

**Doc No: AzSPU-GEN-PRC-001-C9**

## **CASPIAN REGION**

**Document Title:** AzSPU Management of change Procedure

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## Amendment Summary

Revision No	Review Date	Summary description of changes	eMOC Ref
C1	18.7.2008	Initial issue for comment	
C2	12.8.2008	Compliance additions	
C3	3.12.2008	Edits	
C4	5.12.2008	Compliance check sheet added	
C5	8.1.2009	Edits	
C6	8.1.2009	Edits drilling IT&S	
C7	7.2.2009	Comp check and linkages updates issue for use	HSE TD-28
C8	30/07/2010	AzSPU Management of Change Procedure - major review and update	eMOC 56
C9	07/10/2010	Update to the Process Safety TA HAZOP sign off requirements Update to include PSCM contractor change requirement Update to the rev R folder identification General formatting and link updating	eMOC 56

# 1 Purpose

This document provides a single Management of Change (MoC) procedure which will be used by the AzSPU to meet the essential requirements of OMS 4.2 Management of Change and GRP 4.2-0001 to:

- Allow AzSPU to implement and maintain a management of change process for temporary and permanent changes. *(E&P OMS Ver2 section 4.2.1)*
- Identify which tool will be used to support the MoC process *((E&P OMS Ver2 section 4.2.1.1)*
- Monitor legal regulatory and BP requirements so as to be aware of changes in these that might necessitate changes to the AzSPU activity. *(E&P OMS Ver2 section 4.2.2)*
- Specify criteria for determining which proposed changes to AzSPU activity require application of the MoC process, paying particular attention to those affecting plant, material, equipment, technology, process, products, services, procedures, practices, people and organization. *(E&P OMS Ver2 section 4.2.3)*
- Detail the requirement for risk assessment, identification and application of risk reduction measures, the required level of management approval; application of a review prior to implementing the change to verify that identified risk reduction measures are in place, then identified training and updating of relevant documents *(E&P OMS Ver2 section 4.2.4)* is completed
- Identify the minimum review and approval requirements for change. *((E&P OMS Ver2 section 4.2.4)*
- Communicate the details of the proposed change to affected members of the workforce *(E&P OMS Ver2 section 4.2.5)*
- Provide a process to track MoC actions to closure *(E&P OMS Ver2 section 4.2.6)*
- Provide a process to verify the original scope and duration of temporary changes are not exceeded without review and approval *(E&P OMS Ver2 section 4.2.7)*
- Define the workflow for various types and categories of change *(E&P OMS Ver2 section 4.2.6, GRP 4.2-0001 section 5.2.2.D)*
- Identify training and competency assessments for those with accountabilities within the MoC process. *(E&P OMS Ver2 section 4.2.6, GRP 4.2-0001 section 5.2.2.C)*
- Identify the process of review that will be used to verify that the procedure is being implemented correctly

To ensure that change is managed in a clear uniform manner across the AzSPU, a single 'e-MoC' data-base tool will be used. This will be sub-divided by the various operating area groups to provide an MoC register, allowing the operating area line management team to have a clear view of change ongoing in their area of responsibility.

## 2 Accountability

### 2.1 MoC Process

The Single Point Accountable person for the MoC Process is the AzSPU HSE & ENG Vice President.

### 2.2 MoC implementation within the Performance Units

The Single Point Accountable person for the MoC process implementation within the each division is the division Vice president. For an individual MoC, the most senior manager approving the MoC has ultimate accountability for that MoC.

## 3 Scope

This document covers the management of change system used by:

- BP assets and Brownfield sites within the AzSPU in Azerbaijan, Georgia and Turkey when implementing permanent / temporary / emergency changes.
- Major projects green field sites are subject to their own management of the change process and are excluded from the scope of this document with the exception of brown field work.
- Contracts where it has been agreed that the contractor's management of change process will be used are excluded from the scope of this document with the exception of when the contract Technical Specialist requires formal oversight of a change or if the change affects marine systems.

### 3.1 Change types

MoC Type managed and approved under this procedure can be permanent, temporary and emergency.

Types will be categorized as follows:

- Technical Changes
- Process Software Changes
- Chemical
- Maintenance & Inspection Changes
- Drilling Intervention and Completions Changes (Wells)
- Document Changes
- Organizational Changes
- IT&S Changes
- Marine Changes
- DC&I Deviation

**Note:** Specific guidance for each change type can be found after the reference section of this document

Go to link for the MoC decision tree for guidance on what type of MoC is required or if no MoC is required

Document number	Document Title	Applies to	Notes
<a href="#">MOC-FRM-037</a>	MoC Decision Tree	AzSPU	To aid selection of MoC type

### 3.1.1 Permanent Change

A permanent change is a change that will be in place for more than 90 days.

**Note:** 90 days is a reflection of how long it takes to formally update documents and systems after a change has been implemented. If the change will be removed before 90 days then the requirements to update the master equipment list and back draft drawings and update other systems is waived. It is accepted that this will be managed on site.

**Note:** On occasion the operation areas require modifications that will be in place for longer than 90 days however they do not consider this as the long term solution, i.e. pipe clamps are fitted as an immediate measure to stop a leak and it is envisaged that this may be in place for in excess of 90 days. As such, a permanent MoC should be raised and any periodic review /maintenance / inspection should be managed through the computer maintenance management system, to ensure that this type of change does not exceed the period defined in the scope. A traction action is to be raised (and assigned to the MOC authorizer) with an action date to remove this modification. A separate MoC should be used to decommission this equipment and update the associated documents and systems.

**Note:** Examples of permanent changes for DC&I include MoC related to well basis of design documents and statement of requirements.

### 3.1.2 Temporary Change

A temporary change is a change that will have a limited duration and will be less than 90 days.

Temporary changes are typically part of a test, optimization trial, improvement project or similar Change. Temporary changes are typically planned in advance and executed under normal working conditions.

**Note:** Examples of temporary changes for DC&I include BOP test extensions and kick tolerance deviations

The temporary change will have the same sign off requirements as a permanent change, which will be based on risk level and the type of MoC. The documentation, as built drawings, operations instructions and any other maintenance requirements will be maintained in a file on site and within the MoC. The normal information that would be updated within the master documentation and equipment data-bases is waived. This recognizes that the temporary change will be removed (within 90 days) and the site left as it was before.

**Note:** Before close out of a Temporary MoC, a clear reference stating that all temporary changes have been removed.

Any Temporary MoC which is due to expire should be reviewed and actioned by the Authorizer.

A temporary MoC may be re-authorized twice by a period of no more than 90 days, only after an appropriate risk assessment has been recorded and attached to the MoC. After this period the MoC will need to be fully resubmitted as a permanent MoC.

**Note:** The two extensions reflects that on occasion within the Az SPU the ordering purchasing and receipt of material in country can take up to 180 days

**Note:** the temporary MoC period is from the date of authorization, to the date in the post implementation action that confirms that the temporary change has been removed - this should never exceed 270 days including all extensions.

### 3.1.3 Emergency Change

The definition of an emergency change is an immediate change which is required for safe operation. In this case a formal MoC will be raised and verified within 96hrs.

Emergency changes will have the same sign off requirements as a permanent change, which will be based on risk level and the type of MoC.

During the emergency the site management of risk will be considered and managed under ISSOW until the approved MoC can be put in place

### 3.2 AzSPU Sites

These are the sites and facilities which are owned/operated/interface with or are used by AzSPU sites. The table identifies the applicability of this procedure to these areas.

*Note: Where technical over sight is required of a contractor the Contract Technical Specialist will initiate the MoC process*

BP non operated vessels / barges/ boats/ buoys/MDU etc used by BP will require a Marine MoC if there is modification that affects or changes the marine system.

AZSPU eMoC SITE	AZSPU eMoC Facility	Owned by	Operated by	AzSPU MoC applies
C&EA	CEC - Caspian energy centre	BP	BP AZSPU	YES
Central services	AzSPU	BP	BP AZSPU	YES
Central services	Resource	BP	BP AZSPU	YES
Central services	D&C	BP	BP AZSPU	YES
Central services	HSE & Eng	BP	BP AZSPU	YES
Central services	Developments	BP	BP AZSPU	YES
Central services	HR	BP	BP AZSPU	YES
Central services	C&EA and Security	BP	BP AZSPU	YES
Central services	CFO	BP	BP AZSPU	YES
Central services	Shah Deniz 2	BP	BP AZSPU	YES
Central services	Turkey	BP	BP AZSPU	YES
Central services	Operations	BP	BP AZSPU	YES
Central services	Midstream	BP	BP AZSPU	YES
CFO	Housing	OTHERS	BP AZSPU	Yes when required for over sight
CFO	Office Operations	OTHERS	BP AZSPU	Yes when required for over sight
CFO	SPS QUAY side	BDWJF	ASCO	Yes when required for over sight
CFO	Primorsk	SOCAR	ASCO	Yes when required for over sight
CFO	SPS Logistics base	BDWJF	VARIOUS	Yes when required for over sight
CFO	BP Logistics Base	BP	ASCO	YES
CFO	Diesel Tank Farm	BP	ASCO	YES
CFO	Davis training centre	BP		Yes when required for over sight
CFO	TISA	BP	TISA	Yes when required for over sight
D&C	Advanced fluid facility	BP	HALLIBURTON	YES
D&C	Mobile Drilling Units	OTHERS	OTHERS	Yes when required for over sight or marine change
Developments	COP	BP	BP CDO	yes when required for over sight or Brownfield work
Developments	SD2	BP	BP CDO	yes when required for over sight or Brownfield work

AZSPU eMoC SITE	AZSPU eMoC Facility	Owned by	Operated by	AzSPU MoC applies
Developments	SCPx	BP	BP CDO	yes when required for over sight or Brownfield work
Developments	Marine Fleet	BP	BP CDO	yes when required for over sight or Brownfield work
HSE & ENG	CTTC- Training Centre	BP	TTE	Yes when required for over sight
Midstream Export Azerbaijan (BTC/SCP/WREP)	BTC - BVA & pipeline	BP	BP AZSPU	YES
Midstream Export Azerbaijan (BTC/SCP/WREP)	BTC -IPA1	BP	BP AZSPU	YES
Midstream Export Azerbaijan (BTC/SCP/WREP)	BTC - PSA2	BP	BP AZSPU	YES
Midstream Export Azerbaijan (BTC/SCP/WREP)	SCP - BVA & pipeline	BP	BP AZSPU	YES
Midstream Export Azerbaijan (BTC/SCP/WREP)	WREP - Pipeline	BP	BP AZSPU	YES
Midstream Export Azerbaijan (BTC/SCP/WREP)	WREP - PS2	BP	BP AZSPU	YES
Midstream Export Azerbaijan (BTC/SCP/WREP)	WREP - PS5	BP	BP AZSPU	YES
Midstream Export Azerbaijan (BTC/SCP/WREP)	WREP - PS8	BP	BP AZSPU	YES
Midstream Export Turkey (BTC/SCP/Ceyhan)	BTC - BVT & pipeline	BP	BIL	Yes when required for over sight
Midstream Export Turkey (BTC/SCP/Ceyhan)	BTC - Ceyhan Terminal	BP	BIL	Yes when required for over sight
Midstream Export Turkey (BTC/SCP/Ceyhan)	BTC -IPT1	BP	BIL	Yes when required for over sight
Midstream Export Turkey (BTC/SCP/Ceyhan)	BTC -IPT2	BP	BIL	Yes when required for over sight
Midstream Export Turkey (BTC/SCP/Ceyhan)	BTC - PT1	BP	BIL	Yes when required for over sight
Midstream Export Turkey (BTC/SCP/Ceyhan)	BTC - PT2	BP	BIL	Yes when required for over sight
Midstream Export Turkey (BTC/SCP/Ceyhan)	BTC - PT3	BP	BIL	Yes when required for over sight
Midstream Export Turkey (BTC/SCP/Ceyhan)	BTC - PT4	BP	BIL	Yes when required for over sight
Midstream Export Turkey (BTC/SCP/Ceyhan)	SCP - Area 99 (Turkey)	BP	BIL	Yes when required for over sight
Midstream Georgia (BTC/SCP/WREP/Supsa)	BTC - BVG	BP	BP AZSPU	YES
Midstream Georgia (BTC/SCP/WREP/Supsa)	BTC - pipeline	BP	BP AZSPU	YES
Midstream Georgia (BTC/SCP/WREP/Supsa)	BTC -PSG1	BP	BP AZSPU	YES
Midstream Georgia (BTC/SCP/WREP/Supsa)	BTC - PSG2	BP	BP AZSPU	YES
Midstream Georgia (BTC/SCP/WREP/Supsa)	SCP - BVG	BP	BP AZSPU	YES
Midstream Georgia (BTC/SCP/WREP/Supsa)	SCP - pipeline	BP	BP AZSPU	YES
Midstream Georgia (BTC/SCP/WREP/Supsa)	SCP - Area 72 (PSG1)	BP	BP AZSPU	YES
Midstream Georgia (BTC/SCP/WREP/Supsa)	SCP - Area 73 (PSG1)	BP	BP AZSPU	YES

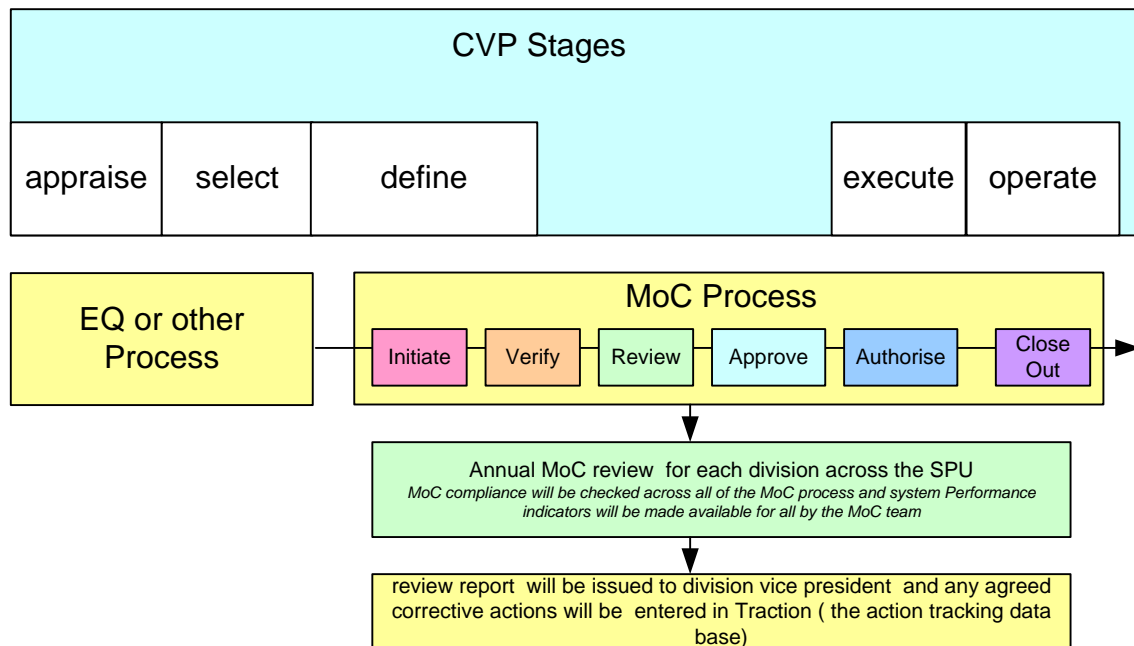
AZSPU eMoC SITE	AZSPU eMoC Facility	Owned by	Operated by	AzSPU MoC applies
Midstream Georgia (BTC/SCP/WREP/Supsa)	SCP - Area 75 (PSG2)	BP	BP AZSPU	YES
Midstream Georgia (BTC/SCP/WREP/Supsa)	SCP - Area 80 (Georgia)	BP	BP AZSPU	YES
Midstream Georgia (BTC/SCP/WREP/Supsa)	WREP - Pipeline	BP	BP AZSPU	YES
Midstream Georgia (BTC/SCP/WREP/Supsa)	WREP - PRS1	BP	BP AZSPU	YES
Midstream Georgia (BTC/SCP/WREP/Supsa)	WREP - PRS2	BP	BP AZSPU	YES
Midstream Georgia (BTC/SCP/WREP/Supsa)	WREP - PS11	BP	BP AZSPU	YES
Midstream Georgia (BTC/SCP/WREP/Supsa)	WREP - PS13	BP	BP AZSPU	YES
Midstream Georgia (BTC/SCP/WREP/Supsa)	WREP - PS15	BP	BP AZSPU	YES
Midstream Georgia (BTC/SCP/WREP/Supsa)	WREP – Supsa	BP	BP AZSPU	YES
Midstream Sangachal terminal	Waterman Produced Water skid	BP	Waterman	YES
Midstream Sangachal terminal	ST CWAA	BP	BP AZSPU	YES
Midstream Sangachal terminal	SPS CWAA	BP	BP AZSPU	YES
Midstream Sangachal terminal	Serenja waste (haz)	BP	BP AZSPU	YES
Midstream Sangachal terminal	ST- STP	BP	AAS-ATE JV	YES
Midstream Sangachal terminal	Sumgait 1 (closed out )	ADES	ASS	NO
Midstream Sangachal terminal	Sumgait 2 (non haz waste)	TTMMC	SRM	Yes when required for over sight
Midstream Sangachal terminal	BTC- PSA1	BP	BP AZSPU	YES
Midstream Sangachal terminal	LTPW	BP	BP AZSPU	YES
Midstream Sangachal terminal	SCP	BP	BP AZSPU	YES
Midstream Sangachal terminal	Shah Deniz (onshore)	BP	BP AZSPU	YES
Midstream Sangachal terminal	ACG EOP	BP	BP AZSPU	YES
Midstream Sangachal terminal	ACG STEP	BP	BP AZSPU	YES
Operations Azeri	CA	BP	BP AZSPU	YES
Operations Azeri	WA	BP	BP AZSPU	YES
Operations Azeri	EA	BP	BP AZSPU	YES
Operations Azeri	Azeri Subsea	BP	BP AZSPU	YES
Operations Chirag/DWG	Chirag 1	BP	BP AZSPU	YES
Operations Chirag/DWG	DWG	BP	BP AZSPU	YES
Operations Chirag/DWG	Chirag/DWG Subsea	BP	BP AZSPU	YES
Operations Chirag/DWG	Chirag Drilling Rig	KCAD	KCAD	YES
Operations logistics	Marine fleet operations	BUE, CMS, CBARS	BUE, CMS, CBARS	Yes when required for over sight or marine change
Operations logistics	Baku Sea Port	Others	Others	Yes when required for over sight
Operations logistics	Aviation	Silk Way	CHC	Yes when required for over sight
Operations Shah Deniz	SDA	BP	BP AZSPU	YES
Operations Shah Deniz	Shah Deniz Subsea	BP	BP AZSPU	YES

## 4 Management of Change Process flow

The majority of changes to be managed in the management of change process described here will have originated in another process or system. For example the majority of Technical MoCs originate from the Engineering Query process, where a problem will have been identified, solutions will have been appraised and site management will have selected the change to go forward. Those changes that do not go through the EQ process or other process may be cancelled at the verify stage at the discretion of the key verifier, if they do not meet the gate criteria.



**Note:** Although financial information can be included in the MoC this procedure does not cover any financial controls and normal budgetary processes and controls will apply.



#### 4.1 Management of Change Stages

All change goes through six main stages and is coordinated through the process after verify

1. **Initiate** – the creation of the MoC this is the responsibility of the initiator who will:
  - a. Create the eMOC choosing the affected Site and Facility and choose the correct template for the MoC type process to be followed (the use of a template is a mandatory requirement).
  - b. Identify the scope of work (identifies the change and describes all work necessary to produce the change). The scope establishes the tone for the remainder of the planning efforts and therefore should be sufficiently detailed. (Keep in mind however that being too detailed can be as bothersome as not providing enough detail).  
***Note:** for DC&I deviations the DWOP reference number shall be included*
  - c. Provide a justification for the work (this section details why the change is required)
  - d. Provide details of other options considered.
  - e. Reference any other business process, Engineering Query, Engineering Technical Practice, Drilling SEQ or DWOP incident report etc, where this is required. (using the TQ/ EQ box in the eMoC application box)
  - f. Identify the Key Change Verifier as per the specific guidance for the MoC type.
  - g. Identify other reviewers and approvers, authorizers as defined as a minimum requirement under each MoC type
  - h. Suggest a priority as per the definition in this procedure
  - i. Attach all relevant documentation as applicable to MoC for information at REV A (more advance revisions may be issued if available)
2. **Verify** – that the change can proceed. This is the responsibility of Key Verifier (as defined in each MoC type) to ensure that:
  - a. The change is described clearly and adequately to avoid any possible confusion
  - b. The justification for the change is clear and adequate
  - c. That all options have been considered and documented in the MoC (as appropriate)
  - d. That the budget is approved and a cost center is identified (as appropriate)
  - e. Any post start up reviews that may be required to assess the success of the change (as appropriate) have been identified.
  - f. All persons who are required to execute various stages of the MoC have been identified
  - g. The priority level as per the IFP matrix
  - h. The person who is responsible for the detailed design has been identified and ensure that a full design work pack has been assembled and attached, with all documents marked up REV A, dated and signed (more advance revisions may be used if available)
  - i. The full scope of work is agreed and appropriate documentation has been identified.

- j. Any hazards and risks associated with, the change as per the OMS requirements and confirm or change the risk level (this includes deviations from company or industry standards or practices and any compliance issues.
  - k. If the change is to be rejected then the key verifier will cancel the MoC giving a reason
3. **Review** - confirm that the detail is complete, correct and suitable, it is the responsibility of the reviewers to:
  - a. Review the change for major hazard, safety or operability issues, and check that key design documents have been provided appropriate for the risk level and MoC type.
4. **Approve** - the change for implementation on the site, the approver will
  - a. Ensure the appropriate process has been followed and will approve the work for implementation
  - b. Approve the budget for any procurement actives, if procurement starts before the MoC is approved then this is done as a deviation from this procedure and is at the budget holders risk.
5. **Authorize** - the change for startup/ use on site, the authorizer will
  - a. Ensure that all pre implementation actions have been completed to their satisfaction and that it is safe for use/ startup.
6. **Close out** - close out the change, the closer will
  - a. Ensure that all post implementation actions have been closed to their satisfaction

Coordination of the MoC will be the responsibility of the coordinator whose responsibility is to work with all those who are involved in the MoC to ensure that the MoC follows the process correctly, that all the correct information is available, clearly identified, filed and that pre and post implementation actions are correctly identified and completed. The coordinator can be changed at the approve stage if the key approver believes that responsibilities are best executed by another member of the team

The level of assurance will be appropriate to the level of risk associated with the MoC implementation.

**Note:** For detail see specific guidance given for each change type.

#### 4.2 MoC Compliance Check

A Bi weekly compliance check will be used to confirm that the MoC procedure is being correctly followed, focusing on:

- Level of risk associated with the change.
- Appropriate verification, review, approval, authorization and close out of the change.
- Overview of all MoC Key Indicators.

**Note:** This is the responsibility of the MoC team to gather and present this information

Document number	Document Title	Applies to	Notes
<a href="#">MOC-FRM-023</a>	MOC AUDIT TEMPLATE	AZSPU	Used to consistently audit MoC implementation

The MoC system team leader in consultation with the Functional Vice President and the Engineering Authority will organize an annual audit of MoCs passed the approved stage

**Note:** MoCs at the earlier stages of the MoC process are going through the normal verify and review processes for quality and accuracy and should not be audited while still under the early stages of development

The compliance check team as a minimum will consist of

- TL - MoC system team leader.
- Persons who can independently audit the MoC
- Person with Line responsibility for the Operating area
- Site persons affected by the MoC if required
- Others if required, as identified by the TL

The Functional Vice President is accountable for ensuring that an appropriate annual compliance check is done for their areas of responsibility.

The Engineering Authority is accountable for ensuring that the annually technical audit is completed for MoC (SRP 5.0.0001)

**Note:** It is recommended that compliance checks are scheduled using the computerized maintenance management system or some other operating area scheduling tool.

## 5 Managing Risk

A key component for managing change is to understand the hazards and the associated risks. As the risk increases the verification process required increases. Specific guidance on risk can be found in the sections for each of the MoC types.

This procedure identifies the minimum MoC review and approval requirements for the different levels of risk as defined under each MoC type. In reality the risk will have many different levels. To ensure that risk is appropriately managed on BP operating areas requires appropriate review and approval by BP competent persons and management personnel of the site(s) that are affected by the change.

It is the job of the MoC key verifier to ensure that the hazard and risk has been properly evaluated as per OMS section 3 with the correct personnel around a table and that appropriate reviewers and approvers have been identified considering work scopes, competencies and responsibilities.

Hazards and Risk should be considered for Personnel Safety Process Safety

HAZARD & RISK AREAS	TOOLS	OMS REF
Personal safety	Task Risk Assessment	
Process safety	ISD (Inherently Safer Design) HAZID (Hazard Identification) WHAT IF HAZOP (hazard and operability) LOPA (layer of protection Analysis) MAR (major accident and risk) PSSR (Pre Start up Safety Review) QRA (Quantified Risk Assessment) SIL (Safety Integrity Level)	GRP3.1 001
Health and industrial hygiene	COSHH Control of substances hazardous to health OGP/ IPIECA Guide to health impact assessments AIHA Exposure assessment process HS&E Methods for determination of Hazardous substances Fitness for task and health surveillance industrial hygiene Asbestos Fatigue	GRP 3.4-001 GRP 3.4-001 GRP 3.4-001 GRP 3.4-001
Security	SIS security of information standard DSS Digital Systems and Security	GRP 3.5-001
Environment	Emission to air Dischargers to Water and Land Handling disposal of waste	GRP 3.6-0001
Transport	MAR major accident risk process Marine operations Travel policy Aviation Driving safety	GRP 3.7-0001 GRP 3.7-0002 GRP 5.6-0001

**Note:** See MoC personnel register.

Document number	Document Title	Notes
GDP 3.1-0001	Assessment , prioritization and management of risk	This will be used along with the guidance in each of the MoC type to drive the level of verification required

Document number	Document Title	Notes
<a href="#">MoC Appendix 1</a>	AzSPU Guidance on Technical Hazard and Risk Processes to be used within MoC Appendix 1	Used to assess the MoC risk level
SRP 5.0-0001	Segment Recommended Practice for Engineering Management	Definitions For Modifications Which Alter The Operation Of Existing Equipment

## 5.1 Risk Levels

Risk ranking is a GDP 3.1-0001 matrix guided representation of the single most significant risk identified during a risk assessment of the hazards introduced by the change. This includes design risks and extraordinary implementation risks.

### 5.1.1 Insignificant Risk

Do not require an MoC  
See the specific MoC decision tree for guidance

### 5.1.2 Risk level 1- White

Change identified as low risk has little or no impact on process safety or operations (Level 1 White as defined in the OMS risk matrix (*GDP 3.1 001 Annex 3 risk matrix*)), no deviation from company engineering standards (ETP or STP), minor organizational impact and minimal business risk.

See the specific MoC type for minimum sign off requirements

### 5.1.3 Risk Level 2- Turquoise

Change identified as risk level 2 (turquoise) has minimum impact on process safety or operations (Level 2 Turquoise as defined in the OMS risk matrix (*GDP 3.1 001 Annex 3 risk matrix*))), may have a degree of technical complexity and minimal business risk.

See the specific MoC type sign minimum sign off requirements

### 5.1.4 Risk Level 3 - Blue

Change identified as risk level 3 (blue) has the potential for significant impact on process safety or operations (Level 3 Blue as defined in the OMS risk matrix (*GDP 3.1 001 Annex 3 risk matrix*))), significant organizational impact or significant business risk.

See the specific MoC type for minimum sign off requirements

### 5.1.5 Risk Level 4- Purple

Change identified as risk level 4 (purple) has the potential for catastrophic impact on process safety or operations (Level 4 Purple and above as defined in the OMS risk matrix (*GDP 3.1 001 Annex 3 risk matrix*)))

See the specific MoC type for minimum sign off requirements

## 6 Priority

Document number	Document Title	Notes
<a href="#">MOC-FRM-008</a>	MoC prioritization tool	This tool is the same as the one used for EQ and is used to ensure that all MoCs are consistently categorized and prioritized

Priority ranking is a GDP 3.1-0001 matrix guided representation of the importance of the change. The ranking is selected from the matrix based on the information provided in the Justification section of the eMOC.

To assist work prioritization it is mandated that the MoC is given a priority. Prioritization is to be determined using the IFP prioritization tool which aligns with MAXIMO and EQ.

## 7 Competency and Training

Competency for MoC has two areas; knowledge of how to use the e-MoC tool, and role knowledge to be able to execute the intent of MoC

- E-MoC Tool.  
The tool is a software based system and is relatively intuitive. Online training and assessment will be required for all new users and recommended for existing users  
Additional training will be available on request.
- MoC Role Knowledge.  
Critical to this process is the Key Verifier who confirms the MoC roles to individuals. They are making the judgment if the individual has the competency, experience and authority to execute the role as per the responsibilities identified within the roles and responsibilities list of each MoC type  
To assist with this, each area is to have a register of persons that have been assessed as competent to complete the management of change process as a verifier / reviewer/ approver/ authorizer for each MoC type and location  
Training and assessment is a normal part of role development. It is the responsibility of line management to assure the competency of their personnel
- Persons required to confirm that GOC elements are adequately completed are to have GOC training and assessment (see MoC type for guidance for which MoC types require GOC)

**Note:** it is a requirement that those who coordinate technical MoC will have completed GOC training and assessment

### Applicable to

This document is applicable to the following job functions:

**Note:** Due to the range of different job titles within the Operating areas at the time of writing, the Job functions have had to be rationalized to align the procedure with the e-MoC tool.

MoC Group	Typical Job Function
(DC&I) AFFM	D&C ADVANCE FLUIDS FACILITY MANAGER
(DC&I) DRE (DISCIPLINE) (KCAD)	KCAD Discipline Responsible Engineers (ELECTRICAL/ INST/ CONTROL/ SIS/ MECHANICAL ETC) (as found in the TA/ DRE register)
(DC&I) DRE (INSTRUMENT/ CONTROL/ SIS) (KCAD)	KCAD Discipline Responsible Engineers (instrumentation / control and safety instrumented system) (as found in the TA/ DRE register)
(DC&I) EIA	D&C EQUIPMENT INTEGRITY ASSURANCE
(DC&I) EM (DISCIPLINE)	D&C ENGINEERING MANAGER(DRILLING / COMPLETIONS/ INTERVENTIONS ETC)
(DC&I) ENG (DISCIPLINE)	D&C ENGINEER (DRILLING / COMPLETIONS/ INTERVENTIONS ETC)
(DC&I) ENG CHALLENGER	D&C CHALLENGER ENGINEER
(DC&I) ENG Snr (DISCIPLINE)	D&C Senior ENGINEER (DRILLING / COMPLETIONS/ INTERVENTIONS ETC)
(DC&I) ENGINEER (KCAD)	KCAD ENGINEER
(DC&I) ENGINEER (SYSTEMS) (KCAD)	KCAD SYSTEMS ENGINEER (DRILL VIEW ETC)
(DC&I) ETL (DISCIPLINE)	D&C ENGINEERING TEAM LEADER (DRILLING / COMPLETIONS/ INTERVENTIONS ETC)
(DC&I) HSE TL	HSE TEAM LEADER D&C
(DC&I) MAINT SUPERINTENDANT (KCAD)	KCAD MAINTENANCE SUPERINTENDANT
(DC&I) MAINT SUPERVISOR(KCAD)	KCAD MAINTENANCE SUPERVISOR
(DC&I) RIG SUPERINTENDANT(KCAD)	KCAD RIG SUPERINTENDANT
(DC&I) RMS	D&C RIG MAINTENANCE SPECIALIST
(DC&I) RMTL	D&C RIG MAINTENANCE TEAM LEADER
(DC&I) TA	D&C TECHNICAL AUTHORITY ARE EMPLOYED IN VARIOUS ACTIVITIES WHERE APPROVE & TA WILL BE ADDED BEHIND THE MAIN JOB TITLE
(DC&I) TA INSTRUMENT/ CONTROL /SIS (KCAD)	KCAD TECHNICAL AUTHORITY FOR INSTRUMENT CONTROL SAFETY INSTRUMENTED SYSTEMS (as found in the TA/ DRE register)
(DC&I) TL ENG (KCAD)	KCAD ENGINEERING TEAM LEADER
(DC&I) TL MAINT (KCAD)	KCAD MAINTENANCE TEAM LEADER
(DC&I) VP & WEA	D&C VICE PRESIDENT & WELL ENGINEERING AUTHORITY
(DC&I) WITL	D&C WELL INTEGRITY TEAM LEADER
(DC&I) WOM	D&C WELL OPERATIONS MANAGER
(DC&I) WSL	D&C WELL SITE LEADER

MoC Group	Typical Job Function
(DC&I) WSL SNR	D&C SENIOR WELL SITE LEADER
(DC&I) WTL	D&C WELLS TEAM LEADER
ACET DATA CONTROL	ACET Administrator ACET Systems Lead
AIA	(OPERATIONS) AREA INSPECTION AUTHORITY (MIDSTREAM SANGACHAL) AREA INSPECTION AUTHORITY (MIDSTREAM Export systems (Az/ Geo/Turk)); SENIOR ASSET INSPECTION ENGINEER
AOM	Area Operations Manager Shah Deniz Area Operations Manager Azeri Area Operations Manager DWG/Chirag Sangachal Terminal AOM Azerbaijan Exports AOM Exports Systems Manager
BMM	Base Management Manager Production and Res Perf. TL Manager, Base Management DWG Base Mgmt TL
DOCUMENT AUTHORITY	Final authority on documentation
DOCUMENT COORDINATOR	Document control will maintain documentation data base (document numbering and version control)
DOCUMENT CUSTODIAN	Will maintain the document
DOCUMENT OWNER	OWNS THE DOCUMENT AND IS RESPONSIBLE TO ENSURE THAT IT IS APPROPRIATELY MAINTAINED
DRE (DISCIPLINE)	DISCIPLINE RESPONSIBLE ENGINEERS (ELECTRICAL/ INST/ CONTROL/ SIS/ MECHANICAL ETC) (as found in the TA/ DRE register)
DRE (ELECTRICAL)	DISCIPLINE RESPONSIBLE ENGINEER ELECTRICAL (as found in the TA/ DRE register)
DRE (INSTRUMENT/ CONTROL/ SIS)	DISCIPLINE RESPONSIBLE ENGINEER INSTRUMENT / CONTROL / SAFETY INSTRUMENTED SYSTEMS (as found in the TA/ DRE register)
DRE (MECHANICAL)	DISCIPLINE RESPONSIBLE ENGINEER MECHANICAL (as found in the TA/ DRE register)
DRE (PRODUCTION CHEMIST)	DISCIPLINE RESPONSIBLE ENGINEER PRODUCTION CHEMIST (as found in the TA/ DRE register)
E&P VP	EXPLORATION AND PRODUCTION SEGMENT VICE PRESIDENT
EA	ENGINEERING AUTHORITY
ENG DATA COORDINATOR	CONTROLS THE MASTER EQUIPMENT LIST AS HELD IN EWAREHOUSE Eng & Data Coordinator Offshore Data Lead Project Data Coordinator Eng & Data Coordinator Eng & Data Coordinator Eng & Data Mgmt Team Leader Midstream Data Lead
ENGINEER (DISCIPLINE)	ENGINEERS WITHIN THE ORGANISATION
ENGINEER (SYSTEMS)	(OPERATIONS) ABB CONTRACTOR (MIDSTREAM SANGACHAL) ICSS SPECIALIST (MIDSTREAM EXPORTS AZERBAIJAN) ABB CONTRACTOR (MIDSTREAM EXPORTS AZERBAIJAN) ABB CONTRACTOR
ENVIRONMENTAL ADVISOR	OPERATIONS: ENVIRONMENTAL ADVISOR (CHIRAG & DWG) ENVIRONMENTAL ADVISOR (AZERI) ENVIRONMENTAL ADVISOR (SD & LOGISTICS)  MIDSTREAM Sangachal; ST ENVIRONMENT ADVISOR  MIDSTREAM EXPORTS AZERBAIJAN; AZ EXP ENVIROMENT ADVISOR  MIDSTREAM EXPORTS GEORGIA GEO EXP ENVIRONMENT OFFICER
Facility Manager	OPERATIONS: Offshore installation manager (Azeri/ Chirag & DWG/ SDA)  MIDSTREAM Sangachal: Operations superintendent (gas / oil/ utilities)  MIDSTREAM Export systems (Az/ Geo/Turk); Export operations superintendant  MIDSTREAM Exports Azerbaijan: PSA2/IPA1 Site Controller RoW and BV Operations Supervisors WREP Site Controllers  MIDSTREAM Exports Georgia: OPERATIONS SUPERVISOR SUPSA TERMINAL

MoC Group	Typical Job Function
	PSG1 & AREA 72 SITE CONTROLLER PSG2 & AREA 75 SITE CONTROLLER A80 & EDDF SUPERVISOR WREP SUPERVISOR GEORGIA OPS PS15, PRS1 PRS2 WREP SUPERVISOR GEORGIA OPS, PS11 PS 13 AGT ROW SUPERVISOR WREP ROW SUPERVISOR
Facility Ops Engineer	OPERATIONS: Offshore operations engineer  MIDSTREAM Sangachal: N/A facility manager will complete this function  MIDSTREAM Export systems (Az/ Geo/Turk); Operations engineer  MIDSTREAM Exports Azerbaijan: N/A facility manager will complete this function  MIDSTREAM Exports Georgia: N/A facility manager will complete this function
FACITLIY OPS SUPERVISORS	OPERATIONS: OTL (Azeri/ Chirag & DWG/ SDA)  MIDSTREAM Sangachal: AREA AUTHORITY (OPS SUPER, OIL)  MIDSTREAM Export systems (Az/ Geo/Turk); Operations engineer (FACILITY MANAGER)  MIDSTREAM Exports Azerbaijan: PSA2 OPERATIONS SUPERVISORS IPA1 OPERATIONS SUPERVISORS RoW and BV Operations Supervisors (FACILITY MANAGER) WREP Site Controllers ((FACILITY MANAGER)  MIDSTREAM Exports Georgia: N/A facility manager will complete this function
GOC COORDINATOR	(OPERATIONS) GOC ENGINEER (MIDSTREAM SANGACHAL) GOC COORDINATOR (MIDSTREAM EXPORTS AZERBAIJAN) SENIOR GOC ENGINEER (MIDSTREAM EXPORTS AZERBAIJAN) N/A
H&S TL/ ENV & COMPLIANCE TL	H&S Team Leader Shah Deniz H&S Team Leader Azeri H&S Team Leader Logistics/Infrastructure Az Exp H&S Team Leader Geo Exp H&S Team Leader ST Site H&S Advisor TL H&S Team Leader Chirag & DWG H&S Team Leader
HR MANAGER	Human resources manager
HR SPECIALIST	Human resources specialist
HSE COMPLIANCE ADVISOR	HSE Compliance Advisors within AzSPU HSE Compliance Team HSE Compliance Advisor ST Compliance Advisor Az Exp Compliance Lead HSE Compliance Specialist Offshore Compliance Advisor
HSEA	Waste Management H&S Advisor Logistics/Infrastructure H&S Lead Chirag & DWG H&S Advisor Geo Exp Site H&S Advisor TL

MoC Group	Typical Job Function
MA	MARINE AUTHORITY
MAINTENANCE ENGINEER	MAINTENANCE ENGINEER IN THE RELIABILITY MAINTENANCE TEAM IN MID STREAM NOT APPLYING GMS THEN THIS MAY BE THE MAINTENANCE SUPERVISOR
MANAGER	DEPARTMENT MANAGER
MOC/ EQ TEAM	MOC/EQ ADVISOR MOC SYSTEMS TEAM LEADER
OMA	OPERATIONS MARINE AUTHORITY
RMM	Reservoir Management Manager
SENIOR Inspection Engineer (contractor)	Senior inspection engineers as contracted
SETA	Global Segment Engineering Technical Authority
SPUL	STRATEGIC PERFORMANCE UNIT LEADER
TA (CORROSION)	TECHNICAL AUTHORITY MATERIALS & CORROSION MANAGEMENT (as found in the TA/ DRE register)
TA (DISCIPLINE)	DISCIPLINE TECHNICAL AUTHORITIES (ELECTRICAL/ INST/ CONTROL/ SIS/ MECHANICAL ETC) (as found in the TA/ DRE register)
TA (INPSECTION)	TECHNICAL AUTHORITY INSPECTION (as found in the TA/ DRE register)
TA (PROCESS SAFETY)	PROCESS SAFETY TECHNICAL AUTHORITY
TA (PROCESS)	TECHNICAL AUTHORITY PROCESS (as found in the TA/ DRE register)
TL	TEAM LEADER
TL- IT&S	IT&S team leader and business information manager
TL- IT&S BIM	BIM OFFSHORE OPERATIONS AND DRILLING BIM FUNCTIONS BIM MIDSTREAM BIM RESOURCES
TL-Eng	OPERATIONS: AESTL (AZERI/ CHIRAG & DWG/ SDA) DISCIPLINE ENGINEERING TL  MIDSTREAM SANGACHAL: ENGINEERING MANAGER SANGACHAL TERMINAL  MIDSTREAM Export systems (Az/ Geo/Turk); ENGINEERING MANAGER  MIDSTREAM Exports Azerbaijan: N/A  MIDSTREAM Exports Georgia: N/A
TL-MODS	(COD) ENGINEERING MANAGER (SMALL PROJECTS) (OPERATIONS) PROJECTS AND MODS TL
VP	VICE PRESIDENT
DRE (PRISM)	DISCIPLINE RESPONSIBLE ENGINEER FOR PRISM SYSTEMS (as found in the TA/ DRE register)
ENGINEER (PIN)	PIN SUPPORT ENGINEER
APPLICATIONS MANAGER (IT&S)	APPLICATIONS MANAGER (IT&S)
REGIONAL FIELD DIGITAL INFRASTRUCTURE MANAGER (IT&S)	REGIONAL FIELD DIGITAL INFRASTRUCTURE MANAGER (IT&S)
MAXIMO maintenance coordinator	MAXIMO maintenance coordinator (activity planning team)
Site Scheduler	Operations; Site Scheduler CA Site Scheduler WA Site Scheduler EA Site Scheduler DWG Site Scheduler CHIRAG Site Scheduler SHAH DENIZ  MIDSTREAM SANGACHAL; MAINTENANCE SCHEDULER (GAS) MAINTENANCE PLANNER (OIL)  MIDSTREAM EXPORTS SYSTEMS; N/A MID STREEAM EXPORTS AZERBAIJAN PLANNER / SCHEDULER MID STREAM EXPORTS AZERBAIJAN PLANNER
DRE(PROCESS)	DISCIPLINE RESPONSIBLE ENGINEER FOR PROCESS (as found in the TA/ DRE register)
TA (PROD CHEMIST & FLOW ASSURANCE)	TECHNICAL AUTHORITY PRODUCTION CHEMIST & FLOW ASSURANCE (as found in the TA/ DRE register)





## 8 Abbreviations and Definitions

This table explains any terminology used within the text that is considered to require clarification. This can be useful in simplifying the text by assigning abbreviations for repetitive terms.

ACC	Authorization for Chemical Change
ADES	Contracting company for Sumgayit Waste disposal Site 2
AWS	Contacting company for Sumgayit Waste disposal Site 2
BHA	Bottom Hole Assembly
BiL	Botas International Ltd – the BTC operator in Turkey
BTC	Baku Tbilisi Ceyhan oil export pipeline
CMMS	Computerized Maintenance Management system
CSM	Contacting company for logistics supply Base at SPS
D,C&I	Drilling, Completions and Interventions
DCT	Digital Communication Technology
DRE	Discipline Responsible Engineer
EA	Engineering Authority
Emergency change	Change which is required for safe operation in these cases a formal MoC will be raised within 96hrs.
e-MoC	Electronic management of change database tool
ESD	Emergency Shut Down
ETP	Engineering Technical Practice
F&G	Fire and Gas
GOC	Guidance on Certification
HAZOP	Hazard and Operability Study
HOD	Head of discipline
HSSE	Health Safety Security Environment
JP	Job Plan
Maint	Maintenance
MoC	Management of Change
Mods	Modifications
Ops	Operations
P&ID	Piping and instrument diagram
Permanent change	Change that will be in place for more than 90 days
PFD	Process flow diagram
PM	Planned Maintenance
PSV	Pressure Safety Valve
PUL	Performance Unit Leader; the operating area manager
SAFOP	Safety and Operability
SCE	Safety Critical Equipment
SCP	South Caucasus gas export Pipeline
SIL	Safety Integrity Level
SNR	Senior
TA	Technical Authority
TS (Expert)	Technical Specialist (Expert) with respect to PSCM issues.
Temporary Change	Change that is intended to be in place for less than 90 days.
TL	Team Leader
TTMHC	Contracting company for Sumgayit Waste disposal Site 1
WREP	Western Route Export Pipeline
WSL	Well site leader
VP	Vice President AzSPU
E&P VP	GLOBAL SEGEMENT VICE PRESIDENT E&P
ACET	Asset Condition Evaluation Tool
SDA	Shah Deniz Alpha
PRISM	Production Reporting and Information Systems Management

## 9 References

Document number	Document title	Applies to
	MoC register	AzSPU
<a href="#">GP 48-02</a>	Hazard and Operability (HAZOP) study	Technical, process software, chemical
<a href="#">AZ-GP 48-02-1</a>	Hazard and Operability (HAZOP) study (AzSPU STP)	Technical, process software, chemical
<a href="#">MOC-FRM-003</a>	Technical MoC document check list	Technical

Document number	Document title	Applies to
<a href="#">MOC-FRM-008</a>	MoC prioritization tool	AzSPU
<a href="#">MOC-FRM-009</a>	Process software MoC change impact assessment & document checklist	Process software
<a href="#">MOC-FRM-011</a>	Chemical MoC check list	Chemical
<a href="#">MOC-FRM-013</a>	Tag request form	Technical, Process software
<a href="#">MOC-FRM-014</a>	Maintenance MOC PM and JP change form	Maintenance
<a href="#">MOC-FRM-015</a>	Maint MoC PSV deferral	Maintenance
<a href="#">MOC-FRM-019</a>	Organization MoC handover form	Organizational
<a href="#">MOC-FRM-020</a>	Organization MoC risk and mitigation	Organizational
<a href="#">MOC-FRM-021</a>	Organization MoC risk matrix	Organizational
<a href="#">MOC-FRM-022</a>	Organization MoC close out review	Organizational
<a href="#">MOC-FRM-023</a>	MoC audit template	AzSPU
<a href="#">MOC-FRM-024</a>	Tech MoC PSSR check list	Technical
<a href="#">MOC-FRM-025</a>	HSSE Compliance Form	Technical, chemical
<a href="#">MOC-FRM-GN-008</a>	Recommended practice for the risk-based inspection (RBI) of relief valves	Maintenance
<a href="#">SHDU-ENG-PRC-001</a>	Weight change procedure for Shah Deniz platform	AzSPU
<a href="#">UNIF ENG PRC 142</a>	Weight change procedure for ACG platforms	AzSPU
<a href="#">UNIF-ENG- REG-021</a>	Production chemical register	Chemical
<a href="#">UNIF-ENG-PRC-022</a>	Engineering maintenance common documents implementation procedure	BU
<a href="#">UNIF-ENG-REG-005</a>	EA/TA/DRE register	AzSPU
<a href="#">UNIF-ENG-WCS-001</a>	Weight change sheet	Technical, chemical
<a href="#">UNIF-ITS- REG-001</a>	AzSPU software applications register	IT&S
<a href="#">UNIF-OPS-PRC-001</a>	Documentum document control procedure	Document
<a href="#">BP-CDZZZZ-PM-GLN-0001</a>	Guidance on certification (GOC)	Technical, process software, chemical
<a href="#">AZSPU-HSSE-DOC-00025-2</a>	AzSPU HSE document management procedure and HSSE document template	Document
<a href="#">AzSPU-GP-32-3001</a> <a href="#">MOC-FRM-026</a> <a href="#">MoC Appendix 1</a>	Safety Critical Equipment (SCE) Management Strategy in AzSPU Documentum controlled document template AzSPU Guidance on Technical Hazard and Risk Processes to be used within MoC Appendix 1	Guidance on how to identify SCE equipment Document AzSPU

## 10 Specific Guidance - Technical MoC

***Technical Change is a permanent, temporary or emergency physical change that affects process or facilities of the BP operated operating areas.***

### 10.1 Technical MoC - Roles and Responsibilities

THOSE IDENTIFIED BY A \* ARE A MINIMUM REQUIREMENT FOR RISK LEVEL 1

MoC Stage /Role	Risk Level	JOB FUNCTION	Responsibility
Initiate	1/2/3/4	ANYONE (IF AN EQ REQUIRES A MOC THEN THE EQ RESPONDER SHOULD INITIATE THE MOC)	<p>Create the eMOC choosing the affected Area and Facility and will choose the correct template for the MoC type process to be followed (the use of a technical template is a mandatory requirement).</p> <p>Will identify the scope of work (identifies the change which identifies and describes all work necessary to produce the change. The scope establishes the tone for the remainder of the planning efforts and therefore should be sufficiently detailed.).</p> <p>Will provide a justification for the work (this section details why the change is required)</p> <p>Will provide details of other options considered.</p> <p>Where the change is required due to some other business process, Engineering Query, incident report etc, the initiator should reference this process.</p> <p>The initiator is required to identify the Change Verifier (Facility Manager &amp; TL Eng) as per the specific guidance for the technical MoC.</p> <p>The initiator is required to suggest a priority as per the definition in this procedure</p> <p>The initiator will attach all relevant documentation as applicable to MoC for information at REV A (later versions may be used if available)</p> <p>The EQ system is used by the operating area operations teams to formally raise technical questions and should be linked if available. Operating areas may cancel an MoC that has not been agreed using the EQ or other operating area system.</p>

MoC Stage /Role	Risk Level	JOB FUNCTION	Responsibility
Verify	1/2/3/4	FACILITY MANAGER	<p>Verify or cancel MoC on behalf of the local operations</p> <p>The initiator is required to identify other reviewers and approvers and authorizers as defined as a minimum requirement under each MoC type</p> <p>Confirm level of priority using the prioritization tool based on the anticipated benefit of the change</p> <p>(If the change is to be rejected) Will cancel the MoC giving a reason</p>
	1/2/3/4	*TL- ENG (KEY VERIFIER)	<p>Verify or cancel MoC on behalf of the local operations, confirm the risk level</p> <p>It should be noted verification should not be given until the person (s) nominated as responsible for the detail design has completed all the necessary activities to ensure that</p> <ul style="list-style-type: none"> <li>• The change is described clearly and adequately avoid any possible confusion</li> <li>• The justification for the change is clear and adequate</li> <li>• All options have been considered and documented in the MoC (as appropriate)</li> <li>• Budget is approved and a cost center is identified (as appropriate)</li> <li>• Any post start up reviews that may be required to assess the success of the change (as appropriate) have been identified.</li> <li>• All persons who are required to execute the various stages of the MoC have been identified</li> <li>• Priority level as per the IFP matrix has been confirmed</li> <li>• Person responsible for the detailed design and will ensure that all a full design work pack is assembled and attached with all document marked up REV A dated and signed</li> <li>• The full scope of work is agreed and appropriate documentation is in place</li> <li>• Identify any hazards and assess risk associated with change as per the OMS requirements</li> </ul> <p><i>Note the Engineer nominated for design should always be identified as a verifier</i></p> <p>Once the design is in place is responsible to identify hazard and assess risk using the appropriate management of risk process (GRP3.1-001 selection of Hazards Evaluation &amp; Risk assessment techniques) this process should involve the appropriate reviews as required, this should be done with appropriate persons around a table. This allows the key verifier to confirm or change the risk level (this includes deviations from company or industry standards or practices and any compliance issues). Details of the risk assessment process used and a summary of the results will be recorded in the risk statement in the MoC initiation page. Detail record will be attached or linked to the MoC.</p> <p>To ensure that the hazard identification and risk assessment process is formally recorded and attached or linked to the MoC for future reference</p> <p>If the change is to be rejected will cancel the MoC giving a reason</p> <p>Accountable for all identified requirements at this stage of the MoC</p>
	1/2/3/4	*ENGINEER (DISCIPLINE) Nominated person or persons responsible for the detailed design as assigned by the TL-Eng	<p>Responsible for the detail design associated with the change and will not verify the MoC until this has been provided.</p> <p>Will ensure that all affected drawings are checked out from documentum as required by this procedure.</p>
	1/2/3/4	TL-MODS	Verify or cancel Brownfield MoC Identify the Brownfield Coordinator
	3/4	AOM	<p>Verify or cancel Risk level 3 or 4 MoC</p> <p>If the change is to be rejected will cancel the MoC giving a reason</p>

MoC Stage /Role	Risk Level	JOB FUNCTION	Responsibility
Coordinator	1/2/3/4	ANYONE AUTHORIZED	<p>To hold the MoC by checking the hold tick box the MoC until all information and data is fully available</p> <p>To manage the MoC through the process ensuring that correct persons are notified, that comments are answered and the MoC is properly planned, executed and closed out (as part of this will facilitate any interaction between reviews and designers)</p> <p>To ensure that all documents as required by the MoC are properly filed and organized (documents to be sectioned by, for design(rev A )/ for construction(rev C) /red line (R), red line as-built (R with as built stamp) Note that drawings attached for information will need to be in Documentum MoC folder named for review/ information</p> <p>Note that for drawings to be actioned by DCMT will need to be transferred to an MoC folder named For Issue.</p> <p>Note that for data and maintenance / inspection requirements documents (request forms, tdt's) need to be added to Documentum MoC folder, Eng Data &amp; Maintenance &amp; Inspection to be actioned by the MAXIMO Maintenance Coordinator and the Eng Data Coordinator</p> <p>To ensure that all pre-implementation and post implementation actions have been identified and completed.</p> <p>The Coordinator will also raise Chemical/ Software MoC as required to support the Technical MoC (note that data / maintenance and document changes that form part of the Technical MoC do not require an additional MoC to be raised)</p> <p>To ensure that all tags, line numbers and cable numbers have been booked out of eWarehouse</p> <p>To ensure that all equipment has been properly identified and tags, cable numbers and line numbers have been reserved in eWarehouse. All necessary information is fed back before authorization</p> <p>To ensure that the any weight changes associated with platform loading are identified recorded and submitted. Governing procedures SHDU-ENG-PRC-001 and UNIF ENG PRC -142</p>
Reviewer	1/2/3/4	*DRE (DISCIPLINE)	The <u>primary technical reviewer</u> and will review against statutory and ETP requirements and engineering practice. All discipline to be included as required. Any changes affecting the P&ID's or PFD's must be reviewed by a DRE (Process) Platform Weight changes must be reviewed by the DRE (structures)
	1/2/3/4	HSEA	As required For changes affecting HSSE issues
	1/2/3/4	AIA	Changes affecting static mechanical equipment future inspection requirements (including piping)
	1/2/3/4	TA (PROCESS SAFETY)	Must review if a HAZOP is required
	1/2/3/4	FACILITY OPS ENGINEER	As required for changes affecting the process operability
	1/2/3/4	OMA	Must review for changes containing a Marine Element
	1/2/3/4	*H&S TL / ENV & COMPLIANCE TL	Will communicate on-site operational changes to the HSE Compliance Advisors through completion of the first section of the HSE Compliance Form and will update the facility APS list (if relevant) Will add a pre -implementation action for the HSE Compliance Advisor to determine and advise any compliance implications.
	2/3/4	TA-DISCIPLINE	Independent Discipline Technical Review of `Medium and Risk level 3 (blue) MoC. Will not start the review process until the Discipline Responsible Engineer has done the initial review.
Approve	1/2/3/4	*TL-ENG	Confirms that actions raised during the review stage have been addressed to their satisfaction
	1/2/3/4	*FACILITY MANAGER	Approves for execution under control of operations team confirming that construction may start using normal site control procedures.
	1/2/3/4	TL-MODS	Approves Brownfield MoC
	1/2/3/4	MA	Approves changes containing a Marine Element
	3/4	AOM	Operating area Approval Risk level 3 or 4 MoC
	3/4	Engineering services manager	Independent Approval Risk level 3 or 4 MoC
	3/4	EA	Independent Approval Risk level 3 or 4 MoC
	4	VP	Independent Approval for Risk level 4 MoC
	4	E&P VP OR CHIEF ENGINEER	Independent Approval for Risk level 4 MoC

MoC Stage /Role	Risk Level	JOB FUNCTION	Responsibility
Pre Implement	1/2/3/4	*COORDINATOR	<p>To ensure that all drawings and formal procedures requested have been checked out of documentum against the MoC</p> <p>To ensure that there is a construction work pack and all necessary GOC certificates have been generated and pre-populated with the data from eWarehouse</p> <p>To ensure that any Software changes have been captured by a Process Software MoC and the MoC link attached to the Technical MoC</p> <p>To ensure that any Chemical changes have been captured by a Chemical MoC and the MoC link attached to the technical MoC</p> <p>To confirms Tags / Line numbers / Cable numbers have been reserved and associated design data has been given to the ENG &amp; DATA COORDINATOR</p> <p>To confirms that any weight changes have been recorded and submitted. Governing procedures SHDU-ENG-PRC-001 and UNIF ENG PRC -142</p> <p>All pre start up checks and GOC documentation has been completed. The SH1 form with punch lists have been signed and that there are no out standing "A punchlist items" on the punch list</p> <p>To ensure that affected drawings have been marked up as redlined drawings, stamped AS BUILT dated/ signed / Job Title</p> <p>To ensure that all supplementary MoCs have Post Implement close out actions attached</p> <p>To confirm that all redlined " As built "REV R documents have been placed in the documentum MoC folder For Issue</p> <p>To ensure that the HAZARD identification / RISK assessment process can be accessed from the MoC (if the MoC form isn't used then a link is to be provided)</p>
	1/2/3/4	MAINTENANCE ENGINEER	To apply maintenance requirements as per generic maintenance strategy and maintenance manuals. Identify maintenance to be planned including job plans, frequency, first start dates, locations any drawings to be linked to MAXIMO. The maintenance requirements will be attached to the MoC to allow the MAXIMO maintenance coordinator to clearly understand what needs to be uploaded into MAXIMO
	1/2/3/4	*MTL	To review the construction pack including the resource and scheduling that have been identified as required by the maximo work order to support this activity
	1/2/3/4	AIA	To apply inspection requirements as per integrity strategy and will identify job plans, frequency, first start dates, locations any drawings to be linked to MAXIMO. The MAXIMO schedule requirements will be attached to the MoC to allow the MAXIMO maintenance coordinator to clearly understand what needs to be uploaded into MAXIMO
	1/2/3/4	ENG DATA COORDINATOR	To ensure that all eWarehouse data has been identified, supplied and uploaded in to eWarehouse (identified by the MoC number). (The identification of tags, cable and line data early is important to allow the other process that require this data to be operated correctly- it is anticipated that data is as built)
	1/2/3/4	GOC COORDINATOR	Ensure that all appropriate GOC requirements have be identified and certification is available in the construction pack (as required)
	1/2/3/4	HSE COMPLIANCE ADVISOR	To review the operational changes communicated in the HSE Compliance Form and facilitate the process to determine whether there are any compliance implications, this may lead to update of Compliance Task Manager (CMT) tasks
Authorize	1/2/3/4	FACILITY MANAGER	The authorizer is accountable for ensuring that all pre implement actions have been identified and closed out to their satisfaction, before start up. Authorize MoC for startup on site.

MoC Stage /Role	Risk Level	JOB FUNCTION	Responsibility
Post implement	1/2/3/4	*COORDINATOR	Ensure that all redline drawings have been reviewed and verified as REV R drawings to be actioned by DMT are in the MoC folder named For Issue Ensure GOC documentation is completed including any post SH1 requirements and that any outstanding "B punch list items" have been raised as correctives in MAXIMO Ensure that any eWarehouse maintenance and inspection required data has been provided for the Master Equipment list, actioned by MAXIMO Maintenance coordinator and the data will need to be transferred to an MoC folder named Eng Data, Maintenance & Inspection Confirm that the change performance has been acceptable and if applicable any lessons learnt are issued
	1/2/3/4	COORDINATOR	Confirm temporary change in place (only applicable to temporary changes)
	1/2/3/4	COORDINATOR	Confirm temporary change removed (only applicable to temporary changes)
	1/2/3/4	DRE (INSTRUMENT/ CONTROL/ SIS)	Ensure that any software changes have been captured by a PROCESS SOFTWARE MoC and have been closed out
	1/2/3/4	DRE (PROCUCTION CHEMIST)	Ensure that any CHEMICAL changes have been captured by a CHEMICAL MoC and have been closed out
	1/2/3/4	DOCUMENT COORDINATOR	Confirm that all "as built- final " documents and procedures found in the for issue folder updated in Documentum main area and when back drafting is completed then rev Z drawings will also be upload at the next revision
	1/2/3/4	ENG DATA COORDINATOR	Confirm that any "as built data Rev R as found in MoC folder named Eng Data, Maintenance & Inspection - is updated in eWarehouse
	1/2/3/4	ACET DATA CONTROL	Confirm that any "as built data final" are updated in ACET, the ACET coordinator will identity any other inspection requirements once the RBI process has been done The inspection requirements will be attached to the MoC to allow the MAXIMO maintenance coordinator to clearly understand what needs to be uploaded into MAXIMO
	1/2/3/4	MAXIMO MAINTENANCE COORDINATOR	Confirm that any maintenance inspection requirement identified by the maintenance Engineer or AIA have been executed in MAXIMO
Close out	1/2/3/4	*COORDINATOR	Confirm that all post implementation actions have been completed as identified in this procedure
	1/2/3/4	*MOC/ EQ TEAM	Confirm that all post implementation actions have been completed as identified in this procedure

**Note:** At any stage reviewers, approvers, post and pre implementation actions, may be added to the MoC, if considered necessary

**Note:** pre and post implementation actions can not be deleted - however in the event that the action is applicable, but due to circumstances that are out with the control of the site (ie net work failure / documentum offline etc) the facility manager can agree to accept sign off of specific pre-implement requirements as long as they have been replicated in post implement section of the MOC. The reason for this is to be noted in the action comment field. The only exception to this is the requirement for GOC SH1 to be signed and all A punch list items closed

**Note:** All weight changes offshore in excess of 100kg should be recorded on the weight change form and submitted to the custodian of the weight change register: - Governing procedures **SHDU-ENG-PRC-001 and UNIF ENG PRC -142**

**Note:** Installation and equipment installed on site shall be proven using the GOC technical check sheets. If the site does not have a GOC database then the MoC number will be used as the reference number



## 10.2 Technical MoC - Templates

The following will be linked directly to the MoC template to assist with the uniform creation of MoC

Document number	Document Title	Applies to	Notes
<a href="#">MOC-FRM-003</a>	TECHNICAL MoC DOCUMENT CHECK LIST	TECHNICAL	This is used to capture which changes are affected by the MoC and should be completed before the review
<a href="#">MOC-FRM-024</a>	TECHNICAL MoC PSSR CHECK LIST	TECHNICAL	Process start up safety review to be completed before authorization
<a href="#">MOC-FRM-025</a>	HSSE COMPLIANCE FORM	TECHNICAL, CHEMICAL, DC&I	Used to communicate on-site operational changes to the AzSPU HSE Compliance Team so that they can determine HSE compliance implications. Must be completed before close out.
<a href="#">UNIF-ENG-WCS-001</a>	WEIGHT CHANGE SHEET	TECHNICAL, CHEMICAL	To be completed for all weight changes on the platforms in excess of 100kg
	RISK MATRIX	AZ GDP3.1-001 risk matrix	To be use to assess risk level, as required

## 10.3 Technical MoC - Risk / Hazard Guidance

Risk Level	Hazard Statement
Technical - Insignificant risk	<p>Managed within the operating area no technical MoC required</p> <ul style="list-style-type: none"> <li>Like-for-like replacement (with the exception of equipment which requires a maintenance MoC to maintain a unique identification number (serial number) required for inspection purposes)</li> <li>Replacement in kind (maintenance MoC required to update eWarehouse and any new maintenance requirements)</li> </ul>
Technical – Risk level 1 (white)	<p>Managed within the Operating area - Technical MoC required</p> <ul style="list-style-type: none"> <li>MoC with a risk level 1 (OMS Risk Matrix)</li> <li>No or little impact on process safety.</li> <li>No change in Metallurgy</li> <li>No change in Cause and Affect table</li> <li>No excursions from accepted operating Envelope</li> <li>No detailed design requirement for a HAZID HAZOP SIL review</li> <li>No deviation from Company and/or international standards.</li> <li>MoCs that are duplicated for the purpose of repeat modifications on identical equipment but different trains that have appropriate risk assessment review and approval on the first MoC, can be managed as risk level 1 as long as the initial MoC that has captured the full review and approve cycle is clearly referenced and linked</li> </ul>
Technical – Risk level 2 (turquoise)	<p>Managed within the Operating area but will have independent technical review and risk level 2 approvals. - MoC required</p> <ul style="list-style-type: none"> <li>MoC with a risk level 2 (OMS Risk Matrix)</li> <li>Minimal impact on process safety.</li> <li>Require approved deviations from Company and or international standards.</li> <li>Change of service (eg changing the service of a tank from crude to produced water)</li> <li>Affects safety critical or SIL rated equipment.</li> <li>Includes alterations to the pressure system envelope.</li> <li>Significant changes to the approved P&amp;ID or PFD or C&amp;E.</li> <li>May affect Hazardous area classification.</li> <li>Includes changes to Class 1 and Class 2 meters.</li> <li>Includes significant weight changes on the platform &gt; 500kg.</li> <li>Includes changes to HV systems or main Electrical Distribution Systems.</li> </ul>

Risk Level	Hazard Statement
Technical – Risk level 3 (Blue)	Managed within the Operating area but will have independent technical review and risk level 3 approval. - MoC required <ul style="list-style-type: none"> <li>MoC with a risk level 3 (OMS Risk Matrix)</li> <li>Has significant impact on process safety.</li> <li>Involves hot tapping / live work / diving operations.</li> <li>Involves operation of equipment out side of normal operating parameters as identified on the P&amp;ID or PFD.</li> <li>Involves change to pressure relief systems.</li> <li>Require approved deviations from Group, Segment and AzSPU mandated ETP and STP's</li> </ul>
Technical – Risk level 4 - (Purple)	Managed within the Operating area but will have independent technical review and risk level 4 approval. - MoC required <ul style="list-style-type: none"> <li>MoC with a risk level 4 (OMS Risk Matrix)</li> </ul>

**Note:** This risk associated directly with making the change and should not be confused with MoC priority

#### 10.4 Technical MoC - Documentation

At the heart of any change is the control of documents, procedures and drawings. Everyone needs to understand the status of these documents at three key stages of change.

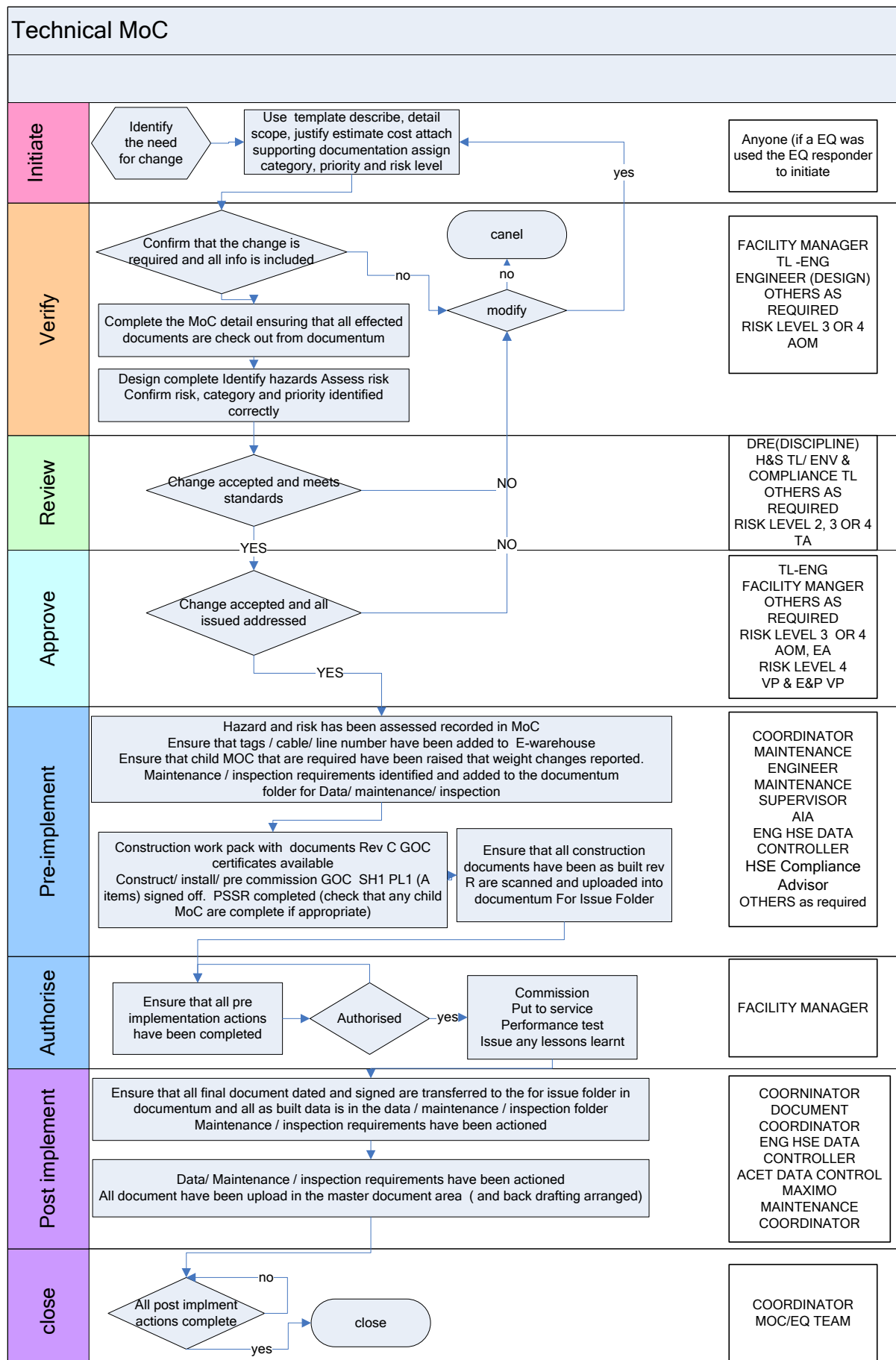
**Note:** It is essential that the Master document data-base is kept up to date

Stage	Requirement
Verify (Design)	All documents/drawings subject to change need to be checked out of documentum and a note added to document data-base stating that the document/ drawing is affected by MoC ref number Initial design document should include in the document name - Rev A Final design documents for review should include in the document name - Rev A
Authorisation (pre-start up)	Within Documentum a MoC folder within a folder named for review / information should contain the following Construction documents should include in the document name - Rev C As Built documents for review should include in the title - Rev R
Closure (post-start up)	Within Documentum a MoC folder within a folder named for issue should contain the following Final As Built document should include in the document name - Rev R (with an as-built stamp dated and signed) DMT will action all documents found in the "for issue folder" and updated the master document area and action any back drafting that needs to be done.

#### 10.5 Technical MoC - Key Indicators

- Number of days to close out an MoC after Authorization. This indicates how long it takes to get accurate documents into the system.
- Number of MoCs authorized to start up at any one time – A high number indicates increased risk depending on the sites ability to manage many simultaneous changes.
- Number of MoCs in Review and Approve stages – This indicates the loading on the teams.

## 10.6 Technical MoC - Process Flow Diagram



## 11 Specific Guidance - Technical MoC (DC&I Facilities)

Technical Change is a permanent, temporary or emergency change that affects drilling process or facilities of the BP operated operating areas

### 11.1 Technical MoC (DC&I Facilities) - Roles and Responsibilities

THOSE IDENTIFIED BY A \* ARE A MINIMUM REQUIREMENT FOR RISK LEVEL 1

MoC Stage/Role	Risk	Job function	Responsibility
Initiate	1/2/3/4	*ANYONE (if a SEQ requires a MoC then the SEQ responder should initiate the MoC)	<p>Create the eMOC choosing the affected Area and Facility and will choose the correct template for the MoC type process to be followed (the use of a template is a mandatory requirement).</p> <p>Will identify the scope of work (identifies the change which identifies and describes all work necessary to produce the change. The scope establishes the tone for the remainder of the planning efforts and therefore should be sufficiently detailed.).</p> <p>Will provide a justification for the work (this section details why the change is required)</p> <p>Will provide details of other options considered.</p> <p>Where the change is required due to some other business process, Engineering Query, incident report etc, the initiator should reference this process.</p> <p>The initiator is required to identify the Verifiers ((DC&amp;I) WSL &amp; (DC&amp;I) TL-ENG (KCAD) as per the specific guidance for the MoC.</p> <p>The initiator is required to suggest a priority as per the definition in this procedure</p> <p>The initiator will attach all relevant documentation as applicable to MoC for information at REV A (LATER VERSIONS MAY BE USED IF AVAILABLE)</p> <p>The SEQ system is used by the Drilling operations teams to formally raise technical questions and should be linked if available. A MoC that has not been agreed using the SEQ or other system may be cancelled.</p>

Verify	1/2/3/4	*(DC&I) WSL	<p>Verify or cancel MoC on behalf of the local operations</p> <p>Confirm level of priority using the prioritization tool based on the anticipated benefit of the change</p> <p>Will cancel the MoC giving a reason If the change is to be rejected.</p>
	1/2/3/4	*(DC&I) TL-ENG (KCAD) Key Verifier	<p>To verify or cancel MoC on behalf of the local operations, confirm the risk level</p> <p>The initiator is required to identify other reviewers and approvers and authorizers as defined as a minimum requirement under each MoC type</p> <p>It should be noted verification should not be given until the person (s) nominated as responsible for the detail design has complete all the necessary activity to ensure that</p> <ul style="list-style-type: none"> <li>• The change is described clearly and adequately to avoid any possible confusion</li> <li>• The justification for the change is clear and adequate</li> <li>• All options have been considered and documented in the MoC (as appropriate)</li> <li>• Budget is approved and a cost center is identified (as appropriate)</li> <li>• Any post start up reviews that may be required to assess the success of the change (as appropriate) have been identified</li> <li>• All persons who are required to execute the various stages of the MoC have been identified</li> <li>• The priority level as per the IFP matrix has been confirmed</li> <li>• Person responsible for the detailed design and will ensure that a full design work pack is assembled and attached with all document marked up REV A dated and signed</li> </ul> <p><i>Note: the Engineer nominated for design should always be identified as a verifier</i></p> <ul style="list-style-type: none"> <li>•</li> <li>• The full scope of work is agreed and appropriate documentation is in place</li> <li>• Identify any hazards and assess risk associated with change as per the OMS requirements</li> </ul> <p>Once the design is in place is responsible to identify hazard and assess risk using the appropriate management of risk process (GRP3.1-001 selection of Hazards Evaluation &amp; Risk assessment techniques) this process should involve the appropriate reviews as required, this should be done with appropriate persons around a table. Allowing the key verifier to confirm or change the risk level (this includes deviations from company or industry standards or practices and any compliance issues). Details of the risk assessment process used and a summary of the results will be recorded in the risk statement in the MoC initiation page. Detail record will be attached or linked to the MoC.</p> <p>To ensure that the hazard identification and risk assessment process is formally recorded and attached or linked to the MoC for future reference</p> <p>If the change is to be rejected will cancel the MoC giving a reason</p> <p>Accountable for all identified requirements at this stage of the MoC</p>
	1/2/3/4	*(DC&I) ENGINEER (KCAD) nominated person or persons responsible for the detailed design as assigned by the	<p>Responsible for the detail design associated with the change and will not verify the MoC until this has been provided.</p> <p>Will ensure that all affected drawings are checked out from documentum as required by this procedure.</p>
	2/3/4	(DC&I) RMTL	VERIFY OR CANCEL
	3/4	(DC&I) WTL	Verify or cancel Risk level 3 or 4 MoC
	3/4	(DC&I) WOM	Verify or cancel Risk level 3 or 4 MoC

Coordinator	1/2/3/4	*(DC&I) DRE (Discipline) (KCAD)	<p>To hold the MoC by checking the hold tick box the MoC until all information and data is fully available</p> <p>To manage the MoC through the process ensuring that correct persons are notified, that comments are answered and the MoC is properly planned, executed and closed out (as part of this will facilitate any interaction between reviews and designers)</p> <p>To ensure that all documents as required by the MoC are properly filed and organized (documents to be sectioned by, for design(rev A) / for construction(rev C) /red line (R), red line as-built (R with as built stamp) Note that drawings attached for information will need to be in an Documentum MoC folder named for review/ information Note that for drawings to be actioned by DCMT will need to be transferred to an MoC folder named for issue. Note that for data and maintenance requirements documents (request forms, tdt's) will need to be in an Documentum MoC folder, Eng Data &amp; Maintenance &amp; Inspection to be actioned by the MAXIMO Maintenance Coordinator and the Eng HSE Data coordinators</p> <p>To ensure that all pre-implementation and post implementation actions have been identified and completed. The Coordinator will also raise Chemical/ Software MoC as required to support the Technical MoC (note that eWarehouse / maintenance and document changes that form part of the Technical MoC do not require an additional MoC to be raised) To ensure that all tags, line numbers and cable numbers have been booked out of eWarehouse To ensure that all equipment has been properly identified and tags cable numbers and line numbers have been reserved in eWarehouse. All necessary information is fed back before authorization Will ensure that the any weight changes associated with platform loading are identified recorded and submitted. Governing procedures SHDU-ENG-PRC-001 and UNIF ENG PRC -142</p>
Reviewer	1/2/3/4	*(DC&I) DRE (Discipline) (KCAD)	The <u>primary technical reviewer</u> and will review against statutory and ETP requirements and engineering practice. All discipline to be included as required. Any changes affecting the P&ID's or PFD's must be reviewed by a DRE (Process) Platform Weight changes must be reviewed by the DRE(structures)
	1/2/3/4	*(DC&I) H&S TL	Will communicate on-site operational changes to the HSE Compliance Advisors through completion of the first section of the HSE Compliance Form and will update the facility APS list (if relevant) Will add a pre-implementation action for the HSE Compliance Advisor to determine and advise any compliance implications.
	1/2/3/4	(DC&I) HSEA	For changes affecting HSE issues
	1/2/3/4	(DC&I) MAINT SUPERINTENDENT (KCAD)	For changes affecting maintainability or operability of the equipment
	1/2/3/4	AIA	Changes affecting static mechanical equipment future inspection requirements. (including piping)
	2/3/4	TA (process safety)	Must review if a HAZOP is required
	1/2/3/4	OMA	For changes containing a Marine Element
	2/3/4	TA (DISCIPLINE)	Independent Discipline Technical Review for MoC with a risk level of greater than 2 Will not start the review process until the DRE has done the initial review
Approve	1/2/3/4	*(DC&I) TL-ENG (KCAD)	Confirms that actions raised during the review stage have been addressed.
	1/2	*(DC&I) WSL Snr	Approves for execution under control of drilling team confirming that construction may start using normal site control procedures.
	1/2/3/4	MA	For all changes containing a Marine Element
	3/4	(DC&I) WTL	(DC&I) WTL SNR for Risk level 3 and 4MoC
	3/4	Engineering services manager	Independent Approval Risk level 3 or 4 MoC
	3/4	(DC&I) RMTL	(DC&I) Rig Maintenance Team leader)
	3/4	EA	Independent Approval for Risk level 3 and 4 MoC
	4	VP	Approval for Risk level 4 MoC
	4	E&P VP	Approval for Risk level 4 MoC

Pre Implement	1/2/3/4	*COORDINATOR	<p>To ensure that all drawings and formal procedures requested have been checked out of documentum against the MoC</p> <p>To ensure that there is a construction work pack and all necessary GOC certificates have been generated and pre-populated with the data from eWarehouse</p> <p>To ensure that any Software changes have been captured by a Process Software MoC and the MoC link attached to the Technical MoC</p> <p>To ensure that any Chemical changes have been captured by a Chemical MoC and the MoC link attached to the technical MoC</p> <p>To confirm Tags / Line numbers / Cable numbers have been reserved and associated design data has been given to the ENG DATA COORDINATORS</p> <p>To confirm that any weight changes have been recorded and submitted. Governing procedures SHDU-ENG-PRC-001 and UNIF ENG PRC -142</p> <p>All pre start up checks and GOC documentation has been completed. The SH1 form with punch lists have been signed and that there are no outstanding "A punch list items" on the punch list</p> <p>To ensure that affected drawings have been marked up as redlined drawings stamped AS BUILT dated/ signed / Job Title</p> <p>To ensure that all supplementary MoC have Post Implement close out actions attached</p> <p>To Confirm that all redlined " As built "REV R documents has been placed in the Documentum MoC folder For Issue Ensure that the HAZARD identification / RISK assessment process can be accessed from the MoC (if the MoC form isn't used then a link is to be provided</p>
	1/2/3/4	(DC&I) TL- MAINT (KCAD)	To apply maintenance requirements as per generic maintenance strategy and maintenance manuals. Identify maintenance to be planned including job plans, frequency, first start dates, locations any drawings to be linked to MAXIMO. The maintenance requirements will be attached to the MoC to allow the MAXIMO maintenance coordinator to clearly understand what needs to be uploaded into MAXIMO
	1/2/3/4	AIA	To apply inspection requirements as per integrity strategy and will identify job plans, frequency, first start dates, locations any drawings to be linked to MAXIMO. The MAXIMO schedule requirements will be attached to the MoC to allow the MAXIMO maintenance coordinator to clearly understand what needs to be uploaded into MAXIMO
	1/2/3/4	(DC&I) TL- MAINT (KCAD)	To review the construction pack including the resource and scheduling that have been identified requirements by the maximo work order to support this activity
	1/2/3/4	ENG DATA COORDINATOR	To ensures that all eWarehouse data has been supplied and uploaded in to eWarehouse
	1/2/3/4	GOC Coordinator	To ensure that all appropriate GOC requirements have be identified and certification is available in the construction pack (as required)
	1/2/3/4	HSE COMPLIANCE ADVISOR	To review the operational changes communicated in the HSE Compliance Form and facilitate the process to determine whether there are any compliance implications, this may lead to update of Compliance Task Manager (CTM) tasks.
Authorize	1/2/3/4	*(DC&I) RIG SUPERINTENDENT (KCAD)	The authorizer is accountable for ensuring that all pre implement actions have been identified and closed out to their satisfaction, before start up.
	1/2/3/4	*FACILITY MANAGER	Authorize MoC for startup on site.

Post implement	1/2/3/4	*COORDINATOR	Ensure that all redline drawings have been reviewed and verified as REV R drawings to be actioned by DCMT are in the MoC folder named For Issue Ensure GOC documentation is completed including any post SH1 requirements Confirm that the change performance has been acceptable and if applicable any lessons learnt are issued
	1/2/3/4	*(DC&I) TL- MAINT (KCAD	Confirm any outstanding "B punch list items" have been raised as correctives in maximo Ensure that any eWarehouse maintenance and inspection required data has been provided for the Master Equipment list is REV R "AS BUILT-final" actioned by Maximo Maintenance coordinator and the Eng Data coordinator will need to be transferred to an MoC folder named Eng Data, Maintenance & Inspection
	1/2/3/4	COORDINATOR	Confirm temporary change in place (only applicable to temporary changes)
	1/2/3/4	COORDINATOR	Confirm temporary change removed (only applicable to temporary changes)
	1/2/3/4	(DC&I) DRE (INSTRUMENT/ CONTROL/ SIS) (KCAD)	Ensure that any software changes have been captured by a PROCESS SOFTWARE MoC and have been closed out
	1/2/3/4	DRE (PROCUCTION CHEMIST)	Ensure that any CHEMICAL changes have been captured by a CHEMICAL MoC and have been closed out
	1/2/3/4	DOCUMENT COORDINATOR	Confirm that all "as built- final " documents and procedures found in the for issue folder updated in Documentum main area and when back drafting is completed then rev Z drawings will also be upload at the next revision
	1/2/3/4	ENG DATA COORDINATOR	Confirm that any "as built data Rev R as found in MoC folder named Eng Data, Maintenance & Inspection - is updated in eWarehouse
	1/2/3/4	ACET DATA CONTROL	Confirm that any "as built data final" are updated in ACET, the ACET coordinator will identity any other inspection requirements once the RBI process has been done The inspection requirements will be attached to the MoC to allow the MAXIMO maintenance coordinator to clearly understand what needs to be uploaded into MAXIMO
	1/2/3/4	MAXIMO MAINTENANCE COORDINATOR	Confirm that any maintenance inspection requirement identified have been executed in MAXIMO
Close out	1/2/3/4	*COORDINATOR	Confirm that all post implementation actions have been completed as identified in this procedure
	1/2/3/4	*(DC&I) RMTL	Confirm that the Drilling operator has finished this modification to his satisfaction on behalf of BP
	1/2/3/4	*MOC/ EQ TEAM	Confirm that all post implementation actions have been completed as identified in this procedure

**Note:** At any stage reviewers, approvers, post and pre implementation actions, may be added to the MoC, if considered necessary

**Note:** pre and post implementation actions can not be deleted - however in the event that the action is applicable, but due to circumstances that are out with the control of the site (ie net work failure / documentum offline etc) the facility manager can agree to accept sign off of specific pre-implement requirements as long as they have been replicated in post implement section of the MOC. The reason for this is to be noted in the action comment field. The only exception to this is the requirement for GOC SH1 to be signed and all A punch list items closed

**Note:** All weight changes offshore in excess of 100kg (should be recorded on the weight change form and submitted to the custodian of the weight change register: - Governing procedures **SHDU-ENG-PRC-001 and UNIF ENG PRC -142**

**Note:** Installation and equipment installed on site shall be proven using the GOC technical check sheets. If the site does not have a GOC database then the MoC number will be used as the reference number



### 11.2 Technical MoC (DC&I Facilities) - Templates

The following will be linked directly to the MoC template to assist with the uniform creation of MoC

Document number	Document Title	Applies to	Notes
<a href="#">MOC-FRM-003</a>	TECHNICAL MoC DOCUMENT CHECK LIST	TECHNICAL	This is used to capture which changes are affected by the MoC and should be completed before the review
<a href="#">MOC-FRM-024</a>	TECHNICAL MoC PSSR CHECK LIST	TECHNICAL	Process start up safety review to be completed before authorization
<a href="#">MOC-FRM-025</a>	HSSE COMPLIANCE FORM	TECHNICAL, CHEMICAL, DC&I	Used to communicate on-site operational changes to the AzSPU HSE Compliance Team so that they can determine HSE compliance implications. Must be completed before close out
<a href="#">UNIF-ENG-WCS-001</a>	WEIGHT CHANGE SHEET	TECHNICAL, CHEMICAL	To be completed for all weight changes on the platforms in excess of 100kG

### 11.3 Technical MoC (DC&I Facilities) - Risk / Hazard Guidance

Risk Level	Hazard Statement
Technical - Insignificant Risk	<p>Managed within the operating area no technical MoC required</p> <ul style="list-style-type: none"> <li>Like-for-like replacement (with the exception of equipment which requires a maintenance MoC to maintain a unique identification number (serial number) required for inspection purposes)</li> <li>Replacement in kind (maintenance MoC required to update eWarehouse and any new maintenance requirements)</li> </ul>
Technical – Risk level 1 (white)	<p>Managed within the Operating area - Technical MoC required</p> <ul style="list-style-type: none"> <li>MoC with a risk level 1 (OMS Risk Matrix)</li> <li>No or little impact on process safety.</li> <li>No change in Metallurgy</li> <li>No change in Cause and Affect table</li> <li>No excursions from accepted operating Envelope</li> <li>No detailed design requirement for a HAZID HAZOP SIL review</li> <li>No deviation from Company and/or international standards.</li> </ul>
Technical – Risk level 2 (turquoise)	<p>Managed within the Operating area but will have independent technical review and risk level 2 approvals. - MoC required</p> <ul style="list-style-type: none"> <li>MoC with a risk level 2 (OMS Risk Matrix)</li> <li>Minimal impact on process safety.</li> <li>Require approved deviations from Company and or international standards.</li> <li>Change of service (eg changing the service of a tank from crude to produced water)</li> <li>Affects safety critical or SIL rated equipment.</li> <li>Includes alterations to the pressure system envelope.</li> <li>Significant changes to the approved P&amp;ID or PFD or C&amp;E.</li> <li>May affect Hazardous area classification.</li> <li>Includes changes to Class 1 and Class 2 meters.</li> <li>Includes significant weight changes on the platform &gt; 500kg.</li> <li>Includes changes to HV systems or main Electrical Distribution Systems.</li> </ul>

Risk Level	Hazard Statement
Technical – Risk level 3 (Blue)	<p>Managed within the Operating area but will have independent technical review and risk level 3 approval. - MoC required</p> <ul style="list-style-type: none"> <li>• MoC with a risk level 3 (OMS Risk Matrix)</li> <li>• Has significant impact on process safety.</li> <li>• Involves changes to well control equipment</li> <li>• Involves hot tapping / live work / diving operations.</li> <li>• Involves operation of equipment out side of normal operating parameters as identified on the P&amp;ID or PFD .</li> <li>• Involves change to pressure relief systems.</li> <li>• Require approved deviations from Group, Segment and AzSPU mandated ETP and STP's</li> </ul>
Technical – Risk level 4 - (Purple)	<p>Managed within the Operating area but will have independent technical review and risk level 4 approval. - MoC required</p> <ul style="list-style-type: none"> <li>• MoC with a risk level 4 (OMS Risk Matrix)</li> </ul>

**Note:** This risk associated directly with making the change and should not be confused with MoC priority

#### 11.4 Technical MoC (DC&I Facilities) - Documentation

At the heart of any change is the control of documents, procedures and drawings. Everyone needs to understand the status of these documents at three key stages of change.

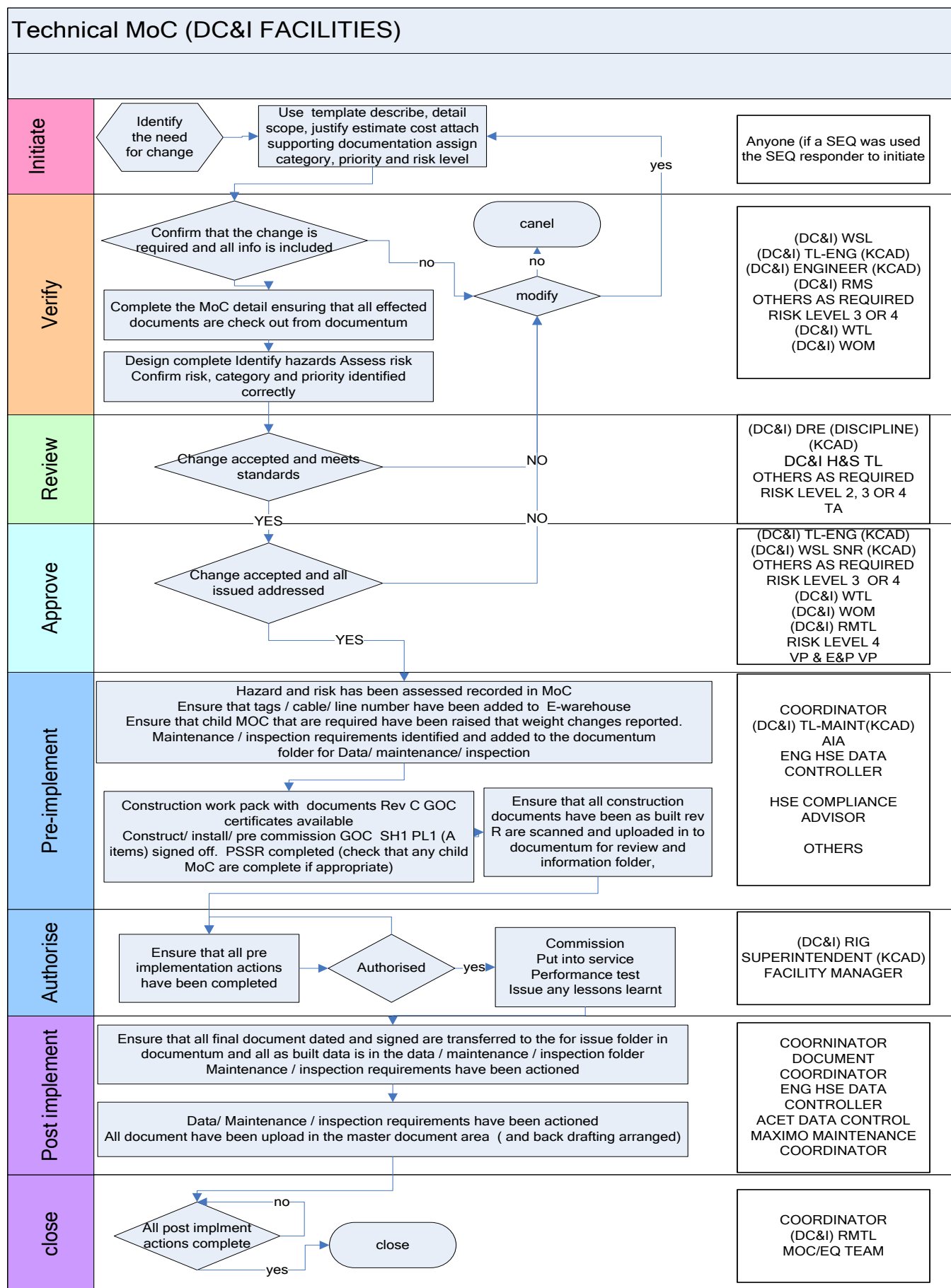
**Note:** it is essential that the Master document data-base is kept up to date

Stage	Requirement
Verify (Design)	<p>All documents/drawings subject to change need to be checked out of documentum and a note added to document data-base stating that the document/ drawing is affected by MoC ref number</p> <p>Initial design document should include in the document name - Rev A</p> <p>Final design documents for review should include in the title - Rev A</p>
Authorisation (pre-start up)	<p>Within documentum a MoC folder within a folder named for review / information should contain the following</p> <p>Construction documents should include in the document name - Rev C</p> <p>As Built documents for review should include in the title - Rev R</p>
Closure (post-start up)	<p>Within documentum a MoC folder within a folder named for issue should contain the following</p> <p>Final As Built document should include in the document name - Rev R (with an As-built stamp dated and signed)</p> <p>DCMT will action all documents found in the "for issue folder" and updated the master document area and action any back drafting that needs to be done.</p>

#### 11.5 Technical MoC (DC&I Facilities) - Key Indicators

- Number of days to close out an MoC after authorized, this indicates how long it takes to get accurate documents in the system
- Number of MoCs authorized to start up at any one time – A high number indicates increased risk depending on the sites ability to manage many simultaneous changes
- Number of MoCs in Review and Approve stages – This indicates the loading of the facility teams

## 11.6 Technical MoC (DC&I Facilities) - Process Flow Diagram



## 12 Specific Guidance – Process Software MoC

Process Software MoC covers the management change associated with process software and electrical protection settings.

**Note:** Although a Process Software MoC can involve minor physical changes these are restricted to modifications "within the system" e.g. internal panel wiring / relays / additions of an hardwired intertrips where the I/O for both Nodes would be existing / Firmware upgrades. All would be allowed as long as the correct review is completed by the correct reviewers. External connections to other sub-systems should be considered to be covered under a separate technical MoC

The person who verifies these modifications needs to decide if a Technical MoC needs to be raised to cover these changes as identified by the scope, and should also consider any impact on ancillary systems such as HVAC or F&G systems which would also required to be considered and as such would need Technical MoC.

**Note:** Offline back ups will be managed for each facility by the DRE (INSTRUMENT/ CONTROL/ SIS)

**Note:** This MoC type will be used for PRISM software changes

### 12.1 Process Software MoC - Roles and Responsibilities

THOSE IDENTIFIED BY A \* ARE A MINIMUM REQUIREMENT FOR RISK LEVEL 1

MoC Stage/ Role	Risk	Job Function	Responsibility
Initiate	1/2/3/4	<p>*ANYONE (if EQ requires a MoC then the EQ responder should initiate the MoC)</p> <p>Before initiating it is advised to review the scope with the DRE (INSTRUMENT/ CONTROL/ SIS)</p> <p>or ENGINEER (PIN) OR DRE (PRISM) for PRISM software changes</p>	<p>Create the eMOC choosing the affected Area and Facility and will choose the Process software template the use of a template is a mandatory requirement).</p> <p>To identify the scope of work (identifies the change which identifies and describes all work necessary to produce the change. The scope establishes the tone for the remainder of the planning efforts and therefore should be sufficiently detailed.).</p> <p>To provide a justification for the work (this section details why the change is required)</p> <p>To provide details of other options considered.</p> <p>Where the change is required due to some other business process, Engineering Query, incident report etc, the initiator shall reference this process.</p> <p>The initiator is required to identify the Key Verifier as identified in the procedure and identify others as required by the procedures</p> <p>To suggest priority</p> <p>The EQ system is used by the operating area operations teams to formally raise technical questions and should be linked if available. Operating areas may cancel a MoC that has not been agreed using the EQ or other operating area system.</p>

MoC Stage/ Role	Risk	Job Function	Responsibility
Verify	1/2/3/4	*DRE (INSTRUMENT/ CONTROL/ SIS)  Or DRE (ELECTRICAL) for electrical protection changes  ENGINEER (PIN)) OR DRE (PRISM) for PRISM SOFTWARE CHANGES  (key Verifier)	<p>To verify or cancel MoC on behalf of the local operations, confirm the risk level</p> <p>It should be noted verification should not be given until the person (s) nominated as responsible for the detail design has complete all the necessary activity to provide to ensure that (note that this may be the DRE (instrument / control/ sis) or another)</p> <ul style="list-style-type: none"> <li>• change is described clearly and adequately to avoid any possible confusion</li> <li>• The full scope of work is agreed and appropriate documentation is in place</li> <li>• The justification for the change is clear and adequate</li> <li>• All options have been considered and documented in the MoC (as appropriate)</li> <li>• Budget is approved and a cost center is identified (as appropriate)</li> <li>• Any post start up reviews that may be required to assess the success of the change (as appropriate) have been identified</li> <li>• Identify who is required to execute the various stages of the MoC</li> <li>• Priority levels are correct</li> </ul> <p>Once the design is in place is responsible to identify hazard and assess risk using the appropriate management of risk process (GRP3.1-001 selection of Hazards Evaluation &amp; Risk assessment techniques) this process should involve the appropriate reviews as required, this should be done with appropriate persons around a table. Allowing the key verifier to confirm or change the risk level (this includes deviations from company or industry standards or practices and any compliance issues). Details of the risk assessment process used and a summary of the results will be recorded in the risk statement in the MoC initiation page. Detail record will be attached or linked to the MoC.</p> <p>To ensure that the hazard identification and risk assessment process is formally recorded and attached or linked to the MoC for future reference</p> <p>Will cancel the MoC giving a reason, if the change is to be rejected</p> <p>Accountable for all identified requirements at this stage of the MoC</p>
		*ENGINEER nominated person or persons responsible for the detailed design as assigned by the verifier	Responsible for the detail design associated with the change and will not verify the MoC until this has been provided. Will ensure that all affected drawings are checked out from documentum as required by this procedure.
	1/2/3/4	TL-MODS	Verify or cancel Brownfield MoC
	3/4	TL-ENG	Verify or cancel Risk level 3 or 4 MoC

MoC Stage/ Role	Risk	Job Function	Responsibility
Coordinator	1/2/3/4	*DRE (INSTRUMENT/ CONTROL/ SIS) Engineer (I&C, Systems) Or DRE (ELECTRICAL) for electrical protection changes ENGINEER (PIN)) OR DRE (PRISM) for PRISM SOFTWARE CHANGES	To hold the MoC by checking the hold tick box the MoC until all information and data is fully available To manage the MoC through the process ensuring that correct persons are notified, that comments are answered and the MoC is properly planned, executed and closed out (as part of this will facilitate any interaction between reviews and designers) To ensure that all documents as required by the MoC are properly filed and organized (documents to be sectioned by, for design(rev A )/ for construction(rev C) /red line (R), red line as-built (R with as built stamp) Note that drawings attached for information will need to be in an Documentum MoC folder named for review/ information. <b>Software impact assessment form completed and all affected documentation listed within</b> Note that for drawings to be actioned by DCMT will need to be transferred to a documentum MoC folder named "for issue". Note that for data documents (request forms, tdt's) will need to be in an Documentum MoC folder named "Eng Data & Maintenance & Inspection", to be actioned by the MAXIMO Maintenance Coordinator and the Eng Data coordinator To ensure that all pre-implementation and post implementation actions have been identified and completed. The Coordinator will also raise a Technical MoC if required <b>and provide links between the two</b> To ensure that all soft tags, reserved in eWarehouse as required and all necessary information is fed back before authorization
Reviewer	1/2/3/4	*DRE (DISCIPLINE)	The <u>primary technical reviewer</u> and will review against statutory and ETP requirements and engineering practice. Any changes affecting the P&ID's or PFD's must be reviewed by a DRE (Process) Identify any Factory acceptance testing required Review the test procedures DRE PRISM to review all PRISM software changes <b>Note:</b> Software MoC that requires maintenance changes will also have a technical MoC and the DRE / maintenance engineer shall identify maintenance requirement there.
	2/3/4	TA-DISCIPLINE	<i>Independent Discipline Technical Review for MoC with a risk level of greater than 2 Will not start the review process until the DRE has done the initial review</i>
	2/3/4	TA (PROCESS)	<i>Independent Discipline Technical Review for MoC with a risk level of greater than 2. MoC with impact on process safety including emergency response plans or changes affecting the P&amp;ID's. Will not start the review process until the DRE has done the initial review</i>
	2/3/4	TA (process safety)	<i>Will review any change that requires a HAZOP</i>
	1/2/3/4	DRE (PRISM)	PRISM SOFTWARE CHANGE PRISM SERVER CHANGES WILL REVIEW
	1/2/3/4	ENGINEER (PIN)	PRISM SOFTWARE CHANGE PRISM SERVER CHANGES WILL REVIEW
	1/2/3/4	DRE (INSTRUMENT/ CONTROL/ SIS)	PRISM SOFTWARE CHANGE WILL REVIEW LDS SERVER (PIN) & CIMIO SERVER (PCN) CHANGES
	1/2/3/4	APPLICATIONS MANAGER (IT&S)	PRISM SOFTWARE CHANGE PIN INFRASTRUCTURE CHANGES & ISIS & D2D SERVER (PIN) CHANGES WILL REVIEW

MoC Stage/ Role	Risk	Job Function	Responsibility
	1/2/3/4	REGIONAL FIELD DIGITAL INFRASTRUCTURE MANAGER (IT&S)	<i>PRISM SOFTWARE CHANGE PIN INFRASTRUCTURE CHANGES WILL REVIEW</i>
Approve	1/2/3/4	*FACILITY OPS ENGINEER	Approves for execution under control of operations team
	1/2/3/4	TL-MODS	Approves Brownfield MoC
	3/4	TL-ENG	Confirms that actions raised during the review stage have been addressed.
	3/4	AOM	Operating area Approval Risk level 3 and 4 MoC
	1/2/3/4	REGIONAL FIELD DIGITAL INFRASTRUCTURE MANAGER (IT&S)	PRISM SOFTWARE CHANGE ISIS & D2D SERVER (PIN) CHANGES WILL APPROVE
	1/2/3/4	DRE SNR (INSTRUMENT/ CONTROL/ SIS)	PRISM SOFTWARE CHANGE WILL APPROVE PRISM / PIN INFRASTRUCTURE/LDS/CIMIO SERVIER CHANGES
	3/4	Engineering services manager	Independent Approval Risk level 3 or 4 MoC
	3/4	EA	Independent Approval for Risk level 3 and 4 MoC
	4	VP	Approval for Risk level 4 MoC
	4	E&P VP OR CHIEF ENGINEER	Independent Approval for Risk level 4 MoC
re Implement	1/2/3/4	*COORDINATOR	<p>Perform offline FAT for complex modifications (as indicated by DRE) <b>any outstanding punchlist items are documented and attached to the MOC</b></p> <p>To ensure that all drawings and formal procedures <b>identified as affected documents within MOC-FRM-009</b> have been checked out of Documentum against the MoC</p> <p>To ensure that there is a work pack and all necessary GOC certificates have been generated, pre-populated with the data from eWarehouse</p> <p>To ensure that any TECHNICAL MoC is <b>"Approved"</b></p> <p>To confirm SOFT Tags have been reserved and associated design data has been given to the ENG DATA COORDINATOR</p> <p><b>All pre Software Load checks have been completed (Program versions, CPU Loading etc)</b></p> <p><b>P&amp;ID Updates have been signed off by Senior Process DRE</b></p> <p><b>Rev A Documents are updated to Rev C (post review) and attached to the MOC Folder</b></p> <p><b>Ensure that the test procedure has been approved by DRE</b></p> <p>Ensure that the HAZARD identification / RISK assessment process can be accessed from the MoC (if the MoC form isn't used then a link is to be provided)</p>
	1/2/3/4	ENG DATA COORDINATOR	<b>Ensures that all new eWarehouse tags have been reserved</b>
	1/2/3/4	DOCUMENT COORDINATOR	Ensure that all drawings and formal procedures requested have been checked out of Documentum against the MoC

MoC Stage/ Role	Risk	Job Function	Responsibility
Authorize	1/2/3/4	*FACILITY MANAGER	The authorizer is accountable for ensuring that all pre implement actions have been identified and closed out to their satisfaction and Authorizes the MoC for software down load and testing controlled by ISSOW
Post implement	1/2/3/4	*Engineer (systems) or Engineer (PIN)	Confirm Down load complete
			Confirm testing successful and attach test records to the MoC
	1/2/3/4	*COORDINATOR	Ensure that all redline drawings have been reviewed and verified as REV R drawings to be actioned by DMT are in the MoC folder named For Issue Ensure GOC documentation is completed including any post SH1 requirements and that any outstanding "B punch list items" have been raised as correctives in MAXIMO Ensure that any eWarehouse required data has been provided for the Master Equipment list, the Eng Data coordinator will need it to be transferred to an MoC folder named Eng Data, Maintenance & Inspection Confirm that the change performance has been acceptable and if applicable any lessons learnt are issued
	1/2/3/4	COORDINATOR	CONFIRM TEMPORARY CHANGE IN PLACE (IF APPLICABLE)
	1/2/3/4	COORDINATOR	CONFIRM TEMPORARY CHANGE REMOVED (IF APPLICABLE)
	1/2/3/4	*FACILITY OPS ENGINEER	Confirm that operating guidelines procedures have been updated (If applicable)
	1/2/3/4	Eng Data coordinator	Ensure that all as built data has been updated in eWarehouse
Close out	1/2/3/4	*COORDINATOR	Confirm that all post implementation actions have been completed
	1/2/3/4	*MOC/ EQ TEAM	Confirm that all post implementation actions have been completed as identified in this procedure

*Note: At any stage reviewers and approvers may be added to the MoC if considered necessary*

*Note: Any documents/data updates should be handled under the umbrella of the Technical MoC unless the Process Software MoC is stand alone.*



## 12.2 Process Software MoC - Templates

The following will be linked directly to the MoC template to assist with the uniform creation of MoC

Document number	Document Title	Applies to	Notes
<a href="#">MOC-FRM-009</a>	PROCESS SOFTWARE MoC CHANGE IMPACT ASSESSMENT and document check list combined	PROCESS SOFTWARE	This software impact assessment and document check list should be completed before authorization

**Note:** Installation and equipment installed on site shall be proven using the GOC technical check sheets if the site does not have a GOC database then the MoC number will be used as the reference number

## 12.3 Process Software MoC - Risk / Hazard Guidance

Risk Level	Hazard Statement
Software – Insignificant risk	Managed within the Assets and don't required eMoC <ul style="list-style-type: none"> <li>• Corrections to error in graphics</li> <li>• Correction to reports</li> <li>• Modifying trend sets</li> <li>• Changing tuning constants (record on separate logs)</li> <li>• Dead bands on alarms and trips</li> <li>• Operator adjustable deviation alarms</li> <li>• Coefficients for inferred flow, well flow &amp; DP calculations which are not reported in PRS</li> <li>• Offline back ups will be managed for each facility by the DRE (INSTRUMENT/ CONTROL/ SIS)</li> </ul>
Software – Risk Level 1 (white)	Managed within the Operating area: <ul style="list-style-type: none"> <li>• MoC with a Risk level 1 (OMS Risk Matrix)</li> <li>• No or little impact on process safety.</li> <li>• No deviation from Company and or international standards.</li> <li>• Includes adding tags or overviews to an operators display, mapping tags to a communications link or a PLC, changing a display layout or a tag descriptor to match design documents, adjusting a range to a transmitter, adjusting alarm settings, System Software Upgrades.</li> <li>• Coefficients for inferred flow, well flow &amp; DP calculations which are reported in PRS</li> <li>• Software change that is part of an approved technical MoC.</li> </ul>
Software– Risk level 2 (turquoise)	Managed within the Operating area but will have independent technical review: <ul style="list-style-type: none"> <li>• MoC with a Risk level 2 (OMS Risk Matrix)</li> <li>• Minimal impact on process safety.</li> <li>• Involves changes to pressure relief systems Includes adjusting trip settings within rated technical limits.</li> <li>• Removal of trips settings</li> <li>• Includes a change that affects a SIL rated device.</li> <li>• Includes changes to the operating areas PSD, ESD or F&amp;G logic. C&amp;E</li> <li>• Changes that affect the electrical trip discrimination.</li> </ul>
Software– Risk level 3 (blue)	Managed within the Operating area but will have independent technical review and independent approval: <ul style="list-style-type: none"> <li>• MoC with a Risk level 3 (OMS Risk Matrix)</li> <li>• Has significant impact on process safety.</li> <li>• Involves operation of equipment out-with normal operating parameters as identified on the P&amp;ID or PFD.</li> </ul>
Technical – Risk level 4 (Purple)	Managed within the Operating area but will have independent technical review and risk level 4 approval. - MoC required <ul style="list-style-type: none"> <li>• MoC with a risk level 4 (OMS Risk Matrix)</li> </ul>

**Note:** This risk associated directly with making the change and should not be confused with MoC priority

#### 12.4 Process Software MoC - Documentation

At the heart of any change is the control of documents, procedures, software and drawings. Everyone needs to understand the status of these items at three key stages of change.

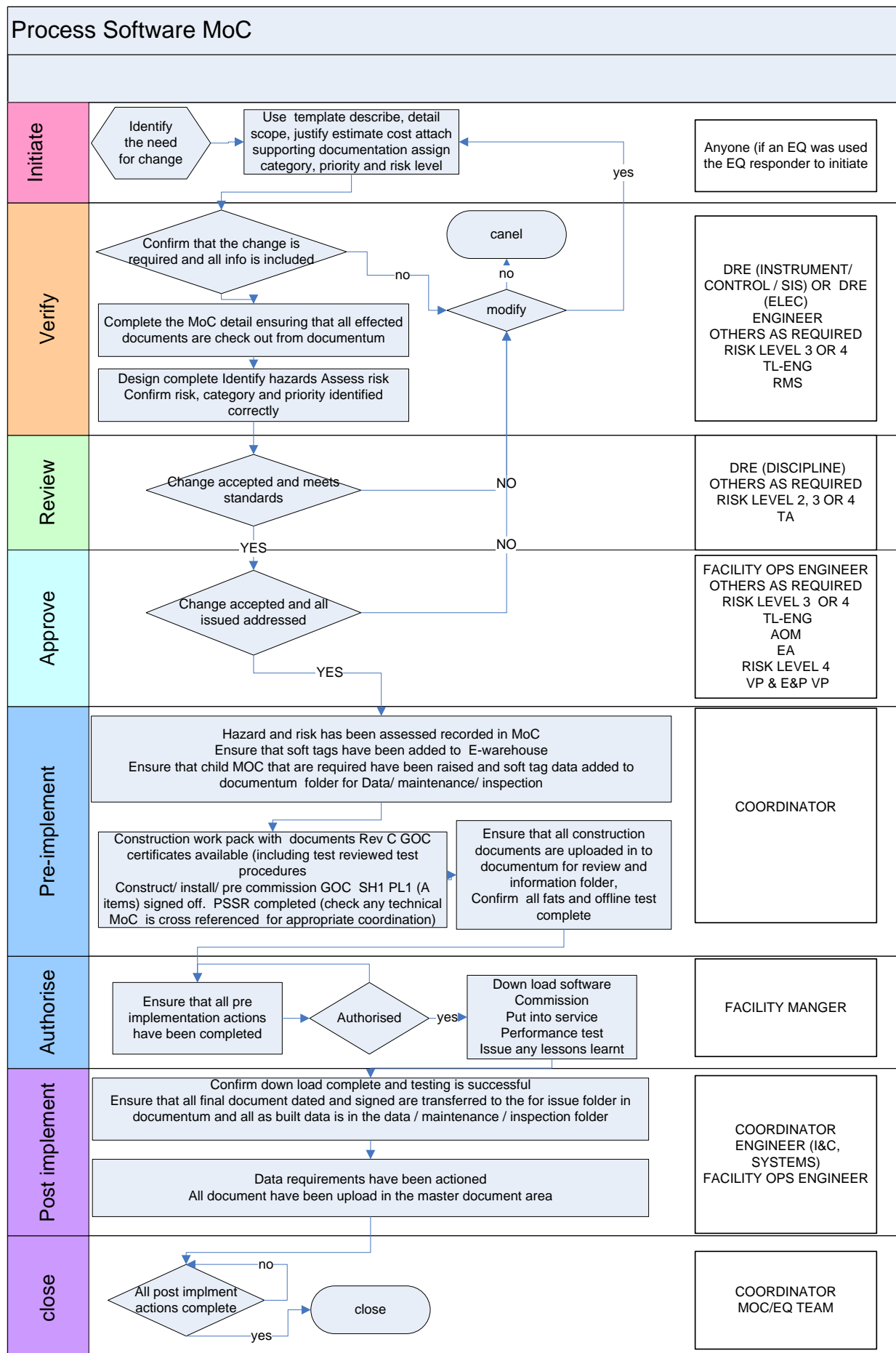
**Note:** it is essential that the Master document data-base is kept up to date

Stage	Requirement
Verify (Design)	All documents/drawings subject to change need to be checked out of documentum and a note added to document data-base stating that the document/ drawing is affected by MoC ref number Initial design document should include in the document name - Rev A Final design documents for review should include in the title - Rev A
Authorisation (pre-start up)	Within Documentum a MoC folder within a folder named for review / information should contain the following Construction documents should include in the document name - Rev C As Built documents for review should include in the document name - Rev R
Closure (post-start up)	Within Documentum a MoC folder within a folder named for issue should contain the following Final As Built document should include in the document name - Rev R (with an as-built stamp dated and signed) DCMT will action all documents found in the "for issue folder" and updated the master document area and action any back drafting that needs to be done.

#### 12.5 Process Software MoC - Key Indicators

- Number of days to close out an MoC after authorization. This indicates how long it takes to get accurate documents into the system.
- Number of MoCs authorized to start up at any one time – A high number indicates increased risk depending on the sites ability to manage many simultaneous changes.
- Number of MoCs in review and approve stages – This indicates the loading on the facility teams.

## 12.6 Process Software MoC - Process Flow Diagram



### 13 Specific Guidance – Process Software MoC (DC&I Facilities)

Process Software MoC (DC&I Facilities) covers the management change associated with process software and electrical protection settings as they affect Drilling Facilities.

**Note:** Although a Process Software MoC can involve minor physical changes these are restricted to modifications "within the system" e.g. internal panel wiring / relays / additions of an hardwired intertrips where the I/O for both Nodes would be existing / Firmware upgrades. All would be allowed as long as the correct review is completed by the correct reviewers. External connections to other sub-systems should be considered to be covered under a separate technical MoC

The person who verifies these modifications needs to decide if a Technical MoC needs to be raised to cover these changes as identified by the scope, and should also consider any impact on ancillary systems such as HVAC or F&G systems which would also required to be considered and as such would need Technical MoC.

**Note:** Offline back ups will be managed for each facility by the DRE (INSTRUMENT/ CONTROL/ SIS)

#### 13.1 Process Software MoC (DC&I Facilities) - Roles and Responsibilities

THOSE IDENTIFIED BY A \* ARE A MINIMUM REQUIREMENT FOR RISK LEVEL 1

MoC Stage/Role	Risk	JOB FUNCTION	Responsibility
Initiate	1/2/3/4	<p>*ANYONE (if an SEQ requires an MoC then the SEQ responder should initiate the MoC)</p> <p>Before initiating it is advised to review the scope with the (DC&amp;I) DRE (INSTRUMENT/ CONTROL/ SIS) (KCAD)</p>	<p>Create the eMOC choosing the affected Area and Facility and will choose the Process software template the use of a template is a mandatory requirement).</p> <p>To identify the scope of work (identifies the change which identifies and describes all work necessary to produce the change. The scope establishes the tone for the remainder of the planning efforts and therefore should be sufficiently detailed.).</p> <p>To provide a justification for the work (this section details why the change is required)</p> <p>To provide details of other options considered.</p> <p>Where the change is required due to some other business process, Engineering Query, incident report etc, the initiator shall reference this process.</p> <p>The initiator is required to identify the Key Change Verifier (DC&amp;I) DRE (instrument/ control /SIS) (KCAD) and identify others as required by the procedures</p> <p>To suggest priority</p> <p>The SEQ system is used by the drilling area operations teams to formally raise technical questions and should be linked if available. Operating areas may cancel an MoC that has not been agreed using the EQ or other operating area system.</p>

MoC Stage/Role	Risk	JOB FUNCTION	Responsibility
Verify	1/2/3/4	* (DC&I) DRE (INSTRUMENT/ CONTROL/ SIS) KCAD OR (DC&I) ENGINEER (SYSTEMS) KCAD  Or (DC&I) DRE (ELECTRICAL) (KCAD) for electrical protection changes	Verify or cancel MoC on behalf of the local operations, confirm the risk level  It should be noted verification should not be given until the person (s) nominated as responsible for the detail design has complete all the necessary activity to provide to ensure that (note that this may be the DRE (instrument / control/ sis) or another) <ul style="list-style-type: none"> <li>change is described clearly and adequate to avoid any possible confusion</li> <li>The full scope of work is agreed and appropriate documentation is in place</li> <li>The justification for the change is clear and adequate</li> <li>That all options have been considered and documented in the MoC (as appropriate)</li> <li>That budget is approved and a cost center is identified (as appropriate)</li> <li>Identify any post start up reviews that may be required to assess the success of the change (as appropriate)</li> <li>Identify who is required to execute various stages of the MoC</li> <li>Priority levels are correct</li> </ul> Once the design is in place is responsible to identify hazard and assess risk using the appropriate management of risk process (GRP3.1-001 selection of Hazards Evaluation & Risk assessment techniques) this process should involve the appropriate reviews as required, this should be done with appropriate persons around a table. Allowing the key verifier to confirm or change the risk level (this includes deviations from company or industry standards or practices and any compliance issues). Details of the risk assessment process used and a summary of the results will be recorded in the risk statement in the MoC initiation page. Detail record will be attached or linked to the MoC.  Ensure that the hazard identification and risk assessment process is formally recorded and attached or linked to the MoC for future reference  If the change is to be rejected cancel the MoC giving a reason  Accountable for all identified requirements at this stage of the MoC
	1/2/3/4	* (DC&I) ENGINEER (KCAD) nominated person or persons responsible for the detailed design as assigned by the verifier	Responsible for the detail design associated with the change and will not verify the MoC until this has been provided. Will ensure that all affected drawings are checked out from documentum as required by this procedure.
	3/4	(DC&I) RMS	Verify or cancel Risk level 3 or 4 MoC
	3/4	(DC&I)TL-ENG (KCAD)	Verify or cancel Risk level 3 or 4 MoC
Coordinator	1/2/3/4	* (DC&I) Engineer (KCAD)	To hold the MoC by checking the hold tick box the MoC until all information and data is fully available  To manage the MoC through the process ensuring that correct persons are notified, that comments are answered and the MoC is properly planned, executed and closed out(as part of this will facilitate any interaction between reviews and designers)  Will ensure that all documents as required by the MoC are properly filed and organized (documents to be sectioned by, for design(rev A )/ for construction(rev C) /red line (R), red line as-built (R with as built stamp) Note that drawings attached for information will need to be in an Documentum MoC folder named for review/ information Note that for drawings to be actioned by DCMT will need to be transferred to a documentum MoC folder named for issue. Note that for data documents (request forms, tdt's) will need to be in an Documentum MoC folder Eng Data & Maintenance & Inspection to be actioned by the MAXIMO Maintenance Coordinator and the Eng Data coordinators  Ensure that all pre-implementation and post implementation actions have been identified and completed. The Coordinator will also raise a Technical MoC if required Will ensure that all soft tags, reserved in eWarehouse as required and all necessary information is fed back before authorization

MoC Stage/Role	Risk	JOB FUNCTION	Responsibility
Reviewer	1/2/3/4	* (DC&I) DRE (DISCIPLINE) (KCAD)	The <u>primary technical reviewer</u> and will review against statutory and ETP requirements and engineering practice. Any changes affecting the P&ID's or PFD's must be reviewed by a DRE (Process) Identify any Factory acceptance testing required Review the test procedures <i>Note Software MoC that requires maintenance changes will also have a technical MoC and the DRE / maintenance engineer shall identify maintenance requirement there.</i>
	1/2/3/4	* (DC&I) MAINT SUPERINTENDENT(KCAD)	Will review any change
	2/3/4	TA-DISCIPLINE	Independent Discipline Technical Review for MoC with a risk level of greater than 2 Will not start the review process until the DRE has done the initial review
	2/3/4	TA (PROCESS)	Independent Discipline Technical Review for MoC with a risk level of greater than 2. MoC with impact on process safety including emergency response plans or changes affecting the P&ID's. Will not start the review process until the DRE has done the initial review
	1/2/3/4	TA (process safety)	Will review any change that requires a HAZOP
Approve	1/2	* (DC&I) WSL SNR	Confirms that actions raised during the review stage have been addressed.
	3/4	(DC&I) TL-ENG (KCAD)	Operating area Approval Risk level 3 or 4 MoC
	3/4	(DC&I) WTL	Operating area Approval Risk level 3 or 4 MoC
	3/4	(DC&I) RMTL	Operating area Approval Risk level 3 or 4 MoC
	3/4	Engineering services manager	Independent Approval for Risk level 3 or 4 MoC
	3/4	EA	Independent Approval for Risk level 3 or 4 MoC
	4	VP	Independent Approval for Risk level 4 MoC
Pre-implement	1/2/3/4	*COORDINATOR	Perform offline FAT for complex modifications (as indicated by DRE) Ensure that all drawings and formal procedures requested have been checked out of documentum against the MoC Ensure that there is a work pack with all necessary construction documents, GOC certificates have been generated pre-populated with the data from eWarehouse Ensure that any TECHNICAL changes have been captured by a TECHNICAL MoC and the MoC link attached to the MoC Confirms SOFT Tags have been reserved and associated design data has been given to the ENG DATA COORDINATOR All pre SOFTWARE LOAD checks and GOC documentation has been completed and the SH1 form with punch lists have been signed and that there are no out standing "A punch list items" on the punch list Note: after software load the system testing should be documented on a plant performance certificate (with any detailed testing documentation attached)  Ensure that affected drawings have been marked up as red lined drawings stamped AS BUILT dated/ signed / Job Title Ensure that all supplementary MoC have Post implement close out actions attached Confirm that all Red lined " As built ""REV R documents in the Documentum MoC folder for issue Ensure that the HAZARD identification / RISK assessment process can be accessed from the MoC (if the MoC form isn't used then a link is to be provided)
	1/2/3/4	*(DC&I) Engineer (systems) (KCAD)	Confirm that all operating guidelines procedures have been updated
	1/2/3/4	ENG DATA COORDINATOR	Ensures that all EWarehouse data has been supplied and uploaded in to eWarehouse

MoC Stage/Role	Risk	JOB FUNCTION	Responsibility
	1/2/3/4	DOCUMENT COORDINATOR	Ensure that all drawings and formal procedures requested have been checked out of documentum against the MoC Confirm that all Red lined documents and procedures are updated in Documentum
Authorize	1/2/3/4	*(DC&I) RIG SUPERINTENDENT (KCAD)	The authorizer is accountable for ensuring that all pre implement actions have been identified and closed out to their satisfaction and Authorizes the MoC for software down load and testing controlled by ISSOW
Post implement	1/2/3/4	*(DC&I) Engineer (systems) KCAD	Confirm Down load complete
	1/2/3/4	*(DC&I) Engineer (systems) KCAD	Confirm testing successful and attach test records to the MoC
	1/2/3/4	*COORDINATOR	Ensure that all redline drawings have been reviewed and verified as REV R drawings to be actioned by DCMT are in the MoC folder named For Issue Ensure GOC documentation is completed including any post SH1 requirements and that any outstanding "B punch list items" have been raised as correctives in MAXIMO Ensure that any eWarehouse required data has been provided for the Master Equipment list, the Eng Data coordinators will need it to be transferred to an MoC folder named Eng Data, Maintenance & Inspection Confirm that the change performance has been acceptable and if applicable any lessons learnt are issued
	1/2/3/4	COORDINATOR	CONFIRM TEMPORARY CHANGE IN PLACE (IF APPLICABLE)
	1/2/3/4	COORDINATOR	CONFIRM TEMPORARY CHANGE REMOVED (IF APPLICABLE)
	1/2/3/4	DOCUMENT Coordinator	Confirm that all "as built- final " documents and procedures as found in the for issue folder updated in Documentum main area and when back drafting is completed then rev Z drawings will also be upload at the next revision
	1/2/3/4	Eng Data coordinator	Ensure that all as built data has been updated in EWarehouse
Close out	1/2/3/4	*COORDINATOR	Confirm that all post implementation actions have been completed
	1/2/3/4	*(DC&I) RMTL	Confirm that the Drilling operator has finished this modification to his satisfaction on behalf of BP.
	1/2/3/4	*MOC/ EQ TEAM	Confirm that all post implementation actions have been completed as identified in this procedure

*Note: At any stage reviewers and approvers may be added to the MoC if considered necessary*

*Note: The KCAD Minor Mod Workpack shall include all the supporting documentation relative to the change, such as: Control Narrative, Logic Diagrams, Test Procedures and GoC check sheets.  
The MMWpk will be an attachment to the MoC.*

### 13.2 Process Software MoC (DC&I Facilities) - Templates

The following will be linked directly to the MoC template to assist with the uniform creation of MoC

Document number	Document Title	Applies to	Notes
<a href="#">MOC-FRM-009</a>	PROCESS SOFTWARE MoC CHANGE IMPACT ASSESSMENT and document check list combined	PROCESS SOFTWARE	This software impact assessment and document check list should be completed before authorization

**Note:** Installation and equipment installed on site shall be proven using the GOC technical check sheets if the site does not have a GOC database then the MoC number will be used as the reference number

### 13.3 Process Software MoC (DC&I Facilities) - Risk / Hazard Guidance

Risk Level	Hazard Statement
Software – Insignificant risk	Managed within the Assets and don't required eMoC <ul style="list-style-type: none"> <li>• Corrections to error in graphics</li> <li>• Correction to reports</li> <li>• Modifying trend sets</li> <li>• Changing tuning constants (record on separate logs)</li> <li>• Dead bands on alarms and trips</li> <li>• Operator adjustable deviation alarms</li> <li>• Coefficients for inferred flow, well flow &amp; DP calculations which are NOT reported in PRS</li> <li>• Offline back ups will be managed for each facility by the DRE (INSTRUMENT/ CONTROL/ SIS)</li> </ul>
Software – Risk Level 1 (white)	Managed within the Operating area: <ul style="list-style-type: none"> <li>• MoC with a Risk level 1 (OMS Risk Matrix)</li> <li>• No or little impact on process safety.</li> <li>• No deviation from Company and or international standards.</li> <li>• Includes adding tags or overviews to an operators display, mapping tags to a communications link or a PLC, changing a display layout or a tag descriptor to match design documents, adjusting a range to a transmitter, adjusting alarm settings, System Software Upgrades.</li> <li>• Software change that is part of an approved technical MoC.</li> </ul>
Software– Risk level 2 (turquoise)	Managed within the Operating area but will have independent technical review: <ul style="list-style-type: none"> <li>• MoC with a Risk level 2 (OMS Risk Matrix)</li> <li>• Minimal impact on process safety.</li> <li>• Involves changes to pressure relief systems Includes adjusting trip settings within rated technical limits.</li> <li>• Removal of trips settings</li> <li>• Includes a change that affects a SIL rated device.</li> <li>• Includes changes to the operating areas PSD, ESD or F&amp;G logic. C&amp;E</li> <li>• Changes that affect the electrical trip discrimination.</li> </ul>
Software– Risk level 3 (blue)	Managed within the Operating area but will have independent technical review and independent approval: <ul style="list-style-type: none"> <li>• MoC with a Risk level 3 (OMS Risk Matrix)</li> <li>• Involves changes to the well control system.</li> <li>• Has significant impact on process safety.</li> <li>• Involves operation of equipment out-with normal operating parameters as identified on the P&amp;ID or PFD.</li> </ul>
Technical – Risk level 4 (purple)	Managed within the Operating area but will have independent technical review and risk level 4 approval. - MoC required <ul style="list-style-type: none"> <li>• MoC with a risk level 4 (OMS Risk Matrix)</li> </ul>

**Note:** This risk associated directly with making the change and should not be confused with MoC priority



### 13.4 Process Software MoC (DC&I Facilities) - Documentation

At the heart of any change is the control of documents, procedures, software and drawings. Everyone needs to understand the status of these items at three key stages of change.

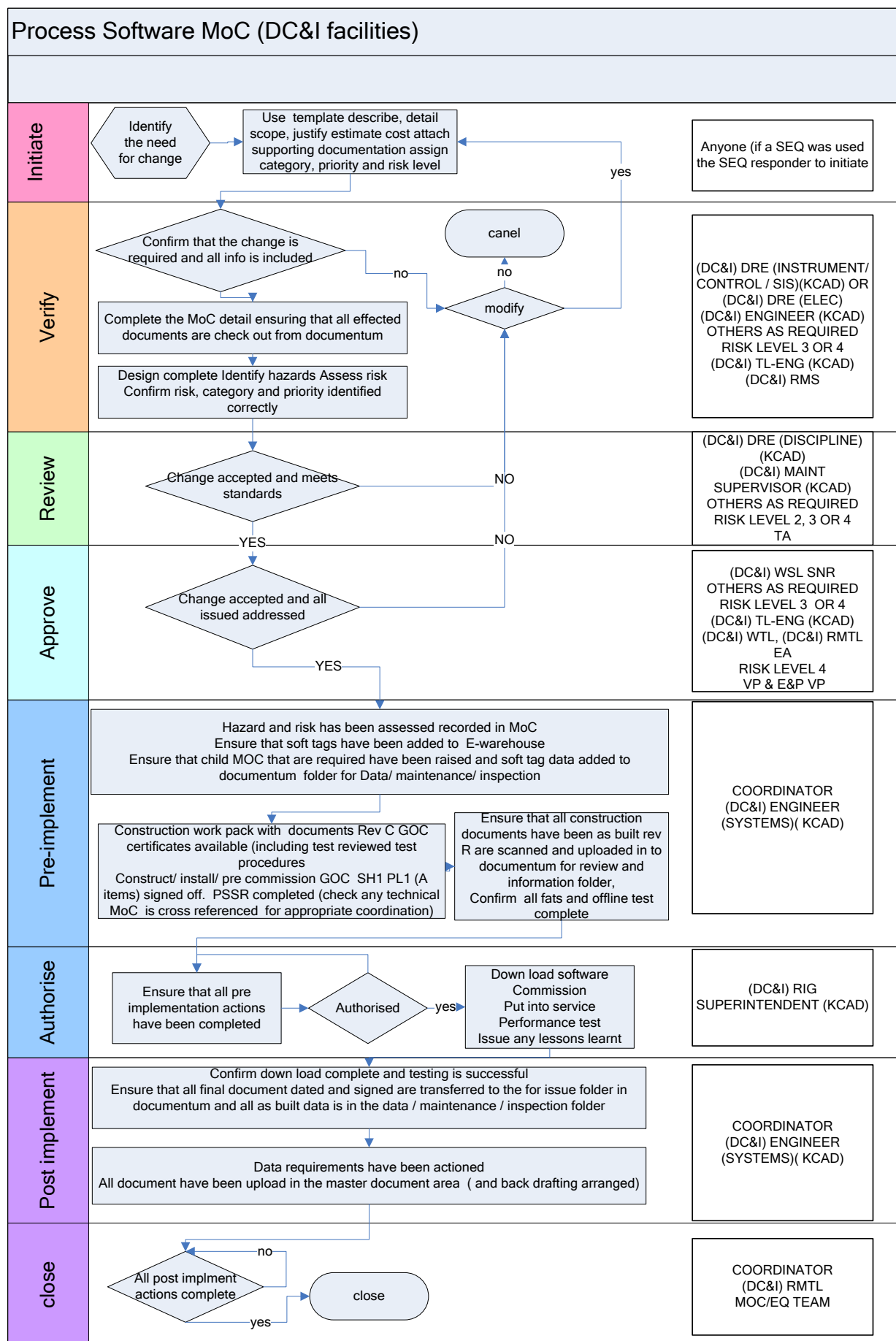
**Note:** it is essential that the Master document data-base is kept up to date

Stage	Requirement
Verify (Design)	All documents/drawings subject to change need to be checked out of Documentum and a note added to document data-base stating that the document/ drawing is affected by MoC ref number Initial design document should include in the document name - Rev A Final design documents for review should include in the document name - Rev A
Authorisation (pre-start up)	Within Documentum a MoC folder within a folder named for review / information should contain the following Construction documents should include in the document name - Rev C As Built documents for review should include in the title - Rev R
Closure (post-start up)	Within Documentum a MoC folder within a folder named for issue should contain the following Final As Built document should include in the document name - Rev R (with an As built stamp dated and signed) DCMT will action all documents found in the "for issue folder" and updated the master document area and action any back drafting that needs to be done.

### 13.5 Process Software MoC (DC&I Facilities) - Key Indicators

- Number of days to close out a MoC after start up. This indicates how long it takes to get accurate documents into the system.
- Number of MoC authorized to start up at any one time – A high number indicates increased risk depending on the sites ability to manage many simultaneous changes.
- Number of MoC in review and approve stages – This indicates the loading on the facility teams.

### 13.6 Process Software MoC (DC&I Facilities) - Process Flow Diagram



## 14 Specific Guidance - Chemical MoC

A chemical change is defined as one of the following:

- Introduction of a new chemical where no chemical is currently in use.
- Removal of a chemical in use.
- Introduction of any fluid into the production stream not related to production (e.g. commission fluids, drilling fluids etc)
- DC&I drilling fluids inclusion into the topsides will be covered by eMOC. However this will be managed as follows:

A single temporary (annual refresh) eMOC will be put in place to cover all typical fluid flow-back scenarios, and topsides safeguards to be in place. The individual facility and drilling operating procedures will be updated as a result to reflect the actions to be taken in each scenario.

- A hazard assessment will be conducted put in place a "Rule Set" for typical drilling fluid flow-backs
- This assessment will be refreshed annually along with the temporary MoC

Any fluid flowback not covered by the generic eMOC will be subjected to a separate eMOC prior to the operation being conducted. The rule set for when a separate eMOC is needed can be defined, but will be along the lines of:

- New operation
  - New fluids
  - Existing fluid, but beyond defined limits (of rate/composition/total volume, etc)
- Replacing an existing chemical with a new one.
  - Changing the composition of an existing chemical, including changes in concentration or generic chemistry.
  - Change of use, where an existing chemical is to be used for a different duty.
  - Change in injection rates outside the previously assessed range. This applies to significant changes (>20%) and does not include minor adjustments as part of ongoing optimization.

Although the requirements are the same, a chemical trial will be implemented as a temporary e-MoC

**Note:** The Chemical MoC will be raised from the point of injection site. TA will ensure that reviewers (Facility Ops Engineers) from the all affected sites (if there are any) such as Sangachal Terminal; BTC; WREP; SCP are added as needed.

**Note:** Although a chemical MoC can involve minor physical changes, it is not intended to replace the Technical MoC if permanent hardware changes are required. The BP production chemist who verifies these modifications needs to decide if a Technical MoC needs to be raised to cover these hardware changes such as changing an injection location.

**Note:** Any changes to Flow Assurance and Production Chemistry management strategies that do not involve a chemical change (e.g. pigging frequency for wax management; producing under different operational conditions for hydrate management) will be covered by Documentation MoC or Maintenance and Inspection MoC).

**Note:** Flow Assurance/Production Chemistry Management strategies will be covered by AzSPU Site Technical Practices and any changes to these will be controlled by Documentation MoC.

**Note:** Lab procedures will be controlled by Documentation MoC.

#### 14.1 Chemical MoC - Roles and Responsibilities

THOSE IDENTIFIED BY A \* ARE A MINIMUM REQUIREMENT FOR RISK LEVEL 1

MoC Stage/Role	Risk	Job Function	Responsibility
Initiate	2/3/4	*ANYONE (if a EQ requires an MoC then the EQ responder should initiate the MoC)	<p>Create the eMOC choosing the affected Area and Facility and will choose the Chemical template the use of a template is a mandatory requirement).</p> <p>Will identify the scope of work (identifies the change which identifies and describes all work necessary to produce the change. The scope establishes the tone for the remainder of the planning efforts and therefore should be sufficiently detailed.).</p> <p>Will provide a justification for the work (this section details why the change is required)</p> <p>Will provide details of other options considered.</p> <p>Where the change is required due to some other business process, Engineering Query, incident report etc, the initiator shall reference this process.</p> <p>The initiator is required to identify the Key Change Verifier DRE (production chemist) and identify others as required by the procedures</p> <p>Will suggest priority</p> <p>The EQ system is used by the operating area operations teams to formally raise technical questions and should be linked if available. Operating areas may cancel an MoC that has not been agreed using the EQ or other operating area system.</p>

MoC Stage/Role	Risk	Job Function	Responsibility
Verify	2/3/4	*FACILITY OPS ENGINEER	<p>To verify or cancel MoC on behalf of the local operations</p> <p>Confirm level of priority using the prioritization tool based on the anticipated benefit of the change</p> <p>Will cancel the MoC giving a reason if the change is to be rejected</p>
	2/3/4	*DRE (PRODUCTION CHEMIST)	<p>To verify or cancel MoC on behalf of the local operations, confirm the risk level</p> <p>It should be noted verification should not be given until the detail design has completed, the verifier will ensure that</p> <ul style="list-style-type: none"> <li>• The change is described clearly and adequate to avoid any possible confusion</li> <li>• The full scope of work is agreed and appropriate documentation is in place</li> <li>• The justification for the change is clear and adequate</li> <li>• That all options have been considered and documented in the MoC (as appropriate)</li> <li>• That budget is approved and a cost center is identified (as appropriate)</li> <li>• Identify any post start up reviews that may be required to assess the success of the change (as appropriate)</li> <li>• Identify who is required to execute various stages of the MoC</li> <li>• Priority levels are correct</li> </ul> <p>Once the design is in place is responsible to identify hazard and assess risk using the appropriate management of risk process (GRP3.1-001 selection of Hazards Evaluation &amp; Risk assessment techniques) this process should involve the appropriate reviews as required, this should be done with appropriate persons around a table. Allowing the key verifier to confirm or change the risk level (this includes deviations from company or industry standards or practices and any compliance issues). Details of the risk assessment process used and a summary of the results will be recorded in the risk statement in the MoC initiation page. Detail record will be attached or linked to the MoC</p> <p>To ensure that the hazard identification and risk assessment process is formally recorded and attached or linked to the MoC for future reference</p> <p>If the change is to be rejected cancel the MoC giving a reason</p> <p>Accountable for all identified requirements at this stage of the MoC</p>

MoC Stage/Role	Risk	Job Function	Responsibility
Coordinator	2/3/4	*DRE (PRODUCTION CHEMIST)	<p>To hold the MoC by checking the hold tick box the MoC until all information and data is fully available</p> <p>To manage the MoC through the process ensuring that correct persons are notified, that comments are answered and the MoC is properly planned, executed and closed out (as part of this will facilitate any interaction between reviews and designers)</p> <p>To ensure that all documents as required by the MoC are properly filed and organized (documents to be sectioned by, for design(rev A )/ for construction(rev C ) /red line (R), red line as-built (R with as built stamp) Note that drawings attached for information will need to be in an Documentum MoC folder named for review/ information Note that for drawings to be actioned by DCMT will need to be transferred to an MoC folder named for issue.</p> <p>To ensure that all pre-implementation and post implementation actions have been identified and completed. The Coordinator will also raise Technical MoC as required to support the Chemical MoC (note that eWarehouse / maintenance and document changes that form part of the technical MoC do not require additional MoC to be raised) To ensure that the any weight changes associated with platform loading are identified recorded and submitted. Governing procedures SHDU-ENG-PRC-001 and UNIF ENG PRC -142</p>
Reviewer	2/3/4	*TA-(PRODUCTION CHEMISTRY)	Review the change giving reasons for any rejection
	2/3/4	*FACILITY OPS SUPERVISOR	Review the change giving reasons for any rejection
	2/3/4	*ENVIRONMENTAL ADVISOR	Review the change giving reasons for any rejection with respect to the environmental impact
	2/3/4	*HSEA	Review the change giving reasons for any rejection
	2/3/4	*FACILITY OPS ENG (EXPORT)	Must review all changes affecting Oil or Gas export route (i.e. SCP BTC WREP)
	2/3/4	*DRE (PROCESS)	Review the change giving reasons for any rejection
	2/3/4	*TA (PROCESS)	Review the change giving reasons for any rejection
	2/3/4	*H&S TL / ENV & COMPLIANCE TL	Will communicate on-site chemical changes to the HSE Compliance Advisors through completion of the first section of the HSE Compliance Form and will update the facility APS list (if relevant) Will add a pre-implementation action for the HSE Compliance Advisor to determine and advise any compliance implications.
	2/3/4	MTL	Review the construction pack and the resource and scheduling that have been identified as required by the maximo work order to support this activity (if applicable)
	2/3/4	TA (PROCESS safety)	To review if a HAZOP was required
	2/3/4	TA-(CORROSION)	Review the change giving reasons for any rejection
	2/3/4	TA-(INSPECTION)	Review the change giving reasons for any rejection
	2/3/4	DOWN STREAM FACILITY OPS ENGINEERS	Review the change giving reasons for any rejection
	2/3/4	DRE (DISCIPLINE)	Review the change giving reasons for any rejection Platform Weight changes must be reviewed by the DRE(structures)
	2/3/4	OMA	Review where the change has a Marine Element (Bulk transport by vessel)

MoC Stage/Role	Risk	Job Function	Responsibility
Approve	2/3/4	MA	Where the change has a Marine Element
	2/3/4	*FACILITY MANAGER	APPROVE the change giving reasons for any rejection
	3/4	AOM	APPROVE the change giving reasons for any rejection
	3/4	EA	APPROVE the change giving reasons for any rejection
	3/4	Engineering services manager	Independent Approval for Risk level 3 or 4 MoC
	4	VP	APPROVE the change giving reasons for any rejection
	4	E&P VP OR CHIEF ENGINEER	APPROVE the change giving reasons for any rejection
Pre implement	2/3/4	*COORDINATOR	To ensure that all drawings and formal procedures requested have been checked out of documentum against the MoC To ensure that there is a work pack To ensure that any TECHNICAL changes have been captured by a Technical MoC and the MoC link attached to the MoC To ensure that affected documents have been marked up as redlined drawings, stamped AS BUILT dated/ signed / Job Title To ensure that all supplementary MoC have Post Implement close out actions attached To confirm that all Red lined "As built " REV R documents has been placed in the Documentum MoC folder for issue To ensure that the HAZARD identification / RISK assessment process can be accessed from the MoC (if the MoC form isn't used then a link is to be provided)
	1/2/3/4	HSE COMPLIANCE ADVISOR	To review the operational changes communicated in the HSE Compliance Form and facilitate the process to determine whether there are any compliance implications, this may lead to update of Compliance Task Manager (CTM) tasks.
Authorize	2/3/4	*FACILITY OPS ENGINEER	To ensure that all pre-implementation actions have been identified and completed. Authorize MoC for startup on site. Site will use the normal Control of work systems for the work done on site Ensure that performance is monitored and reported
Post Implement	2/3/4	*COORDINATOR	Confirm that the change performance has been acceptable and if applicable any lessons learnt are issued
	2/3/4	*DOCUMENT COORDINATOR	Confirm that all "as built/final " documents and procedures as found in the for issue folder updated in Documentum main area and when back drafting is completed then rev Z drawings will also be upload at the next revision
	1/2/3/4	COORDINATOR	Confirm temporary change in place (only applicable to temporary changes)
	1/2/3/4	COORDINATOR	Confirm temporary change removed (only applicable to temporary changes)
	2/3/4	OMA	To ensure that all changes required by the Marine Element have been closed out
Close out	2/3/4	*COORDINATOR	To ensure that all post-implementation actions have been completed and As built documents have been identified and that the production chemicals register has been updated (UNIF-ENG-REG-021)
	1/2/3/4	*MOC/ EQ TEAM	Confirm that all post implementation actions have been completed as identified in this procedure

**Note:** At any stage reviewers approvers post and pre implementation actions may be added to the MoC, if considered necessary

**Note:** All weight changes offshore in excess of 100kg should be recorded on the weight change form and submitted to the custodian of the weight change register: - Governing procedures SHDU-ENG-PRC-001 and UNIF ENG PRC -142

**Note:** Installation and equipment installed on site shall be proven using the GOC technical check sheets if the site does not have a GOC database then the MoC number will be used as the reference number

## 14.2 Chemical MoC - Templates

The following will be linked directly to the MoC template to assist with the uniform creation of MoC

Document number	Document Title	Applies to	Notes
<a href="#">MOC-FRM-011</a>	CHEMICAL MoC CHECK LIST	CHEMICAL	The chemical MoC check list should be completed before the MoC is closed out
<a href="#">MOC-FRM-025</a>	HSSE COMPLIANCE FORM	TECHNICAL, CHEMICAL, DC&I	Used to communicate on-site operational changes to the AzSPU HSE Compliance Team so that they can determine HSE compliance implications. Must be completed before close out.
<a href="#">UNIF-ENG- REG-021</a>	PRODUCTION CHEMICAL REGISTER	CHEMICAL	To be updated before chemical MoC is closed out
<a href="#">UNIF-ENG-WCS-001</a>	WEIGHT CHANGE SHEET	TECHNICAL, CHEMICAL	To be completed for all weight changes on the platforms in excess of 100kg

## 14.3 Chemical MoC - Risk / Hazard Guidance

Risk Level	Hazard Statement
Chemical– insignificant risk	No MoC required
Chemical– Risk level 1 (white)	Managed within the Operating area - technical MoC required <ul style="list-style-type: none"> <li>MoC with a risk level 1 (OMS Risk Matrix)</li> </ul>
Chemical– Risk level 2 (turquoise)	Managed within the Operating area will have independent technical review <ul style="list-style-type: none"> <li>MoC with a risk level 2 (OMS Risk Matrix)</li> <li>Involves the introduction (includes changes in concentration, generic chemistry)/ removal of a chemical.</li> <li>Involves increasing/ reducing the injection rate (&gt;20%) of an existing chemical.</li> <li>Involves using an existing chemical for a new duty. Will have minimal adverse impact on process safety and technical integrity.</li> </ul>
Chemical– Risk level 3 (blue)	Managed within the Operating area but will have independent technical review and risk level 3 approval. - MoC required <ul style="list-style-type: none"> <li>MoC with a risk level 3 (OMS Risk Matrix)</li> </ul>
Technical – Risk level 4 - (Purple)	Managed within the Operating area but will have independent technical review and risk level 4 approval. - MoC required <ul style="list-style-type: none"> <li>MoC with a risk level 4 (OMS Risk Matrix)</li> </ul>

**Note:** This risk associated directly with making the change and should not be confused with MoC priority

## 14.4 Chemical MoC - Documentation

At the heart of any change is the control of documents, procedures and drawings. Everyone needs to understand the status of these items at three key stages of change.

**Note** Documentum is the Master document data-base and it is therefore essential that this data-base is kept up to date

Stage	Requirement
Verify (Design)	All documents/drawings subject to change need to be checked out of Documentum and a note added to document data-base stating that the document/ drawing is affected by MoC ref number Initial design document should include in the document name - Rev A Final design documents for review should include in the title - Rev A
Authorisation (pre-start up)	Within Documentum a MoC folder within a folder named for review / information should contain the following Construction documents should include in the document name - Rev C As Built documents for review should include in the title - Rev R Authorization for Chemical Change Check List and HSSE Compliance Sheet to be completed pre start up

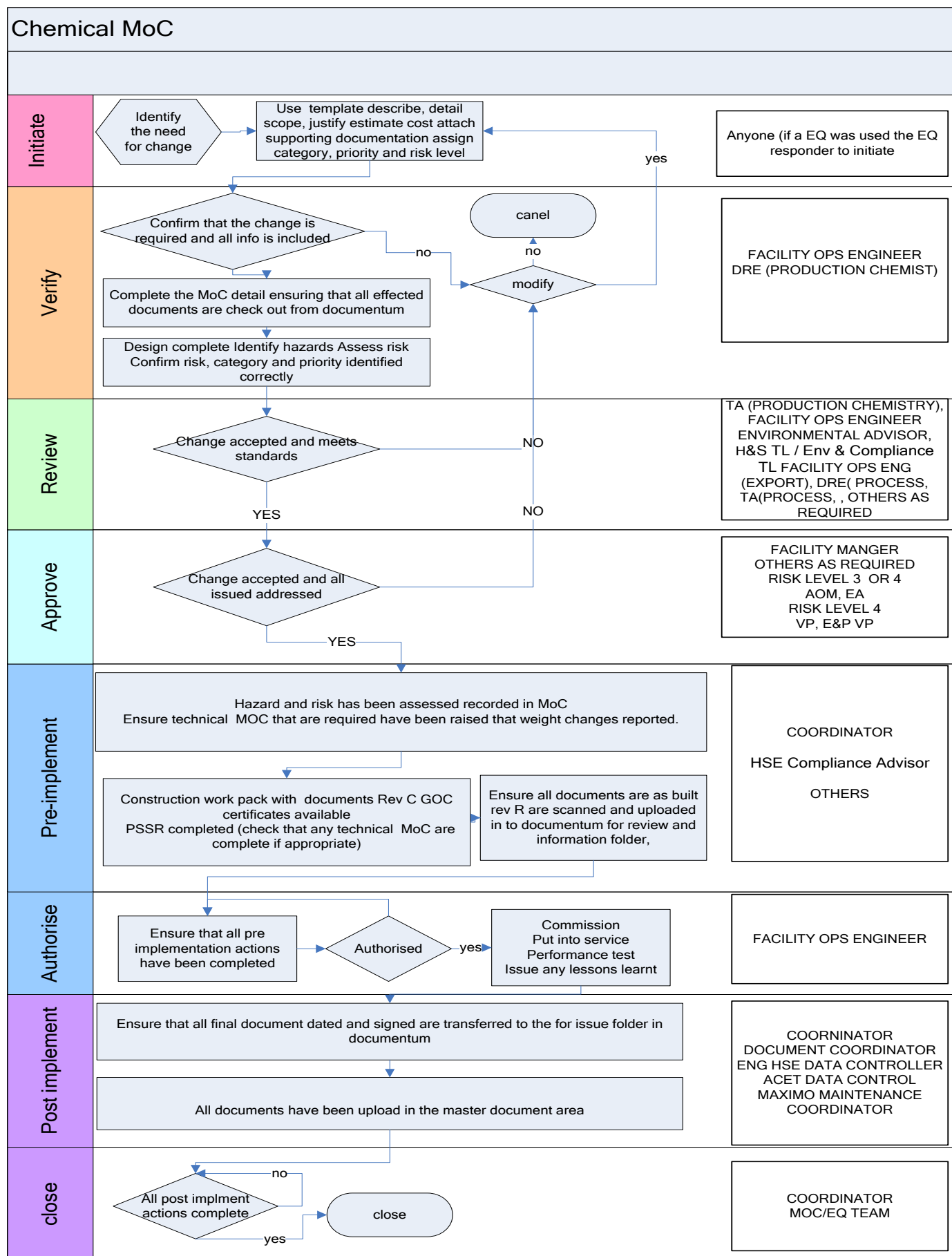


Stage	Requirement
Closure (post-start up)	<p>Within Documentum a MoC folder within a folder named for issue should contain the following Final As Built document should include in the document name - Rev R (with an As built stamp dated and signed)</p> <p>DCMT will action all documents found in the "for issue folder" and updated the master document area and action any back drafting that needs to be done.</p> <p>Lessons learned are documented.</p> <p>COSHH is updated if applicable.</p> <p>Ops Procedures is updated if applicable.</p> <p>Inspection Strategy is updated if applicable.</p> <p>Corrosion Management Strategy is updated if applicable.</p> <p>Production Chemicals Register is updated following any chemical change.</p> <p>Copies of MSDS and risk assessment documents will be distributed to: storage area; point of use; site medical staff; site HSSE representative; facility library; facility laboratory and supplied during transportation.</p>

#### **14.5 Chemical MoC - Key Indicators**

- Number of days to close out an MoC after authorization. This indicates how long it takes to get accurate documents into the system.
- Number of MoCs authorized to start up at any one time – A high number indicates increased risk depending on the sites ability to manage many simultaneous changes.
- Number of MoCs in review and approve stages – This indicates the loading on the facility teams.

## 14.6 Chemical MoC - Process Flow Diagram



## 15 Specific Guidance - Maintenance & Inspection MoC

A Maintenance MoC will be required for:

- Creation of New PM/ change of Frequency/ change of Job Plan or routestop Job Plan/change of Location or Route Location/ Deferral or Suspension of Preventive Maintenance (PM) records in MAXIMO

*Note1: If a tag has been decommissioned then suspension of related PM/WO records will be covered by the Technical MOC. Maintenance MoC will be issued only if there is no Technical MOC.*

*Note2: If a PM is to be suspended then its live work orders must be cancelled in MAXIMO by adding MoC number as a reference to the work order and attaching the list of work orders to the MOC*

- Cancellation/Change of Target Completion Date (Deferral) of SCE Work Orders.

*Note1: Corrective (CO) and Breakdown (BR) SCE work orders will require MoC only if they have already Approved. SCE PM and PdM work orders will need MoC regardless of their statuses*

*Note2: Principally Target Dates of non-SCE Work Orders should not be changed and they should be seen as backlog. Cancellation or deferral of significant amount of non-SCE work orders resulted by the operational circumstances should be captured through a Maintenance MOC.*

- Creation of a new Job Plan/Change to the Master Job Plan details
- Creation / Modification of a Planned Maintenance Routine (PMR or work scope document) in MAXIMO and Document Management System (DMS)
- Creation of the new/modification of the existing Location and Equipment records in eWarehouse and MAXIMO will be covered through respective Technical MOCs. If no Technical MoC exists then a Maintenance MoC will be raised to capture amendment requests for the existing records.

A Maintenance MoC will not be required for updating of the following data fields

- Changes to Location/Equipment Descriptions, Location hierarchy-Parent/Child relationships, Location Priority, GL Account
- Changes to Job Plan Descriptions, Supervisor, Materials, Durations, Resources – not applicable to master Job Plan
- If a Technical MoC requires creation of a new/amendment of the existing maintenance subjects, like PM, JP, PMR e.q. then Pre and Post Implementation stages of the same MoC will cover these activities. Coordinator of the Technical MoC will identify Responsible people for these actions from "R&M" and "System and Tools" teams. For RBI activities Inspection Engineers should be contacted. No Maintenance MoC will be initiated in this case.

### 15.1 Maintenance & Inspection MoC - Roles and Responsibilities

MoC Stage / Role	Risk	Job Function	Responsibility
Initiate	1/2/3/4	ANYONE AUTHORIZED	To initiate the Maintenance e-MoC providing description and justification and any other information required by the change. The attached maintenance forms identify the information required maintenance change To identify the minimum requirement for verification stage based on the below categories
Verify	1/2/3/4	Maintenance Engineer(ME)	<b>Minimum requirement for Maintenance PM/JP/PMR modifications.</b> ME must ensure that requests are inline with Maintenance Strategy requirements. Any exclusion to the strategy is to be captured for the next review of strategy documents. Standardization is to be followed as much as possible Verifies the MOC, identifies applicable priority and risk levels, assigns responsible person for each stage of the MOC. Ensures that necessary data is available and correct
	1/2/3/4	Area Inspection Authority	<b>Minimum requirement for</b> <ul style="list-style-type: none"> <li>• Inspection (RBI) PM/JP/PMR modifications</li> <li>• Deferral of Mechanical Equipment Inspection/Corrosion Activities (see Table1.4, Risk Level 2 requirements)</li> </ul> Verifies the MOC, identifies applicable priority and risk levels, assigns responsible person for each stage of the MOC. Ensures that necessary data is available and correct
	1/2/3/4	Data Coordinator	<b>Minimum requirement for Adding/Removing Tags.</b> Covers updates to location / equipment details, SCE, EX, failure class, location status If the request covers maintainable tags then ME must be added as the <u>second</u> verifier
	1/2/3/4	Facility Ops Engineer/OOE	<b>Minimum requirement for Deferral/Cancellation of SCE WOs.</b> Facility must confirm that request for deferral/cancellation of SCE work orders is valid Verifies the <b>MOC</b> , identifies applicable priority and risk levels. The coordinator assigns necessary person for each stage. If the request needs changes to Maintenance Strategy then ME must be added as the <u>second</u> verifier.
	1/2/3/4	DRE (mechanical)	Responsible for completion of PSV deferral forms
Coordinator	1/2/3/4	Maintenance Coordinator or Site Scheduler	MAXIMO maintenance coordinator will coordinate any maintenance MoC except SCE WO Cancellations and Deferrals Site Scheduler will coordinate Deferral and cancellation of SCE WO The coordinator will ensure that the provided data is enough to processes the MoC, if not then the coordinator is fully responsible for adding names of those who can provide the required input
Reviewer	1/2/3/4	Maintenance Engineer(ME)	<b>Minimum requirement for all maintenance strategy related MOCs and SCE Deferrals</b> Reviews change requests as per Maintenance Strategy and collects necessary justification of the SCE Deferrals, involve TAs if required. <b>Please note that by default all SCE deferrals will be risk ranked blue (high risk).</b>
	1/2/3/4	DRE (Discipline)	Provides assistance to Maintenance Engineer and TA wherever required Changes affecting subsea installations must be reviewed the DRE (offshore pipelines) or DRE (subsea) including corrosion protection systems and pigging
	1/2/3/4	AIA	<b>Minimum requirement for Deferral/Cancellation of SCE Inspection(RBI) WOs</b> To review any change to inspection /corrosion management Failure Class fields, Location Status, Deferral and Cancellation of inspection/ corrosion management WOs, suspension of PM Creation of new PM/ JP/ PMR changes to existing PM & Route locations, frequency, CFW, PMR Content

MoC Stage / Role	Risk	Job Function	Responsibility
	1/2/3/4	TL-SO	To review any change to subsea equipment maintenance
	2/3/4	TA-INPECTION	Independent Technical Review for Deferral and Cancellation of inspection WO (for risk level 2 (turquoise) and above) changes associated with static mechanical equipment i.e. piping, vessels, etc. TA will not start the review process until the AIA has done the initial review
	2/3/4	TA-DISCIPLINE	Independent Technical Review for risk level 2 (turquoise and above) changes, i.e. Deferral and Cancellation of SCE WOs, suspension of PM Creation of new PM/ JP/ PMR, changes to existing PM & Route locations, frequency, CFW, PMR Content, changes to SCE flag. <b>TA will not start the review process until the DRE (discipline) has done the initial review.</b>
Approve	1/2/3/4	Coordinator	Approve Maintenance change ( except SCE deferrals and cancellation)
	2/3/4	FACILITY MANAGER	Minimum Requirement: Approve deferrals of SCE /or inspection/ corrosion management WO
	3/4	AOM or SOM for subsea	Approve second deferrals of SCE /or inspection/ corrosion management WO
	3/4	Engineering services manager	Approve second deferrals of SCE /or inspection/ corrosion management WO
	3/4	EA	Approve second deferrals of SCE /or inspection/ corrosion management WO
	4	VP	Approve third deferrals of SCE /or inspection/ corrosion management WO
Authorize	1/2/3/4	Coordinator	Authorize for execution.
Close out	1/2/3/4	Coordinator	Area scheduler changes target completion dates of SCE work orders and Start(due) dates of PMs if required, cancels SCE WOs and suspends their PMs if required Maximo Maintenance Coordinator updates MAXIMO with any changes related to PM/JP/PMRs Data Coordinator changes location/ equipment details in eWarehouse / MAXIMO To ensure that any final as built documentation is updated in documentum To ensure that all post implementation actions have been completed
	1/2/3/4	MOC/ EQ TEAM	Confirm that all post implementation actions have been completed as identified in this procedure

**Note:** At any stage reviewers and approvers may be added to the MoC if considered necessary

**Note:** Initiator and Verifier can be the same person

### 15.2 Maintenance MoC Attachments - Templates

The following will be linked directly to the MoC template to assist with the uniform creation of MoC

Document number	Document Title	Notes
<a href="#">MOC-FRM-013</a>	TAG REQUEST FROM	To be completed when the master equipment list is to be updated ie removing or adding tags
<a href="#">MOC-FRM-015</a>	MAINT MoC PSV DEFERRAL	To be completed for PSV maintenance deferral

The attached data forms will be used to uniformly capture the data for maintenance changes

- Master Equipment List Form - for changes to the master equipment register.  
**Note:** If equipment is approved to be removed from the master equipment list then the associated maintenance may also be removed from CMMS. New equipment should be assigned maintenance in line with the maintenance guidelines or manufacturer's recommendations and approved using the eMoC maintenance form
- Safety Critical PSV's and SIL rated equipment will have gone through risk based analysis to establish the inspection / testing frequency, and deferral is unlikely to be approved unless it can be shown that on similar equipment, in the same duty, the performance can justify a deferral. To allow proper assessment, the original assessments need to be provided with any information that would support deferral.  
**Note:** The deferral of PSV inspection requires that the risk is reviewed using the RBI practice and this should be attached to the deferral of maintenance MoC.

### 15.3 Maintenance MoC Attachments– Guidance Notes

The following will be linked directly to the MoC template to assist with the uniform creation of MoC

Document number	Document Title	Notes
<a href="#">MOC-FRM-GN-008</a>	RECOMMENDED PRACTICE FOR THE RISK-BASED INSPECTION (RBI) OF RELIEF VALVES	Guidance on the RBI for relief valves
<a href="#">AzSPU-GP-32-3001</a>	SCE Identification Document	Guidance on how to identify SCE document Hyperlink to the document

### 15.4 Maintenance & Inspection MoC - Risk / Hazard Guidance

Risk Level	Hazard Statement
Maintenance & Inspection– Insignificant risk	<p>Managed within the Operating area: No MoC required</p> <ul style="list-style-type: none"> <li>Changes to Location/Equipment Descriptions, Location hierarchy –Parent/Child relationships, Location Priority, GL Account</li> <li>Changes to Job Plan Descriptions, Supervisor, Materials, Durations, Resources – not applicable to master Job Plan</li> <li>If a Technical MoC requires creation of a new/amendment of the existing maintenance subjects, like PM, JP, PMR e.q. then Pre and Post Implementation stages of the same MoC will cover these activities. Coordinator of the Technical MoC will identify Responsible people for these actions from "R&amp;M" and "System and Tools" teams. For RBI activities Inspection Engineers should be contacted. No Maintenance MoC will be initiated in this case.</li> </ul>

Risk Level	Hazard Statement
Maintenance & Inspection -Risk level 1 (white)	<p>Managed within the Operating area - MoC required</p> <ul style="list-style-type: none"> <li>• MoC with a risk level 1 (OMS Risk Matrix)</li> <li>• Includes the creation of new tags.</li> <li>• Like-for-like changes which require identification unique equipment identifier (serial number) as mandated from ETP GP 31-30 for purposes of the inspection and testing program and to provide traceability. To be identified must have a Maintenance MoC to update eWarehouse (eg Process Pressure Vessels, Towers, Heat Exchangers and tube bundles, Fired Heaters and Boilers, Pump and Compressor Casings, Storage Tanks, Relief Valves, Bursting discs, Vacuum Breakers, Flare Tips, Lifting Equipment.)</li> <li>• Replacement in kind a Maintenance MoC to update eWarehouse</li> <li>• Includes optimization of CMMS planning fields or deferral of non safety critical equipment</li> </ul>
Maintenance & Inspection Risk level 2 (turquoise)	<p>Managed within the Operating area but will have independent technical review and risk level 2 approvals. - MoC required</p> <ul style="list-style-type: none"> <li>• MoC with a risk level 2 (OMS Risk Matrix)</li> <li>• Includes the deferral of Safety Critical Equipment</li> <li>• Includes the deferral or inspection and testing of mechanical static equipment (eg piping, vessels, structures, etc)</li> <li>• Includes the deferral of corrosion management activities (eg monitoring, mitigation or control eg pipeline pigging)</li> <li>• Modification of the technical content of job plans</li> <li>• Changing job plan frequencies.</li> <li>• Application of new maintenance routines</li> </ul>
Maintenance & Inspection Risk level 3 (blue)	<p>Managed within the Operating area but will have independent technical review and risk level 3 approval. - MoC required</p> <ul style="list-style-type: none"> <li>• MoC with a risk level 3 (OMS Risk Matrix)</li> <li>• Includes the second deferral of Safety Critical Equipment</li> <li>• Includes the second deferral or inspection and testing of mechanical static equipment (eg piping, vessels, structures, etc)</li> <li>• Includes the second deferral of corrosion management activities (eg monitoring, mitigation or control eg pipeline pigging)</li> </ul>
Maintenance & Inspection Risk level 4 (Purple)	<p>Managed within the Operating area but will have independent technical review and risk level 4 approval. - MoC required</p> <ul style="list-style-type: none"> <li>• MoC with a risk level 4 (OMS Risk Matrix)</li> <li>• Includes the third deferral of Safety Critical Equipment</li> <li>• Includes the third deferral or inspection and testing of mechanical static equipment (eg piping, vessels, structures, etc)</li> <li>• Includes the third deferral of corrosion management activities (eg monitoring, mitigation or control eg pipeline pigging)</li> </ul>

**Note:** This risk associated directly with making the change and should not be confused with MoC priority

### 15.5 Maintenance & Inspection MoC - Documentation

At the heart of any change is the control of documents and data. Everyone needs to understand the status of these items at three key stages of change.

**Note:** Documentum is the Master document data-base, EWarehouse is the Master Equipment data-base, and MAXIMO is the Master maintenance system. It is essential that these are kept up to date.

Stage	Requirement
Verify (Design)	
Authorisation (pre-start up)	
Closure (post-start up)	Job Plans have been updated within Documentum, E Warehouse has been updated and all data required has been added.

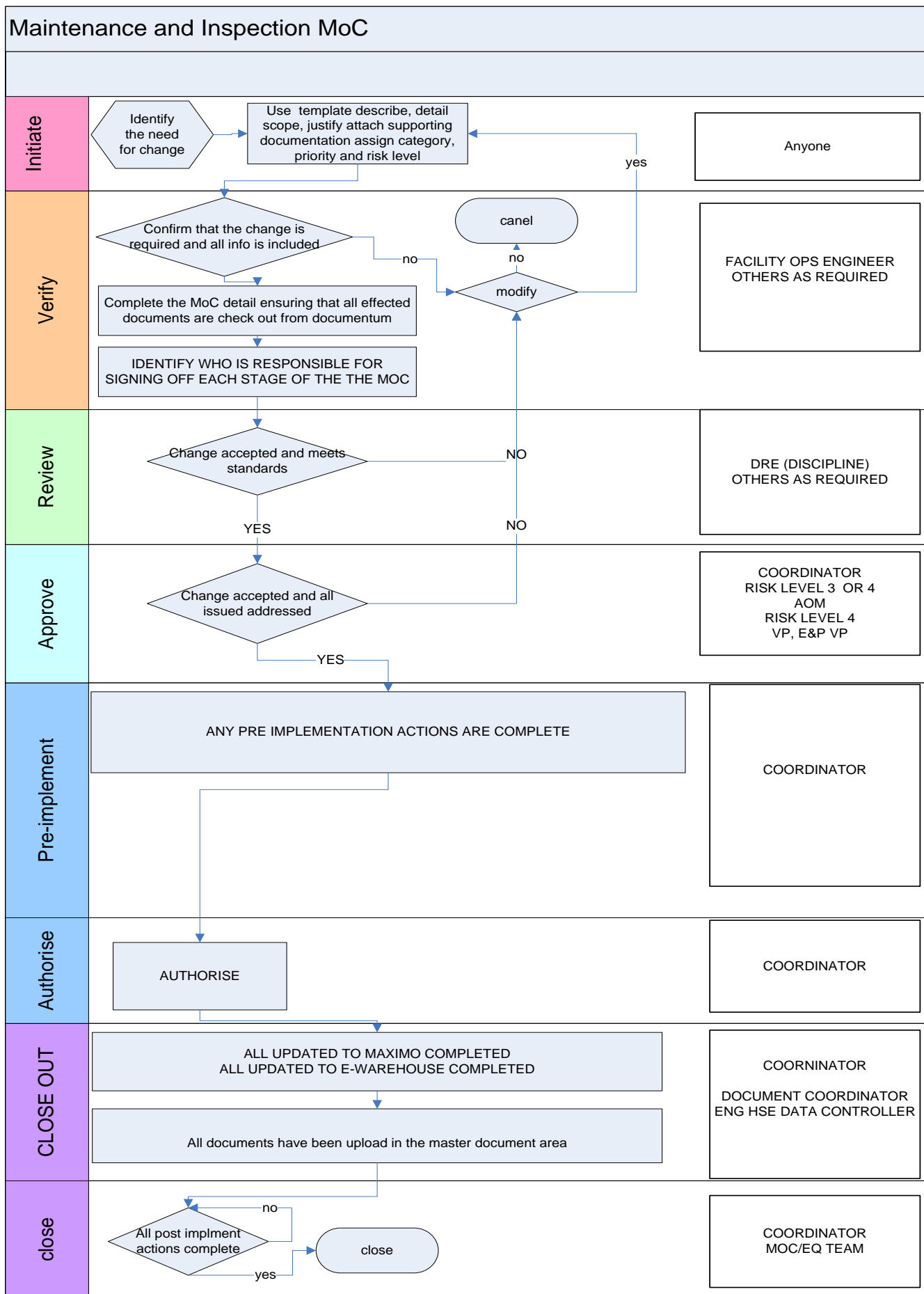
**Note** Master Generic Job plans affecting other operating areas should not be changed unless all of the operating areas have agreed the change

### **15.6 Maintenance & Inspection - Key Indicators**

- Number of days to close out a MoC after authorization. This indicates how long it takes to get accurate documents into the system.
- Number of MoC authorized to start up at any one time – A high number indicates increased risk depending on the sites ability to manage many simultaneous changes.
- Number of MoC in review and approve stages – This indicates the loading on the facility teams.



## 15.7 Maintenance & Inspection - Process Flow



## 16 Specific Guidance - Maintenance & Inspection MoC (DC&I Facilities)

A Maintenance MoC will be created for:

- Creation / Amendment of Frequency or Job Plan or route stop Job Plan/amendment of Location or Route Location/ Deferral / Suspension of Preventive Maintenance (PM) record in MAXIMO

*Note1: If a tag has been decommissioned then suspension of related PM/WO records will be covered by the Technical MOC. Maintenance MoC will be issued only if there is no Technical MOC.*

*Note2: If a PM is to be suspended then its live work orders must be cancelled in MAXIMO by adding MoC number as a reference to the work order and attaching the list of work orders to the MOC*

- Cancellation/Change of Target Completion Date (Deferral) of SCE Work Orders.

*Note1: Corrective (CO) and Breakdown (BR) SCE work orders will require MoC only if they have already Approved. SCE PM and PdM work orders will need MoC regardless of their statuses*

*Note2: Principally Target Dates of non-SCE Work Orders should not be changed and they should be seen as backlog. Cancellation or deferral of significant amount of non-SCE work orders resulted by the operational circumstances should be captured through a Maintenance MOC.*

- Creation of a new/Change of Condition for Work field of a Job Plan record in MAXIMO
- Creation / Modification of a Planned Maintenance Routine (PMR or work scope document) in MAXIMO and Document Management System (DMS)
- Creation of the new/modification of the existing Location and Equipment records in eWarehouse and MAXIMO will be covered through respective Technical MOCs. If no Technical MoC exists then a Maintenance MoC will be raised to capture amendment requests for the existing records.

A Maintenance MoC will not be required for updating of the following data fields

- Changes to Location/Equipment Descriptions, Location hierarchy–Parent/Child relationships, Location Priority, GL Account
- Changes to Job Plan Descriptions, Supervisor, Materials, Durations, Resources – not applicable to master Job Plan
- If a Technical MoC requires creation of a new/amendment of the existing maintenance subjects, like PM, JP, PMR e.q. then Pre and Post Implementation stages of the same MoC will cover these activities. Coordinator of the Technical MoC will identify Responsible people for these actions from “R&M” and “System and Tools” teams. For RBI activities Inspection Engineers should be contacted. No Maintenance MoC will be initiated in this case.

### 16.1 Maintenance & Inspection MoC (DC&I Facilities) - Roles and Responsibilities

THOSE IDENTIFIED BY A \* ARE A MINIMUM REQUIREMENT FOR RISK LEVEL 1

MoC Stage/Role	Risk	JOB FUNCTION	Responsibility
Initiate	1/2/3/4	*ANYONE AUTHORIZED	To initiate the Maintenance e-MoC providing description and justification and any other information required by the change. The attached maintenance forms identify the information required maintenance change To identify the MoC verifier Facility Operations Engineer or TL-ops
Verify	1/2/3/4	(DC&I) RIG SUPERINTENDENT (KCAD)	Facility must confirm that request for deferral or cancellation of SCE work orders are valid To verify the Maintenance e-MoC change can go ahead To identify the applicable priority and risk levels To identify who is responsible for signing off each stage of the MoC
	1/2/3/4	*(DC&I) TL-MAINT (KCAD)	Maintenance Engineer is to ensure that data required for creation/suspension/amendment of maintenance subjects-PM/JP/PMR is in place. Coordinator may require additional information and Maintenance Engineer is responsible to provide it
		Senior Inspection Engineer (Contractor)	Senior Inspection Engineer is to ensure that data required for creation/suspension/amendment of maintenance subjects-PM/JP/PMR is in place. Coordinator may require additional information and Senior Inspection Engineer is responsible to provide it. (note only applies to static mechanical pressure systems)
	1/2/3/4	ENG DATA COORDINATOR	To verify any request for adding / removing tags up dating data (location / equipment details, SCE, EX, failure class, location status affecting the Master equipment lists may hold the MoC until all the info is available )
Coordinator	1/2/3/4	*MAXIMO Maintenance Coordinator or Site Scheduler	MAXIMO maintenance coordinator will coordinate any Maintenance MoC except SCE WO Cancellations and Deferrals Site Scheduler will coordinate Deferral and cancellation of SCE WO The coordinator will ensure that the provided data is enough to processes the MoC, if not then the coordinator is fully responsible for adding names of those who can provide the required input
Reviewer	1/2/3/4	*(DC&I) MAINTENANCE SUPERINTENDENT (KCAD)	To review any change to SCE, EX, Failure Class fields, Location Status, Deferral and Cancellation of SCE WOs, suspension of PM Creation of new PM/ JP/ PMR changes to existing PM & Route locations, frequency, CFW, PMR Content
	1/2/3/4	AIA	To review any change to inspection /corrosion management Failure Class fields, Location Status, Deferral and Cancellation of inspection/ corrosion management WOs, suspension of PM Creation of new PM/ JP/ PMR changes to existing PM & Route locations, frequency, CFW, PMR Content . (note only applies to static mechanical pressure systems)
	2/3/4	(DC&I)RMS	To review any change to MAINTENANCE management Failure Class fields, Location Status, Deferral and Cancellation of inspection/ corrosion management WOs, suspension of PM Creation of new PM/ JP/ PMR changes to existing PM & Route locations, frequency, CFW, PMR Content
	2/3/4	TA-INPECTION	Independent Technical Review for Deferral and Cancellation of inspection WO associated with static mechanical equipment ie piping, vessels, structures etc. TA will not start the review process until the AIA has done the initial review
	2/3/4	TA-DISCIPLINE	Independent Technical Review for risk level 2 (turquoise) changes, i.e. Deferral and Cancellation of SCE WO, suspension of PM Creation of new PM/ JP/ PMR, changes to existing PM & Route locations, frequency, CFW, PMR Content. TA will not start the review process until the DRE has done the initial review

MoC Stage/Role	Risk	JOB FUNCTION	Responsibility
Approve	1/2/3/4	Coordinator	Approve Maintenance change ( except SCE deferrals and cancellation)
	2/3/4	FACILITY MANAGER	Minimum Requirement: Approve deferrals of SCE /or inspection/ corrosion management WO
	3/4	(DC&I) RMTL	Approve second deferrals of SCE /or inspection/ corrosion management WO
	3/4	Engineering services manager	Approve second deferrals of SCE /or inspection/ corrosion management WO
	3/4	EA	Approve second deferrals of SCE /or inspection/ corrosion management WO
	4	VP	Approve third deferrals of SCE /or inspection/ corrosion management WO
Authorize	1/2/3/4	*Coordinator	To ensure that any assigned pre-implement requirements have been met
Close out	1/2/3/4	*Coordinator	Coordinator-Area scheduler changes target completion dates of SCE work orders and Start(due) dates of PMs if required, cancels SCE WOs and suspends their PMs if required Coordinator- Maintenance Planner updates MAXIMO with any changes related to PM/JP/PMRs Coordinator-Data Lead/Data Coordinator confirms that all Master To equipment List Changes have been completed ( To ensure that any final as built documentation is updated in documentum To ensure that all post implementation actions have been completed
	1/2/3/4	ENG DATA COORDINATOR	Confirms that Adds/ amends location/ equipment details in e Ware house
	1/2/3/4	*MOC/ EQ TEAM	To confirm that all post implementation actions have been completed as identified in this procedure

**Note:** At any stage reviewers and approvers may be added to the MoC if considered necessary

## 16.2 Maintenance & Inspection MoC (DC&I Facilities) - Templates

Document number	Document Title	Applies to	Notes
<a href="#">MOC-FRM-013</a>	TAG REQUEST FROM	MAINTENANCE	To be completed when the master equipment list is to be updated i.e. removing or adding tags
<a href="#">MOC-FRM-015</a>	MAINT MoC PSV DEFERRAL	MAINTENANCE	To be completed for PSV maintenance deferral
<a href="#">MOC-FRM-014</a>	Maintenance MOC PM and JP change form	MAINTENANCE	To be completed when changes to MAXIMO are required

The attached data forms will be used to uniformly capture the data for maintenance changes

- Master Equipment List Form - for changes to the master equipment register.  
**Note:** If equipment is approved to be removed from the master equipment list then the associated maintenance may also be removed from CMMS. New equipment should be assigned maintenance in line with the maintenance guidelines or manufacturer's recommendations and approved using the eMoC maintenance form
- Safety Critical PSV's and SIL rated equipment will have gone through risk based analysis to establish the inspection / testing frequency, and deferral is unlikely to be approved unless it can be shown that on similar equipment, in the same duty, the performance can justify a deferral. To allow proper assessment, the original assessments need to be provided with any information that would support deferral.  
**Note:** The deferral of PSV inspection requires that the risk is reviewed using the RBI practice and this should be attached to the deferral of maintenance MoC.

## 16.3 Maintenance & Inspection MoC (DC&I Facilities) - Risk / Hazard Guidance

Risk Level	Hazard Statement
Maintenance & Inspection– Insignificant risk	<p>Managed within the Operating area: No MoC required</p> <ul style="list-style-type: none"> <li>Changes to Location/Equipment Descriptions, Location hierarchy – Parent/Child relationships, Location Priority, GL Account</li> <li>Changes to Job Plan Descriptions, Supervisor, Materials, Durations, Resources – not applicable to master Job Plan</li> <li>If a Technical MoC requires creation of a new/amendment of the existing maintenance subjects, like PM, JP, PMR e.q. then Pre and Post Implementation stages of the same MoC will cover these activities. Coordinator of the Technical MoC will identify Responsible people for these actions from "R&amp;M" and "System and Tools" teams. For RBI activities Inspection Engineers should be contacted. No Maintenance MoC will be initiated in this case.</li> </ul>
Maintenance & Inspection - Risk level 1 (white)	<p>Managed within the Operating area -MoC required</p> <ul style="list-style-type: none"> <li>MoC with a risk level 1 (OMS Risk Matrix)</li> <li>Includes the creation of new tags.</li> <li>Like-for-like changes which require identification unique equipment identifier (serial number) as mandated from ETP GP 31-30 for purposes of the inspection and testing program and to provide traceability. To be identified must have a maintenance MoC to update eWarehouse (eg Process Pressure Vessels, Towers, Heat Exchangers and tube bundles, Fired Heaters and Boilers, Pump and Compressor Casings, Storage Tanks, Relief Valves, Bursting discs, Vacuum Breakers, Flare Tips, Lifting Equipment.) update eWarehouse &amp; ACET</li> <li>Replacement in kind Maintenance MoC to update eWarehouse ACET</li> <li>Includes optimization of CMMS planning fields or deferral of non safety critical equipment</li> </ul>

Risk Level	Hazard Statement
Maintenance & Inspection – Risk level 2 (turquoise)	Managed within the Operating area but will have independent technical review and risk level 2 approvals. - MoC required <ul style="list-style-type: none"> <li>• MoC with a risk level 2 (OMS Risk Matrix)</li> <li>• Includes the deferral of Safety Critical Equipment</li> <li>• Includes the deferral or inspection and testing of mechanical static equipment (eg piping, vessels, structures, etc)</li> <li>• Includes the deferral of corrosion management activities (eg monitoring, mitigation or control eg pipeline pigging)</li> <li>• Modification of the technical content of job plans</li> <li>• Changing job plan frequencies.</li> <li>• Application of new maintenance routines/ or inspections</li> </ul>
Maintenance & Inspection – Risk level 3 (blue)	Managed within the Operating area but will have independent technical review and risk level 3 approval. - MoC required <ul style="list-style-type: none"> <li>• MoC with a risk level 3 (OMS Risk Matrix)</li> <li>• Includes the second deferral of Safety Critical Equipment</li> <li>• Includes the second deferral or inspection and testing of mechanical static equipment (eg piping, vessels, structures, etc)</li> <li>• Includes the second deferral of corrosion management activities (eg monitoring, mitigation or control eg pipeline pigging)</li> </ul>
Maintenance & Inspection Risk level 4 (Purple)	Managed within the Operating area but will have independent technical review and risk level 4 approval. - MoC required <ul style="list-style-type: none"> <li>• MoC with a risk level 4 (OMS Risk Matrix)</li> <li>• Includes the third deferral of Safety Critical Equipment</li> <li>• Includes the third deferral or inspection and testing of mechanical static equipment (eg piping, vessels, structures, etc)</li> <li>• Includes the third deferral of corrosion management activities (eg monitoring, mitigation or control eg pipeline pigging)</li> </ul>

**Note:** This risk associated directly with making the change and should not be confused with MoC priority

#### 16.4 Maintenance & Inspection MoC (DC&I Facilities) - Documentation

At the heart of any change is the control of documents and data. Everyone needs to understand the status of these items at three key stages of change.

**Note:** Documentum is the Master document data-base, eWarehouse is the Master Equipment data-base, and MAXIMO is the Master maintenance system. It is essential that these are kept up to date.

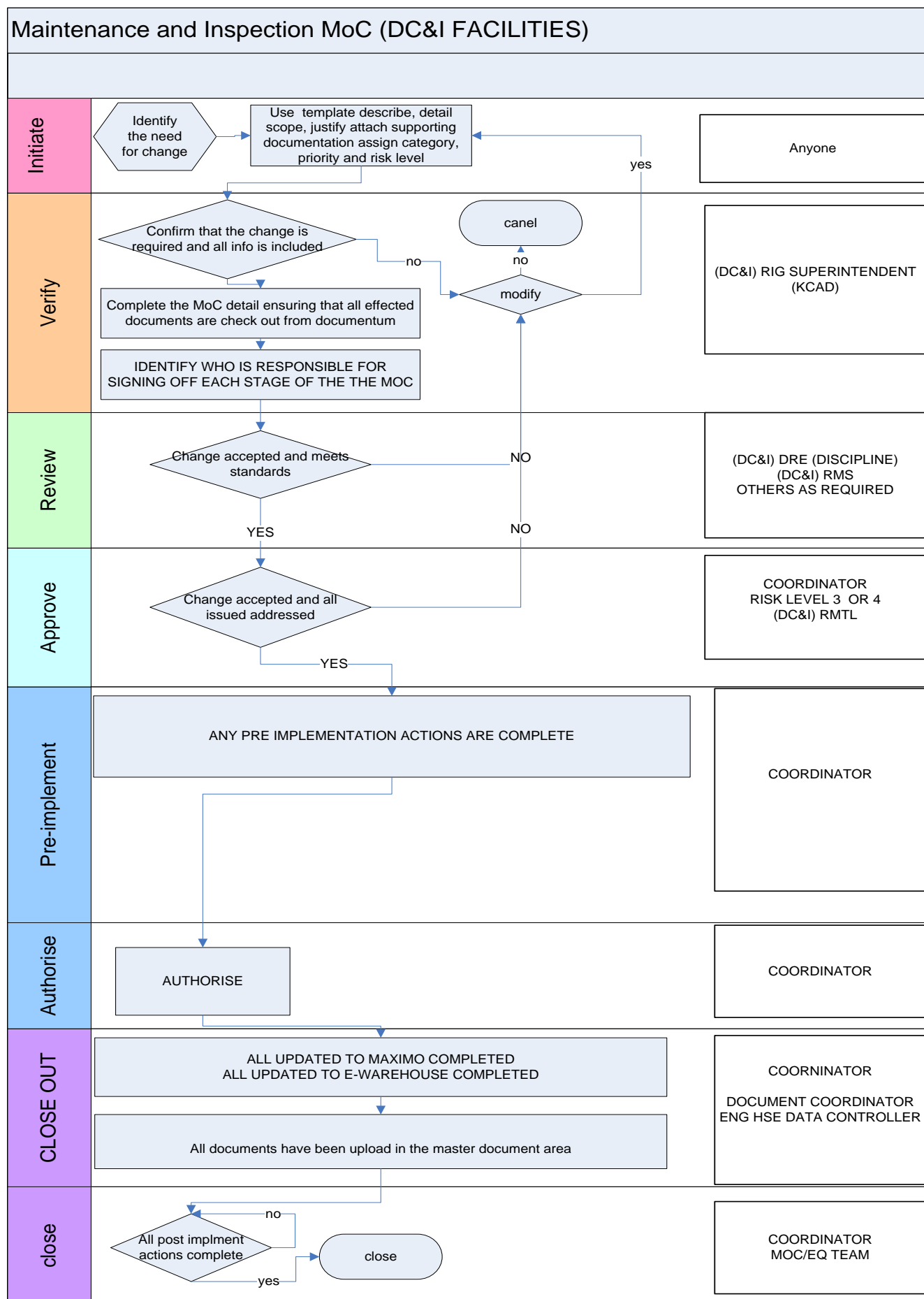
Stage	Requirement
Verify (Design)	
Authorisation (pre-start up)	
Closure (post-start up)	Job Plans have been updated within documentum, eWarehouse has been updated and all data required has been added.

**Note** Master Generic Job plans affecting other operating areas should not be changed unless all of the operating areas have agreed the change

#### 16.5 Maintenance & Inspection MoC (DC&I Facilities) - Key Indicators

- Number of days to close out an MoC after authorization. This indicates how long it takes to get accurate documents into the system.
- Number of MoCs authorized to start up at any one time – A high number indicates increased risk depending on the sites ability to manage many simultaneous changes.
- Number of MoCs in review and approve stages – This indicates the loading on the facility teams.

## 16.6 Maintenance & Inspection MoC (DC&I Facilities) - Process Flow



## 17 Specific Guidance - Drilling, Completions & Interventions MoC

The MoC objective is to assure that changes to wells, statements of requirements (SOR), basis of design criteria or downhole equipment receive adequate review and approval

**Note:** *Organizational MoC will be used to manage DC&I organizational changes*

**Note:** *DC&I Deviation MoC will be used to manage DC&I deviations from practice*

The MoC is intended to be used when changes are made to the well critical documents described before. It is not intended to be used for revising draft SoR or work programs or for a typical day-to-day revision to drilling – completion – sub sea parameters that are within the scope of the original plan.

In summary, The MoC is in place to provide assurance that there is a systematic and adequate approach to implement a change within the wells team in the AzSPU. The system is based on identifying, documenting and performing adequate risk assessment and cost benefit analysis to understand and document any potential implications prior to make a final change.

When assessing a potential change, consideration must be given to the fact that other individuals or groups may be still using an initial and different plan as a building block for their work. If a recommendation is made to change the plans or key documents, the full implications of the change must be thought through and the MoC must be distributed to the appropriate personnel.

Plans can and should be changed as new technology, or new information becomes available. Changing plans because of personal preferences, especially when new members join the team, should be avoided.

Changes are often made to the agreed drilling, completions and sub sea operations procedures as events unfold differently to that envisioned in the plan. The intent of this process is that changes be handled in the appropriate manner. Changes must follow a proper MoC process.



### 17.1 Drilling, Completions & Interventions MoC - Roles and Responsibilities

THOSE IDENTIFIED BY A \* ARE A MINIMUM REQUIREMENT FOR RISK LEVEL 1

MoC Stage	Risk	Job Function	Responsibility
Initiate	1/2/3/4	*(DC&I) ENG (DISCIPLINE)	To initiate the eMoC providing description and justification and any other information required by the change, e.g. Description of operations and/or changes, advantages and disadvantages, estimated cost & time and relevant risk assessment with clear recommendations and conclusions. Identify the MoC verifier
Verify	1/2/3/4	*(DC&I) ENG Snr (DISCIPLINE)	Verification of the change proposed. To identify priority level and risk level. To identify who needs to sign off each stage of the MoC
Coordinator	1/2/3/4	*(DC&I) ENG (DISCIPLINE)	To manage the MoC through the process ensuring that correct persons are notified and that comments are answered and the MoC is properly closed out as per the procedure
Reviewer	1/2/3/4	*(DC&I) ETL (DISCIPLINE)	REVIEW
	1/2/3/4	(DC&I) WITL	REVIEW ANY MoC HAVING LIFE CYCLE AND WELL INTEGRITY IMPACT
	1/2/3/4	BMM	REVIEW SOR OR BOD CHANGES DURING DEFINE
	1/2/3/4	(DC&I) TA	REVIEW AFTER BASIS OF DESIGN IS FINALISED
	1/2/3/4	RMM	REVIEW SOR OR BOD CHANGES DURING DEFINE
	1/2/3/4	*(DC&I) H&S TL	To communicate on-site operational changes to the HSE Compliance Advisors through completion of first section of HSE Compliance Form and will update facility APS list (if relevant) Will add a pre -implementation action for the HSE Compliance Advisor to determine and advise any compliance implications.
	1/2/3/4	*(DC&I) WTL	Review - State reason for any rejections
Approve	1/2/3/4	*(DC&I) WOM	Approve - State reason for any rejections
	1/2/3/4	*(DC&I) EM (Discipline)	Approve - State reason for any rejections
	3/4	(DC&I )VP & WEA	Tier 4 Approve - State reason for any rejections
	4	E&P VP	RISK LEVEL 4 APPROVAL
Pre-implement	1/2/3/4	HSE COMPLIANCE ADVISOR	To review the operational changes communicated in the HSE Compliance Form and facilitate the process to determine whether there are any compliance implications, this may lead to update of Compliance Task Manager (CTM) tasks.
Authorize	1/2/3/4	*(DC&I) WSL SNR	To ensure that pre-implementation requirements have been met
Post Implement	1/2/3/4	*COORDINATOR	To confirm that the change performance has been acceptable and if applicable any lessons learnt are issued
	1/2/3/4	COORDINATOR	To confirm temporary change in place (only applicable to temporary changes)
	1/2/3/4	COORDINATOR	To confirm temporary change removed (only applicable to temporary changes)
Close out	1/2/3/4	*COORDINATOR	To ensure that all post implementation actions have been completed, relevant documentation has been updated and lessons learned issued
	1/2/3/4	*MOC/ EQ TEAM	To confirm that all post implementation actions have been completed as identified in this procedure

**Note:** At any stage reviewers and approvers may be added to the MoC if considered necessary

## 17.2 Drilling, Completions & Interventions MoC - Templates

The following will be linked directly to the MoC template to assist with the uniform creation of MoC

Document number	Document Title	Applies to	Notes
<a href="#">MOC-FRM-025</a>	HSSE COMPLIANCE FORM	TECHNICAL, CHEMICAL, DC&I	Used to communicate on-site operational changes to the AzSPU HSE Compliance Team so that they can determine HSE compliance implications. Must be completed before close out.

## 17.3 Drilling, Completions & Interventions MoC - Risk / Hazard Guidance

Risk Level	Hazard Statement
Drilling and Completions– Insignificant Risk (Tier 1)	<p>Managed within the operating area no MoC required</p> <ul style="list-style-type: none"> <li>And will be documented with a note in the Well file</li> <li>Examples bit selections, drilling rate wiper trips all within program guidelines. This is documented in a ops note that is a note from the programme writer on a clarification point in the program , it should still be within the bounds of the signed off programme and therefore does not need to be signed off</li> </ul>
Drilling and Completions– Risk level 1 (white) (DC&I Tier 2)	<p>Managed within the Operating area - MoC required</p> <ul style="list-style-type: none"> <li>MoC with a risk level 1 (OMS Risk Matrix)</li> <li>Decisions with a potential impact of greater than 2 day of unplanned activities, but minimum potential impact on well objectives</li> <li>Examples cement casing early due to lost returns, work to cure moderate losses, mud / brine weight properties changes inside of program guide lines. Will be document as an ops note</li> </ul>
Drilling and Completions – Risk level 2 (turquoise) (DC&I Tier 3)	<p>Managed within the Operating area but will have independent technical review and risk level 2 approval. - MoC required</p> <ul style="list-style-type: none"> <li>MoC with a risk level 2 (OMS Risk Matrix)</li> <li>Decisions with a potential impact of greater than 2 day of unplanned activities, but minimum potential impact on well objectives</li> <li>Examples set casing off bottom shoe squeeze, side track vs fishing, programme for dealing with major losses, mud / brine weight properties changes out side the program guidelines.</li> </ul>
Drilling and Completions – Risk level 3 (blue) (Tier 4)	<p>Managed within the Operating area but will have independent technical review and risk level 3 approval. - MoC required</p> <ul style="list-style-type: none"> <li>MoC with a risk level 3 (OMS Risk Matrix)</li> <li>Decisions with clear potential impact on SOR well objectives</li> <li>Examples, changes to the evaluation programme changes that have the potential to compromise well integrity and / or well productivity / injectivity DHPG failure , completion integrity failure, policy exceptions, early TD of hole sections.</li> </ul>
Drilling and Completions – Risk level 4 (Purple)	<p>Managed within the Operating area but will have independent technical review and risk level 4 approval. - MoC required</p> <ul style="list-style-type: none"> <li>MoC with a risk level 4 (OMS Risk Matrix)</li> </ul>

**Note:** This risk associated directly with making the change and should not be confused with MoC priority

**Note:** The VP D&C provides the independent approval

**Note:** Independent technical review is provided by the Engineering Manager and/or Technical Authority

#### **17.4 Drilling, Completions & Interventions MoC - Documentation**

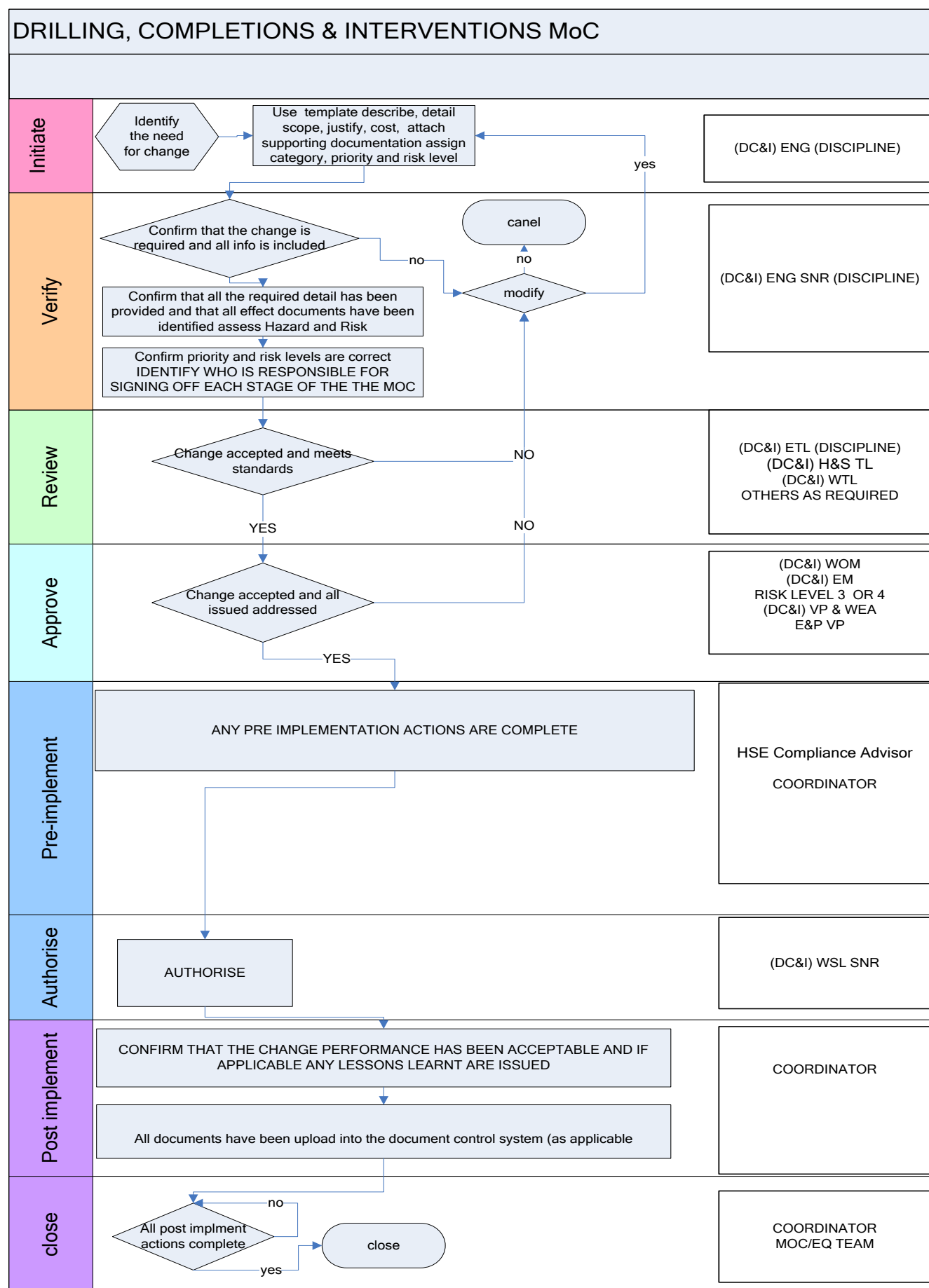
At the heart of any change is the control of documents and data. Everyone needs to understand the status of these items at three key stages of change.

Stage	Requirement
Verify (Design)	To ensure verification of operational risk has been considered
Authorisation (pre-start up)	To ensure that all work plans / programmes / work instructions reflect the change.
Closure (post-start up)	To ensure that all work plans / programmes / work instructions, basis of design documents, end of well reports and well handover documentation is as built and the document data base is updated

#### **17.5 Drilling, Completions & Interventions MoC - Key Indicators**

- Number of days to close out an MoC after authorized. This indicates how long it takes to get accurate documents into the system or to close out the MOC.
- Number of MoCs authorized at any one time – A high number indicates increased risk depending on the DC&I sites ability to manage many simultaneous changes.
- Number of MoCs in review and approve stages – This indicates the loading on the DC&I teams.

## 17.6 Drilling, Completions & Interventions MoC - Process Flow Diagram



## 18 Specific Guidance - Documentation MoC

Documentation changes cover the review and approval of key documents that are controlled through the Document Management Procedure, UNIF-OPS-PRC-001 and the HSSE Document Management Procedure AzSPU-HSSE-DOC-00025-2.

**NOTE:** FOR GUIDANCE ON KEY DOCUMENT REFERENCE E&P OMS 4.3

Changes to these documents that are not part of another type of MoC, will be managed through a Documentation MoC. Within other MoC types, documents change will be managed through the specific MoC type, e.g. Technical MoC.

**Note:** It is expected that most controlled documents will be developed outside of the e-MoC process, and that the document MoC will capture the final review and approvals instead of wet signature. Once the document is live, the MoC system shall be used to propose the change, review and approve.

**Note:** All Asset key documents will have Document Authority and a Document Owner.

**Note:** Temporary documents, e.g. procedures will follow the same requirements as the temporary technical MoC.

### 18.1 Documentation MoC - Roles and Responsibilities

THOSE IDENTIFIED BY A \* ARE A MINIMUM REQUIREMENT FOR RISK LEVEL 1

MoC Stage/Role	Risk	JOB FUNCTION	Responsibility
Initiate	1/2/3/4	*ANYONE APPROVED	To initiate the eMoC providing description and justification and any other information required by the change. To identify the MoC verifier typically the Document Owner
Verify	1/2/3/4	*DOCUMENT OWNER	Verify or cancel the change proposed and identify who needs to sign off on each stage of the MoC
Coordinator	1/2/3/4	* ANYONE APPROVED	To manage the MoC through the process ensuring that correct persons are notified and that comments are answered and the MoC is properly closed out
Reviewer	1/2/3/4	*Any one as required	Content review State reason for any rejections
	2/3/4	(DC&I)TA	Review changes to critical DC&I documentation
	2/3/4	TA (Process Safety)	Review changes to HAZOP's
	2/3/4	TA (Discipline)	Review changes to Engineering or Site Technical Practices. Review Medium and / or High Risk SOP's & Standing Instructions
Approve	1/2/3/4	*DOCUMENT AUTHORITY (TL OR MANAGER)	Content Approval State reason for any rejections
	2/3/4	(DC&I) VP & WEA	Approve changes to critical DC&I documentation
	2/3/4	EA	Approve changes to Engineering or Site Technical Practices. Approve Medium and / or High Risk SOP's & Standing Instructions
	4	VP	Approve changes risk level 4
	4	E&P VP	Approve changes risk level 4
Authorize	1/2/3/4	*DOCUMENT AUTHORITY (TL OR MANAGER)	Authorize for Use
Post implement Actions	1/2/3/4	*DOCUMENT COORDINATOR	UPDATE THE MASTER DATA BASE/Documentum/DK ENSURE OLD DOCUMENTS ARE VOIDED AND NEW DOCUMENT ARE UPLOADED
Close out	1/2/3/4	*COORDINATOR	To ensure that all post implementation actions have been completed
	1/2/3/4	*MOC/ EQ TEAM	To confirm that all post implementation actions have been completed as identified in this procedure

**Note:** At any stage reviewers and approvers may be added to the MoC if considered necessary

## 18.2 Documentation MoC - Templates

The following will be linked directly to the MoC template to assist with the uniform creation of MoC

Document number	Document Title	Applies to	Notes
AzSPU	AzSPU Modification Information Handover	Document/ Maint MoC	This document identifies the Information deliverables for Documents, data, models etc.
<a href="#">UNIF-OPS-PRC-001</a>	DOCUMENT CONTROL PROCEDURE	Document	Procedure, This contains the Document Management detail of how to affect change.
MOC-FRM-036	Engineering Critical Documents Listing Controlled Document Register	Document	This listing will be aligned with the RP SRP 5.0-0001 Critical documents 4.3 Table 4L
<a href="#">AZSPU-HSSE-DOC-00025-A1</a>	HSE document template	Document	Document template to be used for HSE documents stored in DK
<a href="#">AZSPU-HSSE-DOC-00025-2</a>	AzSPU HSE Document Management Procedure	Document	Procedure
<a href="#">MOC-FRM-026</a>	Documentum Controlled document template	Document	Document template to be used for document stored in documentum

## 18.3 Documentation MoC - Risk / Hazard Guidance

**Note:** This risk associated directly with making the change and should not be confused with MoC priority

Risk Level	Hazard Statement
Documentation– Insignificant Risk	Managed within the operating area no MoC required
Documentation– Risk level 1 (white)	Managed within the Operating area - MoC required MoC with a risk level 1 (OMS Risk Matrix)
Documentation – Risk level 2 (turquoise)	Managed within the Operating area but will have independent technical review and risk level 2 approval. - MoC required <ul style="list-style-type: none"> <li>MoC with a risk level 2 (OMS Risk Matrix)</li> <li>To be considered when there is a requirement to site check for HAZOP reasons, and / or multiple high level drawings are being site checked for equipment and correctness.</li> <li>Critical DC&amp;I Documentation</li> </ul>
Documentation – Risk level 3 (blue)	Managed within the Operating area but will have independent technical review and risk level 3 approval. - MoC required <ul style="list-style-type: none"> <li>MoC with a risk level 3 (OMS Risk Matrix)</li> </ul>
Documentation – Risk level 4 (Purple)	Managed within the Operating area but will have independent technical review and risk level 4 approval. - MoC required <ul style="list-style-type: none"> <li>MoC with a risk level 4 (OMS Risk Matrix)</li> </ul>

## Documentation MoC - Documentation

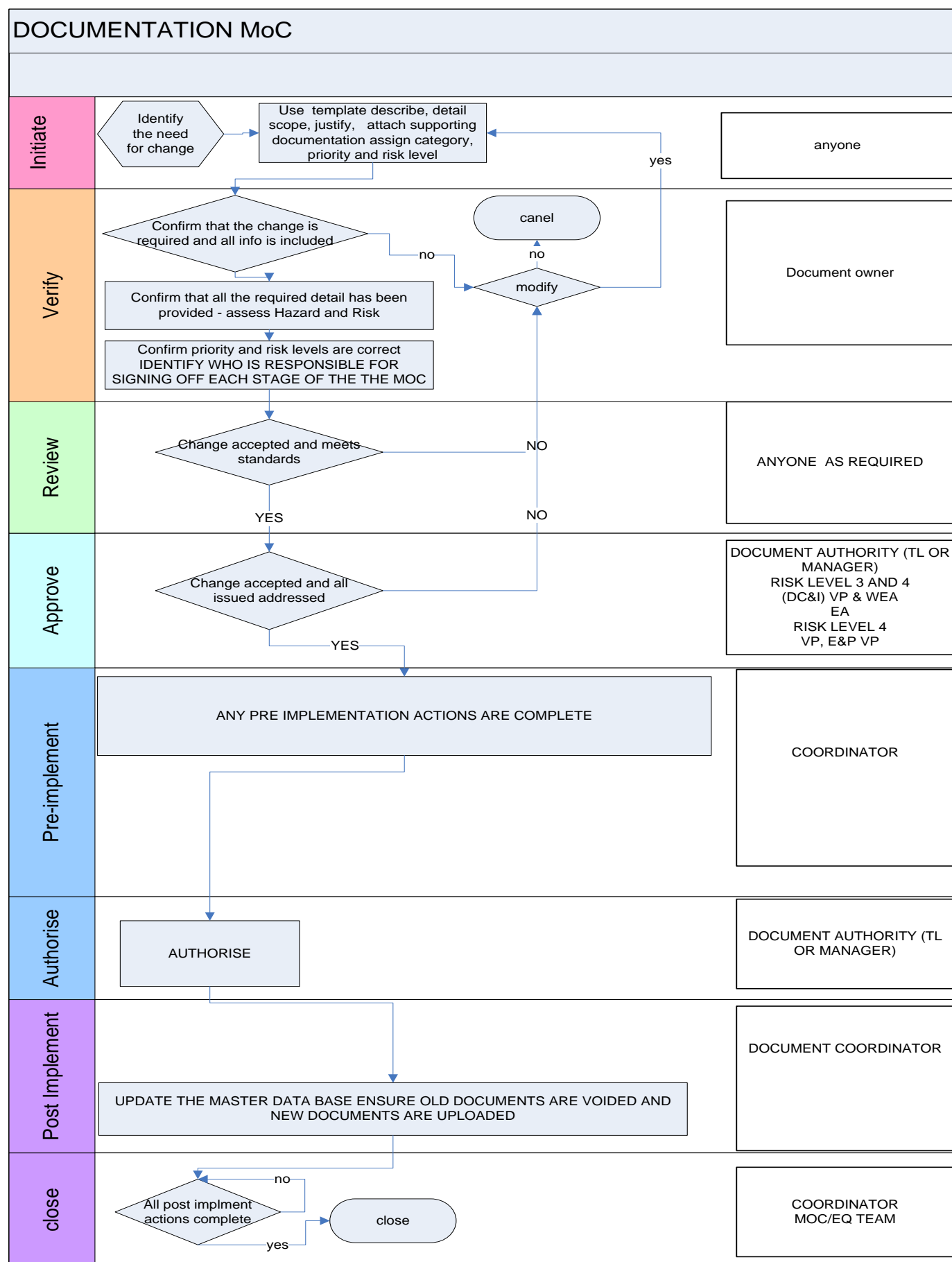
At the heart of any change, is the control of documents and data that personnel use. Everyone needs to understand the status of these items at three key stages of change.

Stage	Requirement
Verify (Design)	Check out the document to indicate that it is subject to change
Authorisation	Any documents changed that are identified as controlled and / or Engineering Critical must be red-lined, signed and dated.
Closure	Documents have been as-built as per requirements, fully checked by relevant technical discipline and fully loaded into document database. All superseded documents are identified and marked up To ensure that the document has a document owner and authority so that working issues can be raised and addressed

## 18.4 Documentation MoC - Key Indicators

- Number of days to close out an MoC after Authorization. This indicates how long it takes to get accurate documents into the system.
- Number of MoCs in review and/or approval stage without red-lined drawings in place – This indicates that MoC is not being correctly reviewed and approved and the change is not fully visible, increasing risk.

## 18.5 Documentation MoC - Process Flow Diagram



## 19 Specific Guidance - Organizational MoC

This process should be used to manage all temporary and permanent changes to organization, personnel, and contractor services to ensure that any business risks arising from these changes are managed to an acceptable level.

Organizational change falls into two main categories

- Personnel change – one in and one out-with job content remaining the same but person changes. In situations where individual discipline professionals or TLs are handing over a post, the need is to ensure appropriate knowledge of current issues and work in progress is transferred.
- Organizational change – changes of structure, business or teams merging, de-merging, down or upsizing, relocating, changes of roles within organization
- Company to third party and third party to third party contracted services

### 19.1 Organizational MoC - Roles and Responsibilities

THOSE IDENTIFIED BY A \* ARE A MINIMUM REQUIREMENT FOR RISK LEVEL 1

MoC Stage/Role	Risk	Job function	Responsibility
Initiate	1/2/3/4	*Anyone	For Personnel changes identifies who is changing out with who For organizational change defines reasons, objective, outcomes, Terms of Reference, should be provided. Identify the Verifier
Verify	1/2/3/4	*TL	Verifies the personnel change, Ensures appropriate contract and call-off is in place through PSCM to cover 3rd party services change To identify who needs to be involved for each of the stages of the MoC as per this procedure
	3/4	AOM / VP, or Facility Manager, or Maintenance & Reliability Manger, or Head of Department	For organizational change To review the MoC and verify the organization change can proceed To identify who is responsible for MoC coordination To verify High Risk MoC To confirm the Terms of Reference To identifies the Change Review Team,
Coordinator	1/2/3/4	*Anyone Authorized	To manage the MoC through the process ensuring that correct persons are notified. That comments are answered. That risks have been assessed mitigation in place if required, that all pre-implementation and post implementation actions have been identified and the MoC is properly closed out
Reviewer	2/3/4	PSCM specialist	To confirm that appropriate contract is in place and necessary elements are covered for 3rd party services change
	3/4	HSEA	To ensure that any HSE issues associated with the Organizational change have been correctly identified and addressed.
	3/4	HR specialist	Independent review of Organizational Change identifying any risks
Approve	1/2/3/4	*Department manager	Approve the personnel change
	2/3/4	PSCM manager	Approve 3rd party contract changes
	/3/4	AOM / VP	Approve Organizational Change To ensure that all appropriate funding is in place
	4	E&P VP	Approve Organizational Change
Authorize	1/2/3/4	*TL	To ensure that all pre-implementation actions have been identified and completed, and any announcements made. Authorizing the change for implementation on site



	3/4	AOM / VP	To ensure that all pre-implementation actions have been identified and completed, and any announcements made
Post Implement	1/2/3/4	*Coordinator	To ensure that all post implementation actions have been completed and any organigrams & non HR data bases have been updated and responsibilities have been handed over
	1/2/3/4	*HR MANAGER	To confirm organigrams have been updated, that all check list as required have been completed and all HR data bases have been updated
Close out	1/2/3/4	*MOC/ EQ TEAM	To confirm that all post implementation actions have been completed as identified in this procedure

**Note:** At any stage reviewers and approvers may be added to the MoC if considered necessary

**Note:** If the change is confidential then all attachments etc should be stored in a secure area

### 19.2 Organisational MoC - Template Attachments

The following will be linked directly to the MoC template to assist with the uniform creation of MoC

Document number	Document Title	Applies to	Notes
<a href="#">MOC-FRM-008</a>	MOC PRIORITIZATION TOOL IFP	ALL MoC TYPES	This tool is the same as the one used for EQ and is used to ensure that all MoC are consistently categorized and prioritized
<a href="#">MOC-FRM-019</a>	ORGANIZATION MoC HANDOVER FORM	ORGANISATIONAL	To be complete for personnel change over to ensure all responsibilities and accountabilities have been transferred
<a href="#">MOC-FRM-020</a>	ORGANIZATION MoC RISK AND MITIGATION	ORGANISATIONAL	To be used for major organizational change affecting the structure of the organization
<a href="#">MOC-FRM-021</a>	ORGANIZATION MoC RISK MATRIX	ORGANISATIONAL	To be used for major organizational change affecting the structure of the organization
<a href="#">MOC-FRM-022</a>	ORGANIZATION MoC CLOSE OUT REVIEW	ORGANISATIONAL	To be used for major organizational change affecting the structure of the organization

### 19.3 Organisational MoC - Risk / Hazard Guidance

**Note:** This risk associated directly with making the change and should not be confused with MoC priority

Risk Level	Hazard Statement
Organisational – insignificant Risk (	Managed within the operating area no MoC required
Organisational – Risk level 1 (white)	Managed within the Operating area - MoC required <ul style="list-style-type: none"> <li>MoC with a risk level 1 (OMS Risk Matrix)</li> <li>Personnel change which does not change the organisational structure</li> </ul>
Organisational – Risk level 2 (turquoise)	Managed within the Operating area but will have independent technical review and risk level 2 approval. - MoC required <ul style="list-style-type: none"> <li>MoC with a risk level 2 (OMS Risk Matrix)</li> <li>Company to third party and third party to third party contracted services</li> </ul>
Organisational – Risk level 3 (blue)	Managed within the Operating area but will have independent technical review and risk level 3 approval. - MoC required <ul style="list-style-type: none"> <li>MoC with a risk level 3 (OMS Risk Matrix)</li> <li>Organisational change affecting the structure of the organisation</li> </ul>
Organisational – Risk level 4 (Purple)	Managed within the Operating area but will have independent technical review and risk level 4 approval. - MoC required <ul style="list-style-type: none"> <li>MoC with a risk level 4 (OMS Risk Matrix)</li> </ul>

### 19.4 Organizational MoC - Documentation

At the heart of any change, is the control of documents and data. Everyone needs to understand the status of these items at three key stages of change.

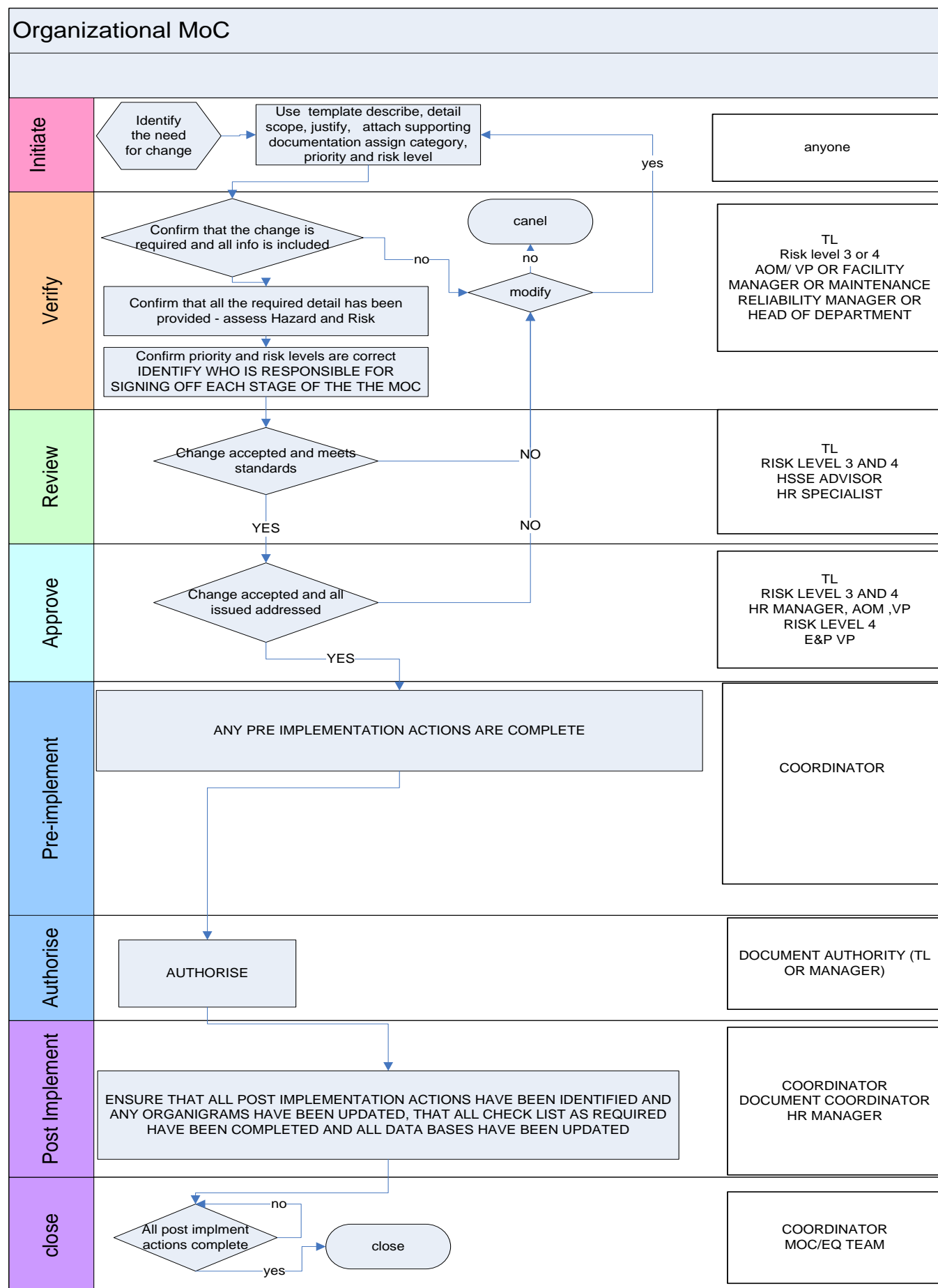
Stage	Requirement
Verify (Design)	
Authorisation (pre-start up)	To ensure change is announced Ensure third party services providing contract and appropriate call-off are signed
Closure (post-start up)	To ensure that all organigrams have been updated and posted and all responsibilities have been transferred

### 19.5 Organizational MoC - Key Indicators

- Number of days to close out an MoC after authorization. This indicates how long it takes to get accurate documents into the system.
- Number of MoCs authorized to start up at any one time – A high number indicates increased risk depending on the sites ability to manage many simultaneous changes.

- Number of MoCs in review and approve stages – This indicates the loading on the facility teams.

## 19.6 Organizational MoC - Process flow diagram



## 20 Specific Guidance – IT&S MoC

IT&S have a global change management process and GSMS (Global Service Management System link: <http://gsms.bpweb.bp.com>) system for managing each change. IT&S will use GSMS process as required by the function.

Scheduled system outages related to maintenance activities are not considered as change and normal IT&S GSMS procedure will be followed. All users will be notified 7 days in advance of any system outage required for planned maintenance, allowing business users and stakeholders to raise any concerns that they may have.

Emergency maintenance notifications will be sent to business users within 24hrs.

IT&S GSMS will be used together with IT&S eMOC in order to implement any change that require business technical endorsement and impacts safety critical equipment or requires modification to approved infrastructure design based on criteria below:

- For any project related activities or system enhancements originated by IT&S and which will affect business processes or infrastructure IT&S Project Manager or his delegate will raise GSMS change request (if required) and IT&S eMOC. Business stakeholders will ensure that affected business processes are managed/changed/approved appropriately in eMOC.
- For any project related activities or system enhancements not originated by IT&S the business will initiate appropriate eMOC and will ensure that affected business processes are managed/changed/approved appropriately. If a change will consequently affect any IT&S systems/processes then corresponding GSMS change request will be raised by IT&S project manager or his delegate.

### 20.1 IT&S MoC - Roles and Responsibilities

MoC Stage	Risk	Job function	Responsibility
Initiate	2/3/4	Anyone	To initiate the eMOC providing description and justification and any other information required by the change. Identify the eMOC verifiers.
Verify	2/3/4	TL- IT&S	To verify that the request is supported by the Az SPU IT&S and assign persons to each stage of MoC
Coordinator	2/3/4	IT&S Change Owner (same as per GSMS)	To manage the MoC through the IT&S GSMS process ensuring that correct persons are notified and that comments are answered and the MoC is properly closed out. IF a physical change is required on site then a technical moc will be raised
Reviewer	2/3/4	TL- IT&S BIMs	To review the change and state reason for any rejections
	2/3/4	Service Delivery Manager	To verify that the request is supported by the operations
	2/3/4	IT&S Technical Authority	To verify that the request is supported by the operations
Approve	2/3/4	Facility Manger or Department manager	To approve the change and state reason for any rejections
	2/3/4	Application Business Owner	To approve the change if applicable to a specific application
	3 / 4	VP	To approve the risk level 3 & 4
	4	E&P VP	To approve the risk level 4
Pre implement	2/3/4	IT&S Change Owner (same as per GSMS)	To raise Technical MOC if physical change is required on site

Authorize	2/3/4	TL-IT&S	To authorize for implementation once all necessary approvals are in place To ensure that any pre implementation actions have been identified and completed.
	2/3/4	TL or Facility Managers	To authorize for implementation on site
Close out	2/3/4	IT&S Change Owner (same as per GSMS)	To ensure that all post-implement actions have been completed and lessons learnt issued
	1/2/3/4	MOC/ EQ TEAM	To confirm that all post implementation actions have been completed as identified in this procedure

**Note:** The roles in black bold font are the minimum required for a low risk MoC with others to be added in line with risk level as indicated in the risk column or as required.

**Note:** At any stage reviewers and approvers may be added to the MoC if considered necessary

## 20.2 IT&S MoC - Templates

The following will be linked directly to the MoC template to assist with the uniform creation of MoC

Document number	Document Title	Applies to	Notes
<a href="#">UNIF-ITS- REG-001</a>	AZSPU SOFTWARE APPLICATIONS REGISTER	IT&S	Used to identify who needs to be consulted for IT&S application changes

## 20.3 IT&S MoC - Risk / Hazard Guidance

**Note:** This risk associated directly with making the change and should not be confused with MoC priority

Risk Level	Hazard Statement
IT&S – Insignificant Risk (	Managed within the operating area no MoC required Scheduled system outages related to maintenance activities are not considered as change and normal IT&S GSMS procedure will be followed. All users will be notified 7 days in advance of any system outage required for planned maintenance, allowing business users and stakeholders to raise any concerns that they may have.
IT&S – Risk level 1 (white)	Managed within the Operating area - MoC required <ul style="list-style-type: none"><li>MoC with a risk level 1 (OMS Risk Matrix)</li></ul>
IT&S I – Risk level 2 (turquoise)	Managed within the Operating area but will have independent technical review and risk level 2 approval. - MoC required <ul style="list-style-type: none"><li>MoC with a risk level 2 (OMS Risk Matrix)</li><li>IT&amp;S GSMS will be used together with IT&amp;S eMOC in order to implement any change that require business technical endorsement and impacts safety critical equipment or requires modification to approved infrastructure design.</li></ul>
IT&S – Risk level 3 (blue)	Managed within the Operating area but will have independent technical review and risk level 3 approval. - MoC required <ul style="list-style-type: none"><li>MoC with a risk level 3 (OMS Risk Matrix)</li></ul>
IT&S – Risk level 4 (Purple)	Managed within the Operating area but will have independent technical review and risk level 4 approval. - MoC required MoC with a risk level 4 (OMS Risk Matrix)

## 20.4 IT&S MoC - Documentation

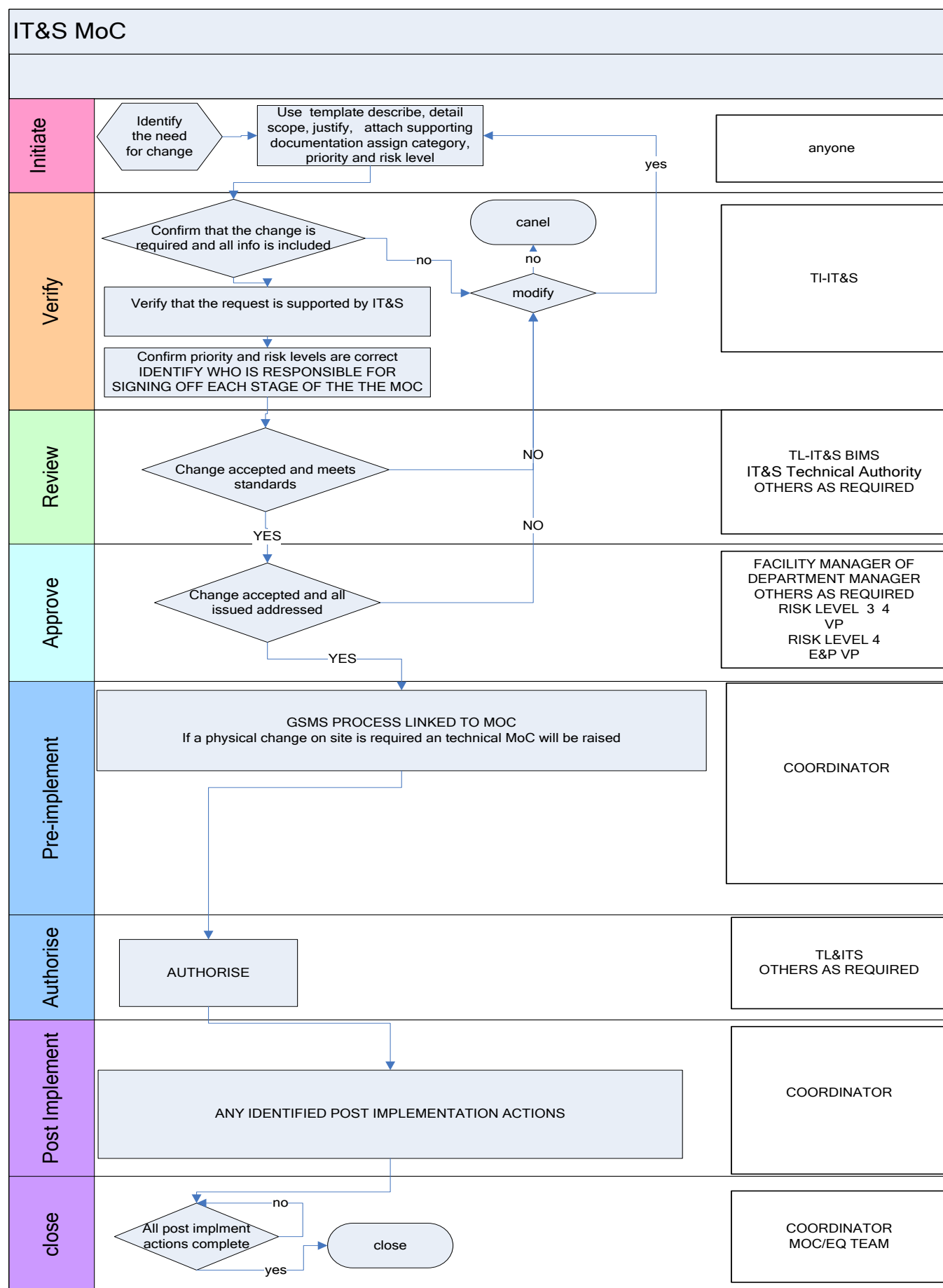
At the heart of any change, is the control of documents and data. Everyone needs to understand the status of these items at three key stages of change.

Stage	Requirement
Verify (Design)	Not applicable
Authorisation (pre-start up)	Not applicable
Closure (post-start up)	Documents and user manual has been updated

## IT&S MoC - Key Indicators

- Number of days to close out an MoC after authorization. This indicates how long it takes to get accurate documents into the system.
- Number of MoCs authorized to start up at any one time – A high number indicates increased risk depending on the sites ability to manage many simultaneous changes.
- Number of MoCs in review and approve stages – This indicates the loading on the facility teams.

## 20.5 IT&S MoC - Process Flow Diagram



## 20.6 Specific Guidance - Marine MoC

Marine Change is a permanent, temporary or emergency physical change that affects everything owned or operated or contracted by AzSPU that floats excluding Mission systems as long as there is no impact on marine systems.

A Marine Contractor operates his own MoC system. Where the Contractor MoC addresses a situation which would attract a "risk level 3 or 4" ranking in an AzSPU eMOC, the BP Contract Technical Specialist shall inform the BP Marine Authority (MA). The MA in such situation will request the Operations Marine Authority (OMA) to initiate an AzSPU eMOC for the purpose of corroborating the particulars contained in the Contractor MOC.

Note: Definition of Mission System, Special purpose equipment installed on a marine unit for executing non-marine activities. For example, related to diving, ROV, seismic, drilling, coring, hydrography, pipelay, subsea installation, heavy lift offshore

Note: An eMOC is also required in the situation where a new vessel is permanently introduced into the fleet or when there is a change in the role of an existing marine unit, for example a supply vessel being adapted for the purpose to undertake seismic or subsea installation work, or to conduct offshore crew changes.

## 20.7 Marine MoC - Roles and Responsibilities

THOSE IDENTIFIED BY A \* ARE A MINIMUM REQUIREMENT FOR RISK LEVEL 1

MoC Stage/Role	Risk	JOB FUNCTION	Responsibility
Initiate	1/2/3/4	*ANYONE	<p>To create the eMOC choosing the affected Area and Facility and will choose the Marine template (the use of a template is a mandatory requirement).</p> <p>To identify the scope of work (identifies the change which identifies and describes all work necessary to produce the change. The scope establishes the tone for the remainder of the planning efforts and therefore should be sufficiently detailed.).</p> <p>To provide a justification for the work (this section details why the change is required)</p> <p>To provide details of other options considered.</p> <p>Where the change is required due to some other business process, Engineering Query, incident report etc, the initiator shall reference this process.</p> <p>To initiator is required to identify the Key Change Verifier as OMA.</p> <p>To suggest priority</p> <p>The EQ system is used by the operating area operations teams to formally raise technical questions and should be linked if available. Operating areas may cancel an MoC that has not been agreed using the EQ or other operating area system.</p>



MoC Stage/Role	Risk	JOB FUNCTION	Responsibility
Verify	1/2/3/4	*OMA	<p>To verify or cancel MoC on behalf of the local operations It should be noted verification should not be given until.</p> <ul style="list-style-type: none"> <li>The change is described clearly and adequately to avoid any possible confusion</li> <li>The justification for the change is clear and adequate</li> <li>All options have been considered and documented in the MoC (as appropriate)</li> <li>Budget is approved and a cost center is identified (as appropriate)</li> <li>Any post start up reviews that may be required to assess the success of the change (as appropriate) have been identified</li> <li>All persons who are required to execute the various stages of the MoC have been identified</li> <li>Confirm the priority level as per the IFP matrix has been confirmed</li> <li>The full scope of work is agreed and appropriate documentation is in place</li> </ul> <p>To identify any hazards and assess risk associated with change as per the OMS and assign risk level using the appropriate management of risk process (GRP3.1-001 selection of Hazards Evaluation &amp; Risk assessment techniques) This process should involve the appropriate reviews as required, this should be done with appropriate persons around a table. Allowing the key verifier to confirm or change the risk level (this includes deviations from company or industry standards or practices and any compliance issues). Details of the risk assessment process used and a summary of the results will be recorded in the risk statement in the MoC initiation page.</p> <p>To ensure that the hazard identification and risk assessment process is formally recorded and attached or linked to the MoC for future reference If the change is to be rejected will cancel the MoC giving a reason Accountable for all identified requirements at this stage of the MoC</p>
	3/4	MA	Verify or cancel risk level 3 or 4 MoC
Coordinator	1/2/3/4	*Any one assigned by the Verifier	Manage the MoC through the process ensuring that correct persons are notified, that comments are answered and the MoC is properly planned, executed and closed out. To ensure that all pre-implementation and post implementation actions have been identified and completed. The Coordinator shall ensure that any subsequent MoCs required by the Marine MoC are raised, actioned and closed out to meet the timeframe required by the Marine MoC
Reviewer	1/2/3/4	*OMA	Primary technical reviewer and shall review the MoC against statutory, MTP and marine engineering practice
	1/2/3/4	HSEA	For changes affecting HSSE issues
	1/2/3/4	Marine SUPERVIOR (Engineering)	For changes affecting performance maintainability of the marine unit or its equipment
	1/2/3/4	Facility Manager	For changes affecting vessels that perform a safety function for the facility
	1/2/3/4	Marine Practioner (Operations)	For changes affecting the operation of the marine unit or its equipment
Approve	1/2/3/4	*MA	To confirm that the actions raised during the MoC review stage have been addressed
	3/4	(HSE& Eng) VP	Operating area Approval Risk level 3 (blue) and level 4 (Purple)MoC
	4	SMA (E&P)	Independent Approval for Risk level 4 (PURPLE) Marine MoC

MoC Stage/Role	Risk	JOB FUNCTION	Responsibility
Pre-implement	1/2/3/4	*COORDINATOR	To ensure that all drawings and formal procedures required by the MoC are available All pre-start checks and class documentation has been completed To ensure that all supplementary MoCs have post implementation close out actions attached CONFIRM Conformance with Class (DnV, ABS, Lloyds etc) Flag State Regulations (ASMA) International Regulations (IMO) BP GDPs, GRPs (GMS, HSSE) Industry practice (IMCA, OGUK)
Authorize	1/2/3/4	*OMA	The authorizer is accountable for ensuring that all pre implement actions have been identified and closed out to their satisfaction before start up. Authorize MoC for startup on site.
Post implement	1/2/3/4	*COORDINATOR	To ensure that all drawings and documents have been reviewed and verified to reflect the change(s) and any class documents completed All operations and maintenance manuals have been updated for any changes Weight and stability calculations have been completed "As Built" and submitted (as appropriate) To confirm that the change performance has been acceptable and if applicable any lessons learned are recorded and distributed
	1/2/3/4	*OMA	To ensure that all changes required by the MoC have been closed out
	1/2/3/4	*DOCUMENT Coordinator	To confirm that all "as built/final " documents and procedures as found in the for issue folder are back drafted and updated in Documentum
Close out	1/2/3/4	*Coordinator	To confirm that all post implementation actions have been completed
	1/2/3/4	*MOC/ EQ TEAM	To confirm that all post implementation actions have been completed as identified in this procedure

**Note:** At any stage reviewers and approvers may be added to the MoC, if considered necessary

## 20.8 Marine MoC - Templates

The following will be linked directly to the MoC template to assist with the uniform creation of MoC's

Document number	Document Title	Applies to	Notes
TBA	Marine MoC Document Checklist	Technical, Process	This form is used to capture which changes are affected by the MoC and should be completed before the review stage

## 20.9 Marine MoC - Risk / Hazard Guidance

Risk Level	Hazard Statement
Marine – insignificant Risk	Managed within the operating area no MoC required
Marine – Risk level 1 (white)	<p>Managed within the Operating area - MoC required</p> <p>MoCs with a risk level 1 (OMS Risk Matrix)</p> <p>No impact on marine safety</p> <p>No impact on marine operational reliability</p> <p>No deviation from existing marine rules, regulations and best practice</p> <p>Examples:</p> <p>*Fitting new equipment that has no impact on existing process activities</p>
Marine – Risk level 2 (turquoise)	<p>Managed within the Operating area but will have independent technical review and risk level 2 approval. - MoC required</p> <p>MoCs with a risk level 2 (OMS Risk Matrix)</p> <p>Minimal impact on marine safety</p> <p>Minimal impact on marine operational reliability</p> <p>Minor deviation from marine existing rules, regulations and best practice</p> <p>Examples:</p> <p>*Repair task involving hazardous materials</p> <p>*Fitting additional technical equipment or piping that may change the flow of existing process activities</p> <p>*Change in emergency response capability</p> <p>*Fitting safety equipment of a novel type</p> <p>*Upgrade of navigational equipment</p> <p>*Change in preventative maintenance system</p> <p>*Operational repairs not completed in standardised manner</p> <p>*New marine SSOW procedures</p> <p>*Organisational change</p> <p>*Change in manning level</p>

Risk Level	Hazard Statement
Marine – Risk level 3 (blue)	<p>Managed within the Operating area but will have independent technical review and risk level 3 approval. - MoC required</p> <ul style="list-style-type: none"> <li>MoCs with a risk level 3 (OMS Risk Matrix)</li> <li>Considerable impact on marine safety</li> <li>Serious affect on marine operational reliability</li> <li>Major deviation from existing marine rules, regulations and best practice</li> <li>Possible introduction of MAR</li> <li>Subject to scrutiny by Class</li> <li>Could be subject to BP Shipping Exception/Variation process</li> </ul> <p>Examples:</p> <ul style="list-style-type: none"> <li>*Affecting overall structural integrity of the marine unit</li> <li>*Affecting systems for removal of water from compartments</li> <li>*Affecting stability of the marine unit inclusive systems designed to manage stability</li> <li>*Change in propulsion and dynamic position keeping systems</li> <li>*Aggregate increase in lightship weight exceeding 2%</li> <li>*Structural modifications outwith ship design</li> </ul>
Marine – Risk level 4 (Purple)	<p>Managed within the Operating area but will have independent technical review and risk level 4 approval. - MoC required</p> <ul style="list-style-type: none"> <li>MoCs with a risk level 4 (OMS Risk Matrix)</li> <li>GMS Exception or Variation process was invoked.</li> </ul>

**Note:** This risk associated directly with making the change and should not be confused with MoC priority

## 20.10 Marine MoC - Documentation

At the heart of any change is the control of documents, procedures and drawings. Everyone needs to understand the status of these documents at three key stages of change.

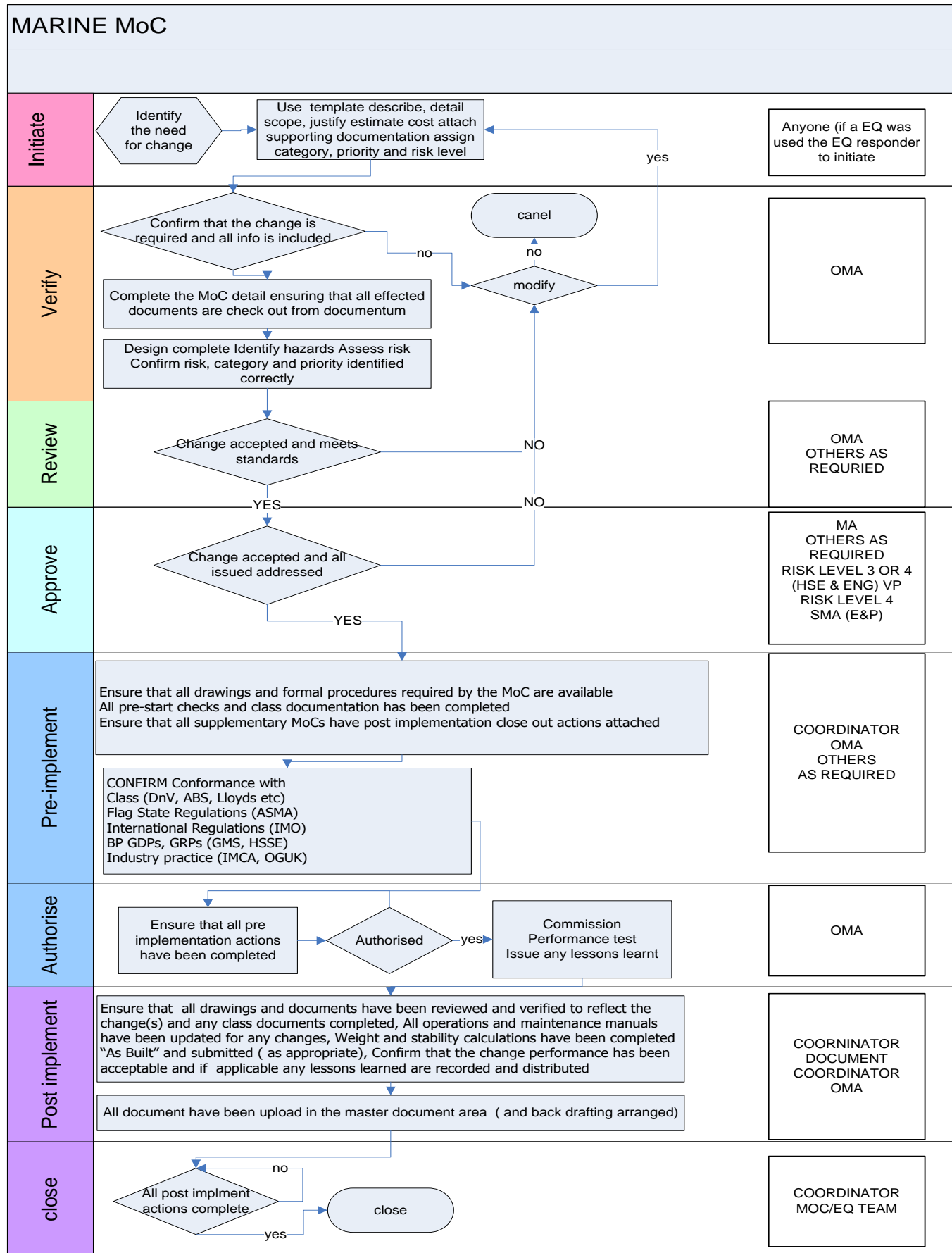
**Note:** It is essential to keep documentation systems update

Stage	Requirement
Verify (Design)	All documents/drawings subject to change need to be available and a note added to the document register that the document/drawing is affected by the MoC ref number
Authorisation (pre-start up)	All MoC drawings/ documents need to be marked up by the person responsible for the changes
Closure (post-start up)	All MoC drawings / documents need to be marked up as " AS BUILT" and/or with new revision

## 20.11 Marine MoC - Key Indicators

- Number of days to close out an MoC after implementation. This indicates how long it takes to get accurate documents into the system.
- Number of MOCs authorized to start up at any one time – A high number indicates increased risk depending on the MA's ability to manage simultaneous changes.
- Number of MoC in review and approve stages – Indicates the loading on the marine teams.

## 20.12 Marine MoC - Process Flow Diagram



## 21 Specific Guidance - DC&I Deviation MoC

DC&I Deviation MoC are for the formal approval of deviations from BP Drilling and Well Operations Practice (GP 10-00) and the associated ETPs. All deviations must be risk assessed with the rig site team and this is to be recorded in the MoC. The risk assessment process must consider the impact on the Drilling Contractor or installation owner's policies and requirements.

**Note:** Non conformance with the Drilling and Well operations Practice and ETPS is permitted only in accordance with the requirements of paragraph 1.7 of that document

**Note:** Paragraph 24.2.5 permits extension of the BOP test interval past 14 days in Exceptional circumstances after the endorsement of the SPU Well control Technical Authority and the approval by the Wells EA

### 21.1 DC&I Deviation MoC - Roles and Responsibilities

THOSE IDENTIFIED BY A \* ARE A MINIMUM REQUIREMENT FOR RISK LEVEL 1

MoC Stage/Role	Risk	Job function	Responsibility
Initiate	1/2/3	*(DC&I) ENG (DISCIPLINE)	To initiate the MoC providing in the title well number or development, practice requirement number, deviation reference number and a short one line description of the deviation In the scope provide a full identification of the proposed departure from practice In the justification provide the reason for the request In the risk comments provide the risk assessment identifying what additional risk does this change incur and what is being done to minimize those risks identify the expiration date of the deviation if the deviation required is temporary
Verify	1/2/3	*(DC&I) ETL (DISCIPLINE)	Identify the risk ranking To verify the MOC
Coordinator	1/2/3	*(DC&I) ENG SNR (DISCIPLINE)	Manage the MoC through the process ensuring that correct persons are notified, that comments are answered and the MoC Is properly planned, executed and closed out
Reviewer	1/2/3	(DC&I) WITL	To review any deviation having a life cycle and well integrity impact
	1/2/3	*(DC&I) WTL	Primary technical reviewer and shall review the MoC against statutory and DC&I deviation engineering practice
Approve	1/2/3	*(DC&I) VP & WEA	Approve deviation
	2/3	(DC&I) SPU TA	Technical approval for a deviation for part B should statements
	3	SETA	To endorse deviation for part B shall statements
	1/2/3	*(DC&I) WOM	To approve deviation
	1/2/3	*(DC&I) EM (DISCIPLINE)	To approve deviation

Pre-implement	1/2/3	*Coordinator	To complete any pre implementation action
Authorize	1/2/3	*(DC&I) WSL (SNR)	To authorized for use on site
Post implement	1/2/3	*Coordinator	To complete any post implementation action
	1/2/3	Coordinator	To confirm temporary change in place (only applicable to temporary changes)
	1/2/3	Coordinator	To confirm temporary change removed (only applicable to temporary changes)
Close out	1/2/3	*Coordinator	To confirm that all post implementation actions have been completed
	1/2/3	*MOC/ EQ TEAM	To confirm that all post implementation actions have been completed as identified in this procedure

**Note:** At any stage reviewers and approvers may be added to the MoC, if considered necessary

### 21.2 DC&I Deviation MoC - Templates

The following will be linked directly to the MoC template to assist with the uniform creation of MoC

Document number	Document Title	Applies to	Notes
<a href="#">GP 10-00</a>	Drilling and Wells Operations Practice	DC&I deviations	This document is a segment defined operating practice and is applicable in all areas of the E&P Segment of BP

### 21.3 DC&I Deviation MoC - Risk / Hazard Guidance

Risk Level	Hazard Statement
DC&I Deviation insignificant risk	<ul style="list-style-type: none"><li>not applicable</li></ul>
DC&I Deviation –Risk level 1 (white)	<ul style="list-style-type: none"><li>no deviation from shall or should statements</li></ul>
DC&I Deviation – Risk level 2 (turquoise)	<ul style="list-style-type: none"><li>deviations from Part A shall and should statements</li><li>deviations from Part B should statements</li></ul>
DC&I Deviation – Risk level 3 (blue)	<ul style="list-style-type: none"><li>deviations from Part B shall statements</li></ul>
DC&I Deviation – Risk level 4 (Purple)	<ul style="list-style-type: none"><li>not accepted</li></ul>

**Note:** This risk associated directly with making the change and should not be confused with MoC priority

### 21.4 DC&I Deviation MoC - Documentation

At the heart of any change is the control of documents, procedures and drawings. Everyone needs to understand the status of these documents at three key stages of change.

Stage	Requirement
Verify (Design)	To ensure that the MoC adequately reflects the deviation request and a risk assessment is documented
Authorisation (pre-start up)	To ensure that all work plans / programmes / work instructions reflect the deviation. Ensure that the risk assessment has involvement of the offshore teams
Closure (post-start up)	To ensure that all work plans / programmes, basis of design documents, end of well reports and well handover documentation reflects the as built design.

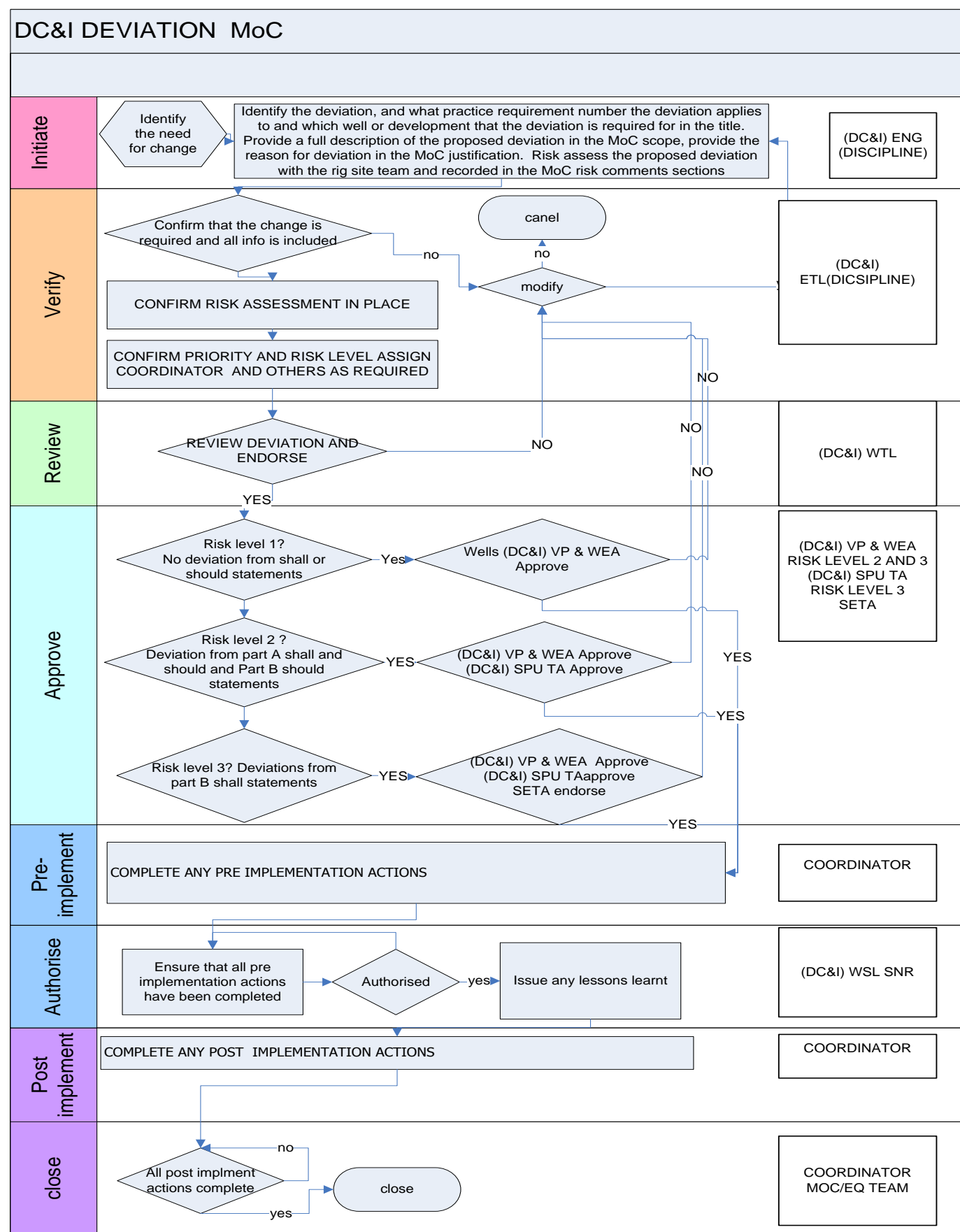
**Note:** The future intent of the DC&I organization is to move to a control document system, this MoC procedure will require updating at that time to reflect these changes

### 21.5 DC&I Deviation MoC - Key Indicators

- Number of days to close out an MoC after authorized. This indicates how long it takes to get accurate documents into the system or to close out the deviation.
- Number of MoCs authorized at any one time – A high number indicates increased risk depending on the DC&I sites ability to manage many simultaneous changes.
- Number of MoCs in review and approve stages – This indicates the loading on the DC&I teams.



## 21.6 DC&I Deviation MoC - Process Flow Diagram



## 22 Specific Guidance - Technical MoC (WIMS Deviation)

Technical Change is a permanent, temporary or emergency change that affects producing process of the BP operated wells in operating areas. WIMS Deviation MOCs are for the formal approval of deviations from the AzSPU Well Integrity Management System requirements. All deviations must be risk assessed with the Base Management Team, Operations Team, and Well Integrity Team and this must be recorded in the MOC.

### 22.1 Technical MoC (WIMS Deviation) - Roles and Responsibilities

THOSE IDENTIFIED BY A \* ARE A MINIMUM REQUIREMENT FOR RISK LEVEL

MoC Stage/Role	Risk	Job function	Responsibility
Initiate	1/2/3	ANYONE (Well Integrity Team or Base Management Team Engineer should initiate the MoC)	<p>Create the MoC providing in the title the well number and a short one line description of the deviation. In the scope, provide a full identification of the proposed departure from WIMS. In the justification, provide the reason for the request. Identify the expiration date of the deviation, if the deviation required is temporary.</p> <p>The WIMS Deviation Form (write-up template) should be used to provide the details on the reasoning for the request. In this document the risk assessment should identify the additional risk associated with the continued operation of the well and what is being done to minimize those risks. Also, the nullifying conditions that would invalidate the Deviation.</p> <p>The initiator is required to identify the Verifiers (WIE, PE, Sr. WIE, Sr. PE, Facility Manager &amp; TL Eng) as per the specific guidance for the MoC.</p> <p>The initiator is required to identify other reviewers and approvers and authorizers as defined as a minimum requirement under each MoC type.</p> <p>The initiator is required to suggest a priority and risk level.</p> <p>The initiator will attach all relevant documentation as applicable to MoC for information.</p>
Verify	1	(Sr. WIE or Sr. PE)	<p>Verify that:</p> <ul style="list-style-type: none"> <li>• The risk ranking for the well is correct in the MoC and the appropriate reviewers and approvers are assigned.</li> <li>• The deviation to WIMS is described clearly and adequately to avoid any possible confusion</li> <li>• The justification for the change is clear and adequate</li> </ul>

	2/3	(Sr. WIE, or Sr. PE, or OOE, or TL Eng)	Verify that: <ul style="list-style-type: none"> <li>The risk ranking for the well is correct in the MoC and the appropriate reviewers and approvers are assigned.</li> <li>The deviation to WIMS is described clearly and adequately to avoid any possible confusion</li> <li>The justification for the change is clear and adequate</li> </ul>
Coordinator	1/2/3	(WIE or PE)	Manage the MoC through the process ensuring that: <ul style="list-style-type: none"> <li>correct persons are notified</li> <li>comments are answered, and</li> <li>the MoC is properly planned, executed and closed out</li> </ul>
Reviewer	1	*(TL Eng, OOE)	<ul style="list-style-type: none"> <li>Confirm that the details of the current well conditions are complete</li> <li>Review well operating conditions against WIMS requirements.</li> </ul>
	2	*(OIM)	<ul style="list-style-type: none"> <li>Confirm that the details of the current well conditions are complete</li> <li>Review well operating conditions against WIMS requirements.</li> <li>Review proposed risk mitigations to ensure they are adequate</li> </ul>
	3	*(OIM, AOM)	<ul style="list-style-type: none"> <li>Confirm that the details of the current well conditions are complete</li> <li>Review well operating conditions against WIMS requirements.</li> <li>Review proposed risk mitigations to ensure they are adequate</li> </ul>
Approve	1	*(OIM, WI TA)	Approve Deviation
	2	*(AOM, WI TA)	Approve Deviation
	3	*(WI TA, SPU EA, Wells EA, VP OPS)	Approve Deviation
Pre Implement	1/2/3	(Sr. PE)	Verify that all nullifying conditions are included in the Well guidelines
	1/2/3	(OOE)	Verify that all risk mitigation action items are input and tracked in Traction
Authorize	1/2/3	OIM	The authorizer is accountable for ensuring that all pre implement actions have been identified and closed out to their satisfaction, before start up or continuing to operate the well under deviation.
Post implement	1/2/3	(Sr. PE)	If any of the dispensation nullifying conditions occurs, or the Well Integrity conditions that required the MoC are eliminated (repaired or replaced), notify WIE
Close out	1/2/3	*COORDINATOR	Confirm that all post implementation actions have been completed as identified in this procedure

**Note:** At any stage reviewers, approvers, post and pre implementation actions, may be added to the MoC, if considered necessary

**Note:** pre and post implementation actions can not be deleted - however in the event that the action is applicable, but due to circumstances that are out with the control of the site (ie net work failure / Documentum offline etc) the facility manager can agree to accept sign off of specific pre-implement requirements as long as they have been replicated in post implement section of the MOC. The reason for this is to be noted in the action comment field.

## 22.2 Wells WIMS Deviation MoC - Templates

The following will be linked directly to the MoC template to assist with the uniform creation of MoC

Document number	Document Title	Applies to	Notes
<a href="#">AZ-WIMS-10-0001</a>	Well Integrity Management System (WIMS)	Wells WIMS deviations	The purpose of this AzSPU Well Integrity Management System (WIMS) is to define BP's expectations related to Well Integrity, Well Management, and Conformance with BP global Well Integrity policies in order to ensure safe operation of the wells in the Azerbaijan Strategic Performance Unit (AzSPU) over their full lifecycle.

## 22.3 Wells WIMS Deviation MoC - Risk / Hazard Guidance

Risk Level	Hazard Statement
WIMS Deviation - insignificant risk	<ul style="list-style-type: none"><li>not applicable; operable well with no deviation required</li></ul>
WIMS Deviation – Risk level 1 (white)	<ul style="list-style-type: none"><li>deviation from shall or should statements; low risk based on nature of non-conformance</li></ul>
WIMS Deviation – Risk level 2 (turquoise)	<ul style="list-style-type: none"><li>deviation from shall or should statements; medium risk based on nature of non-conformance</li></ul>
WIMS Deviation – Risk level 3 (blue)	<ul style="list-style-type: none"><li>deviation from shall or should statements; high risk based on nature of non-conformance</li></ul>
WIMS Deviation – Risk level 4 (Purple)	<ul style="list-style-type: none"><li>not accepted</li></ul>

**Note:** This risk associated directly with making the change and should not be confused with MoC priority

## 22.4 Wells WIMS Deviation MoC - Documentation

At the heart of any change is the control of documents, procedures and drawings. Everyone needs to understand the status of these documents at three key stages of change.

Stage	Requirement
Verify (Design)	To ensure that the MoC adequately reflects the deviation request and a risk assessment is documented
Authorisation (pre-start up)	To ensure that all risk mitigations are in place, all WOG are updated
Closure (post-start up)	To ensure that all WOG have been updated to reflect the deviation

**Note:** The future intent of the Wells organization is to move to a control document system, this MoC procedure will require updating at that time to reflect these changes

## 22.5 Wells WIMS Deviation MoC - Key Indicators

- Number of days to close out an MoC after authorized. This indicates how long it takes to get accurate documents into the system or to close out the deviation.
- Number of MoCs authorized at any one time – A high number indicates increased risk depending on the Platforms ability to manage many simultaneous changes.
- Number of MoCs in review and approve stages – This indicates the loading on the Ops, Base Management, and WI teams.

# Wells WIMS Deviation MoC

