation of the Audit Plan and Schedule,					
10.1	5.3.3	• Feedback on the source Document Review,					
10.2	5.3.3	• Confirmation of communication channels,					

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10.3	5.3.3	<ul style="list-style-type: none"> <li>Confirmation of scope and resource requirements, and,</li> </ul>				
10.4	5.3.3	<ul style="list-style-type: none"> <li>An opportunity for the auditee to ask questions.</li> </ul>				
11	5.3.3	Was the audit fieldwork conducted, following guidance from the Audit Protocol?				
12	5.3.3	Are all non-conformities recorded on the Preventive and Corrective Action form?				
13	5.3.3	Are all Opportunities for Improvement listed on the Audit Report?				
14	5.3.3	Was closing meeting held? <ul style="list-style-type: none"> <li>Each individual audit non-conformity (listed on the Corrective and Preventive Action form)</li> </ul>				
14.1	5.3.3	<ul style="list-style-type: none"> <li>A summary of Auditee conformity</li> </ul>				
14.2	5.3.3	<ul style="list-style-type: none"> <li>Arrangements and logistics of reporting and follow-up</li> </ul>				
15	5.3.4	Was the audit report completed by the Lead auditor?				
16	5.3.4	Was the relevant Corrective and Preventive Action Forms attached as part of the audit report?				
17	5.3.4	Was the formal Audit Report signed by the Lead auditor and Environmental Manager?				
18	5.3.4	Was the audit report made available to the Auditee and Client within 3 (three) days of completion of the Audit Fieldwork?				
19	5.3.5	Audit follow-up and closure				
20	5.3.5	Were all the relevant Corrective and Preventive Action reports followed-up?				
21	5.3.5	Has the audit been listed as closed on the Audit Programme?				

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Comments				
Self-Assessment by:	Name:	Position:	Revision Required? (Yes / No)	Planned Revision Date:
Attendees:				

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