 Eskom	Work Instruction	Medupi Power Station Project
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1. Introduction

As a requirement of ISO 9001:2015, defined in section 8.5.4, is the preservation of product during internal processing and delivery to the intended destination in order to maintain conformity to requirements. The Medupi Power Station Project aims for compliance to ISO 9001:2015 and hereby documents its process for product Storage and Preservation. As applicable, preservation shall include identification, handling, packaging, storage and protection.

2. Supporting Clauses

2.1 Scope.

2.1.1 Purpose

The objective of this procedure is to outline the process steps, control mechanisms and reporting requirements for the different types of equipment Storage and Preservation.

2.1.2 Applicability

This procedure is applicable to Medupi Power Station Project Contractors and their manufacturing locations and covers the Storage and Preservation requirements for:

- On-Site equipment
- Off-Site equipment
- Installed equipment on-site
- Equipment arriving at site

2.1.3 Effective date

The date of approval of this work Instruction

2.2 Normative/Information References

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.2.1 Normative

- [1] ISO 9001: 2015 Quality Management Systems
- [2] ISO 9000: 2015 Quality Management Systems -Vocabulary

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2.2.2 Informative

- [3] 200- 5019 Project Execution Plan
- [4] 200-1679 Project Quality Plan
- [5] 200-1680 Document and Record Management Procedure
- [6] 200- 46362 Site Quality Assurance, Control and Verification
- [7] 200-5665 Development and Change of Project Quality Management Systems(QMS)
- [8] 200- 1684 Correction Action Request
- [9] 200-15327 Control of Nonconforming Product

2.3 Definitions

The vocabulary of ISO 9000, ISO 19011 and the following definitions apply in the application of this procedure.

- 2.3.1 Quality** : Degree to which a set of inherent characteristics fulfils requirements
- 2.3.2 Quality Assurance** : Part of quality management focused on providing confidence that quality will be fulfilled.
- 2.3.3 Inspection** : Conformity evaluation by observation and judgement of Contractor activities and control processes accompanied, if appropriate, by measurement, testing or gauging.
- 2.3.4 Verification** : Conformity through the provision of objective evidence that specified requirements have been fulfilled.
- 2.3.5 Quality Control** : Part of quality management focused on fulfilling quality requirements
- 2.3.6 Process** : Set of interrelated or interacting activities which transforms inputs into outputs.
- 2.3.7 Product** : Result of a process-software, hardware, materials or processed materials.
- 2.3.8 Defect** : Non- fulfilled of a requirement related to an intended or specified use
- 2.3.9 Nonconformity** : Non-fulfilment of a requirement

2.4 Abbreviation

This list contains the abbreviations used in this document.

Abbreviation or Acronym	Definition
S&P	Storage and Preservation
DQM	Discipline Quality Manager
QCI	Quality Control Inspector
OSQCM	Off-Site Quality Control Manager

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PQM	Project Quality Manager
SPI	Storage and Preservation Inspector
IC	Inspection Coordinator
TM	Team Medupi
VIR	Vendor Inspection Register
I&TN	Inspection and Test Notification
I&TR	Inspection and Test Report
NoD	Notice of Defect
CAR	Corrective Action Report
PITR	Preservation Inspection and Test Report
QMS	Quality Management System
KPA	Key Performance Area
KPI	Key Performance Indicator
TPIA	Third party inspection agency

2.5 RESPONSIBILITIES AND AUTHORITIES

a) Responsible

Those who do the work to achieve the task. There is at least one role with a participation type of responsible, although others can be delegated to assist in the work required.

b) Accountable (also approver or final approving authority)

The one ultimately answerable for the correct and thorough completion of the deliverable or task, and the one who delegates the work to those responsible. In other words, an accountable must sign off (approve) work that responsible provides. There **must** be only one accountable specified for each task or deliverable.

c) Consulted (sometimes counsel)

Those whose opinions are sought, typically subject matter experts; and with whom there is two-way communication.

d) Informed

Those who are kept up-to-date on progress, often only on completion of the task or deliverable; and with whom there is just one-way communication.

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Table 1: RACI Matrix

Process Step				
Monthly review of project quality data	A	R	I	
Initiation of S&P related CAR and NoD		R		A
Determination of potential non conformities and their causes	R			A
Implementation of the corrective action	R			A
Evaluation of effectiveness of the corrective actions taken	R			A
Maintenance of Records	A	R		I
Notification of S&P related CAR and NoD Status/trend to Management	A	R	I	I

2.6 Related/Supporting Documents

Documents superseded by the procedure

[10] 200-129834 Storage and Preservation Procedure Rev.2

Forms and Template

[11] 200-75592 Document Self –Assessment Template

[12] 200-82532 Inspection & Test Notification

[13] 200-149002 Preservation Inspection Checklist

[14] 200-156823 Receiving Inspection checklist

Records

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

[15] Document Self –Assessment Report

[16] Inspection and Test Report(recorded on SPO as permanent record)

[17] Weekly Storage and Preservation Management Report

[18] Notice of Defect(NOD)

[19] Corrective Action Request (CAR)

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[20] Preservation Inspection and Test Report

[21] Receiving Inspection Checklist

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 Procedure 200-1681 “Control of Records”.

3. Document Content

3.1 Process Map / Flowchart

The process defined herein is self - explanatory and is not documented pictorially via a “Process Map / Flowchart”.

3.2 Structure, Formant and Content of Storage and Preservation requirements

Storage and Preservation is performed by Contractors on their supplied equipment. Assurance by Medupi Quality Management is performed in 3 categories:

- A monthly visit and completion of a Preservation Inspection and Test Report (200-149002) for each storage location requiring specific S&P
- A planned inspection, walk down or surveillance, notified by the Contractor via I&TN
- An inspection, walk down or surveillance initiated by Eskom OSQCM

Inspections are coordinated as follows:

- On-site inspection – coordinated by S&P Inspector as directed by Offsite Quality Control Manager
- Off-site inspection – coordinated by Offsite Quality Control Manager
- Installed Equipment inspection – coordinated by S&P Inspector as directed by the Offsite Quality Control Manager

The quality assurance requirements to be provided by each and every Contractor with equipment in Storage or Preservation are:

- a) A comprehensive list of equipment for both on and off-site storage stating, for each item, type of location required for storage and identifying any items requiring preservation or maintenance during storage. This list to be updated monthly by the Contractor and provided to the DQM and S&P Inspector via email.
- b) OEM compliant Storage and Preservation procedures, approved by Medupi Engineering for each type of item requiring preservation or maintenance during storage, including frequency of inspection or maintenance, together with registers wherein results of preservation inspections are recorded.

A schedule for Storage and Preservation inspections updated and submitted monthly.

3.3 Storage and Preservation inspection calendar

Using information received from Contractors' schedules, the S&P Inspector, at the end of each calendar month, draws up a schedule of inspections for the coming month and sends it to all Contractors having equipment in storage. The Contractor can, within 24 hours, reject the given dates and request an alternative date.

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3.4 Storage and Preservation inspection process

The Contractor requests an inspection in line with the schedule, via the I&TN system, to the Inspection Coordinator. Alternatively, surveillance inspection may be requested by the OSQCM after discussion with DQM via the I&TN system to the Inspection Coordinator.

The Inspection Coordinator verifies the I&TN details and if correct, allocates the I&TN to the relevant QCI. Should the I&TN details be incorrect, the Inspection Coordinator requests the correct details from the DQM or Senior QCI, prior to allocation to QCI. Inspections are planned accordingly

The QCI conducts the inspection and with the exception of laydown area walk-downs, records the results on the Preservation Inspection and Test Report. The QCI will complete all sections of the PITR.

The PITRs are completed per package / Contractor / Area, and provided to the DQM for verification on a daily basis.

In addition, where specific equipment is being preserved or maintained per storage and maintenance procedures, and issues are detected, an inspection & test report may be generated by the inspector as per inspection and testing procedure.

3.5 Storage and Preservation reporting

Reporting for Storage and Preservation inspections is done as follows:

Daily:

QCIs complete the I&TR and Preservation Inspection and Test Report per package / contractor / area, conducted that day, as per I&TN defined inspections. Recipient of the daily I&TR and Preservation Inspection and Test Reports are the DQMs.

Weekly:

The OSQCM will generate the weekly Storage and Preservation report, indicating the results of S&P inspections conducted for the week, together with any NODs raised. Recipient for the weekly report are Engineer Assistants, Unit Managers, Discipline Quality Managers and Department Heads.

3.6 Incoming goods inspection notification and reporting

Inspection of incoming materials / equipment at site is the responsibility of Contractors and Employer's involvement is determination of suitability of storage and preservation not incoming receipt as Employers focus, where necessary, is on the release of materials from manufacturers. However, Quality Dept. QC Inspectors shall undertake inspection of incoming equipment / materials where:

- defined as an activity on ITPs and as such requested by Contractor via I&TN
- requested by OSQCM in line with potential / known quality issues via the I&TN system to the Inspection Coordinator.
- after discussion with DQM via the I&TN system to the Inspection Coordinator.

In the unlikely event that receipt inspection of material / equipment is enacted by Employer the reporting shall occur via the Receiving Inspection checklist (200-156823) which shall be completed by TM inspector as record of the incoming goods inspection and shall be referenced in the completed I&TN

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4. PROCESS FOR MONITORING

4.1 Key Performance Areas and Indicators

The following Key Performance Areas / Indicators (KPA's / KPIs) 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.

Table 2: KPA's/KPIs

Key Performance Area	Key Performance Indicator	Measure Frequency	Responsible	Record
Inspection and Test Notifications	Submittal Efficiency - Issue Date versus Inspection Date, Submittal Conformity - Correctness of Data.	Monthly	IC	Weekly Report
Inspections	Inspection Efficiency - No. postponed /occurring as planned Inspection Conformity - No conformant / No defective	Monthly	IC	Weekly Report
Product Conformity	No. of NOD's initiated for S&P	Monthly	OSQCM	WISPA
Process Conformity	NO. of CARs issued for S&P	Monthly	OSQCM	WISPA
Contractor Performance	Average score on Preservation Inspection and Test Report	Monthly	OSQCM	Weekly report

4.2 Document Review and Checklist for Self-Assessment

4.2.1 Document Self -Assessment

The "Process Owner" identified on page 1 of this document along with departmental personnel and the project QMS Engineer shall undertake a "self-check" review of the process defined in this procedure document at six monthly intervals, commencing from the effective date of this document, to check:

- the process / procedure operational integrity
- process efficiency
- 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 200 - 75592**) included as **Appendix A** of this procedure which shall be issued to medupiqa@eskom.co.za by the Process Owner once completed.

Process Owner shall proceed with any revision requirements in line with Medupi Procedures 200-5665 "Development and Change of Medupi QMS Documents" and 200-1680 "Document and Record Management work Instruction"

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4.2.2 Review Period

The 200-45965 Manufacturing Inspection & Testing procedure shall undergo a 3 yearly compulsory revision period from starting from the effective date.

4.3 Training Requirements

Training required to implement the process documented in this procedure document out with normal job function include:

- Preservation Inspection and Test Report
- Receiving Inspection Checklist
- NOD Processing
- CAR Processing

5. Acceptance

This documents has been seen and accepted by:

Name	Designation
B Mgidlana	Project Quality Manager
J Ballett	Offsite QC Manager
M Sinobolo	Discipline Quality Manager
E Memela	Quality Assurance Manager
R Tshotheli	Senior Advisor , Quality Assurance

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6. Revisions

Date	Rev.	Compiler	Remarks
May 2021	3	R Tshotheli	Spelling errors corrected, Roles and Responsibilities updated
August 2017	2	J Mathebula	Aligned contents of the procedure with the new document template Aligned with the ISO 9001
April 2016	1	J Ballett Off-Site QC Manager	Incoming goods inspection added. Additional acronyms added. Preservation Inspection and Test Report revised

7. Development Team

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

- Jonathan Ballet
- Eugene Memela
- Moses Sinobolo
- Raymond Tshotheli

8. Appendix

The following templates are included as attachments to this procedure:

- Appendix A : Document Self-Assessment Checklist

The Inspection and Test Notification, the Preservation Inspection and Test Report and Receiving Inspection checklist are available separate, but should be used with this work instruction.

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Appendix A – Process Self-Assessment Checklist

A.1 Process Self-Assessment Checklist

Discipline: Quality Management		Applicable Document No.: 348-860843				Self Assessment Date: / /	
Item No	Ref Section	Self-Assessment Question	Compliant			Comment	
			Yes	Part	No		
1	3.2	Have required documents from all Contractors who have equipment stored been requested and/or received?					
2	3.3	Is a planned inspection schedule sent to all Contractors by S&P inspector each month?					
3	3.4	Are Preservation Inspection and Test report scorecards completed and recorded as required by procedure?					
4	3.5	Are the daily and weekly compiled and distributed?					
5	5.6	Is a Receiving Inspection checklist completed for each inspection and attached to the completed I&TN					
6	2.6	Are quality records available for all S&P inspections conducted?					
7	4.1	Are KPIs measured and reported monthly?					
Comments:							
Self-Assessment by:		Name:	Position:		Revision Required? (Yes / No)	Planned Revision Date:	
Attendees:							

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