



MANAGEMENT OF CHANGE PROCEDURE
Engineering Services Department



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Abbreviations

AIOC – Azerbaijan International Operating Company

MOC – Management of Change

RJO – Responsible Job Officer

STA – Senior Technical Authority

MSTA – Mechanical / Structural Technical Authority

IETA – Instrument/Electrical Technical Authority

PTA – Process Technical Authority

MA – Maintenance Authority

SOR – Statement of Requirements

DCC – Document Control Centre



SCOPE

This Management Of Change procedure details the responsibilities and activities to be followed for all modifications required on the AIOC (Operated by BP Amoco) facilities and associated pipelines whether they are permanent or temporary, major or minor, on existing facilities or additions to existing facilities. It details the process from start to finish, referencing AIOC critical documentation.

The critical interface with drilling is triggered from their own procedure when there is a modification that effects either Operations or the overall platform integrity, likewise any modification that effects the drilling operation will be triggered from this procedure.

Only authorized modifications may be implemented. Exceptional and Emergency modifications, detailed in section Inadvertent Modification may obtain immediate approval after the relevant offshore risk assessment procedure has been implemented, but full application of this instruction must follow as soon as reasonably practicable.

The standards and specifications being applied are those used in the original design of AIOC operated sites including Chirag-1 platform, subsea pipeline, Sangachal, Western and Northern Route Export Pipelines, any deviation from these will be documented.

Any person with the relevant process or engineering knowledge may initiate the procedure. Though the Line/Facility Manager and the Operations Team Leader should approve the proposal before the MOC is submitted for circulation. Thereafter nominated authorities within Production Operations and other departments will review the justification and proposal, for information and comment and then final approval.

This instruction has been written with the Production Operations Management structure taken into consideration and it has been specifically designed to be rigorous but not onerous.



Objective

To ensure that all modifications are justified, assessed, controlled and documented in a consistent manner in order that:

1. Safety is not compromised
2. The technical integrity of AIOC-operated sites is not compromised
3. Proposed modifications are given due consideration to prevent unnecessary cost
4. Proposed modifications are publicized to the relevant departments within and outwith Production Operations when necessary
5. Interfaces with all disciplines are taken into account before committing to the modifications
6. The integrity of the modification process remains intact and is auditable
7. The Safety Case does not have its validity impaired by the modifications

In addition to these specific objectives, this instruction also provides guidelines on the actual process flow through the procedure. An overview of this process is shown in Attachment A, and detailed in Section 4. The major steps are:

- ***Initiation***
- ***Review***
- ***Approval***
- ***Implementation and Commissioning***
- ***Documentation and Control***



Identifying Relevant Modifications

Modifications have been split into three categories, determined by the type of modification involved: - Configuration. Change is one where it is a variable setting change to a previously installed piece of equipment; - Maintenance Modification is a change to maintenance interval or methodology; - Full Engineering Modification covers all of the other scenarios outlined below.

Full Engineering Modifications

Some examples of Full Engineering Modifications

- A physical change or addition made to equipment; vessels, pipework, pumps, instrumentation, protective devices and electrical systems
- Basic mechanical design changes (e.g. bolt types, joint types, pump seals)
- Other modifications that do not affect the process directly may still require a Chirag 1 Management of Change request. (Re routing of pipework may introduce dead legs and hence corrosion black spots, modification to skid floor plates may affect drainage etc.)

Configuration Change

A Configuration Change can be defined as a change to existing equipment that has variable settings.

Some examples of Configuration Changes

- A change in the setting or arrangement of protective devices installed for safety or environmental reasons (e.g. safety valves, alarms, trips, and interlocks)
- A software change made to the principle on which the platform's Control, Shutdown or Fire and Gas systems operate, when the platform can be affected by a computer or other programmable device.

If there are any doubts as to what proposed changes should be subject to this procedure, the Senior Technical Authority will give guidance on the matter.

Maintenance Modification

Some examples of Maintenance Modifications

- A change to the frequency of planned maintenance
- A change to the methodology of maintenance:
i.e. after operational experience it is found that all of the seals on a pump do not need replaced or the seat on a control valve does not need refurbished on a major overhaul.



Note. This procedure not only provides an auditable trail for changes made, but it is also an excellent vehicle for dissemination of technical information and changes, as it v/ill be reviewed by all nominated teams within the Production Operations department. This should be borne in mind when any marginal decision regarding the need for circulation has to be taken.



Roles and Responsibilities

Identified Personnel

This procedure has been designed to be rigorous but not onerous in its application. The recognized authorities are highlighted and their roles and responsibilities are defined as follows along with the other personnel involved in the process:

- ⇒ Initiator / Originator
- ⇒ Responsible Job Officer
- ⇒ Senior Technical Authority
- ⇒ Mechanical / Structural Technical Authority
- ⇒ Instrument / Electrical Technical Authority
- ⇒ Process Technical Authority
- ⇒ Maintenance Technical Authority
- ⇒ Senior Operating Authority~~Operations Authority~~ (Area Team Leader)
- ⇒ Modifications Coordinator
- ⇒ DCC Coordinator
- ⇒ HSE Technical Authority

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Initiator / Originator

The Initiator or Originator can be any person with relevant process or engineering knowledge, the minimum responsibility here is to ensure that the proposal and initial idea has been agreed with both their line manager and the Operations Team Leader. There should be some documentary evidence of the problem and thought processes that have been established in the diagnosis.

The Initiator / Originator has the responsibility for filling out the following documentation. Management of Change forms, section A.

Responsible Job Officer

The Responsible Job Officer (RJO), is nominated by the Senior Technical Authority (STA), if there is no obvious candidate. He is responsible for collating design contributions from all required disciplines, fostering a team approach. The initiator and RJO can be the same person and his minimum responsibilities are:

1. Overall control and progression of the modification, from Statement of Requirements (SOR), to handover and commissioning of the completed modification.
2. Reviewing the requirement for completing the modification.
3. Reviewing the requirement to implement the modification utilizing AIOC personnel or external engineering contractor support. This review must be completed with the STA.



4. Reviewing which departments and disciplines should be involved in the procedure. This review must be completed with the STA.
5. When using a support contractor, liaison with their nominee regarding all aspects of the detailed engineering requirements, costs and modification close out.
6. Overseeing all internal engineering modifications
7. Ensuring that all relevant documentation has been updated by the disciplines concerned with the modification.
8. Ensuring the modification is completed as per the workpack.
9. Resource planning for modification implementation.

The Responsible Job Officer has the immediate responsibility for the records and documentation listed below, and he is ultimately responsible for ensuring that all other documentation is updated as per the individual discipline requirements.

- ⇒ Management of Change forms, section A, B, D, F where applicable
- ⇒ Answer or reply to all comments raised in “Part H” to the acceptance of prior to approval of MOC.
- ⇒ Statement of Requirements and as-much information as possible for all disciplines to comment on
- ⇒ Scope of work

Senior Technical Authority

The minimum responsibilities expected of the STA are those of ensuring that:

1. STA reviews all Modification proposals concerning AIOC-operated facilities.
2. Modification proposals are prepared, approved and progressed using this procedure in the proper manner giving final authoritative guidance with justifications when required.
3. External departments and bodies are involved when necessary: Health and Safety, Environmental, Logistics, Marine, Aviation, Sangachal, Oil Rocks, AIOC comms, GPA, SOCAR, FOC.
4. The modification does not jeopardize the technical integrity or the Safety Case of the platform.
5. If the justification on economic or safety grounds is not clear, or if there are several options for implementation, then the STA will initiate the work required to confirm the benefits and the preferred option, before the modification is finalized.
6. Deciding whether the modification is a Configuration Change, a Full Engineering Modification or a Maintenance Modification.
7. Decide on the allowable timescales for temporary modifications.
8. Post modification review and final sign off.
9. Decide if the modification should be covered by this procedure or separate procedures, such as the case for major projects.
10. Decide with the Operations Manager whether the proposal should be:
 - a. *immediately progressed.*



- b. delayed, pending resource or finance.*
- c. rejected.*

The Senior Technical Authority has the overall responsibility for the integrity of the following documentation and records, but it is the responsibility of the RJO to ensure they are updated.

- ⇒ Management of Change sections B, C 4
- ⇒ Safety Case books 2 and 3

Mechanical Structural Technical Authority

The Mechanical / Structural Technical Authority (MSTA) has the responsibility for:

1. Reviewing all Modification proposals for Mechanical and Structural workscope implications.
2. Ensuring the modification does not jeopardize the technical integrity or the safety case of the platform.
3. Ensuring that all mechanical modifications are to the required standards.
4. Ensuring that the relevant weight control procedure has been adhered to.
5. Ensuring that potential corrosion risks have been addressed.
6. Ensuring that all modifications adhere to the relevant AIOC standards.
7. The TA must review the information as presented and avoid the temptation to indulge in opinion engineering

Any comments or questions requiring answers / justification to be incorporated into “Part H” Comments section.

The Mechanical / Structural Technical Authority has the overall responsibility for the integrity of the following documentation and records, but it is the responsibility of the RJO to ensure they are updated.

- Register of Mechanical Equipment
- Weight control documentation
- Pressure systems inspections

Instrument Electrical Technical Authority

The Instrument Electrical Technical Authority (IETA) has the responsibility for:

1. Reviewing all Modification proposals for Instrument Electrical workscope implications.
2. Ensuring the modification does not jeopardize the technical integrity or the
3. Safety Case of the platform.



4. Ensuring that any I/E systems changes integrity of recovery information is attained as per the relevant housekeeping manuals and procedures.
5. Ensures that all modifications adhere to the relevant AIOC standards.
6. The TA must review the information as presented and avoid the temptation to indulge in opinion engineering

Any comments or questions requiring answers / justification to be incorporated into “Part H” Comments section.

The Instrument Electrical Technical Authority has the overall responsibility for the integrity of the following documentation and records, but it is the responsibility of the RJO to ensure they are updated.

- Register of Electrical Equipment
- Instrument data sheet documentation
- Software modification documentation
- Program backups
- I/E loop and line drawings
- Cause and Effects

Process Technical Authority

The Process Technical Authority (PTA) has the responsibility for:

1. Reviewing all Modification proposals for Process workscope implications.
2. Ensuring the modification does not jeopardize the technical integrity or the
3. Safety Case of the platform.
4. Ensure that potential process risks have been addressed.
5. Ensures that all modifications adhere to the relevant AIOC standards.
6. The TA must review the information as presented and avoid the temptation to indulge in opinion engineering

Any comments or questions requiring answers / justification to be incorporated into “Part H” Comments section.

The Process Technical Authority has the overall responsibility for the integrity of the following documentation and records, but it is the responsibility of the RJO to ensure they are updated.

- P&IDs, PFDs
- Hazardous Area Classification drawings
- Chemical Inventories
- Register of Safety Related Devices



Maintenance Authority

The Maintenance Authority (MA) has the responsibility for:

1. Reviewing all Modification proposals for Maintenance workscope implications.
2. Ensuring the modification does not jeopardize the technical integrity or the safety case of the platform.
3. Ensures that all modifications adhere to the relevant AIOC standards.
4. Updating of the Maintenance Management system.
5. The TA must review the information as presented and avoid the temptation to indulge in opinion engineering

The Maintenance Authority has the overall responsibility for the integrity of the following documentation and records, but it is the responsibility of the RJO to ensure they are updated.

- Maintenance management system
- Equipment maintenance intervals
- Maintenance methodology

Facility Manager

The Facility Manager, has the responsibility for:

1. Reviewing all Modification proposals for Operational workscope implications within his area of responsibilities.
2. Ensuring the modification does not jeopardize the technical integrity or the safety case of the asset.
3. Ensures that the modification adheres to the relevant AIOC standards.
4. Reviews modification 'window' opportunity when necessary.
5. Reviews the working area requirements for proposed modifications.

Any comments or questions requiring answers / justification to be incorporated into "Part H" Comments section.

The Facility Manager has the overall responsibility for the integrity of the following documentation and records, but it is the responsibility of the RJO to ensure that they are updated.

- Safety Case book 1
- Operating procedures; temporary/startup /shutdown / normal running
- Training requirements
- Manning levels



HSE Technical Authority

HSE Technical Authority has the responsibility for:

1. Assurance of legislative, SMS & Environmental requirements are being complied with.
2. Reviewing all Modification proposals for HSE implications within his area of responsibilities.
3. HSE Technical Authority review is to provide assurance that sensitive areas have been identified and confidence that the appropriate project, engineering and operational procedures, including those for Occupational Health, Safety, Environmental control and Energy Efficiency have been or will be developed to control the identified risks.
4. HSE Technical Authority review is not a guarantee that the installation will meet these objectives
5. HSE Technical Authority must review the information as presented and avoid the temptation to indulge in opinion with engineering

Any comments or questions requiring answers / justification to be incorporated into “Part H” Comments section.

The HSE technical Authority has the overall responsibility for the integrity of the following documentation and records, but it is the responsibility of the RJO to ensure that they are updated.

- Safety Case
- Site specific Operating Procedures

DCC Administrator

The DCC Administrator issues MOC numbers from the Microsoft Access database, which will be used for tracking and reporting of the system. Each time a MOC has to be moved to the next step or from one person/department to the next he/she will log it on the system this will provide an auditable trail around the departments. His minimum, responsibility is:

1. Using the Database to allocate numbers of MOC.
2. Produce MOC Circulation Sheet based on distribution list determined by STA.
3. Provide a weekly status report of MOC, Monitor any MOC, which appear to be 'stagnant'.

The DCC Administrator has the overall responsibility for the collation and update of the following documentation and records.

- Modifications database
- Weekly reporting



Senior Operating Authority

Senior Operating Authority has the responsibility for:

1. Approval of initial concept of MOC so it can be raised and passed around parties involved in finding solution, i.e. Engineering, Operating Site.
2. Approval of final go-ahead, i.e. the point when MOC package can go on site for physical implementation and further progression
3. Authorities and Departments are involved when necessary
4. Central Asset Prioritisation
- ~~5.~~ Securing resources
- ~~5-6.~~ Sets targets for Engineering and Modification Contractors in line with BUs objectives
- ~~6-7.~~ Defines required performance point contact for the modification within BU
- ~~7-8.~~ For the contractor measures performance of the job delivery
- ~~8-9.~~ Decide on the allowable timescales for temporary modifications
- ~~9-10.~~ Job 'Champion' (vested interests in success)

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The role of Senior Operating Authority is played by Area Team Leader.



Management of Change Procedure

Any person with the relevant justification can initiate the procedure, the steps through the process are;

Note. Any movement of the assembled workpack must be via the modification coordinator this enables tracking and control of information.

Full Engineering Change Procedure

Initiation

1. Originator identifies the need for a modification
2. Discuss the proposal with the line manager
3. On authorization from Line Manager the proposal shall be approved by Senior Operating Authority to go to Engineering Team
4. Originator together with Line Manager discuss the proposal with the Senior Technical Authority to decide
 - Responsible Job Officer nomination (if this is not obvious)
 - Internal or external engineering
 - Which departments should be included in circulation
 - Full Engineering Modification, Configuration Change or Maintenance Modification
 - Requirement for a full Safety Review

Full Engineering Change

1. The Initiator outlines the problem and the proposed solution on the MOC form part A along with the justification in part B.
2. The Responsible Job Officer after discussion with the Initiator completes a full Statement of Requirements, using part D of the MOC forms. If the modification is multi discipline then the Responsible Job Officer enlists the help of the relevant discipline engineers to complete the Statement of Requirements.
3. The completed Statement of Requirements is circulated for review and agreement around those departments previously nominated for circulation.
4. Any comments are written into the MOC form part G and should have a written reply from the relevant person or department.
5. The Responsible Job Officer reviews the comments and makes alterations to the Statement of Requirements as required.
6. SOR sent to Internal or External engineering depending on which was previously specified, for detailed completion with cost and time estimations. The Responsible Job Officer is the point of contact.



7. The Responsible Job Officer receives the final detailed scope.
8. Final engineering plan and detailed information is then re-circulated around the original circulation for approval, the STA being the last to approve and decide on the need for a Safety Review.
9. Then MOC is submitted to Senior Operating Authority for final “go-ahead” approval
10. Only on receipt authorization from Senior Operating Authority the work can be started on site as per design and plan.
11. The Responsible Job Officer ensures all relevant documentation has been updated.
12. The Senior Technical Authority reviews the modifications effectiveness after 3 months and
 - a) Signs off the change
 - b) Refers the mod to the Responsible Job Officer for further review.



Configuration Change Procedure

Initiation

1. Originator identifies the need for a modification
2. Discuss the proposal with the line manager
3. On authorization from Line Manager the proposal shall be approved by Senior Operating Authority to go to Engineering Team
4. Discuss with the Senior Technical Authority to decide
 - Responsible Job Officer nomination (if tills is not obvious)
 - Internal or external engineering
 - Which departments should be included in circulation
 - Full Engineering Modification, Configuration Change or Maintenance Modification
 - Requirement for a full Safety Review

Configuration Change

1. The Initiator outlines the problem and the proposed solution on the MOC form part A along with the justification in part B.

Note: the calculations or detailed design for the Configuration Change should be attached at this stage.
2. These details are circulated around the previously nominated departments for **APPROVAL**.

Note: the agreement stage is bypassed because the proposal will generally have come from the department from whom agreement is required
3. The Configuration Change request is sent to the previously nominated engineering department, Internal or External who will then carry out the change under the guidance of the Responsible Job Officer.
4. The Responsible Job Officer ensures all relevant documentation has been updated.
5. The Senior Technical Authority reviews the modifications effectiveness after 3 months and
 - a. Signs off the change.
 - b. Refers the mod to the Responsible Job Officer for further review.



Maintenance Modification Procedure

Initiation

1. Originator identifies the need for a modification
2. Discuss the proposal with the line manager
3. On authorization from Line Manager the proposal shall be approved by Senior Operating Authority to go to Engineering Team
4. Discuss with the Senior Technical Authority to decide
 - Responsible Job Officer nomination (if this is not obvious)
 - Internal or external engineering
 - Which departments should be included in circulation
 - Full Engineering Modification, Configuration Change or Maintenance Modification
 - Requirement for a full Safety Review

Maintenance Modification

1. The Initiator outlines the problem and the proposed solution on the MOC form part A along with the justification in part B.

Note: the history and reason/or the Maintenance Modification should be attached at this stage.

2. These details are circulated around the previously nominated departments for APPROVAL.

Note: the agreement stage is bypassed because the proposal will generally have come from the department from whom agreement is required.

3. The Maintenance Modification is sent to the Maintenance department who will then integrate the change into the Maintenance Management system under the guidance of the Responsible Job Officer.
4. The Responsible Job Officer ensures all relevant documentation has been updated.
5. The Senior Technical Authority reviews the modifications effectiveness after 3 months and:

a) Signs off the change.

b) Refers the mod to the Responsible Job Officer for further review.



Temporary Modifications

If the change is temporary then the Senior Technical Authority will have imposed duration on this, the Responsible Job Officer is charged with confirming that the change has been reversed, and the equipment reinstated to the original condition, this is recorded by signing off the FULLY RESTORED portion in section E of the MOC form. Any changes to documentation or procedures will also be reversed.

If the original timescale is to be exceeded then the Responsible Job Officer must seek permission from the Senior Technical Authority and Senior Operating Authority,

Emergency Modifications

The acting Facility Manager has the authority to define a change for immediate implementation only to maintain continuous and safe operation or shutdown. The offshore Risk Assessment procedure must be adhered to prior to any change.

In such cases, the MOC must be followed as soon as reasonably practicable or the modification must be reversed. If it is possible approval from Senior Operating Authority shall be received prior to implementation of any work on site.

Inadvertent Modification

Unauthorized or inadvertent modifications are not permitted, therefore it is the duty of the FACILITY MANAGER to review the daily logs for any inadvertent modifications, which fall within the scope of this procedure. These must be identified and in such cases, the MOC must be followed as soon as reasonably practicable or the modification must be reversed.

Modification Register and Update of Records

The Modifications Register is maintained by the DCC Administrator and is a central database for all modifications.

The database must, as a minimum contain the following fields:

- ⇒ Modification Number
- ⇒ Modification Type
- ⇒ Priority
- ⇒ Modification Title
- ⇒ Responsible Job Officer
- ⇒ Area
- ⇒ Origination Date



Modification Records

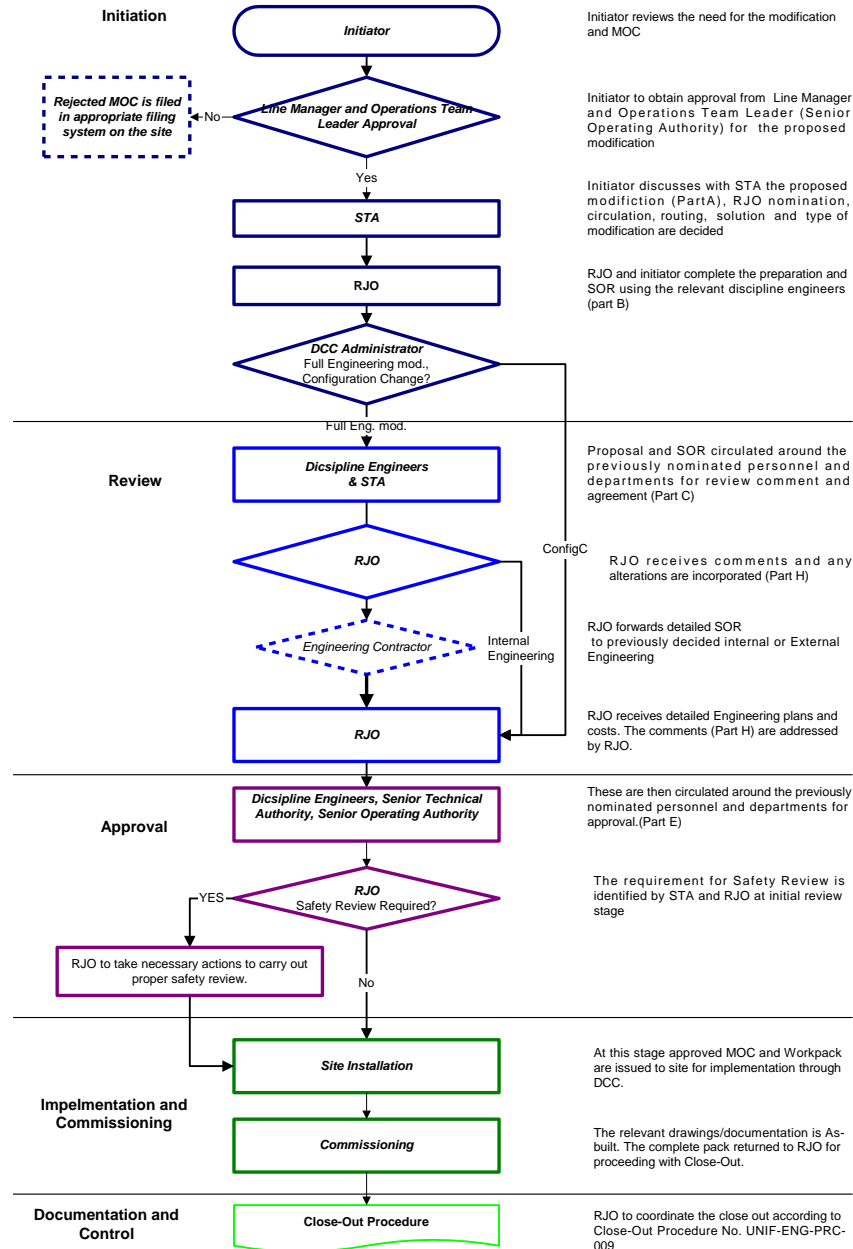
A central file for each modification will be kept in the Engineering Department central filing system, within this archived file all relevant documentation will be kept, i.e. anything that could be required for reference in the future.



MANAGEMENT OF CHANGE PROCEDURE Engineering Services Department



Attachment A – MOC Flowchart





Attachment B – MOC Proforma

[Please click here to go to proforma](#) or see below



MOC Completion Certificate

MOC Number			
Facility			
MOC Title			
	Site Inspected and Work Completed	Documentation Completed	
DATE			
	NAME	SIGNATURE	DATE
Responsible Job Officer			
Senior Technical Authority			



Part A Proposal			
INITIATOR	MODIFICATION TYPE	LOCATION	MOC NUMBER
Title:			
<div>Summary</div> <p>Enter your text instead here</p>			
Part A Justification & Cost Estimate			
Safety	YES NO	Engineering	
Production	YES NO	Materials	
Cost Savings	YES NO	Labor	
Operational	YES NO	Total	
Manager Approval			
Line Manager Name:		Senior Operating Authority Name:	
Assigned Responsible Job Officer			
NAME:			
Part C Reviewed and Agreed by		HSE	Date
MECH	Date	Senior TA	Date
I/E	Date	Other Departments	Date
Process	Date	RJO	Date
Facility Manager	Date	Maintenance Supervisor	Date



Part D	Solution/SOR

P&IDs, Cause & Effects, GA s, Line drawings, Reference drawings, meeting minutes, communications, e-mails, Modification description, procedure changes, maintenance and operations knock on effects, Study reports, problem solution and benefits, timescales.

SAFETY REVIEW REQUIRE	YES NO	Senior TA Signature
TEMPORARY MODIFICATION TIME LIMIT		Senior TA Signature

Part E Approval			
MECH	Date	HSE	Date
I/E	Date	Senior Technical Authority	Date
Process	Date	Senior Operating Authority	Date
Facility Manager	Date	Other Departments	Date
Maintenance Supervisor	Date	RJO	Date
Senior Operating Authority	Date		



Part F Documents touched by present MOC

Operating Basis		
Safety Case		
Heat and Material Balance		
P&ID		
Cause and Effect Diagrams		
Line List		
Master Equipment List		
RSRD		
Instrument Loop Diagram		
Electrical Single Line Diagram		
Fire and Gas		
Plant Layout		
Weight Control		
Hazardous Area Class		
Instrument List		
MMS		
SP Register		
Other (state if applicable)		



Part G

Aide Memoir

Operations

Startup/Shut down	Required Services	Operating Procedure Change	Routine Operation
Control panel Locale/Visibility	Unusual Operation	New Operating Procedure	Access for Operations
Noise Implications	Emergency Shutdown	Preparation for Maintenance	Lagging/Radiation/Protection
Personnel Protection	Manning	Training	

ENGINEERING / MAINTENANCE

Past history of similar, equip.	Mechanical Isolation	Electrical Isolation	Instrument Isolation
Cavitation	Reliability / Availability	Lifting equipment	Cold Duty application
Standardisations of equipment	Erosion / Sand / Velocities	Sour Service	Maintenance access
Corrosion	Weight	Instrument test frequency	Spares
MMS	Corrosion Monitoring		

IMPLEMENTATION AND COMMISSIONING

Shutdown Windows	System Shutdowns	Single V/V Isolations	Fire Pump availability
Hot Work restrictions	Long lead times	Tie In points	Any simultaneous operations
Scale			

PROCESS HAZARDS CONSIDERED

Overfilling	Two Phasing	Erosion	Equipment Failure
Emptying	Chemical Reactions	Corrosion	Trip Failure
Backflow	Blockages	Deposition	Source of Ignition
Sampling	Leaks	Surge	Static
Overpressure	Spillage	Thermal Cycling	Power Loss
Vacuum Formation	Fouling	Vibration	Loss of Services
High Temperatures	Contamination	Fatigue	Cross Connections
Gas Blow by	Flammability	Passing Valves	Dust
Valve Line up	Explosion	Access	Radioactivity
Hazardous Liquids Inventory			

PROCESS SAFEGUARDS

Relief Capacity	Earthing	Use of Filters	Procedures
Flaring	Bonding	Design Standards	Emergencies
Fire Protection	Locking	Instrumentation	Fire Fighting
Bellows	Purging	Trips	Access
Isolation	Lighting	Vents	Startup
Thermal Relief	Area Classification	Control Valve Failure	Shutdown
NRV s	Lagging	ROs	Frost Protection
Duplication	Training		



Part H		Comments	
Answer the comments and MOC will be approved			
Comments	Date / Initial	Reply	Date / Initial



A. DETAILED PROBLEM ANALYSIS



B. DETAILED SOLUTION / TECHNICAL APPRAISAL



C. DETAILED JUSTIFICATION / COST ESTIMATE



D. BACKGROUND REPORTS AND INFORMATION



E. DRAWINGS AND DOCUMENTATION
