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1. Introduction

As changes are required to the plant, changes are required to the associated Configuration Items. These changes could result from a requirement for a permanent change or temporary change. The Design Base which is managed consists of the plant breakdown structure, related design locations and associated Configuration Elements (documentation).

To ensure equilibrium between the Design, Physical Plant and the Information is maintained, the Configuration Elements affected by the required changes need to be revised using a controlled process. This process is detailed herein.

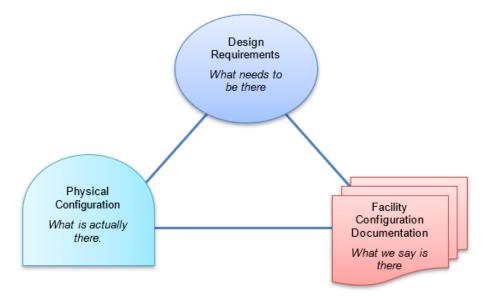


Figure 1: Configuration Management Equilibrium Model (From IAEA SR65)

2. Supporting Clauses

2.1 Scope

- Applicable to all plant document changes as a result of plant anomalies, temporary alterations and modifications.
- Applicable to all persons involved in the process of changing plant documents.

2.1.1 Purpose

- To define the process and responsibilities for changing plant documents.
- To ensure that all requests for plant document changes are assessed and authorised by competent personnel.

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2.1.2 Applicability

This document shall apply to all Configuration Management Items relevant to the Design Base of Koeberg Nuclear Power Station.

2.1.3 Effective date

This work instruction shall be effective when published.

2.2 Normative/Informative References

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

2.2.1 Normative

- [1] KAA-501 Project Management Process for Koeberg Nuclear Power Station Modifications
- [2] KAA-502 Project Management Process for New Facilities and Changes to Existing Facilities at Koeberg Nuclear Power Station
- [3] KAA-500 The Process for Controlled Documents
- [4] KSA-011 The Requirements for Controlled Documents
- [5] KAA-614 Controls of Spares Assessments and New Stock Applications
- [6] KAA-830 Process for Management of Quality Records
- [7] KSA-038 Requirements for Quality Records
- [8] 331-86 (KAA-815) Design Changes to Plant, Plant Structures or Operating Parameters
- [9] 331-143 (KAA-504) The Equivalency Process to Change Plant
- [10] 331-88 (KAA-506) Temporary Alterations to Plant, Plant Structures or Operating Parameters that affect the Design Base
- [11] 331-216 (KFA-050) Nuclear Engineering Manufacturers / Suppliers Catalogue Form
- [12] 331-212 Document Change Identification Form
- [13] 240-149108318 [KNA-002] Requirements for Data Integrity on PIGO
- [14] 240-86502715 (KAA-803) Processing Minor Modifications
- [15] 240-99837788 KOU Configuration Management Process Manual
- [16] 331-282 Trigramme and Cable Request Form
- [17] 240-145628543 SAP Configuration Item Anomaly PBS Update Form
- [18] KBA0000G00031 Master Classification Plan
- [19] KBA0000G00032 List of Systems
- [20] KBA0000G00036 Equipment Identification System
- [21] IAEA Safety Report Series no 65 Application of Configuration Management in Nuclear Power Plants
- [22] 240-86973501 Engineering Drawing Standard Common Requirements

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2.2.2 Informative

- [23] 32-1286 Process Control Manual (PCM) for Manage Item Configuration
- [24] 238-8 (NMN-008) Nuclear Safety and Quality Manual
- [25] 238-6 Nuclear Document and Records Management Requirements
- [26] 331-3 (EWG-624): Nuclear Engineering Documentation and Records Management Work Instruction
- [27] 331-2 Nuclear Engineering Management Manual
- [28] KSA-139 Initiating a Work Request
- [29] 240-119744497 (KAA-697) Control of the Safety Analysis Report
- [30] 240-43898815 Document Transmittal Form

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2.3 Definitions

- **2.3.1 Controlled disclosure:** Controlled disclosure to external parties (either enforced by law, or discretionary).
- 2.3.2 Configuration Item: A hardware, software, or composite item at any level in the system hierarchy designated for configuration management. Configuration Items have four common characteristics 1) Defined functionality; 2) Replaceable as an entity, 3) Unique specification, 4) Formal control of form, fit, and function.
- **2.3.3 Configuration Management:** Configuration Management generally concentrates on technical and organisational activities that establish and maintain control of a configuration item and it's Structure, System and Component configuration information throughout the life cycle of the configuration item.
- **2.3.4 Configuration Element:** All the configuration information applicable that defines a configuration item throughout its lifecycle. Operational information, engineering change requests, audit reports and source code. These configuration elements may reside in physical storage facilities or electronic libraries under configuration control.
- **2.3.5 DDR and Document Tracking System:** A LAN-based system called DDT, accessible to all LAN users that replaces the conventional paper DDR form and also allows query and report generation.
- **2.3.6 Design Base:** The Design Base of an Asset is the combination of those key design outputs that define the functions, capabilities, capacities, physical sizes and dimensions (Physical Base), limits and set points, shutdown and start-up sequences, normal and out of normal operations (Operating Technical Specification) and maintenance elements (Maintenance Base); that are required for the asset to meet its required performance, reliability and availability within the limits of the external constraints.
- **2.3.7 Document Change Identification Form:** A form that lists all documents requiring creation/change/withdrawal as a result of a design change. This form is included in Part D of a design document and forms part of temporary and permanent modification packages.
- **2.3.8 Document/Drawing Change Request:** A form used to request changes to plant documentation and to record the action taken. The DDR and Document Tracking System (DDT) must be used to generate DDR's.
- **2.3.9 Draftsperson:** Person responsible for the creation and updating of drawings, in accordance with standard (240-86973501).
- **2.3.10 Modification:** Any change, deletion or addition to structures, systems or components or changes to operating parameters that affect the design base.
- **2.3.11 Modification DDR Authorisation:** The design reviewer ensures that the proposed change is reflected in the new document.
- **2.3.12 Modification DDR Approval for Issue:** Confirmation that the plant and the documentation conform.
- **2.3.13 Plant Document:** A plant document is uniquely identified and maintained accurate and current through controlled distribution, which covers the design basis, operating basis and maintenance basis of the KOU.

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- **2.3.14 Configuration Item Anomaly:** A plant document consisting of any diagram or illustration associated with the design and construction of Koeberg Nuclear Power Station.
- **2.3.15 Temporary Alteration:** A temporary change made to plant equipment, structures, systems, or components that differ from the approved configuration or design parameters. This alteration is temporary in that it is expected to be installed for as short a period as possible (i.e. two operating cycles or less).
- **2.3.15 Master Media:** Can be retrieve from the system in various media formats which can be in the following media and captured on the system for design base changes e.g., Paper, Sepia, CD's, Aperture Card and Electronic format.
- **2.3.16 Component**: An item of equipment composed parts, example wires, transistors, switches, relays, motors, fittings, pumps, valves from which a system is assembled.
- **2.3.17 Function:** The action or requirements that a component, functional group, subsystem or system must accomplish, defined in terms of performance capabilities.
- **2.3.18 Bill of Material:** A complete, formally structured list of the components that make up a product or assembly. The list contains the object number of each component, together with the quantity and unit of measure.
- **2.3.19 SAP material number:** A number that uniquely identifies a material that consists of seven numeric digits which are stock and non stock items. The material is allocated by Materials Planning Group.
- **2.3.20 New Stock Application Form:** Is a form which indicates if a spare is a stock item and also describes the spare, gives the functional location and the material classification.
- **2.3.23 Trigramme**: Plant Location Coding System, used at KNPS. The 9 character code is defined as: NN Numeric Unit Number
 - AAA Alphanumeric Plant System Code
 - NNN Numeric Equipment Number
 - AA Alphanumeric Component Type Identifier
- **2.3.24 Bigramme:** A two character alphanumeric code that identifies a component type. This code is found at the end of the Trigramme (Functional Location) This code is found at the end of the functional location.
- **2.3.25 Functional Location:** Equipment Identification System. The 10 character code is made up of the following: N Unit number
 - LLL Trigramme NNN – Equipment number or NNNN in cases where all the first 999 items is used.
 - LL Bigramme
- 2.3.26 SAP: Systems, Applications and Products (Enterprise Resource Planning System)
- **2.3.27 Satellite office/vault**: A satellite office/vault is a branch of a larger office/vault that is physically separate from the main office/vault. Satellite office/vault stores copies of controlled documents for accessibility and retrievability by users.

2.4 Abbreviations

Abbreviation	Explanation
BOM	Bill of Material
ССН	Control Copy Holder
CMG	Configuration Management Group
CN	Change Notice
CRN	Computer Reference Number
DCP	Design Change Package
DDR	Document/Drawing Change Request
DDT	DDR and Document Tracking System
DE	Design Engineering
DFC	Design Field Change
DO	Drawing Office
DQI	Document Quality Index
DRC	Design Revision Change
DSE	System Description Manual
ECP	Electronic Change Process
EWR	Engineering Work Request
FLOC	Functional Location
FS	Feasibility Study
GA	General Action
КВА	Prefix for KNPS technical documents
KNPS	Koeberg Nuclear Power Station
KOU	Koeberg Operating Unit
LAN	Local Area Network
NNR	National Nuclear Regulator
PCR	Procedure Change Request
QADP	Quality Assurance Data Package
SAP	System Application of Products
SAR	Safety Analysis Report
SEG	Specification Engineering Group
SIF	Site Implementation File
SPO	Smart Plant Owner Operator (Electronic Documentation Management System)
TAF	Temporary Alteration Form
TCR	Training Change Request
TD & RM	Technical Documentation and Records Management
TRS	Technical Requirement Specification

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2.5 Roles and Responsibilities

2.5.1 The Nuclear Engineering Configuration Management Manager:

• is responsible for ensuring that the process described in this instruction is correctly implemented and maintained.

2.5.2 Group IT:

• will ensure daily backups of the DDT database and SAP application is performed.

2.5.3 Design Engineering

- Is responsible for raising DDR's for modifications. Please note if Design is done with Contractor, they raising their DDR's for the Modification.
- is responsible for reviewing DDR's and evaluating Plant Status DDR's. The reviewer/evaluator also needs to verify that DDR's are correctly raised, and all fields are populated in DDT before signing the DDR.
- is responsible for authorising DDR's. The cycle time for authorisation of production Plant Status DDR's is 3 days and 5 days for non-production Plant Status DDR's.
- Modification DDR's needs to be authorised before the planned implementation date.
- is responsible for providing information for 331-216, Manufacturers / Suppliers Catalogue Form. This is for Equivalency DDR's only.
- Trigramme allocation letter may only be processed by CMG if signed by DE.

2.5.4 Systems Engineering

- Is responsible for raising TAF DDR's and needs to be reviewed by the authorised Design Engineer.
- is responsible to populate the planned implementation field on DDT before the DDR can be approved for processing. This will be enforced in DDT.
- is responsible to approve the Minor Mod DDR's for processing 3 months before the planned implementation date.
- is responsible to approve TAF DDR's for processing before the planned implementation date.
- is responsible to amend the planned implementation date on DDT if the implementation date has changed.
- is responsible to approve the DDR's for issue when Minor Mod implementation has taken place.
- Is responsible to approve TAF DDR's for issue when TAF implementation has taken place.

2.5.5 Nuclear Project Management

- is responsible to populate the planned implementation field on DDT before the DDR can be approved for processing. This will be enforced in DDT.
- is responsible to approve the Modification DDR's for processing 3 months before the planned implementation date.
- is responsible to change the planned implementation date on DDT if the implementation date has changed.

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- is responsible to approve the Modification DDR's for issue when modification have been implemented.
- is responsible to ensure that the electronic copies for new/existing drawings that were done by contractors are submitted in dwg, dgn format to the Drawing Office. Other text documents must be in MS Word.

2.5.6 Configuration Management

- is responsible for issuing of KBA and CRN numbers for all document / drawings
- update DDT with required content relevant to mark-up (Reference numbers KBA numbers, CRN numbers, Title and Discipline).
- is responsible to register, update and check documents as per mark-up
- revise and published authorise documents on SPO in conjunction with PIGO allocation centres 38B, 0.46, 1.46 and 31.46.
- distribute the documents to relevant CCH's as per Appendix's Q and R.
- cycle time for the distribution of Modification DDR's is 1 month after the approval for issue date. The electronic image will be available to the plant after the linked document has been verified on SPO.
- cycle time for the distribution of Plant Status DDR's is 18 days after the authorisation date. The electronic image will be available to the plant after the linked document has been verified on SPO.
- cycle time for the distribution of production Plant Status DDR's is 10 days after the authorisation date. The electronic image will be available to the plant after the linked document has been verified on SPO.
- cycle time of production Plant Status DDR's is 21 days from registration to master file update.
- cycle time for non-production Plant Status DDR's is 30 days from registration to master file update.
- update the material classification and link the Bill of Material in SAP as per the New Stock Application Form and Equivalency Process.
- to issue new, change or delete Trigrammes and cables as per modification Trigramme letter. These Trigrammes are loaded onto SAP. And in addition to this, this will be controlled by DE.
- update trigrammes status in SAP to inactive before modification implementation.
- update trigrammes status in SAP to active after modification implementation.
- Trigramme allocation letter may only be signed off by CMG when authorised by DE.

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2.5.7 Drawing Office

- create technical drawings (i.e. electrical, instrumentation, mechanical, structural, civil, pipe, etc.) according to applicable Eskom, national and international standards for use in Technical Documents – Common Requirements" (240-86973501).
- update and verify drawings as per mark-up requests
- liaison with engineers and technicians, maintaining quality and quantity, ensuring continuity of the DDR process
- ensure drawing accuracy based on plant knowledge or by reference to other relevant drawings or by visiting plant to verify measurements and location.
- the draughtsperson emails the drawing in a PDF to the requestor to review the drawing against the initial requirements or marked up drawing. This is done with the relevant stakeholders to ensure that due processes and standards have been applied and the drawing content is correct and acceptable as per the request.
- all drawing office request for manufacturing, tender drawings and all other drawing related requests may be forwarded to <u>KOU drawingoffice@eskom.co.za.</u> in dwg, dgn format.

2.5.8 Technical Documentation and Records Management

- is responsible for the printing of documents.
- is responsible to file documents in the Control Room (CCH 11,14,39,45).
- cycle time for printing of production DDR's are 2 days from the date documents are sent to the print room.
- cycle time for printing of non-production DDR's are 5 days from the date documents are sent to the print room.

2.5.9 Issuing and Distribution

- All changes to controlled documents shall be timeously distributed to control copy holders.
- Revisions to controlled documents received must be promptly and correctly filed by control copy holders.
- Only the latest authorised revision is valid for use and available on SPO.
- The Configuration Management Group (CMG) shall maintain an appropriate register of controlled copy holders who are in possession and maintain hard copies of selected documents.
- The number of controlled copy holders and the number of documents held by each shall be kept to a minimum.
- The preferred alternative is to use electronic viewing (with ad hoc printing, where required).

NOTE: Refer to Appendices A to R, Workflow Responsibility Matrix for specific responsibilities.

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2.6 **Process for Monitoring**

This process shall be monitored as per the requirements stipulated in 331-2, Nuclear Engineering Management Manual.

2.7 Related/Supporting Documents

Not applicable.

3. Configuration Workflow Responsibility Matrix

See Appendices A to R

4. Acceptance

This document has been seen and accepted by:

Name	Designation
Sadika Touffie	Manager – Nuclear Engineering
Bravance Mashele	Senior Manager - Integrated Plant Design Koeberg
Ahmed Kamroodien	Middle Manager (Acting) – Engineering Support
Israel Sekoko	Middle Manager – Nuclear Analysis and Siting
Nizaam Ryland	Middle Manager – System Engineering
Ravid Goldstein	Middle Manager – Design Engineering
Shireen Osman	Middle Manager – Business Support
Tommy Booysen	Middle Manager – Project Engineering
Luren Chetty	Manager – Nuclear Project Management-Configuration Management
Sydney Cyster	Manager (Acting) – Configuration Management Group

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5. Revisions

Date	Rev.	Compiler	Remarks
January 2022	5	E Perrang	Closure of (SE 38324-001 GA) Drawing office to create a Work instruction to outline their activities. Replace PIGO with SPO database throughout the document.
			CCH 37 was removed from CCH List (Appendix R)
			CR 127207-002 GA - All Trigramme and Cable Request form (331-282) must be reviewed / authorised by a Design Engineer / Manager.
October 2020	4	D Slingers	 Closure of CR 108311-004 CA Change the processing of plant status DDRs from 8 days to 1 month. Closure of CR 108928-001 CA <u>Update 331-85 to include:</u> The definition of satellites The list of important satellites where controlled copies will be distributed. The reasonable period of distribution from the date of DDR approval. Closure of SE 38324-002 GA Update 331-85 to include the DDR checklist as an Appendix to the document. Expanding the Roles and Responsibilities of various Departments Update the cycle time of Plant Status DDR's Inclusion of the following lists: Control Copy Holders List for Distribution of Documents DDR Checklist Production Document Lists List of Satellites

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Date	Rev.	Compiler	Remarks
			 Inclusion of the following Guides: Guide for KBA and CRN number Guide for CMG to process DDR's on DDT Guide for Issuing Trigrammes on SAP Guide for Classifications to be updated on SAP
March 2019	3	E Perrang	Closure of CR 105614-001 CA- Include a verification step that needs to be performed by an independent verifier in the CMG after images has been linked on SPO in 331-85. CR 102265-002 CA- Update 331- 85 to include the process of Archival of As-built drawings of plant (QADP, Grey box), to prevent future misunderstandings. CR 98326-001 CA- Rectify NE Governance documents for which Importance Classification is incorrect and include Safety Screening Forms for those documents that do not have any (where applicable). Workflow of Plant Breakdown Structure and Equivalency process included in instruction.
March 2017	2	A Holland	Current Document Type, which is a Procedure, changed to Work Instruction. Scheduled Review – Applicability and accuracy of documentation activities has been reviewed.
March 2014	1	D Slingers	Closure of CA 32255. TAF Workflow included in Procedure. Appendix 11 of KSA 011 has also been transferred to this Procedure and added under Notes and References.
September 2012	0	M Heugh	NE taking ownership of the plant document change process and aligning responsibilities and activities in the accordance with the NE organisational structure.

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6. Development Team

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

- C Michillies
- D. Slingers
- R Smit

7. Acknowledgements

Not applicable.

8. Records

- 8.1 All records generated shall be managed in accordance with 331-3 (EWG-624), Nuclear Engineering Documentation and Records Management Work Instruction.
- 8.2 When updating As-Built documents filed in QADP, Grey Boxes and NEC, the retrieval must be completed from these files and a checklist refiled with a copy of the affected document. When document has been completed, the retrieved master document must be refiled in its original location (QADP/Grey Box and NEC). CMG provides the new location from the SPO system for the new revision of master document or file in location provided as per the DDR.
- 8.3 The following records have been identified from this process:

Note: to be identified by compiler and process owner

Records Type	Forms
Design Change Package	KFI-RE-001
Design Package	KFI-RE-001
DDR Mark-up	KFI-RE-001

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APPENDI	XA: P	lant D	ocum	entatio	on Cha	nges A	ssocia	ated w	ith Mo	dificati	ons Workflow
		1	C	RGAN	IISATIO	ON / FL	JNCTIC	NC			-
R – Responsible											
A – Approve											
F – File											
Outside Matrix Scope											
Y/N or N/Y – Decision C – Concur			LN NT								NOTES
I – Informed	TER		3E ME								& REFERENCES
S – Service	TROI	(1)	ANAG								
[] – Mandatory Requirement	CON	RING	CT M.								
() – As Appropriate/Required	TION	INEE	SOJE								
Flow Path:	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	NUCLEAR PROJECT MANAGEMENT	V							
$\longleftrightarrow \longleftrightarrow$	NFIG	sign	CLE/	& RM							
Main Flow Secondary Flow	8	2 2	NN 3		5	6	7	8	9	10	
ACTIVITIES		2	3	-	5	Ŭ	'	0	3	10	
1. Plant Documentation Changes Associated with Modifications											DDT must be updated at each step of the process.
1.1. Produce modification design.		[R]									331-86 (KAA-815): Design Changes to Plant, Plant Structures or Operating Parameters
1.2. Request Document / Drawing Change for Modification on DDT		▼ [R]									
1.3. Design Engineer to mark-up a copy of the master with the proposed changes		(R]									 -If an existing document is being modified, a mark- up as follows should be made on a copy of the document: Red–Add Blue–Remove Yellow–Remain Green–Comments -If a new document is being added, the Unit, System and Chapter must be provided for the KBA number and a descriptive title that includes the functional system and trigramme, if applicable (e.g. Support Plate for 1 RCP 001 PO) and the Discipline (e.g., Mechanical, Electrical, Instrumentation) -Indicate if it forms part of, or relates to existing documents e.g. RCP / DSE. The Master Classification Listing
		↓									(KBA0000G00031) can be used as a guide for new KBA numbers. In case of a new document, originator to identify where documen

Appendix A: Plant Documentation Changes Associated with Modifications Workflow

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APPENDI	XA: P	lant D	ocume	entatio	n Chai	nges A	ssocia	ated w	ith Mo	dificati	ons Workflow
			C	RGAN	ISATIC	DN / FL	JNCTIC	ON			
R – Responsible											
A – Approve											
F – File											
- Outside Matrix Scope											
Y/N or N/Y – Decision			F								NOTES
C – Concur	ËR		EMEN								&
I – Informed	SOLL		NAGE								REFERENCES
S – Service	ILNO	ING	T MAI								
[] – Mandatory Requirement	ON O	LEER	DIEC								
() – As Appropriate/Required	IRATI	NGIN	R PRC								
Flow Path:	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	NUCLEAR PROJECT MANAGEMENT	TD & RM							
Main Flow Secondary Flow	CON										
ACTIVITIES	1	2	3	4	5	6	7	8	9	10	
											must be filed e.g., in case where new datasheets to be filed in the Maintenance Manuals.
											If no location is provided for new documents, then the default location which is CAB boxes will be used. Documents in CAB boxes are not distributed to satellites and are only filed in the main vault. The document will be available on Excalibur / SPO.
											-Seek advice from relevant experts and apply the applicable procedures, as required.
											-240-86973501- Engineering Drawing Office and Engineering Documentation Standard
2. Review Change Request											
2.1. The change is reviewed by Design Engineering as part of the design review process.		[R]									The reviewer of the associated design package will review the applicable DDRs. The Reviewer need to sign off on DDT.
2.2. Upon approval of the design, hand-deliver the hard copy marked up DDRs by Transmittal to CMG. The location of the DDR's in DDT should be updated to reflect Config Control.		• [R]									-240-43898815, Document Transmittal Form Completed, authorised design packages must be cover slipped and transmitted to the document controlling body for processing and storage. -Field changes shall be an Addendum to the design package.
											Field changes shall be cover slipped and transmitted to the document

APPENDI	XA: P	lant D	ocume	entatio	n Cha	nges A	ssocia	ated w	ith Mo	dificati	ons Workflow
		r	C	RGAN	IISATIO	ON / FI	JNCTIO	N	I	1	
R – Responsible											
A – Approve											
F – File											
Outside Matrix Scope Y/N or N/Y – Decision											NOTES
C – Concur	~		ENT								NOTES &
I – Informed	OLLEF		GEM								REFERENCES
S – Service	NTRO	ŋ	MANA								
[] – Mandatory Requirement	N CO	ERIN	ECT								
() – As Appropriate/Required	RATIO	IGINE	PROJ								
Flow Path:	IGUR	NO NO	EAR	& RM							
Main Flow Secondary Flow	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	NUCLEAR PROJECT MANAGEMENT	TD &							
ACTIVITIES	1	2	3	4	5	6	7	8	9	10	
3. Storage at CMG 3.1. Store the DDR's in the designated place, filed under the Modification number.	▼ [R]										controlling body for processing and storage. -No changes are allowed to field changes. -Addendum to the design package must be cover slipped and transmitted to the document control organisation. The title must include "Addendum to DesignRev nr" -A design could have page changes. -Page changes shall be cover slipped and transmitted to the document controlling body for processing and storage. DDRs are only stored if there is a time delay between originating the Change Request and Modification Implementation date.
4. Approved for Processing	•										
4.1. The Project Leader initiates activity in Primavera at T-3 before the implementation date & populate the planned implementation in DDT.	[1] —		▼ [R]								NPM will not be able to Approve for Processing if the implementation date is not populated in DDT. This is also enforced in DDT.
4.2. Approve the DDRs for processing on DDT.	[1] -		▼ R] ▼								Project leader need to sign off on DDT.
5. Registration on SPO	<i>←</i>		\rightarrow								

APPENDI	XA:P	lant D				-			ith Mo	dificati	ons Workflow
			C	RGAN	ISATIO	ON / FU	JNCTIO	ОМ	T		
R – Responsible											
A – Approve											
F – File											
Outside Matrix Scope											
Y/N or N/Y – Decision			⊨								NOTES
C – Concur	ER		MEN								&
I – Informed	SOLL		IAGE								REFERENCES
S – Service	ONTF	Ů	MAN								
[] – Mandatory Requirement	N CC	EERI	JECT								
() – As Appropriate/Required	ATIC	IGIN	PRO,								
Flow Path:	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	NUCLEAR PROJECT MANAGEMENT	RM							
← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ←	ONF	ESIG	INCLE	TD & F							
Main Flow Secondary Flow ACTIVITIES	1	2	3	4	5	6	7	8	9	10	
5.1. Register DDR on SPO	[R]										-For new documents: Where applicable, new documents need to be added to the SPO database.
											When registering document, that all the required fields (e.g., KBA number, CRN number etc.) are not populated in DDT, the DDR will be send back to the originator and the
	↓										signatures will be reversed until originator status. CMG sign off on DDT.
5.2. If there is already a DDR change in the system, then the new DDR will remain pending until the existing DDR in the system has been completed.	[R]										Plant Status DDR's gets preference over a modification DDR as the cycl time of the Plant Status is less than that of a mod.
6. Update master document to reflect proposed changes.											
6.1. Master document is retrieved from MAB Vault.	▼ [R]										A copy of the master document is refiled temporarily with the DDR checklist, 240-158506528 for reference purposes, should the document be required before the revised document is available.
	↓ ↓										CMG to complete register at MAB vault when DDR's are retrieved.
6.2. Distribute DDR for text or											CMG to sign off on DDT. 240-43898815-Document
drawing changes via transmittals.	[R]										Transmittal Form Drawings – Drawing Office
แลางกานสาง.											Text – CMG
	+										Update "Locations" of the document on DDT

CONTROLLED DISCLOSURE

APPENDI	XA: F	Plant D	ocume	entatio	n Cha	nges A	ssocia	ated w	ith Mo	dificati	ons Workflow
			C	RGAN	ISATIO	ON / FU	JNCTIC	ON			
R – Responsible											
A – Approve											
F – File											
- Outside Matrix Scope											
Y/N or N/Y – Decision			L								NOTES
C – Concur	ĸ		MEN								&
I – Informed	OLLE		AGEI								REFERENCES
S – Service	NTR	ŋ	MAN								
[] – Mandatory Requirement	20 Z	ERIN	ECT								
() – As Appropriate/Required	ΑΤΙΟ	GINE	ROJ								
Flow Path:	GUR,	NEN	EAR F	RM							
	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	NUCLEAR PROJECT MANAGEMENT	TD & R							
Main Flow Secondary Flow ACTIVITIES	1	2	<u>z</u> 3	4	5	6	7	8	9	10	
6.3. Update and check the master document according to the mark-up.											The documents are to be updated using MicroStation, MSWord, or manual methods, as applicable.
	♥ [R]										Where new documents have been produced by contractors, electronic copies should be submitted to CMG. The format for drawings should be dwg, dgn and MS word for Text documents. CMG to sign off on DDT.
6.4. Transmit DDR's to Design Engineering for	(R)										240-43898815-Document Transmittal Form
authorization.											CMG to update DDR location in DDT to reflect that DDR's are with DE.
7. Authorisation											
7.1. If acceptable, authorise the document.		[R]									To be authorised by DE. Checks must ensure that changes have been implemented in the correct order, that there is full alignment between the master and the change request and that the document quality is adequate. Authoriser to sign off on DDT. Addendum to the design package shall be where possible authorised by the same authorised engineer who has reviewed and authorised
7.2. Notify the Project leader via e-mail of all the DDR's that have been authorised.	(R] ↓										the design.

								T ug			
APPENDI	XA:P	Plant D	ocum	entatio	n Cha	nges A	ssocia	ated w	ith Mo	dificati	ons Workflow
			C	RGAN	IISATIO	ON / Fl	JNCTIC	NC			
R – Responsible											
A – Approve											
F – File											
- Outside Matrix Scope											
Y/N or N/Y – Decision			Ь								NOTES
C – Concur	Ř		MEN								&
I – Informed	OLLE		AGEI								REFERENCES
S – Service	NTR	ŋ	MAN								
[] – Mandatory Requirement	N CC	ERIN	ECT								
() – As Appropriate/Required	ΑΤΙΟ	GINE	PROJ								
Flow Path:	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	NUCLEAR PROJECT MANAGEMENT	W							
	ONFI	ESIG	NCLE	TD & RM							
Main Flow Secondary Flow ACTIVITIES	1	2	3	4	5	6	7	8	9	10	
7.3. Store the updated masters with the change request in a designated place until the "Approval for Issue" signature is received from the Project Manager.	[R]										Applicable to any control documents required to be booked in or out on the SPO.
8. Approval for Issue											
8.1 CMG notifies Project Leader that authorised documents is ready for release.	[R]— ↓		- [1]								
8.2 NPM to inform CMG if the implementation date has changed from the planned implementation date in DDT.	[1] —		-[R]								
8.3 Project Leader to amend the implementation date if it has changed from the planned implementation date on DDT.			▼ [R]								
8.4 Approve for Issue on DDT.			(Ř)								Project leader to review the physical hard copy at CMG. If there are corrections or additional changes identified by the project leader, then a mark-up should be made, and this DDR will go back for changes. The Project Leader would release or
											'Approve for Issue' only after the modification work scope has been completed on the plant.
			♥								Project leader to sign off on DDT.

APPENDI	X A: P	lant D	ocum	entatio	n Cha	naes A	ssocia	ated w	ith Mo	dificati	ons Workflow
				ORGAN							
R - Responsible A - Approve F - File • - Outside Matrix Scope Y/N or N/Y - Decision C - C - Concur I - Informed S - Service [] - Mandatory Requirement () - As Appropriate/Required Flow Path:	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	NUCLEAR PROJECT MANAGEMENT	& RM		DN / FU	JNCTIC				NOTES & REFERENCES
Main Flow Secondary Flow ACTIVITIES	8 1	<u>Ц</u> 2	3	₽ 4	5	6	7	8	9	10	
9. ECP of DDR's	101										The revision of new documents starts
9.1 Documents are revised to the subsequent revision on SPO.	[R]										at Z1. CMG signs off on DDT.
9.2 All updated documents not electronically available to be scanned and linked to SPO."											Complete a Docs Transmittal for distribution The electronic image will be available to the plant at this step.
10. Distribution											
10.1 Complete a Quality Check of the DDR's completed as per the package transmitted for Distribution.											Quality checks to be completed on SPO and DDT.
10.2 Update DQI.											DQI on G: Drive
10.3 Verify all linked documents as per transmittal submitted											
10.4 Categories the documents in accordance with Appendix R.	¥										Refer to Control Copy Holder Distribution List, 240- 158556048 All other document types that do not require distribution to CCH's will be signed off on DDT.
10.5 Documents submitted to TD & RM for printing.	[R] ·			_[S]							CMG to sign off on DDT.

APPENDI	XA: P	lant D	ocum	entatio	n Cha	nges A	ssocia	ated w	ith Mo	dificati	ons Workflow
R – Responsible A – Approve F – File • – Outside Matrix Scope Y/N or N/Y – Decision C C – Concur I – Informed S – Service [] – Mandatory Requirement () – As Appropriate/Required Flow Path: Element Concur	CONFIGURATION CONTROLLER	DESIGN ENGINEERING		RGAN		-			ith Mo	dificati	NOTES & REFERENCES
Main Flow Secondary Flow ACTIVITIES	1 CONFIG	2 DESIGN	∾ NUCLEA	4 TD & RM	5	6	7	8	9	10	
10.6 Received documents back from TD & RM	[R]										TD&RM provides a Printing Service to reproduce copies. KFJ-TD-012 Request for Printing Service Form Cycle time for Printing Service: Production DDR's = 2 working days from documents send to Print room date. Non-production DDR's = 5 working days from documents send to Print room date. TD & RM to sign off on DDT.
10.7 Issue Controlled Copies to controlled copy holders.	[R]_			_[S]							See Control Copy Holders Distribution list, 240-158556048. Controlled copies of the page changes request shall be distributed to all controlled copy holders with a notice to replace superseded pages. CMG informs CCH's via email of the updates that they will receive via the post with and electronic transmitta sheet. TD&RM files Control Room (CCH 11,14,39,45
10.8 Sign off DDR'S											DDT for Control Copies Issued
10.9 File new master document at MAB vault.				[S]							CMG to complete register at MAE vault when DDR's are filed CMG to sign off on DDT.
10.10 Superseded DDR Package to be cover slipped and submitted to TD & RM											KFI-RE-004-Records Transfer Acknowledgement Form. transmitted to TD&RM as a record.
11. NNR Review	•										
11.1 On request from NNR a DDR report will be completed.	[R]										Manager of Configuration Management compiles a letter and attaches the report.

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Appendix B: Plant Documentation Changes Associated with Minor Modifications Workflow

APPENDIX B:	Plant	Docu	imenta	tion C	hange	s Asso	ciated	with N	linor N	lodific	ations Workflow
			C	ORGAN	IISATI	ON / Fl	JNCTI	ON			
R – Responsible											
A – Approve											
F – File											
Outside Matrix Scope											
Y/N or N/Y – Decision											NOTES
C – Concur				Ř							&
I – Informed				OLLE							REFERENCES
S – Service		NG		NTR							
[] – Mandatory Requirement		EERI	EER	CO Z							
() – As Appropriate/Required		NGIN	IGINE	ATIOI							
Flow Path:	ſŕ	SN EI	MEN	GUR	RM						
$\longleftrightarrow \longleftrightarrow$	OWNER	DESIGN ENGINEERING	SYSTEM ENGINEER	CONFIGURATION CONTROLLER	~č						
Main Flow Secondary Flow ACTIVITIES	0 1	2	<u>б</u> 3	4	₽ 5	6	7	8	9	10	
1. Minor Modification Process											240-86502715 [KAA-803]
1.1 Produce minor modification		[Ŗ]									
design.											
1.2 Design Engineer to mark-up a copy of the master with the proposed changes		▼ [R]									
2. Review Change Request											
2.1 The change is reviewed by Design Engineering as part of the design review process.		(R)									The reviewer of the associated design package will review the applicable DDRs. Reviewer need to sign off on DDT.
2.2 Upon approval of the design, hand-deliver the hard copy marked- up DDR's by		[R]									
Transmittal to CMG for storage.		•									
2.3 Upon approval of the design, submit an electronic copy of the design to CMG.		[R]									
3. Storage at CMG				\rightarrow							
3.1 Store the DDR's in the designated place, filed under the Minor Modification number.											DDRs are only stored if there is a time delay between originating the Change Request and Modification Implementation date.

CONTROLLED DISCLOSURE

APPENDIX B:	Plant	Docu	imenta	tion C	hanges	s Asso	ciated	with N	/linor N	lodific	ations Workflow
			C	RGAN	ISATIO	ON / FL	JNCTIC	NC			
R – Responsible											
A – Approve											
F – File											
- Outside Matrix Scope											
Y/N or N/Y – Decision											NOTES
C – Concur				ĸ							&
I – Informed				SOLLE							REFERENCES
S – Service		RING		ONTF							
[] – Mandatory Requirement		LEEA	JEER	ON CC							
() – As Appropriate/Required		IDNE	NGIN	RATIC							
Flow Path:	R	DESIGN ENGINEERING	SYSTEM ENGINEER	CONFIGURATION CONTROLLER	RM						
Main Flow Secondary Flow	OWNER	DES	SYST	CONF	TD &						
ACTIVITIES	1	2	3	4	5	6	7	8	9	10	
2. Implementation											
2.1 Inform the necessary persons/groups of the intended changes.	[R] - 	-[1] -	- [1]	- [1]							
2.2 Inform stakeholders that											
project implementation has started.											
	[K]	-[1] -	— [I] —	— [1]							
3. Approved for Processing											
5. Approved for Processing			Π.								
3.1 Systems Engineer to populate the planned implementation date in DDT.			[R]-	- [1]							System Engineer will not be able to approve for processing if the implementation date is not populated in DDT. This is also enforced in DDT.
3.2 Approve the DDRs for processing on DDT.			[R]								System Engineer to sign off on DDT.
4 Registration on SPO				\downarrow							
4.1 Register DDR on SPO				[R] ↓							For new documents: Where applicable, new documents need to be added to the SPO database. When registering document, that all the required fields (e.g., KBA number, CRN number etc.) are no populated in DDT, the DDR will be send back to the originator and the signatures will be reversed until originator status. CMG sign off on DDT.
4.2 If there is already a DDR change in the system, then the new DDR will remain pending until the existing				[R]							Plant Status DDR's gets preference over a modification DDR as the cycle time of the Plan Status is less than that of a mod.

CONTROLLED DISCLOSURE

APPENDIX B:	Plant	Docu	imenta	tion Cl	nanges	s Asso	ciated	with N	linor N	lodific	ations Workflow
			C	RGAN	ISATIO	ON / FL	JNCTIO	ON			
R – Responsible											
A – Approve											
F – File											
Outside Matrix Scope											
Y/N or N/Y – Decision											NOTES
C – Concur				ER							&
I – Informed				SOLL							REFERENCES
S – Service		RING	~	ILNO							
[] – Mandatory Requirement		INEEI	NEEF	ON O							
() – As Appropriate/Required		ENG	ENG	RATI							
Flow Path:	ER	DESIGN ENGINEERING	SYSTEM ENGINEER	CONFIGURATION CONTROLLER	& RM						
Main Flow Secondary Flow	OWNER	DES	SYS ⁻	CON	AD &						
ACTIVITIES	1	2	3	4	5	6	7	8	9	10	
DDR in the system has been completed											
5. Update master document to reflect proposed changes.											
5.1 Master document is retrieved at MAB vault.				[R]							A copy of the master document is refiled temporarily with the DDR checklist, 240-158506528 for reference purposes, should the document be required before the revised document is available.
											CMG to complete register at MAB vault when DDR's are retrieved.
											CMG to sign off on DDT.
5.2 Distribute DDR for text or drawing changes via transmittals.				▼ [R] ↓							240-43898815-Document Transmittal Form Drawings – Drawing Office Text – CMG Update "Locations" of the document on DDT
5.3 Update and check the master document according to the mark-up.				[R]							The documents are to be updated using MicroStation, MSWord, or manual methods, as applicable.
											Where new documents have bee produced by contractors, electronic copies should be submitted to CMG. The format for drawing should be dwg, dgn and MS wor for Text documents.CMG to sign of on DDT.
				↓ ↓							on DDT.

CONTROLLED DISCLOSURE

APPENDIX B:	Plant	Docu	menta	tion Cl	nange	s Asso	ciated	with N	linor N	lodific	ations Workflow
7		2000		RGAN							
R – Responsible A – Approve F – File • – Outside Matrix Scope Y/N or N/Y – Decision C C – Concur I – Informed S – Service [] – Mandatory Requirement () – As Appropriate/Required Flow Path: –	OWNER	DESIGN ENGINEERING	SYSTEM ENGINEER	CONFIGURATION CONTROLLER	& RM						NOTES & REFERENCES
Main Flow Secondary Flow ACTIVITIES	0 1	2 2	SXS 3	0 4	 ₅	6	7	8	9	10	
 6. Authorisation 6.1 If acceptable, authorise the document. 				— [R]							
6.2 Notify the System Engineer via e-mail of all the DDR's that have been authorised.				[R]							Authoriser to sign off on DDT.
6.3 Store the updated masters with the change request in a designated place until the "Approval for Issue" signature is received from the System Engineer.				[R]							
7. Approval for Issue											
7.1 Configuration Management notifies Owner / System Engineer that authorised document is ready for release.	[1] —		— [I] —	- [R]							
7.2 System Engineer to inform CMG if the implementation date has changed from the planned date on DDT.7.3 System Engineer to amend	[1] —			 [1]							
the implementation date on DDT if it has changed from											

CONTROLLED DISCLOSURE

APPENDIX B:	Plant	Docu	menta	tion Cl	hange	s Asso	ciated	with M	Minor N	Aodific	ations Workflow
			C	RGAN	ISATI	ON / FL	JNCTIC	NC			
R – Responsible											
A – Approve											
F – File											
Outside Matrix Scope											
Y/N or N/Y – Decision											NOTES
C – Concur				ËR							&
I – Informed S – Service				CONFIGURATION CONTROLLER							REFERENCES
		DESIGN ENGINEERING	r	CONT							
[] – Mandatory Requirement		INEE	SYSTEM ENGINEER	ON O							
() – As Appropriate/Required		ENG	ENGI	IRATI							
	LER	sign	TEM	IFIGL	& RM						
Main Flow Secondary Flow	OWNER	DE	SYS	CON	TD 8						
ACTIVITIES	1	2	3	4	5	6	7	8	9	10	
the planned implementation date in DDT.											
7.4 Approve for Issue on DDT.			[R] 								System Engineer to review the physical hard copy at CMG. If there
											are corrections or additional changes identified by the system engineer, the system engineer must do a mark-up and this DDR
			v								will go back for changes. The System Engineer would release or 'approve for issue' only after the modification work scope has been completed on the plant. System Engineer to sign off on DDT.
8 ECP of DDR's			\leftarrow	[R]							
8.1 Documents are revised to the subsequent revision on SPO.				[R]							The revision of new documents begins at Z1.CMG signs off on DDT.
8.2 All updated documents not electronically available to be scanned and linked to SPO."											Complete a Docs Transmittal for distribution The electronic image will be available to the plant at this step.
9. Distribution											
9.1 Complete a Quality Check of the DDR's completed as per the package transmitted for Distribution.											Quality checks to be completed on SPO and DDT.
9.2 Update DQI.											DQI (G: Drive)
9.3 Verify all linked documents as per transmittal submitted				↓							

CONTROLLED DISCLOSURE

APPENDIX B:	Plant	Docu							linor N	lodifica	ations Workflow
		1	C	RGAN	ISATIO	ON / FL	JNCTIC	N			
R – Responsible											
A – Approve											
= – File											
 Outside Matrix Scope 											
Y/N or N/Y – Decision											NOTES
C – Concur				ËR							&
– Informed S – Service		(5)		ROLI							REFERENCES
		RING	~	LNO							
] – Mandatory Requirement		NEE	NEEF	ON O							
() – As Appropriate/Required		ENG	ENG	RATI							
Flow Path:	ĒR	DESIGN ENGINEERING	SYSTEM ENGINEER	CONFIGURATION CONTROLLER	RM						
Main Flow Secondary Flow	OWNER	DES	LSYS	CON	TD &						
ACTIVITIES	1	2	3	4	5	6	7	8	9	10	
9.4 Categories the documents in accordance with											Refer to Control Copy Holder
Appendix R											Distribution List, 240- 158556048 All other document types that do
				[R]							not require distribution to CCH's will be signed off on DDT
9.5 Documents submitted to TD & RM for printing.				[R]							CMG to sign off on DDT
9.6 Received documents back											TD&RM provides a Printing
from TD & RM				•							Service to reproduce copies. KFJ-TD-012 Request for Printing
											Service Form
											Cycle time for Printing Service: Production DDR's = 2 working
				[R] _	_[S]						days from documents send to Pri
											room date. Non-production DDR's = 5 workir
				↓							days from documents send to Pri room date. TD & RM to sign off o
											DDT. See Control Copy Holders
9.7 Issue Controlled Copies to controlled copy holders.				[R] —	– [S]						Distribution list, 240-158556048.
											Controlled copies of the page changes request shall be
											distributed to all controlled copy holders with a notice to replace
											superseded pages. CMG informs CCH's via email
											the updates that they will receive via the post with and electron
											transmittal sheet. TD&RM file
9.8 Sign off DDR'S										1	Control Room (CCH 11,14,39,45 DDT for Control Copies Issued
9.9 File new master											CMG to complete register at MA
document at MAB vault											vault when DDR's are file CMG to sign off on DDT.

CONTROLLED DISCLOSURE

APPENDIX B:	Plant	οοοι	imenta	tion Cl	nanges	s Asso	ciated	with N	linor N	Iodific	ations Workflow
				RGAN							
R – Responsible											
A – Approve											
F – File											
- Outside Matrix Scope											
Y/N or N/Y – Decision											NOTES
C – Concur				К							&
I – Informed				OLLE							REFERENCES
S – Service		ВN		NTR							
[] – Mandatory Requirement		EERI	ER	00 7							
() – As Appropriate/Required		DESIGN ENGINEERING	SYSTEM ENGINEER	CONFIGURATION CONTROLLER							
Flow Path:	r	SN EP	MEN	3UR/	RM						
$\longleftrightarrow \longleftrightarrow$	OWNER	ESIG	STE	ONFIG	~č						
Main Flow Secondary Flow ACTIVITIES	<u>б</u> 1	2	5 3	4	₽ ₅	6	7	8	9	10	
9.10 Superseded DDR											KFI-RE-004-Records Transfer
package are cover slip and submitted to TD & RM				[R]							Acknowledgement Form.
		-									
10. Design Field Changes											
10.1 Send the new DDR's to CMG.		[R] ⁻		-[S]							
10.2 Send DRC's and DFC's (and attachments) to CMG.		▼ [R] -		_[S]							
10.3 Make controlled copies of the DFC's or DRC's (as supplied).				↓ [R]							
10.4 Implement the DFC's or DRC's.	[Ř]										
10.5 Validate the "as built" status of plant and that documentation has been updated.	[R] -	- [C] -		— [S]							

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Appendix C: Plant Documentation Changes Associated with Configuration Item Anomaly Workflow

APPENDI	X C: I	Plant I	Docum	nentati	on As	sociat	ed wit	th Co	nfigura	tion It	em Ar	nomaly Workflow
		1	1	ORG	ANISA		FUNC		1	1		
R – Responsible A – Approve												
F – File												
- Outside Matrix Scope												
Y/N or N/Y – Decision C – Concur			NT									NOTES
C – Concur I – Informed	CONFIGURATION CONTROLLER		NUCLEAR PROJECT MANAGEMENT		9							& REFERENCES
S – Service		ŋ	ANAG		o HEA							
[] – Mandatory Requirement		EERIN	ECT M		ROUF	щ						
() – As Appropriate/Required	ATIO	NGN	PROJ	Я	ORS G	OFFIC						
Flow Path:	IGUR	DESIGN ENGINEERING	EAR	ORIGINATOR	ORIGINATORS GROUP HEAD	DRAWING OFFICE	N					
Main Flow Secondary Flow	CONF	DES	NUCL	ORIG	ORIG	DRAV	TD&RM					
ACTIVITIES	1	2	3	4	5	6	7	8	9	10	11	
1. Plant documentation changes associated with Configuration Item Anomaly												DDT must be updated at each step of the process.
1.1 Request document change for Configuration Item Anomaly on DDT				[R]								-If a new document is being added, the Unit, System and Chapter must be provided for the KBA number and a descriptive title that includes the functional system and trigramme, if applicable (e.g., Support Plate for 1 RCP 001 PO) and the Discipline (e.g., Mechanical, Electrical, Instrumentation) -Indicate if it forms part of, or relates to existing documents e.g., RCP / DSE. The Master Classification Listing (KBA0000G00031) can be used as a
												guide for new KBA numbers. In case of a new document, originator to identify where document must be filed e.g., in case where new datasheets to be filed in the Maintenance Manuals.
												If no location is provided for new documents, then the default location which is CAB boxes will be used. Documents in CAB boxes are not distributed to satellites and are only filed at the MAB vault. The document will be available on Excalibur.
				↓								-Seek advice from relevant experts and apply the applicable procedures, as required.

CONTROLLED DISCLOSURE

APPENDI	X C: I	Plant [Docum	nentati	on As	sociat	ed wit	h Coi	nfigura	tion It	em Ar	nomaly Workflow
				ORG	ANISA		FUNC		I			
R-ResponsibleA-ApproveF-File•-Outside Matrix ScopeY/N or N/Y - DecisionCC-ConcurI-InformedS-Service[]-Mandatory Requirement()-As Appropriate/RequiredFlow Path:	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	NUCLEAR PROJECT MANAGEMENT	ORIGINATOR	ORIGINATORS GROUP HEAD	DRAWING OFFICE						NOTES & REFERENCES
Main Flow Secondary Flow	CON		NUCI	ORIG		DRA	TD&RM					
ACTIVITIES	1	2	3	4	5	6	7	8	9	10	11	
												-240-86973501- Engineering Drawing Office and Engineering Documentation Standard
1.2 Mark-up a <u>copy</u> of the master document for the proposed changes				[R]								-If an existing document is being modified, a mark-up as follows should be made on a copy of the document: Red – Add Blue – Remove Yellow – Remain Green – Comments
1.3 Confirmation to proceed					▼ [R]							This is to ensure agreement in the originator's group that the change is valid. Need to sign off on DDT.
2. Evaluation					+ *							
2.1 Check whether the document or plant is correct.		▼ [R]										
2.2 Verify whether the document or plant requires updating.		[R]										If a plant change request is required: Raise a EWR to System Engineering. KSA-139 Initiating a Work Request
3. Accept the document change request.		[R]										Evaluator to sign off on DDT.
4. Registration on SPO												Cycle time for Configuration Item <u>Anomaly:</u> Production DDR's = 21 working days from registration date to Master filed date. Non-production DDR's = 30 working days from registration date until Master filed date.

CONTROLLED DISCLOSURE

APPENDI	X C:	Plant [Docum	nentati	on As	sociat	ed wit	h Cor	nfigura	tion It	em Aı	nomaly Workflow
		_		ORG	ANISA	TION	FUNC	TION	l			
R – Responsible A – Approve F – File • – Outside Matrix Scope Y/N or N/Y – Decision C C – Concur I – Informed S – Service [] – Mandatory Requirement () – As Appropriate/Required Flow Path: –	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	NUCLEAR PROJECT MANAGEMENT	ORIGINATOR	ORIGINATORS GROUP HEAD	DRAWING OFFICE						NOTES & REFERENCES
Main Flow Secondary Flow	CONFI	DESI	NUCLE	ORIGII		DRAW	TD&RM					
ACTIVITIES 4.1 Register DDR on SPO	1 [R]	2	3	4	5	6	7	8	9	10	11	For new documents: Where applicable, new documents need to be added to the SPO database. A cover page shall be attached to 331-216 Manufacturers/Suppliers Catalogue Form in the case of an equivalency DDR. When registering document, that all the required fields (e.g., KBA number, CRN number etc.) are not populated in DDT, the DDR will be sent back to the originator and the signatures will be reversed until originator status. CMG sign off on DDT.
 4.2 If there is a DDR change in the system, then the new DDR will remain pending until the existing DDR in the system has been completed. 5. Update master document to reflect proposed 	•											Plant Status DDR's gets preference over a modification DDR as the cycle time of the Plant Status is less than that of a mod.
changes. 5.1 Master document is retrieved from MAB Vault.	[R]											A copy of the master document is refiled temporarily with the DDR checklist, 240-158506528 for reference purposes, should the document be required before the revised document is available. CMG to complete register at MAB vault when DDR's are retrieved. CMG to sign off on DDT.
5.2 Distribute DDR for text or drawing changes via transmittals.	↓ [R]											240-43898815-Document Transmittal Form Drawings – Drawing Office Text – CMG Update "Locations" of the document on DDT

CONTROLLED DISCLOSURE

APPENDI	X C: I	Plant [Docum	nentati	on As	sociat	ed wit	h Coi	nfigura	tion It	em Ar	nomaly Workflow
				ORG	ANISA		FUNC					
R – Responsible A – Approve												
F - File • - Outside Matrix Scope Y/N or N/Y - Decision - C - Concur I - Informed S - Service [] - Mandatory Requirement () - As Appropriate/Required Flow Path:	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	NUCLEAR PROJECT MANAGEMENT	ORIGINATOR	ORIGINATORS GROUP HEAD	DRAWING OFFICE	TD&RM					NOTES & REFERENCES
Main Flow Secondary Flow ACTIVITIES	1	2	2 3	4	5	6	7	8	9	10	11	
5.3 Update and check the master document according to the mark-up	[R]					- [R]						Where new documents have been produced by contractors, electronic copies should be submitted to CMG. The format for drawings should be dwg, dgn and MS word for Text documents. CMG to sign off on DDT
5.4 Transmit DDR's to Design Engineering for authorization.												240-43898815-Document Transmittal Form CMG to update DDR location in DDT to reflect that DDR's are with DE.
6. Authorisation												
6.1 If acceptable, authorise the document.	↓	[₹]										To be authorised by DE. Checks must ensure that changes have been implemented in the correct order, that there is full alignment between the master and the change request and that the document quality is adequate. Authoriser to sign off on DDT. Addendum to the design package shall be where possible authorised by the same authorised engineer who has reviewed and authorised the design.
7. ECP of DDR's												
7.1 Documents are revised to the subsequent revision on SPO.	[R]											The revision of new documents starts at Z1. CMG signs off on DDT.
7.2 All documents to be scanned and linked to SPO.	Ļ											Complete a Docs Transmittal for distribution The electronic image will be available to the plant at this step.
8. Distribution												
8.1 Complete a Quality Check of the DDR's	[R]							<u> </u>				Quality checks to be completed on SPO and DDT.

CONTROLLED DISCLOSURE

APPEND	X C: I	Plant [Docum	entati	on As	sociat	ed wit	h Cor	nfigura	tion It	em Ar	nomaly Workflow
				ORG	NISA	TION	FUNC	TION				
R – Responsible A – Approve												
 A – Approve F – File Poutside Matrix Scope Y/N or N/Y – Decision C – Concur I – Informed S – Service [] – Mandatory Requirement () – As Appropriate/Required Flow Path: Main Flow Secondary Flow 	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	NUCLEAR PROJECT MANAGEMENT	ORIGINATOR	ORIGINATORS GROUP HEAD	DRAWING OFFICE	TD&RM					NOTES & REFERENCES
ACTIVITIES	1	2	2 3	4	5	6	7	8	9	10	11	
completed as per the package transmitted for Distribution.												
8.2 Update DQI.												DQI on G: Drive
8.3 Verify all linked documents as per transmittal submitted												
8.4 Categories the documents in accordance with Appendix R.												Refer to Control Copy Holder Distribution List, 240- 158556048 All other document types that do not require distribution to CCH's will be signed off on DDT.
8.5 Documents submitted to TD & RM for printing	↓ _						[S]					CMG to sign off on DDT.
8.6 Received documents from TD & RM	[R] –						►[S]					TD&RM provides a Printing Service to reproduce copies. KFJ-TD-012 Request for Printing Service Form <u>Cycle time for Printing Service:</u> Production DDR's = 2 working days from documents send to Print room date. Non-production DDR's = 5 working days from documents send to Print room date. TD & RM to sign off on DDT.
8.7 Issue Controlled Copies to controlled copy holders.	[R] —						[S]					See Control Copy Holders Distribution list, 240-158556048. Controlled copies of the page changes request shall be distributed to all controlled copy holders with a notice to replace superseded pages.

CONTROLLED DISCLOSURE

APPENDI	X C: I	Plant [Docum	nentati	on As	sociat	ed wit	th Co	nfigura	tion It	em Ar	nomaly Workflow
				ORG	ANISA		FUNC		I			
R – Responsible												
A – Approve												
F – File												
- Outside Matrix Scope												
Y/N or N/Y – Decision			F									NOTES
C – Concur	R		MEN									&
I – Informed	SOLLE		IAGE		EAD							REFERENCES
S – Service	ONTR	SING	MAN		Н ЧО							
[] – Mandatory Requirement	N CC	LEER	JECT		GRO	Ш						
() – As Appropriate/Required	RATIC	NGIN	PRO.	RO	ORS	OFFI						
Flow Path:	IGUF	DESIGN ENGINEERING	EAR	INATO	INATO	NING	Σ					
Main Flow Secondary Flow	CONFIGURATION CONTROLLER	DES	NUCLEAR PROJECT MANAGEMENT	ORIGINATOR	ORIGINATORS GROUP HEAD	DRAWING OFFICE	TD&RM					
ACTIVITIES	1	2	3	4	5	6	7	8	9	10	11	
												CMG informs CCH's via email of the updates that they will receive via the post with and electronic transmittal sheet. TD&RM files Control Room (CCH 11,14,39,45)
8.8 Sign off DDR'S												DDT for Control Copies Issued
8.9 File new master document at MAB vault	¥											CMG to complete register at MAB vault when DDR's are filed. CMG to sign off on DDT.
8.10 Superseded DDR Package to be cover slipped and submitted to TD & RM	[R]											KFI-RE-004-Records Transfer Acknowledgement Form. transmitted to TD&RM as a record.

CONTROLLED DISCLOSURE

Design Documentation Change Process	Unique Identifier:	331-85
	Revision:	5
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Appendix D: Plant documentation changes associated with Design Packages workflow

APPENDI	CD: P	lant D	ocum	entati	on Ch	anges	Asso	ciated	with	Desigr	n Pack	ages Workflow
 R – Responsible A – Approve F – File P – Outside Matrix Scope Y/N or N/Y – Decision C – Concur I – Informed S – Service [] – Mandatory Requirement () – As Appropriate/Required Flow Path: Main Flow Secondary Flow 	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	NUCLEAR PROJECT MANAGEMENT	ORGA WB/BD								NOTES & REFERENCES
ACTIVITIES	1	2	3	4								
1. Design Packages												
1.1 The Authorised Design Package is submitted to CMG for Processing either in Hard-copy or Electronic format. The Authorised Electronic Designs (All Authorised signed sheets to be submitted to CMG with record cover slip [KFI- RE-001]. DE to store on (G:drive – file path) for CMG to retrieve, stored, maintain the revision, location of updated and new designs.	[1] —	- [R]										This Design Package Appendix is Applicable for: Design Packages Design Page Changes Design Revision Change (DRC) Design Field Change (DFC) Technical Requirement Specification (TRS) Feasibility Study (FS) Minor Modification
1.2 The Design Package is verified and checked by DE for DDR's. DDRs must be submitted to CMG in Hardcopy format. DE to split Design Package and DDR's for the Distribution of Design Package and the processing of DDR's.	[1] -	- [R]										The DDR's are filed in a cabinet at the Configuration Area for storage until date of implementation.
1.3 The Hard Copy of Design Package is transmitted to TD&RM for Printing Service.	(R) -			_ [S]								KFJ-TD-012 Request for Printing Service Form Cycle time for Design Package: 5 working days TD&RM produces 1 Plain Copy for Records

CONTROLLED DISCLOSURE

APPENDI	KD:	Plant	Docum	entati	on Ch	anges	Asso	ciated	with l	Desigr	n Pack	ages Workflow
				ORG	ANISA	TION /	FUNC	CTION				
R – Responsible												
A – Approve												
F – File												
- Outside Matrix Scope												
Y/N or N/Y – Decision			∟									NOTES
C – Concur	Ř		MEN									&
I – Informed	OLLE		AGEI									REFERENCES
S – Service	NTR	ŋ	MAN									
[] – Mandatory Requirement	N CO	ERIN	ECT									
() – As Appropriate/Required	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	NUCLEAR PROJECT MANAGEMENT									
Flow Path:	GUR,	NEN	AR F	~								
$\longleftrightarrow \qquad \longleftrightarrow \qquad \longleftrightarrow$	ONFI	ESIG	JCLE	TD&RM								
Main Flow Secondary Flow ACTIVITIES	<u>Ŭ</u>	2	2 3	4 4								
AGINITED												
2 Distribution												
2.1 CMG distributes and hard copy or electronic copy to TD & RM	[R]			[S]								CMG distributes the hard copy or electronic copy of the changes as per the document received from
				[0]								Design Engineering for processing. CMG to send an electronic notification via email of the updates.
2.2 Issue of <u>Electronic</u> <u>Designs f</u> rom CMG to TD & RM												CMG and TD & RM to be given access to DE Authorised Design Folders [G:Drive].
				[S]								CMG transmits the authorised signed sheets to TD & RM with record cover slip [KFI-RE-001] and Document Transmittal Form 240- 43898815.
												CMG to sends an electronic transmittal and notification via email of the updates
												TD & RM will load electronic file on SPO for retrievability.
2.3 Update the Design Location File												This is for New Packages (CMG G: drive)
2.4 Master document refiled.	▼ [R]											Refer to 2.2 for the electronic file that will be linked on SPO by TD & RM

CONTROLLED DISCLOSURE

Appendix E: Plant Documentation Changes Associated with Temporary Alterations Workflow

APPENDIX E: P	lant D	ocum			-				empo	rary A	Alterations Workflow
R – Responsible A – Approve F – File • – Outside Matrix Scope Y/N or N/Y – Decision C C – Concur I – Informed S – Service [] – Mandatory Requirement () – As Appropriate/Required Flow Path: –	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	RESPONSIBLE LEAD OF TAF	SANIS	DRAWING OFFICE	5 / FUN					NOTES & REFERENCES
Main Flow Secondary Flow	CONFIG				DRAWI	TD & RM					
ACTIVITIES	1	2	3	4	5	6	7	8	9	10	
1. Plant Documentation Changes associated with Temporary Alterations											DDT must be updated at each step of the process.
1.1 Request Document Change for TAF on DDT.			[R]								At Installation of TAF and Restoration of TAF DDT is available on the Z-drive, NalApp, Ddt
1.2 Responsible Lead to mark-up a copy of the master document with the proposed changes.			• [R]								 -If an existing document is being modified, a mark- up as follows should be made on a copy of the document: Red – Add Blue – Remove Yellow – Remain Green – Comments -If a new document is being added, th Unit, System and Chapter must be provided for the KBA number and a descriptive title that includes the functional system and trigramme, if applicable (e.g., Support Plate for 1 RCP 001 PO) and the Discipline (e.g. Mechanical, Electrical, Instrumentation) -Indicate if it forms part of, or relates to existing documents e.g. RCP / DSE. In case of a new document, originator
		↓									to identify where document, originate to identify where document must be filed e.g., in case where new datasheets to be filed in the Maintenance Manuals -Seek advice from relevant experts and apply the applicable procedures, as required. The Master Classification Listir (KBA0000G00031) can be used as guide for new KBA numbers.

CONTROLLED DISCLOSURE

											14
APPENDIX E: P	ant D	ocume							empoi	ary A	Iterations Workflow
R - Responsible A - Approve F - File • - Outside Matrix Scope Y/N or N/Y - Decision C C - Concur I - Informed S - Service [] - Mandatory Requirement () - As Appropriate/Required Flow Path:	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	RESPONSIBLE LEAD OF TAF	SYSTEM ENGINEER	DRAWING OFFICE	W2 % C					NOTES & REFERENCES
Main Flow Secondary Flow ACTIVITIES	<u></u> 1	2 2	3	ي 4	5	6 6	7	8	9	10	
											In case of a new document, originator to identify where document must be filed e.g. in case where new datasheets to be filed in the Maintenance Manuals. If no location is provided for new documents, then the default location which is CAB boxes will be used. Documents in CAB boxes are not distributed to satellites and are only filed in the main vault. The document will be available on Excalibur. Seek advice from relevant experts and apply the applicable procedures, as required. -240-86973501- Engineering Drawing Office and Engineering Documentation Standard.
2. Review Change Request											
2.1. The change is reviewed by Design Engineering as part of the design review process.		(R]									The reviewer of the associated TAF package will review the applicable DDRs. The Reviewer sign on DDT.
2.2. Upon approval of the TAF package, hand-deliver the hard copy marked up DDRs by Transmittal to CMG. The location of the DDR's in DDT should be updated to reflect Config Control.		▼ [R]									240-43898815 Document Transmittal Form

CONTROLLED DISCLOSURE

APPENDIX E: P	lant D	ocum	entatio	n Char	nges A	ssocia	ated w	ith Te	empor	ary A	Iterations Workflow
			OR	GANIS		I / FUN	стю	N			
R-ResponsibleA-ApproveF-File•-Outside Matrix ScopeY/N or N/Y - DecisionC-ConcurI-InformedS-Service[]-Mandatory Requirement()-As Appropriate/RequiredFlow Path-	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	RESPONSIBLE LEAD OF TAF	SYSTEM ENGINEER	DRAWING OFFICE	& RM		7			NOTES & REFERENCES
Main Flow Secondary Flow ACTIVITIES	1	2	3	∑S 4	<u>ЧО</u> 5	<u>р</u>	7	8	9	10	
3. Storage at Configuration Control											
3.1. Store the DDRs in the designated place, filed under the TAF number.	▼ [R]										DDRs are only stored if there is a time delay between originating the Change Request and TAF Implementation date.
4. Approve for Processing	•		-								
4.1 Systems Engineer to populate the planned implementation date in DDT.											System Engineer will not be able to approve for processing if the implementation date is not populated in DDT. This is also enforced in DDT.
4.2 Issue the DDRs for processing on DDT				-[R]							System Engineer to sign off on DDT.
5. Registration on SPO		•									
5.1 Register DDR on SPO	[R]										-For new documents: Where applicable, new documents need to be added to the SPO database. If CMG notice, when registering document, that all the required fields (e.g., KBA number, CRN number etc.) are not populated in DDT, the DDR will be sent back to the originator. The signatures will be reversed until Originator's status. CMG need to sign off on DDT.
5.2 If there is already a DDR change in the system, then the new DDR will remain pending until the existing DDR in the system has been completed	¥										Plant Status DDR's gets preference over a modification DDR as the cycle time of the Plant Status is less than that of a mod.

CONTROLLED DISCLOSURE

APPENDIX E: Plant Documentation Changes Associated with Temporary Alterations Workflow ORGANISATION / FUNCTION													
									•	,			
R - Responsible A - Approve F - File • - Outside Matrix Scope													
Y/N or N/Y – Decision C – Concur I – Informed S – Service [] – Mandatory Requirement () – As Appropriate/Required Flow Path: Main Flow Secondary Flow	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	RESPONSIBLE LEAD OF TAF	SYSTEM ENGINEER	DRAWING OFFICE	TD & RM					NOTES & REFERENCES		
ACTIVITIES	1	2	3	4	5	6	7	8	9	10			
6. Update master document to reflect proposed changes.													
6.1 Master document is retrieved from MAB Vault.	[R] 										A copy of the master document is refiled temporarily with the DDR checklist, 240-158506528 for reference purposes, should the document be required before the revised document is available. CMG to complete register at MAB vault when DDR's are retrieved. CMG to sign off on DDT.		
6.2 Distribute DDR for text or drawing changes via transmittals.	[R] ↓										240-43898815-Document Transmittal Form Drawings – Drawing Office Text – CMG Update "Locations" of the document on DDT		
6.3. Update and check the master document according to the mark-up	[R]—				- [R]						The documents are to be updated using MicroStation, MSWord, or manual methods, as applicable.		
											Where new documents have been produced by contractors, electronic copies should be submitted to CMG. The format for drawings should be dwg, dgn and MS word for Text documents.CMG to sign off on DDT		
6.4 Transmit DDR's to Design Engineering for authorization.	[R]										240-43898815-Document Transmitta Form CMG to update DDR location in DDT to reflect that DDR's are with DE.		

CONTROLLED DISCLOSURE

APPEND	IX E:	Plant [Docum	entatio	on Cha	nges /	Associ	ated w	ith Ter	npora	ry Alterations
			0	RGAN	ISATIC	DN / FU	INCTIC	N			
R – Responsible											
F-File•-Outside Matrix ScopeY/N or N/Y - DecisionC-ConcurI-InformedS-Service[]-Mandatory Requirement()-As Appropriate/RequiredFlow Path:	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	RESPONSIBLE LEAD OF TAF	SYSTEM ENGINEER	DRAWING OFFICE						NOTES & REFERENCES
$\longleftrightarrow \longleftrightarrow \longleftrightarrow$	ONFIGL	DESIGN	SPON	STEM	RAWING	TD & RM					
Main Flow Secondary Flow ACTIVITIES	1	2	3	6 4	5	6	7	8	9	10	
7. Authorisation											
7.1. If acceptable, authorise the document.		[R]									To be authorised by DE. Checks must ensure that changes have been implemented in the correct order, that there is full alignment between the master and the change request and that the document quality is adequate.
	•										Authoriser to sign off on DDT. Addendum to the design package shall be where possible authorised by the same authorised engineer who has reviewed and authorised the design.
7.2 Notify the System Engineer / DE via e-mail of all the DDR's that have been authorised.	[R]										
7.3 Store the updated master document with the change request in a designated place until the confirmation is received from the TAF Coordinator.	[R]										DDR's are only stored if there is a time delay between originating the change request and TAF implementation date.
8. Approval for Issue											
8.1 CMG notifies System Engineer / DE that authorised document is ready for release.	▼ [R]	[1]									
8.2 System Engineer / DE to inform CMG if the implementation date has changed from the planned date on DDT.	[1]—			▼ [R] ↓							

CONTROLLED DISCLOSURE

APPEND	IX E:	Plant D	Docum	entati	on Cha	nges /	Associ	ated w	ith Ter	npora	ry Alterations
			0	RGAN	ISATIO	ON / FL	INCTIC	DN			
R – Responsible											
F – File											
- Outside Matrix Scope											
Y/N or N/Y – Decision											NOTES
C – Concur	Ë										&
I – Informed	OLLE		ΑF								REFERENCES
S – Service	ATR(ŋ	DF T								
[] – Mandatory Requirement	co	ERIN	AD (Ř							
() – As Appropriate/Required	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	RESPONSIBLE LEAD OF TAF	SYSTEM ENGINEER	DRAWING OFFICE						
	RAT	ENG	SIBLE	5 N	0 F						
Flow Path:	UDI:	IGN	NO	EME	NIN	R					
Main Flow Secondary Flow	ONE	DES	ESP	YST	IRAV	D &					
ACTIVITIES	1	2	3	4	5	6	7	8	9	10	
8.3 System Engineer to amend the implementation date on DDT if it has changed from the planned implementation date in DDT.				[R]							
8.4 Approve for Issue on DDT.											System Engineer / DE to review the physical hard copy at CMG. If there are corrections or additional changes identified by the system engineer, the system engineer must do a mark-up and this DDR will go back for changes.
											The System Engineer / DE would release or 'approve for issue' only after the TAF work scope has been completed on the plant.
											System Engineer / DE to sign off on DDT.
9. ECP of DDR's											
9.1 Documents are revised to the subsequent revision on	[R]										The revision of new documents starts at Z1.
SPO.											CMG signs off on DDT.
9.2 All documents to be scanned and linked to SPO.											Complete a Docs Transmittal for distribution The electronic image will be available to the plant at this step.

CONTROLLED DISCLOSURE

APPEND	IX E:	Plant D	ocum	entatio	on Cha	nges A	Associ	ated w	ith Ter	nporai	ry Alterations
						-					
R – Responsible											
F – File											
- Outside Matrix Scope											
Y/N or N/Y – Decision											NOTES
C – Concur	Ř										&
I – Informed	OLLE		ΑF								REFERENCES
S – Service	NTRO	ġ	OF TAF								
[] – Mandatory Requirement	CO	ERIN	EAD (ER	ш						
() – As Appropriate/Required	TION	GINE	E LE	ENGINEER	FFICI						
Flow Path:	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	RESPONSIBLE LEAD	EN ENG	DRAWING OFFICE	RM					
$\longleftrightarrow \longleftrightarrow$	INFI	DESIG	ESPO	SYSTEM	AW	<u>مە</u>					
Main Flow Secondary Flow ACTIVITIES	<u>Ŭ</u> 1	2	3 RI	ي 4	5	6 TD	7	8	9	10	
10. Distribution											
10.1 Complete a Quality Check of the DDR's completed as per the package transmitted for Distribution.	[R]										Quality checks to be completed on SPO and DDT.
10.2 Update DQI.											DQI on G: Drive
10.3 Verify all linked documents as per transmittal submitted											
10.4 Categories the documents in accordance with Appendix R.											Refer to Control Copy Holder Distribution List, 240- 158556048 All other document types that do not require distribution to CCH's will be signed off on DDT.
10.5 Documents submitted to TD & RM for printing.						- [S]					CMG to sign off on DDT.
10.6 Received documents back from TD & RM	V										TD&RM provides a Printing Service to reproduce copies. KFJ-TD-012 Request for Printing Service Form Cycle time for Printing Service:
	[R] [–]					> [R] ↓					Production DDR's = 2 working days from documents send to Print room date. Non-production DDR's = 5 working days from documents send to Print room date. TD & RM to sign off on DDT.

CONTROLLED DISCLOSURE

APPEND	nporar	y Alterations									
						-	INCTIO		-	•	-
R – Responsible											
F – File											
- Outside Matrix Scope											
Y/N or N/Y – Decision											NOTES
C – Concur	ER										&
I – Informed	ROLL		TAF								REFERENCES
S – Service	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	0 OF	~							
[] – Mandatory Requirement	ON C	NEEI	LEAI	E E F	Ш						
() – As Appropriate/Required	RATIO	ENGI	IBLE	IIBN	OFF						
Flow Path:	IGUI	lign	SNO	EM E	VING	RM					
Main Flow Secondary Flow	CONI	DES	RESPONSIBLE LEAD OF TAF	SYSTEM ENGINEER	DRAWING OFFICE	TD &					
ACTIVITIES	1	2	3	4	5	6	7	8	9	10	
10.7 Issue Controlled Copies to controlled copy holders	^[R] ←					▶ [S]					See Control Copy Holders Distribution list, 240-158556048. Controlled copies of the page changes request shall be distributed to all controlled copy holders with a
											notice to replace superseded pages. CMG informs CCH's via email of the updates that they will receive via the post with and electronic transmittal sheet. TD&RM files Control Room (CCH 11,14,39,45)
10.8 Sign off DDR'S											DDT for Control Copies Issued
10.9 Sign off DDR on DDT for Control Copies Issued											CMG to complete register at MAB vault when DDR's are filed. CMG to sign off on DDT.
10.10 Superseded DDR Package to be cover slipped and submitted to TD & RM	→ [R]										KFI-RE-004-Records Transfer Acknowledgement Form. transmitted to TD&RM as a record.

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Appendix F: Plant Documentation Change Reversal Workflow

	AF	PPEN	DIX F:	Plant	Docur	nentat	ion Cl	nange	Rever	sal W	orkflo	W
				ORG	ANISA	TION	FUNC	TION				
R – Responsible												
A – Approve												
F – File												
- Outside Matrix Scope												
Y/N or N/Y – Decision			⊢									NOTES
C – Concur	К		MEN									&
I – Informed	SOLLE		IAGE		TAF							REFERENCES
S – Service	NTF	UNG	MAN		OF .							
[] – Mandatory Requirement	N CC	IEER	IECT	Щ	EAD							
() – As Appropriate/Required	ATIO	NGIN	PROJ	OFFIC	BLE I							
Flow Path:	GUR	EN E	EAR	9 NG	ISNC							
	CONFIGURATION CONTROLLER	DESIGN ENGINEERING	NUCLEAR PROJECT MANAGEMENT	DRAWING OFFICE	RESPONSIBLE LEAD OF TAF							
Main Flow Secondary Flow ACTIVITIES	1	2	2 3	4	5	6	7	8	9	10	11	
1. Reversal Process												-This process can only be initiated if the document is between registration and authorisation state. -If the document is already approved a new DDR must be raised.
1.1 The responsible Project Engineer/TAF Lead/ Design Engineer informs CMG of modification / TAF implementation date change or cancellation	[1]—	— [R]—	—[R] -		- [R]							Modification/TAF removed from current scope and re-allocated to new scope.
1.2 Reversal process to be initiated.	[R] -			-[R]								Changed document will be reversed to its previous authorised status.
1.3 The changes proposed by the mark-up are to be removed from the master.	(R]	ſ		↓ _ [R]								-For both text and drawing changes. -Checks must ensure that changes have been reversed in the correct order and the document quality is adequate.
1.4 Update SPO to reflect the reversal process	[R] ·		- [1] -		- [1]							DDT– remove signatures (until 'Reviewed' status) SPO Database- Remove DDR number related to document.
1.5 Master document refiled.	▼ [R]											Revised document is filed and the copy of document and DDR checklist, 240-158506528 are removed.

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Appendix G: Plant Documentation Change Cancellation Workflow

	APF	PENDI	(G: P	lant D	ocume	entatio	on Cha	nge C	ancel	lation	Work	flow
				ORG	ANISA	TION	FUNG	CTION				
R – Responsible												
A – Approve												
F – File												
Outside Matrix Scope												
Y/N or N/Y – Decision			F									NOTES
C – Concur	Щ		NUCLEAR PROJECT MANAGEMENT									&
I – Informed S – Service	CONFIGURATION CONTROLLER		NAG									REFERENCES
	CONT	ENGINEERING	T MA									
	O NOI	NEEL	DJEC	EICE								
() – As Appropriate/Required Flow Path:	IRAT	ENG	R PR(G OFI	TOR							
	IFIGL	DESIGN	LEAF	DRAWING OFFICE	ORIGINATOR	& RM						
Main Flow Secondary Flow	CON	DES	NUC	DRA	ORIC	TD 8						
ACTIVITIES	1	2	3	4	5	6	7	8	9	10	11	
1. Cancellation Process												
1.1 A request to cancel a DDR should be made via												This process can only be initiated if the document is between originated
e-mail. The e-mail should contain the DDR number,	[1] -	-[R]-	[R] ·		-[R]							and authorisation state. If the document is already approved a
modification number (if applicable) and the												new DDR must be raised. E-mail to:
reason for cancellation.												KOU configcontrol@eskom.co.za
1.2 CMG will cancel the DDR on the DDT Database and												
SPO and send the requestor a confirmation	[Ř]											
e-mail that the DDR has been cancelled.												
1.3 Once a DDR has been												
cancelled after it has been authorised or changes												
made to the master	[Ŕ]											
document, the following steps needs to be done:												
1.4 The master document needs to be reversed												For both text and drawing changes. Checks must ensure that changes
back to its original state.	[R]			_[R]								have been reversed in the correct
												order and the document quality is adequate.
1.5 If a new document was created,then the												
document should be clearly marked as	[R] ·			_[R]								
Cancelled.				- [' ']								
1.6 The master document should be refiled.	[R]											
1.7 The Cancellation package should be coverslipped				1								The cancellation package should include the DDR mark-up, e-mail
and submitted to TD &	(R]											notification of cancellation and
RM, Records Department as a record.												clearly marked Cancelled document (where applicable)

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Appendix H: Update of document/SPO when an entire document is withdrawn/removed from system

			OR	GANIS		N / FUN	стю	N			
R – Responsible											
A – Approve											
F – File											
- Outside Matrix Scope											
Y/N or N/Y – Decision											NOTES
C – Concur	£	(7)									&
I – Informed	DLLE	RIN	ц								REFERENCES
S – Service	TRO	NEE	Р Т/								
[] – Mandatory Requirement	CONFIGURATION CONTROLLER	SYSTEM DESIGN ENGINEERING	RESPONSIBLE LEAD OF TAF								
() – As Appropriate/Required	NOI	IGN	Ш								
Flow Path:	IRAT	DES	SIBLI								
FIUW FallI.	FIGU	EM	NOC	RM							
← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ←	NOC	SYST	RESF	TD &							
ACTIVITIES	1	2	3	4	5	6	7	8	9	10	
 Update master document to reflect proposed changes. 											
1.1. Entire master document is retrieved from Master file.	[R]										Only a copy of the DDR cover with a note stating that entire document will be withdrawn will be refiled.
1.2. Distribute DDR for text or drawing changes via transmittals.	(R)										-240-43898815 Document Transmittal Form -Drawings – Drawing Office -Text – Configuration Control -Update "Locations" of the document or SPO
1.3. Update the current revision of the master document with the note, "Withdrawn from System" and include the DDR number.	[R]										The Master document will not be revved up to the subsequent revision because it will be removed from the system.
2. Update document on SPO											Update of document on SPO will take place after a document has been Authorise / Approve for Issue.
2.1. Update document on SPO which will result in a subsequent revision being issued.	[R]										The document will be revved up on SPO to indicate the change request to withdrawn the document.
2.2. Change the Status of the new revision to "Withdrawn" and the Rev Type to "N".	[R]										Rev Type "N" refers to Historical on SPO

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APPENDIX H	: Upd	ate of	docun	nent/S	PO wh	en an	entire	docur	nent is	withd	rawn from system	
			0	RGAN	ISATIC	N/FU	INCTIO	ON				
R – Responsible												
A – Approve												
F – File												
- Outside Matrix Scope												
Y/N or N/Y – Decision											NOTES	
C – Concur	R	ŋ									&	
I – Informed	SOLLI	ERIN	TAF								REFERENCES	
S – Service	ONTR	GINE	. HO									
[] – Mandatory Requirement	N CC	NEN	EAD									
() – As Appropriate/Required	ATIO	CONFIGURATION CONTROLLER	ESIG	BLE I								
Flow Path:	IGUR	M	ISNC	& RM								
Main Flow Secondary Flow	CONF	SYSTEM DESIGN ENGINEERING	RESPONSIBLE LEAD OF TAF	TD & F								
ACTIVITIES	1	2	3	4		6	7	8	9	10		
3. Distribution												
3.1 Inform Controlled Copy holders via e-mail to withdrawn the document and submit an electronic / hardcopy of the withdrawn document.	[R]_			_ [S]								
	★											
3.2 Remove DDR cover in Master file.	[R]											
3.3 The DDRpackage (with the withdrawn document) should	▼			- (61							KFI-RE-004 Records Transmittal Form	
be coverslipped and submitted to TD & RM, Records Department as a record.	[R] —			– [S]							The DDR package should include the DDR mark-up, DDR checklist, 240- 158506528 and clearly marked Withdrawn document.	

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Appendix I: SAP Bill of Material Workflow

			APP	ENDI	(I: SA	AP Bill	of Ma	terial	Workf	low		
				ORG	ANISA	TION /	FUNG	TION				
R – Responsible												
A – Approve												
F – File												
Outside Matrix Scope	•											
Y/N or N/Y – Decision	ROUF		F									NOTES
C – Concur	G GF	н	EMEN									&
I – Informed	ERIN	SOLL	IAGE									REFERENCES
S – Service	GINE	DNTF	MAN .	Ŋ								
[] – Mandatory Requirement	NENC	N C	JECT	ANNI								
() – As Appropriate/Required	ATION	RATIC	PRO	SPL	К							
Flow Path:	IFIC/	IGUF	EAR	RIAL	INATO	RM						
Main Flow Secondary Flow	SPECIFICATION ENGINEERING GROUP	CONFIGURATION CONTROLLER	NUCLEAR PROJECT MANAGEMENT	MATERIALS PLANNING	ORIGINATOR	TD &						
ACTIVITIES	1	1	3	4	5	6	7	8	9	10	11	
1. Equivalency Process												-SEG originates and authorises Equivalencies.
	[R]—					- [S]						-The document is then sent to TD &
	\uparrow											RM to scan and distribute to the departments on the distribution list.
1.1 CMG will update the		\square										This function is applicable for the Equivalency and New Stock
material classification and link the bill of material in SAP.		[R] 										Application form processes see KFZ-IO-010.
2. Withdrawal Process of												
Equivalencies												
2.1 The withdrawal of equivalencies is originated	♦											
by SEG.	[R] 											
2.2 A formal letter is originated by SEG, this letter is												
forwarded to relevant	[Ř]											
parties for processing. 2.3 TD & RM will process the	<i></i>											
withdrawal letter to												
remove the equivalency record from the database.						> [R]						
The withdrawal letter will												
be reverenced on the database.												

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					_		of Ma		Workf	low		
R - Responsible A - Approve F - File • - Outside Matrix Scope Y/N or N/Y - Decision C - Concur I - Informed S - Service [] - Mandatory Requirement	SPECIFICATION ENGINEERING GROUP	CONFIGURATION CONTROLLER	NUCLEAR PROJECT MANAGEMENT		ANISA	TION /	FUNC	TION				NOTES & REFERENCES
() – As Appropriate/Required Flow Path: ← → ← → ← → ← → ← → ← → ← → ← → ← → ← →		-		· MATERIALS PLANNING	ORIGINATOR	TD & RM						
ACTIVITIES 2.4 CMG will reverse all the SAP updates, material classification and Bill of Material relating to the equivalency process. To reverse the DDR changes, a DDR needs to be raised as per 331-85.	1	1 [R]	3	4	5	6	7	8	9	10	11	
3. Change of SAP Bill of Materials												
3.1 Materials Planning originates a Notice of change of material number: KFZ-IO-008 form and submits it to CMG.				[R] ↓								
3.2 CMG will remove and replace the old SAP material number with the new material number on SAP.		(R]										

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Appendix J: Trigramme Allocation Associated with Modifications Workflow

APP	ENDI	(J: T	rigram	nme Al	locati	on As	sociat	ed wit	h Mod	lificati	ons V	Vorkflow
				ORG/	NISA	TION /	FUNC					
R – Responsible												
A – Approve												
F – File												
Outside Matrix Scope												
Y/N or N/Y – Decision				Ę								NOTES
C – Concur		Ë	4	EMEN								&
I – Informed S – Service		ROLL	GROI	NAGE								REFERENCES
		ONT	SING	T MA								
[] – Mandatory Requirement		ON C	LEER	DJEC								
 As Appropriate/Required Flow Path: 	ror	IRATI	NGIN	R PRC								
	ORIGINATOR	CONFIGURATION CONTROLLER	DESIGN ENGINEERING GROUP	NUCLEAR PROJECT MANAGEMENT								
Main Flow Secondary Flow	ORIC	CON	DES	NUC								
ACTIVITIES	1	1	3	4	5	6	7	8	9	10	11	
1. Trigramme allocation process												
1.1.Receive request for new trigrammes and cables.												Form must be filled in (331-282)
Trigramme letter form part	[R] _	-[S]										
of the design package. Request can be from DE												
or System Engineering												
1.2. Trigramme form will be typed with received												331-282 Trigramme & Cable request form
information (trigrammes												
and cables added, deleted or changed) and be given	[R]	-[S]										
a reference number (T												
number and next sequential number).												
1.3. Trigramme and Cable												Requestors need to supply CMG
numbers may be proposed or requested by Designer.	▼											with Document number for checking.
CM to check and verify with SAP, Cable Database,	[R]—	_[S]										
Master documents, if the proposed/requested		ျပ										
numbers are available. If requested by the Designer,												
CM to check and supply."												
1.4. Once Trigramme form is complete,CMG will send it	[R]-	_[S]										Trigramme Letter from contractors must be signed by DE
back to Originator to check, verify and sign.	`∻											
1.5 Once received CMG will		→ [R]										CMG cannot sign Trigramme
also sign and attached form to letterhead.												Letter from contractors without signature from DE
		▼	L				l			L	I	

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APP	ENDI	(J: T	rigram	ime Al	locati	on As	sociat	ed wit	h Mod	ificati	ons W	/orkflow
			-	ORGA								
R – Responsible												
A – Approve												
F – File												
Outside Matrix Scope												
Y/N or N/Y – Decision				L								NOTES
C – Concur		£	0	IENJ								&
I – Informed		OLLE	SOUF	AGEN								REFERENCES
S – Service		NTRO	50	1AN/								
[] – Mandatory Requirement			ERIN	CTN								
() – As Appropriate/Required	~	CONFIGURATION CONTROLLER	DESIGN ENGINEERING GROUP	NUCLEAR PROJECT MANAGEMENT								
Flow Path:	ORIGINATOR	URA	ENG	AR PF								
\longleftrightarrow	IGIN/	NFIG	sign	CLEA								
Main Flow Secondary Flow	-											
ACTIVITIES	1	1	3	4	5	6	7	8	9	10	11	
1.6. Requestor will receive original signed letter.		[R]										Signed form will be attached to Design Package.
		▼										
1.7 Signed PDF Trigramme letter will be load on G:Drive		[R]										For retrievability
2. SAP & Cables update												
2.1 CMG will load trigrammes on SAP and Cable Database with the Mod Number.		(R)										
2.2 Trigrammes will be made inactive on SAP and will be activated after implementation and confirmation from Project Leader.		▼ [R										If inactive in SAP then no work orders can be done against it.

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APPENDIX J: T	rigrar	nme /	Alloca	ation	Assoc	iated	with S	AP Co	onfigu	ration	Item /	Anomaly Workflow
				ORG/	NISA		FUNC	TION				
R – Responsible												
A – Approve												
F – File												
- Outside Matrix Scope												
Y/N or N/Y – Decision				L								NOTES
C – Concur		Ř	۵.	MEN								&
I – Informed		OLLE	ROU	AGEI								REFERENCES
S – Service		NTR	10 G	MAN								
[] – Mandatory Requirement		N CO	ERIN	ECT								
() – As Appropriate/Required	ъ	CONFIGURATION CONTROLLER	DESIGN ENGINEERING GROUP	NUCLEAR PROJECT MANAGEMENT								
Flow Path:	STO	sur⁄	N ENC	AR P								
$\longleftrightarrow \longleftrightarrow$	REQUESTOR	NFIG	SIG	ICLE								
Main Flow Secondary Flow ACTIVITIES		1	<u>Ц</u> 3	2 4	5	6	7	8	9	10	11	
						-			-			240 145629542 SAD CMC Itom
 Trigramme that is not Mod related but needs to be loaded on SAP CMG needs to be notified. 	[R]_	—[S]										240-145628543, SAP CMG Item Anomaly PBS Update Form
2. Configuration Item Anomaly DDR needs to be raised. CMG will process DDR as per 331-85	[R] —	-[S]										Originator needs to notify CMG DDR number (for tracking)
(Appendix C)												
 Requestor needs to fill in information as per 240- 145628543 and sign form. 	♥ [R]											240-145628543, SAP Configuration Item Anomaly PBS Update Form
4. CMG will load trigrammes on SAP as per request. Trigrammes will be activated on SAP.	*											
5. Once SAP has been updated,CMG will sign form.		▼ [R]										
6. Signed form will be send to requestor as confirmation that request is complete.												
7. Form will be scanned and file on G:Drive		♥ [R]										For retrievability

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Appendix K: Guide for KBA and CRN number request

Step 1:

Requestor need to supply CMG with Unit, System & Chapter e.g. 1217RCP.... (12-unit, 17-chapter, RCP-system). (If unsure, he/she needs to check in KBA 0000G000031 (Master Classification Plan) for guidance. KBA 0000G00031 is available on SPO / Excalibur.

Step 2:

Requestor should also provide the Title of the document and indicate if the Discipline is Mechanical, Electrical or Instrumentation.

Step 3:

Once the unit, system, chapter, title and discipline have been received, CMG gives the next sequential number as well as a CRN number.

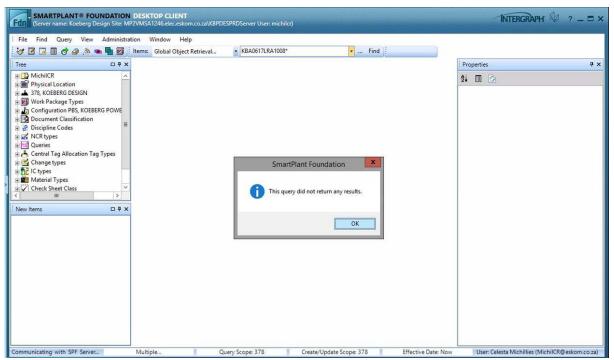
Please note: If there is no existing KBA number and a new number should be given, then the number always start with 1000 e.g., 1217RCP1000.

Step 4: verification (extract from SPO below) must be completed to make sure numbers are not used and to avoid duplication in numbers.

Step 5:

All KBA Numbers (from Chapter 01-28) and CRN Numbers are stored in the cupboard at CMG and are still processed manually. (Cupboard is marked KBA and CRN Numbers & Blue Cover Slipping)

<u>Note</u>: When a New KBA is issued to a customer for new documents, a CRN number must also be issued for the same document.



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Appendix L: Guide for Issuing Trigrammes on SAP

New Trigrammes to be loaded on SAP and applicable Forms

Step 1

If requestor is unsure about trigramme number, he/she needs to supply CMG with Unit, System, Bigramme (1/2 RCV+++PO). CMG needs to go onto SAP (IH06) to pull a list for the specific System and Bigramme (To pull list please put in 38-*RCV+++PO). Once a list has been pulled, CMG can issue the next sequential number.

	3 G. C C 🚱 🚷 🗳 🐘 🖏 🐨 🖓 😧	1 🔣 🛃 🚱	E.		
Display Function	al Location: Functional Location Lis	t			
	7 III - I - 2 B				
Functional Location	Description of functional location	Location	Sort Field	SysStatus	
38-1RCV001PO	PUMP - CHARGING OR HHSI	9HNA 00.0M		CRTE	
38-1RCV002PO	PUMP - CHARGING OR HHSI	9HNA 00.0M		CRTE	
38-1RCV003PO	PUMP - CHARGING OR HHSI	9HNA 00.0M		CRTE	
38-1RCV004PO	PUMP - AUXILLIARY OIL LIFT FOR 001PO	9HNA 00.0M		CRTE	
38-1RCV005PO	PUMP - AUXILLIARY OIL LIFT FOR 002PO	9HNA 00.0M		CRTE	
38-1RCV006PO	PUMP - AUXILLIARY OIL LIFT FOR 003PO	9HNA 00.0M		CRTE	
38-1RCV007PO	PUMP OIL AUXILLIARY ON 001PO	9HNA 00.0M		CRTE	
38-1RCV008PO	PUMP OIL AUXILLIARY ON 002PO	9HNA 00.0M		CRTE	
38-1RCV009PO	PUMP OIL AUXILLIARY ON 003PO	9HNA 00.0M		CRTE	
38-1RCV015PO	EMERGENCY SEAL INJECTION POSITIVE DISPLA	9HNA 00.0M	MOD96074	CRTE	
38-1RCV089PO	PUMP - CHARGING	9HNB 00.0M		CRTE	
38-2RCV001PO	PUMP - CHARGING OR HHSI	9HNB 00.0M		CRTE	
38-2RCV002PO	PUMP - CHARGING OR HHSI	9HNB 00.0M		CRTE	
38-2RCV003PO	PUMP - CHARGING OR HHSI	9HNB 00.0M		CRTE	
38-2RCV004PO	PUMP - AUXILLIARY OIL LIFT FOR 001PO	9HNB 00.0M		CRTE	
38-2RCV005PO	PUMP - AUXILLIARY OIL LIFT FOR 002PO	9HNB 00.0M		CRTE	
38-2RCV006PO	PUMP - AUXILLIARY OIL LIFT FOR 003PO	9HNB 00.0M		CRTE	
38-2RCV007PO	PUMP OIL AUXILLIARY ON 001PO	9HNB 00.0M		CRTE	
38-2RCV008PO	PUMP OIL AUXILLIARY ON 002PO	9HNB 00.0M		CRTE	
38-2RCV009PO	PUMP OIL AUXILLIARY ON 003PO	9HNB 00.0M		CRTE	
38-2RCV015PO	EMERGENCY SEAL INJECTION POSITIVE DISPLA	9HNB 00.0M	MOD96074	CRTE	

Step 2

Once requestor got new number, he/she needs to supply CMG with the rest of the information such as the Functional location (which consists of unit, system, number and Bigramme e.g 1 RCV 001 PO), description, parent location (where to link trigramme on SAP), physical location (where trigramme/component is on the Plant), classification of trigramme, Mod Number.

Step 3

Need to know if it is MOD related or an update for a drawing. If it is Mod related, then Trigramme and Cable request form needs to be completed. Form is located on Hyperwave.

<u>HTTPS://hyperwave.eskom.co.za:443/Eskom/Eskom%20Documentation/Generation%20Division/NUCLEAR%20ENGINEERING/Forms/331-282</u>. Trigramme and Cable Request Form forms part of the Design.

Step 4

CMG will give "T" Number for Our Reference part and numbers are also sequential. All Trigramme letters will be on G: Drive.

HTTPS://hyperwave.eskom.co.za:443/Eskom/Eskom%20Documentation/Generation%20Division/NUCLEAR /NUCLEAR%20ENGINEERING/Forms/331-282

Step 5

Once all information has been populated in Form with the initials of the Design Engineer (who will sign for the classification and CMG will sign other part.

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Step 6

Once all signatures have been obtained, CMG will do a letterhead with all and send original to requestor and CMG will scan in and load trigrammes on SAP and Cable Database.

Step 7

Please note: Requestor can request for trigrammes and Cables to be added, change or deleted. (It depends on what is Design for).

1 GCT 423 XR Monostable R 2 GCT 423 XR Monostable R 2 e: 1 of 1 Words: 84 🕉 English (S	D DESCRIPTION Play Module 28 Vdc Play Module 28 Vdc	PARENT LINK 1 GCT 2 GCT	LOCATION 1 KRG 034 AR 2 KRG 034 AR Elsabè Perrang	Our Referen Modification CLASS No. 0195/88Q 0195/88Q	No:	S9	1086E	Rev.0) ATION ER 0 0		INITIALS MS MS			
TRIGRAMME Image: Comparison of the text of the text of t	DESCRIPTION elay Module 28 Vdc elay Module 28 Vdc	1 GCT	1 KRG 034 AR 2 KRG 034 AR Elsabè Perrang	CLASS No. 0195/88Q	SA 1E	CLAS: SE	SIFIC/ Q Q3	ATION ER 0	IMP AR	MS			
TRIGRAMME 1 GCT 423 XR Monostable R 2 GCT 423 XR Monostable R 1 of 1 Words: 84 3 English (S To The N	DESCRIPTION elay Module 28 Vdc elay Module 28 Vdc	1 GCT	1 KRG 034 AR 2 KRG 034 AR Elsabè Perrang	0195/88Q	SA 1E	SE 1	Q Q3	ER 0	IMP AR	MS			
2 GCT 423 XR Monostable R	elay Module 28 <u>Vdc</u> elay Module 28 <u>Vdc</u>	1 GCT	1 KRG 034 AR 2 KRG 034 AR Elsabè Perrang	0195/88Q	1E	1	Q3	0	AR	MS			
2 GCT 423 XR Monostable R	elay Module 28 <u>Vdc</u>		2 KRG 034 AR Elsabè Perrang					-					
e: 1 of 1 Words: 84 👌 English (S		2 GCT	Elsabè Perrang	0195/88Q	1E	1	Q3	0	AR	MS			
Your Refe										1			
To: The M										M. Scholtz			
Your Refe	buth Africa) 🛛 🎦 📗	5 - 1 - 6 - 1 - 7 8	II		1.13		106	3	100% (
	To: The Manager						Date: 14 October 2019 Enguines: Tel: +27 21 550 4059 Elsabé Perrang						
Dear Sinf	rence:	Our Refere	nce:	Rev: 0									
	ladam												
Attached	is the listing of tri	R CR 104614-RC igrammes added Plant as seen fr	for CR 10461	4 - RCV -1	frigr	amn	nes	are	used	1			
Trigramm Ptease er	e Numbers have be	een verified on SAI s in KAA-501 and 3	P, PIGO and w	ith the Des	Igner		ppro	priat	le				

E Perrang CONFIGURATION MANAGEMENT

CONTROLLED DISCLOSURE

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Plant Anomaly Form E FORM.pdf - Adobe Acrobat Pro DC			

ols	PB	S UPDATE FOR	M ×								
ቀ (1 /	1 📐 🤇	ΦΘ(.6% •	La -	₩ (.	
	Requ	estor	Date		Depa	rtment			Signature		
	Roxsanne	e Gordon	2019-11-2	r i	Conventional Systems Engineering						
Add Dele		te Change Description	An additional filter and pres	et valve was installed o) under equivalency M037-15E.						
✓ DDR N		2010/01752									
DDR No 2019/01752 Trigramme			Description	Location	Classification Number	Quality	Safety	SIFICATIO Seismic	Environmental	Importance Category	
1 GHE 901 F	9 📝	Separator Filter		GHE Room 0.0m Turbine Hall	0099/88Q	Q4	NSF	NC	NEV	AR	
1 GHE 901 \	и 🗸	Preset Valve for Fil	ter	GHE Room 0.0m Turbine Hall	0099/88Q	Q4	NSF	NC	NEV	AR	
										4.	
				-			_				
SAP update		Elsabe P	errang	Date Updated	2019-12-						

Step 1

If it is just a Plant Anomaly update, then Plant Breakdown Structure Form needs to be completed. Form is located on Hyperwave. Link to

HTTPS://hyperwave.eskom.co.za:443/Eskom/Eskom%20Documentation/Generation%20Division/NUCLEAR /NUCLEAR%20ENGINEERING/Forms/240-145628543

Step 2

Requestor needs to raise a DDR to do the updates on drawings/documents.

Step 3

Once Forms has been issued (Mod or Plant Anomaly), CMG will load trigrammes on SAP. If Modification has not been implemented, trigrammes will stay inactive (INAC) on SAP until Project Leader informs CMG.

CONTROLLED DISCLOSURE

Step 4 Plant anomaly Trigrammes on SAP it will be active (CRTE) To load Plant.

🕫 🔎 Chan	ge Functional	Location: Master Data									
1 - 유 해 사	Classification Meas	suring points/counters Data origin									
	38-1AC0003LE										
unctional loc.		18-1AC0003LP Cat. M Technical system - standa GAUGE - DISCHARGE PRESSURE 1AC0001PO Image: Cat. M Technical system - standa									
Description Itatus	CRTE										
	Ľ										
Location data											
MaintPlant	3400	Koeberg Power Station									
Location	1HMX-06.0M	Unit One Turbine Hall -06.0M									
Room											
Room											
Plant Section	100	A Feedwater									
Plant Section Work center											
Plant Section Work center ABC Indic.	100	A Feedwater									
Plant Section Work center											
Plant Section Work center ABC Indic. Sort Field											
Plant Section Work center ABC Indic.		Availability Related									
Plant Section Work center ABC Indic. Sort Field											
Plant Section Work center ABC Indic. Sort Field Address Name		Availability Related									
Plant Section Work center ABC Indic. Sort Field Address		Availability Related									

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Issuing of Cables

Step 1

A request can be for Trigrammes and Cables. The same form should be updated. <u>HTTPS://hyperwave.eskom.co.za:443/Eskom/Eskom%20Documentation/Generation%20Division/NUCLEAR%20ENGINEERING/Forms/331-282</u>

Step 2

CMG needs the Cable Number (Type of cables (C-Control, M-Measurement, B-Power), Description, Source and destination (From and To), Mod Number and Cable Specification.

Step 3

Cable Numbers runs sequential and can be checked on the Cable Database in Access. <u>Access</u> Database\Cables 27 March .accdb

26	Cut	T	51.000m		election *	New E Totals	Grand	Calibri. *	11 , 三三 徳 徳	9-91 IP-6		
new	Paste // Format Painter	Filter		escending 🔥 🗛	dvanced * Refresh	Save Spelling Fi	nd la Se	N 7 Y A 107	<u>a</u> · ≡ ≡ ≡ ⊞ ·]			
ews	Clipboard 5		~	Sort & Filter	All	Records	Find		Formatting	15		
ables	• « 🕻	Cable	a Sche	dule 🗇 Cable	ScheduleFilter1							
arch	Q	Syste	ι	Cable No +	From •	то то	Mod	Cable Specification	Remarks •	In Pericles +	Record_Create_Date •	_
1 a	ble Schedule	RCV	1	1RCV C930	1RCV 007UB	1KSA B07AR	02239	Control cable 4 x 1.5mm2 non armoured		No	2005/02/16 12:02:42 PM	
		RCV	1	1RCV C935	1RCV 037UB	1K5A R07	96074	12 x 1.5mm2 Non - armoured	Arthur Von Allemann	No	2007/08/02 08:40:35 AM	
		RCV	1	1RCV C936	1RCV 037UB	1KIT 001CQ	96074	37 x 1.5mm2 Non - armoured	Arthur Von Allemann	No	2007/08/02 08:42:43 AM	
		RCV	1	1RCV C937	1RCV 038UB	1RCV 167TL	96074	12 x 1.5mm2 Non - armoured	Arthur Von Allemann	No	2007/08/02 08:44:39 AM	
		RCV	1	1RCV C938	1RCV 038UB	1RCV 166TL	96074	12 x 1.5mm2 Non - armoured	Arthur Von Allemann	No	2007/08/02 08:46:08 AM	
		RCV	1	1RCV C939	1RCV 038UB	1RCV 165TL	96074	12 x 1.5mm2 Non - armoured	Arthur Von Allemann	No	2007/08/02 08:47:21 AM	
		RCV	1	1RCV C940	1RCV 037UB	1LHA 001TU	96074	2 x 1.5mm2 Non -armoured	Arthur Von Allemann	No	2007/08/02 08:48:29 AM	
		RCV	1	1RCV C941	1RCV 037UB	1LHB 001TU	96074	2 x 1.5mm2 Non -armoured	Arthur Von Allemann	No	2007/08/02 08:50:03 AM	
		RCV	1	1RCV C942	1RCV 037UB	1KRG 111AR	96074	2 x 1.5mm2 Non -armoured	Arthur Von Allemann	No	2007/08/02 08:51:31 AM	
		RCV	1	1RCV C943	1RCV 037UB	1KRG 121AR	96074	2 x 1.5mm2 Non -armoured	Arthur Von Allemann	No	2007/08/02 08:53:18 AM	
		RCV	1	1RCV C944	1RCV 037UB	1KRG 131AR	96074	2 x 1.5mm2 Non -armoured	Arthur Von Allemann	No	2007/08/02 08:54:37 AM	
		RCV	1	1RCV C945	1RCV 038UB (VALVE	1LLY 203JA	96074	12 x 1.5mm2 Non - armoured	Arthur Von Allemann	No	2007/08/02 08:55:37 AM	
		RCV	1	1RCV C946	1RCV 038UB(PUMP)	1LLY 104JA	96074	12 x 1.5mm2 armoured	Arthur Von Allemann	No	2007/08/02 08:57:03 AM	
		RCV	1	1RCV C947	1RCV 038UB	1LKI 005UB	96074	2 x 1.5mm2 Non -armoured	Arthur Von Allemann	No	2007/08/02 08:59:03 AM	
		RCV	1	1RCV C948	1RCV 700VP	1LLY 001TB	96074	12 x 1.5mm2 Non - armoured	Arthur Von Allemann	No	2007/08/02 09:00:18 AM	
		RCV	1	1RCV C949	1RCV 038UB	1RCV 3305P	96074	2 x 1.5mm2 armoured	Arthur Von Allemann	No	2007/08/02 09:01:27 AM	
		RCV	1	1RCV C950	1RCV 005ST	1RCV 038UB	96074	2 x 1.5mm2 armoured	Arthur Von Allemann	No	2007/08/02 09:06:33 AM	
		RCV	1	1RCV C952	1RCV 030UB	1LU 002UB	96074	2 x 1.5mm2 armoured	Arthur Von Allemann	No	2008/12/08 12:07:51 PM	
		RCV	1	1RCV C953	1RCV 038UB	1LLS 001UB	96074	2 x 1.5mm2 armoured	Arthur Von Allemann	No	2008/12/08 12:05:48 PM	
		RCV	1	1RCV C959	1RCV 005ST	1RCV 005BC	96074	2 x 1.5mm2 armoured	Arthur Von Allemann	No	2008/12/08 01:27:10 PM	

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Appendix M: Guide for Classifications to be updated on SAP

New or revised Classifications to be updated in SAP

Step 1

Design Engineering send new or revised classification via a blue cover slip to Configuration Management on transmittal or via e-mail.

Step 2

Trigrammes should also be listed on blue cover slip.

Step 3

CMG to sign transmittal and sent back to DE.

Step 4

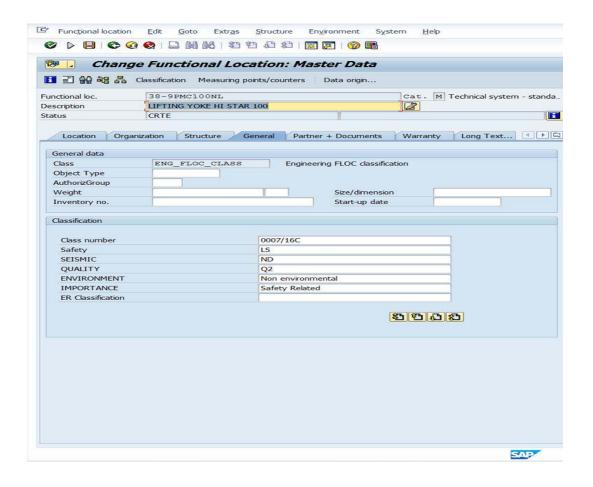
CMG to update SAP accordingly.

Step 5

CMG to send proof of changes.

Step 6

CMG not responsible for the distribution and storage of Classification packages. Distribution done by Spec Eng and storage by TD&RM



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Appendix N: Guide for CM to process DDR'S on DDT

How to initiate a DDR on the DDT System

DDT can be found on Z: Drive/NalApp/DDT.

Access will be granted by Tertuis Rossouw via e-mail (<u>RossouT@eskom.co.za</u>), he will provide you with a registration form that must be completed for access to DDT system.

Once you get DDT screen as below, login with Name and Password that Tertuis granted you, then you can select a new password, verify password and login. The next time when you log in again, then you just logged in with your login name and new password.

Login User Name: Cless Password: New Password:
Verify Password: DDR's are processed according to 331-85. To view existing DDR's login as Guest.

How to add Reference number (KBA number) and CRN number on DDT

config/add docs/new kba & doc no/ doc decipline/production/current location

		DDT		
d Documents				23
Document Number	Title	Rev CRN	Disci- Pro- pline duction License	Current Location
Humber	145	1.07 0.11		20000011

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How to send DDR back to originator if information is not correct

config/edit ddr/p/s or mod/undo signatures to originator

Plant Status DDR Pro	cess Edit		23
DDR Number 2020/01014 P20/0003 P20/0003 P20/0001 2020/01029 2020/01019 2020/01019 2020/01016 2020/01016 2020/01016	Text Change?	A1207B02097 Rev: Z1 ERATING AND MAINTENANCE MANUAL FOR REACT Production? License Binding? SE(S) PAGE 1 (COVER) & PAGE 46 (SECTION 5.4.2)	CRN: CRN:
2020/01005 2020/01004 +	Originated By RAMAN 2020/07/13 Current Location Config Process Cancel DDR:	Process Checked By Supervisor: [raman Evaluated By: [venter] EDMS Registration By: Changes Made By: Changes Checked By: EDMS Completion By: EDMS Completion By: EDMS Linked By: Print Room Sent By: [Undo 2020/04/08 Undo 2020/08/12
		Print Room Received By: Controlled Copies Issued By: Vault Filed By:	

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How to Cancel DDR on DDT.

config/process ddr/p/s or mod/find ddr/ tick on cancel/scroll on config process: comments/ add comments in field

Modification DDR P	rocess			2
DDR Number	DDR Info			
2014/01324	Modification Nr: 08	051 Outage Nur	mber: 123	Unit Nr: 1
2014/01328	Taf: 🗖			
2014/01326 2014/01325	Document Nr: KB/	1207H011007 🖵 Rev: Z1 0	CRN: 14976	
2014/01324	Title: ON-	LINE SIPPING SYSTEM-MOVABLE CABIN	IET-MEASURE AND CO	ONTROL CABINET
2014/01323 2014/01322	Text Change?	Produc	tion?	License Binding?
2014/01321	Required changes: UNI	T 1 : PAGE(S) - ALL - DELETE TEH COMP	PLETE DOCUMENT	
2014/01320 2014/01319 -				
	Originated By	Process	-	
	JOEPIE VISSE		Ins_cheynea	2015/06/24
	2014/11/11	Approved For Processing By	a de la construcción de la constru	2018/04/18
	Implementation Date	EDMS Registration By		2020/09/06
		Master Retrieved By		
		Changes Made By		
	Current Location	Changes Checked By		
	1	Authorised By	ATT AND A DECK	
	Config Process	Approved For Issue By	1	
	Comments	EDMS Completion By	15	<u></u>
	1	EDMS Linked By		
Print	Cancel DDR: 🔽	Print Room Sent By	· · · · · · · · · · · · · · · · · · ·	
		Print Room Received By		
Close		Controlled Copies Issued By		
		Vault Filed By		1

How to Process DDR's on DDT

config control/process ddr/p/s or mod

Plant Status DDR Pr			
DDR Number	DDR Info		
P20/0004	Document Nr: Ne		CRN:
P20/0003	Title: da	ta sheets for contactors for 2DMW005PR	
P20/0002 P20/0001	Text Change?	Production? 🔽 License Binding? 🗖	Equivalence: 🔽 ee-2020-0033
2020/01020 2020/01019	Required changes: Ad	ld to MM574 vol 1/1	
2020/01018			
2020/01016			
2020/01014 2020/01013	Justification:		
2020/01005 -			
	Originated By	Process	
	fahrenm	Checked By Supervisor:	Sign
	2020/09/07	Evaluated By:	Sign
		EDMS Registration By:	Sign
	Current Location	Master Retrieved By:	
	1	Changes Made By: Changes Checked By:	Sign
	Config Process	Authorised By:	Sign Sign
	Cancel DDR:	EDMS Completion By:	Sign
		EDMS Competition By:	Sign
Print		Print Room Sent By:	Sign
DDR		Print Room Received By:	Sigh
Close		Controlled Copies Issued By:	(Sign)
Liose		Vault Filed By:	Sign

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	DOT	The second second
2		0
	Configuration Control Switchboard	
	DDT DATABASE	
	Verify(git Process Reppts	
	Cocuments CON'S	
	Click to open a form to verify/edit existing documents.	
	Ard Ede Documents DDRs	
	Modification Expert List DDT Date	
	Man Meny	

Verify Document	ts		CRN	Disci-	Pro-		_	Verified	Verified	83	
Number	Title	Rev	Nr	pline	duction	License	Verified	By	Date		
46/04755	6SSL007CR	0	0.46/04755	-							
46/1021	CAS BASEMENT ELECTRICAL SUPPLY 1ARE903VL	Z1 Z1	0.46/1021 46/14255R\	+							
46/14255 46/14255RV1	IARE903VL IARE903VL	Z1	46/14255H1	-	18						
46/1480	SEC PUMPHOUSE LEVELS +6.75 & +8.00 GENERAL ARRA		51312	*		10					
46/1481	SEC PUMPHOUSE - LEVEL 13:50 AND ROOF OVER STAIR		51313	-		1 U	M				
46/1482	SEC PUMPHOUSE - SECTIONAL DETAILS	Z	0.46/1482	-			V				
46/1941	SEC PUMPHOUSE - NORTH, SOUTH, EAST AND WEST EI		51445	-	U	Ū					
46/1951	SECTIONAL ELEVATIONS OF WALLSW18 TO W21, W72 T		51447	-			2				
.46/28201	GENERAL LAYOUT FOR CCTV SYSTEM	Z2	0.46/28201	-		U	M			1	
46/31479	SECURITY COMPUTER SYSTEM POWER DISTRIBUTION	1	0.46/31479				Ш				
.46/31480	SECURITY COMPUTER SYSTEM POWER DISTRIBUTION	1	0.46/31480								
.46/31481	SECURITY UHF POINT 6SSD 003CR	1	45924								
46/31482	SECURITY CCTV POWER DISTRIBUTION BOARD CCTV 1	1	0.46/31482								
.46/31483	SECURITY CCTV POWER DISTRIBUTION BOARD CCTV2	1	45926	-							
46/31496	AIR CONDITIONING 6DWI 303AR ELECTRICAL DIAGRAM		0.46/31496				KK				
46/31497	AIR CONDITIONING 6DWC 401AR ELECTRICAL DIAGRAM AIR CONDITONING 6DWC 402AR ELECTRICAL DIAGRAMS		0.46/31497	E ¥			V				
46/31498	6SEU, ACP2 PUMPS CABLE LAYOUT	5 Z1	64409	E 💌		1	V	_			
46/31506	CAS BUILDING BASEMENT AIR CONDITIONING 6SSM403/		046/31506		10	10	M		_	-	
46/31507	BASEMENT DISTRIBUTION BOARD SINGLE LINE DIAGRA		64415	-	10	<u> </u>	Ü		_		
46/31518	PSF EH 338V AND 220V DISTRIBUTION BOARDS	1	95557			Ū.	V				
46/31519	PSF E/H'S 380V AND 220V DISTRIBUTION BOARDS	1	95558	-						1	
.46/31558	ISOMETRIC DRAWING LINE : ABP 005	0	0.46/31558	-			¥				
.46/31560	ISOMETRIC DRAWING LINE : ABP 006	0	0.46/31560	-			V				
46/31561	ISOMETRIC DRAWING LINE : ABP 007	0	0.46/31561	-							
.46/31562	ISOMETRIC DRAWING LINE : ABP 008	0	0.46/31562	-			V				
.46/31563	ISOMETRIC DRAWING LINE : ABP 009	0	0.46/31563	-			V				
.46/31564	ISOMETRIC DRAWING LINE : ABP 010 ISOMETRIC DRAWING LINE : ABP 011	0	0.46/31564 0.46/31565	-			V			-	
	0676 + H + KN NG LINE : ABP 011	0	0.46/31565	-						×	

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Appendix O: Document and Drawing Request (DDR) Checklist

DDR ECP Date Master Media	Online M DDR Nur Checklis		nic	Sepia
	Checklis	t Date	nic	Sepia
			nic	Sepia
	Filing Location	Electro	nic	Sepia
Master Media	Filing Location	Electro	nic	Sepia
eader Informed				Transmittal No
E.C	C.P. DDT	PIGO		
			E.C.P. DDT PIGO	E.C.P. DDT PIGO

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Appendix P: Production Documents Lis	Appendix P:	Production	Documents	List
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	Configuration Management Production Documents List	Template Identifier	240-43921804	Rev	6
Eskom		Document Identifier	240-158483322	Rev	1
		Effective Date	October 2020		
		Review Date	October 2023		

This list Identifies all production documents that is processed by the CM Group as per 331-85			
DSE LOGIC I	DIAGRAMS	FLOW DIA	GRAMS
006		500's	
026	026		's
036	036		's
046	6	310	's
056	5	410	's
066	5	610's	
FEEDER DI	AGRAMS	BOARD OUTAGE	
*KBA 0015 /	400 1000	31.46 / 1150	
31.46 /	1003	31.46 / 1151	
31.46 /	31.46 / 1004		1152
31.46 /	1005	31.46 / 1153	
31.46 /	1006	KSA ALAR	MLISTS
31.46 /	1007	KBA 0122 E02 1003	
ELECTRICAL PE	ENETRATION	KBA 0222 E02 1003	
KBA 0022 E	602 1004	KBA 0922 E02 1007	
NSSS SET POI	NT MANUAL	NSSS VALVE LIST	
KBA 1222	E02 027	1.46 /	1047
BNI SET POIN	IT MANUAL	BNI VAL\	/E LIST
KBA 1227	KBA 1227 E02 507		1046
	SIP / SIN 60	0'S SYSTEM	
ARE	GCT	RCV	RPN
ASG	GSE	REA	RRA
DVK	PTR	RGL	VVP
EAS	RAZ	RIS	KBA 0022 F00 002
ETY	RCP	RPE	

CONTROLLED DISCLOSURE

Appendix Q: Configuration Management Control Copy Holders List for Distribution Documents

	Configuration Management	Template Identifier	240-43921804	Rev	6
Eskom	Control Copy Holders List for Distribution Documents	Document Identifier	240-158556048	Rev	1
		Effective Date	October 2020		
		Review Date	October 2023		

BOARD OUTAGE SHEETS	FLOW DIAGRAMS
11 X CONTROL INFRONT (11, 14, 17, 23, 35, 36, 37, 38, 39, 84, 119)	FLOWS (CHECK THE FLOW DIAGRAM MATRIX SAVED ON
	G:DRIVE) ALWAYS INCLUDE 6 WORKING COPIES
(CCH 65 & 66 ONLY UNIT 1, 6, 9 TO BE SUPPLIED) (CCH 65 & 66 NO UNIT 2)	SIZE A2 FOR TOMMY
	1 X A3 WORKING COPY
	1 X A3 CONTROL COPY 39A
	1X PLAIN A3 (TD & RM COPY GABY)
BNI SETPOINT MANUAL	LOGIC DIAGRAMS: 006.026.036.046.056.066.
BNI = 15 CONTROL INFRONT	3 X CONTROL AT BACK (36, 37, 38.)
(11, 13, 14, 23, 35, 36, 37, 38, 39, 64, 65, 66, 80, 107,118)	8 X CONTROL INFRONT (11, 13, 14, 23, 64, 65, 66, 118)
	(<u>1</u> , 10, <u>14</u> , 20, 00, 00, 110)
BNI VALVE LIST	MAINTENANCE MANUAL
BNI = 15 CONTROL INFRONT	DOCUMENTS ONLY:
(11, 13, 14, 23, 35, 36, 37, 38, 39, 64, 65, 66, 80, 107,118)	3 X CONTROL AT BACK (36, 37, 38)
	DRAWINGS ONLY: (CONTROL STAMP INFRONT)
	3 X CONTROL INFRONT (38, 37, 38)
DSE NORMAL	NSSS SETPOINT MANUAL
3 X CONTROL AT THE BACK (36, 37, 38)	NSSS = 15 CONTROL INFRONT
4 X CONTROL INFRONT (13, 23, 64, 118)	(11, 13, 14, 23, 35, 36, 37, 38, 39, 64, 65, 66, 80, 107,118)
ELECTRICAL DRAWINGS (700 SERIES)	NSSS VALVE LIST
3 X CONTROL (13, 36, 38)	NSSS = 15 CONTROL INFRONT
	(<u>11</u> , 13, <u>14</u> , 23, 35, 36, 37, 38, <u>39</u> , <u>64, 65, 66,</u> 80, 107, 118)
FEEDER DIAGRAMS	PENETRATION LIST
NB-KBA 0015 A00 1000 TO BE DISTRIBUTED TO ALL FEEDER CCH'S	7 X CONTROL INFRONT (11, 14, 23, 36, 37, 38, 39)
15 X CONTROL INFRONT	
(11, 14, 17, 17a, 23, 35, 38, 37, 38, 39, 64, 65, 66, 80, 118)	
(CCH 65 & 66 ONLY UNIT 1, 6, 9 TO BE SUPPLIED)(CCH 65	
& 66 NO UNIT 2)	
KSA ALARM LIST	SIP/SIN DRAWINGS
8 X CONTROL INFRONT (11, 13, 14, 36, 37, 38, 64, 91, 118)	16 X CONTROL INFRONT (10A, 13, 23, 35, 36, 37, 38, 39, 64,
KBA 01 NO COPY FOR CCH14	65, 66 80, 107, 111, 118)
KBA 02 NO COPY FOR CCH11	1 X PINK COPY (CCH 11), 1 X GREEN COPY (CCH 14)
(CCH 65 & 66 NO UNIT 2)	
(CCH 91 FOR UNIT 9 ONLY)	
KSC ALARM DRAWINGS	IMPORTANT INFORMATION: CONTROL ROOM CCH: CCH 11 - UNIT 1
7 X CONTROL INFRONT (13, 36, 38, 39, 64, 65, 66)	CCH 11 – UNIT 1
	CCH 39 - PTW SATELLITE
	CCH 45 – NAB CONTROL ROOM

CONTROLLED DISCLOSURE

Appendix R: Configuration Management Control Copy Holder List

CCH No	Location on Plant
11	Control Room Unit 1
14	Control Room Unit 2
39	PTW Office Control Room OPS
39A	PTW Office Control Room OPS (19.00M)
39B	PTW Office Control Room OPS (15.00M)-Created for Covid-19 period
45	NAB Control Room OPS
13	Emergency Control Centre ECC
23	Lesedi
29	MMS
34	Chemistry
35	Ops Support MSB
36	MAB Satellite Office
38	ISI Satellite Office
42	Inspection & Test
17	000
64	Ops Training Library Edusec
65	Ops Training Simulator Edusec
66	Ops Training Simulator Edusec
67A	MWS
80	System Engineering
82	SHY Plant OPS
97	Fire Station
107	NNR
115	OPS Training
118	OPG

CONTROLLED DISCLOSURE