Level:	CS ENERGY
Procedure No:	CS-AM-010
TRIM Ref No:	B/D/10/7377
Reviewed:	11/25
Review Due:	11/27

CS ENERGY PROCEDURE

PLANT MODIFICATIONS
CS-AM-010

Responsible Officer: Asset Management Specialist
Responsible Manager: Head of Process Safety, Strategy and Standards
Responsible Executive: Executive General Manager Asset Management

DOCUMENT HISTORY

Key Changes	Prepared By	Checked By	Approved By	Date
Original Issue – Portfolio-wide Plant Modification Procedure to replace existing site procedures which differ across each site, developed with consideration of all procedures.	R Conaghan	D Bell B Sinclair	J James D Bell	Dec 2010
New Temporary Modification process added.	W Underhill	D Bell B Sinclair	J James D Bell	Dec 2010
Amendments to process flow diagrams and check sheet from first site review and procedure entered into new logo template.	W Underhill	D Bell	D Bell	Feb 2012
Updated and Reformatted	S Collard	W Underhill	D Bell	Mar 2012
Temporary modification section updated to provide better definition. Full copy of checklist form removed from attachments and direct link to form added.	R Ravell	R Ravell D Bell	D Bell	17/12/2012
Changes identified from February 2014 review of process and Check Sheet	R. Ravell	D Kendrick	D Bell	19/05/2014
Changes identified in the December 2015 Audit	P Schmidt	D Kendrick	K Lines	06/10/2016
Update to engineering roles and responsibilities	W Underhill	D Kendrick	B Lawrence	07/05/2019
Incorporated Learnings from Incidents	A Shaw	D Kajewski C Lamari	D Kendrick	19/06/2020
Revised link to Plant Modification Design Risk Assessment	W Underhill	T Houston	D Kendrick	01/09/2022
Updated based on Engineering Team Feedback	W Underhill	C Trembath	D Kendrick	07/08/2023
Template update - converted to new standard document template. References to Notifications removed, references to site modification register updated, Section 7 temporary modifications updated to align with process in J5 now.	Worley Consulting	F Montagner	D Kendrick	14/08/2024
Inclusion of additional Mod request link for Battery	S Collard			11/11/2025

CONTENTS

1 PURPOSE

The purpose of this procedure is to establish the minimum requirements for managing changes to physical plant and support systems including the:

- Identification and assessment of risks relating to the proposed change
- Establishing the authorities and responsibilities for authorisation and management of the proposed changes, and
- Proper documentation of the change and updating of all associated technical and support requirements.

2 SCOPE

This procedure applies to all modifications to CS Energy owned and / or operated plant and support systems.

The procedure covers:

- Risk assessment of modifications,
- The technical approval of the modification design, and
- The methodology for monitoring, reporting, and closing of the modification.

The procedure does not cover:

- Non-plant and process changes such as organisational changes
- The financial approval of capital projects covered under the Project Management Framework, and
- The implementation of capital projects.

The implementation of modifications funded by the operational budget is carried out using the current on-site work management processes.

3 RESPONSIBILITIES AND ACCOUNTABILITIES

3.1 General Requirements

Everyone involved in a modification is responsible for:

- Reviewing the change with respect to their area of responsibility, keeping the following in mind:
  - The change and its effects should be fully understood
  - The changes should not result in undesirable consequences such as increased hazards to personnel, environment or equipment, or dilution of existing risk control measures
  - WH&S and environmental requirements and impacts must be considered
  - Engineering codes, standards, and good practice must be used in design, manufacturing, and installation

3.2 Modification Initiator

The Modification Initiator is the person who raises a proposed modification, and is responsible for:

- Identifying the need for a change – including safety and/or financial justification
- Attaching all relevant details to the modification

Any CS Energy personnel may initiate a Plant Modification.

3.3 Modification Officer

The Modification Officer is the person assigned responsibility for “shepherding” the Plant Modification through to completion.

The Modification Officer is responsible for:

- Ensuring the modification is managed in accordance with the Plant Modification procedure/ process (this document)
- Ensuring all information is recorded in TRIM/ SAP where necessary
- Ensuring all relevant Officers, RPEQ’s, and Advisors are informed and consulted as necessary in all phases of the process
- Obtaining approvals where required
- Ensuring all relevant sections of the modification Quality Plan and Check Sheet (J5 platform) and other associated documentation/ files are completed and accurate
- Coordinating all meetings, risk assessments, and reviews for the modification
- Closing out the modification once all requirements/approvals are met or the proposed modification is cancelled
- Coordinating the registration of the Plant Modification and creation of a TRIM folder/ tag
- Entering the Plant Modification number into the description and long text of any releavant SAP work orders.
- Saving all documents associated with the Plant Modification in the nominated Plant Modification folder in TRIM
- Initiating a HAZOP study where this is determined as necessary risk evaluation tool, refer to CS-AM-024 Hazop Guide (B/D/12/85976) for more details on the process
- Developing Work Pack for the Plant Modification
- Ensuring all work associated with the Plant Modification complies with the specification as defined in the Final Design
    - Any variations from the technical specification must be approved and recertified by the relevant Technical Specialists (including RPEQs) prior to implementation
- Ensuring that all relevant inspections and tests, including statutory requirements, are carried out and are within the acceptance criteria as defined in the Final Design
- Ensuring all commissioning documentation, including ITPs etc., as detailed in the acceptance criteria and Work Pack are completed
- Ensuring the modified plant has been properly inspected, tested, and commissioned
- Ensuring all stakeholders are notified of Plant Modification completion
- Coordinating effective reporting of Plant Modification

The Modification Officer may change during the life cycle of a Plant Modification. In all cases the Modification Officer will ensure adequate handover of “in process” modifications.

3.4 Production Manager or Maintenance Manager

The Production Manager or Maintenance Manager responsibilities are derived from the need to ensure the operators and maintainers of the plant are aware of changes that may affect them and the need to

ensure the technical and support requirements match the “as built” status of the plant. They may delegate their duties but will remain ultimately responsible where nominated in this procedure for the following:

- Ensuring they are aware of and endorsing any proposed Plant Modifications
- Ensuring that all proposed modifications are evaluated and dealt with in the morning meetings
- Ensuring adequate input into the modification assessment/evaluations and the identification/completion of all relevant technical and support requirements
- Ensuring operations and maintenance personnel affected by the change understand the change and its impacts and are trained as appropriate prior to “acceptance for Operation”
- Being satisfied as to the integrity of implemented Plant Modifications and hazard/risk control measures prior to “acceptance for operation”
- Reviewing and approving Temporary and Emergency Modifications as required
- Providing adequate resources to ensure timely finalisation of critical documentation such as KKS master data, plant labelling, drawing updates and registration, updating stock holdings, Maintenance and Operations procedures

3.5 Senior Engineer / Engineering Superintendent

The Senior Engineer / Engineering Superintendent will remain ultimately responsible where nominated in this procedure. The Senior Engineer / Engineering Superintendent is responsible for:

- Initial assessment including review of the priority score to determine acceptance or rejection of the proposal
- Ensuring that all Plant Modifications are captured and effectively managed in accordance with the Plant Modification procedure (this document) in their area of influence
- Monitoring the status of all Plant Modifications and reviewing/evaluating as required
- Ensuring that nominated Modification Officers are trained and competent for the role
- Ensuring that all site operations personnel are aware of and understand the Plant Modification process and requirements
- Ensuring all changes are properly classified as like for like/ modification/ Temporary Modification
- Ensuring all necessary Technical Specialists and relevant stakeholders have input into assessments/ evaluations
- Ensuring all modifications do not increase the risk to people, plant, or production without due diligence to the assessment and mitigation of such risks
    - Any acceptance of residual increased risks shall be at the appropriate organisational level, refer to CS-FIN-01 Authorities and Delegations (B/D/11/39713) or CS-RISK-01 Risk Management Framework (B/D/12/63934).
- Reviewing and approving implementation of each modification, considering only the following:
    - That the modification procedure up to and including design has been adequately followed, giving consideration to the flexible application of the process based on complexity and risk to physical plant or processes
    - A suitable risk assessment has been carried out and approved by the required cross section of stakeholders
    - The required RPEQ disciplines have approved the design, where these are required within the obligations of the Professional Engineers Act

- The required Advisor approvals have approved the design
- Conducting periodic self-assurance checks on Plant Modifications

3.6 RPEQ's and Advisors

RPEQ's and Advisors are responsible for:

- Ensuring compliance with all relevant regulatory, design standards, codes, etc. are considered and applied in the modification
- Reviewing and technically approving the design, where RPEQ signoff is required

3.7 Head of Unit Plant, Station Plant, or Electrical Engineering

The Head of Unit Plant, Station Plant, Electrical Engineering is the single point of accountability for the modification process. For each modification the Head of Unit Plant, Station Plant, Electrical Engineering is responsible for:

- Ensuring consistent approach and process to Plant Modifications across all CS Energy Sites
- Reviewing and approving Plant Modifications which have a residual risk of significant or high
- Periodically reviewing the procedure and Quality Plan and Check Sheet (J5 platform)
- Ensuring awareness of modification procedure and requirements across all CS Energy divisions, including Operations, Asset Management, Procurement, Projects and Overhauls
- Periodically reviewing/ auditing compliance with modification procedure requirements

4 PLANT MODIFICATIONS OVERVIEW

4.1 Introduction

Important Note – No modification shall be made to plant or associated systems without proper assessment, authorisation, implementation, and documentation. Proper assessment includes evaluation for workplace health, safety, and environmental impacts.

Management of Change (MOC) is a critical and essential element of a robust and comprehensive risk-based asset management and safety management system, as changes to plant can introduce new hazards/ defects, or impact on existing risk control measures. There needs to be effective management of all changes to assets and asset systems.

This procedure covers the managing of changes (modifications) to physical asset, process, process control or operational technology. Plant modifications will be required from time to time due to new technology, obsolescence, plant performance, reliability, safety, access issues, etc. These modifications require rigid control to ensure that the modification is properly assessed, authorised, implemented, and documented.

Why?

Failure to properly manage changes can significantly increase the risk of incidents / introduce unintended hazards or defects or reduce the effectiveness of existing controls. Many incidents can be traced, in part, to a MOC process that was not in place or not effective. Many operational incidents can be traced to operating conditions being changed beyond their safe range.

It is so important it is a requirement under the following:

- WH&S regulation 2011, s205

- WH&S Code of Practice – Managing Risks of plant in the workplace, s3.5
- ISO 55001:2014, s8.2 – Asset Management Standard, Management of Change

In addition, proper management of plant modifications procedure will ensure everyday work can be carried out in a safe and efficient way by ensuring the technical and support requirements accurately matches the “as built” configuration of the plant such as:

- Drawings supplied, updated, and registered
- Manuals supplied or updated and registered
- Plant identification (KKS) labelling assigned and labels attached to Plant
- Associated procedures updated and approved
- Plant changes communicated effectively, and training carried out where necessary
- Preventative maintenance task updated or developed, approved, and implemented in SAP
- Equipment spares list detailed in SAP and held as stock where necessary
- Process control settings aligned with the capabilities and limitations of the plant

4.2 What is a Plant Modification?

A challenging aspect of managing modifications is identifying that the proposed modification is in fact a modification or a Like for Like replacement.

Modifications can include:

- Installation of new plant
- Removal of redundant plant
- The replacement of plant or components other than like for like
- Addition or removal of ICMS, PLC logic, and OT
- Changes which are performed on a temporary or trial basis
- Changes to plant protection or design/safe operating parameters

In determining what constitutes a modification it is helpful to understand what is meant by like for like.

Like for Like - A replacement of one item of equipment or component by another that satisfies the same design specification and performance characteristics and does not change the function of the plant / process. Like for like are not modifications but do require evaluation and approval.

Changes to equipment can be considered a 'like for like' if:

- the drawings remain unchanged, and equipment can be reconnected to the termination point of the replacement equipment which has been placed in the same position as the replaced unit
- the rating characteristics are identical
- the classification ratings are identical
- the replacement equipment has certification proving compliance with the appropriate Australian Standards

Equipment of similar configuration may have a different detailed specification e.g., a new model of pump may have a higher discharge pressure or contain a different material – this is a modification.

Examples of a plant modification include:

- Change of lubricant type
- The substitution of a material type
- Removal of plant from use, i.e., obsolete
- Change to approved safe operating parameters
- Installing or changing a platform or monorail
- Extending a handrail / adding toe-boards
- Adding a cubicle to a switchboard
- Replacing a section of pipeline on a different alignment
- Equipment / component replacements where drawing changes are required
- Building structural changes (extensions, upgrade, change affecting layout, structure strength/integrity)
- Chemical: Process chemical changes, additives, water treatment changes
- Anything that requires a change to P&ID's
- Change of pressure set points for relief valves
- Temporary modifications to plant, including installation of back up equipment (e.g. additional air compressor)

Table 5-2 contains a guide to determining whether a change is subject to the modification process or not.

4.3 Control System Modifications

What is a control system modification?

- Changing an existing safe/design/established operating envelope
- Changing an existing upper or lower protection limit
  - Establishing/removing a protection limit
  - Adding, removing or changing protection logic
- Change to logic as part of another plant modification

What is not a control system change?

- Changes to control loop tuning parameters within design/safe operating parameters as defined in the OEM manuals or other relevant documentation.
- Changes to sequences and alarms within safe/design/established operating envelope as defined in the OEM manuals or other relevant documentation.

For changes to the control system that are not regarded as modifications, it is sufficient to utilise another system to record/approve the changes, otherwise the modification procedure is to be followed. The establishment of a TRIM folder titled 'Control System minor changes' is required and is to be used to record all changes including the before and after logic diagram with the approval signature of the Control System Engineer, Supervisor Instrumentation & Control or Manager Electrical, Instrumentation & Control.

4.4 Modification Exclusions

Specific Modification scope exclusions are:

- Control Parameter changes within safe/design/established operating envelopes such as control loop tuning
- Changes that are Like for Like as defined above
- Changes that are required for routine temporary modifications that are part of approved and frequent operating or maintenance procedures and where such procedure ensures the change is evaluated and managed to ensure the health, safety and environment risks arising from these changes remain at an acceptable level e.g., attachment of lubricant filtration trolley
- Changes to technical support requirements where the purpose of the change is to reformat, clarify, or to correct typographical errors. Mark-up of field changes to P&ID's may require a Plant Modification to be registered pending a review of the change by the Safety Advisor or Technical RPEQ.
- Changes to maintenance Preventative Maintenance's (PM) are to be made in accordance with the instruction: CSE - OPS - WM-0009 - Work Management - Preventative Maintenance (PM) Change - (B/D/22/3270)
- Changes to the ICT system are to be made in accordance with the ICT Change Control Procedure. Refer to CS-AM-027: Procedure - Plant Control Systems Security (B/D/14/17932)
- Changes to procedures are to be made in accordance with CS Energy Registered Document Review Process (B/D/14/21279)
- Changes that are covered by the Like for Like Change Electronic Approval Form in the J5 platform

These exclusions do not remove the need for normal safe working practices and procedures to be applied such as the Permit to Work requirements and risk assessments.

4.5 Types of Modification

Modifications can be permanent, temporary, or emergency.

A temporary modification may be considered under certain circumstances but must still be viewed as a Plant Modification and must carry the appropriate approvals. An example of a temporary Plant Modification may be testing a control system parameter change prior to alleviating some operational problem. Refer to Section 7 for further details on the Temporary Plant Modification process.

4.6 Modification Form (now Electronic)

An electronic modification Form has been developed for modifications, this has been incorporated into the J5 platform.

Modification Forms are to be completed and approved electronically in the J5 platform.

To assist in using the J5 Platform, a Plant Modification - General Awareness Presentation is available in TRIM: B/D/21/3722

Records in TRIM

The use of TRIM is required for all Plant Modification documentation.

4.7 Modification Register

J5 Platform for the recording and tracking of modification details and status.

Note: This previously was an excel spreadsheet (one for each site) (these spreadsheets are no longer used, but are still available in TRIM for legacy modification details.)

For emergency modifications the operators log is adequate documentation in the first instance, until such time as the proper modification process can be applied.

4.8 Review and Audit

The following governance and controls are to be in place to verify the integrity of the modification process.

Modification Register: Used to monitor the progress and status of modifications.

Plant Modification Review Committee: The site governance body to oversee the Plant Modification process and ensuring:

- Plant Modifications are progressed and managed in accordance with CS Energy Procedure CS-AM-010 Plant Modification (this document)
- Plant Modification completion is achieved in a timely manner
- Operations and maintenance teams review the quality of a modification closure

Self-Assurance Checks: The Senior Engineer / Engineering Superintendent are responsible for conducting periodic self-assurance checks on plant modifications.

Every 3 months, the Heads of Engineering are to ensure their team reviews a sample of a total of 3 plant modifications across both sites completed in the prior period in an engineering area **not** under their delegation.

A Plant Modification Self-Assurance Checklist (Form S2303) is to be completed for each plant modification reviewed.

Any gaps or issues identified should be rectified at the time of the review where possible.

Once the checklist is completed and signed off, scan and store in TRIM (F/20/2296).

A summary of self-assurance check outcomes will be presented at the Plant Modification Review Committee.

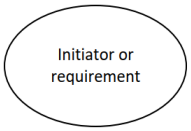
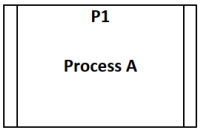
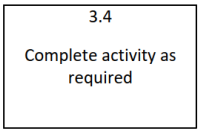
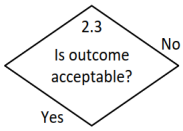
Audits: Periodic Audits shall be conducted by both the Asset Management Group and the Internal Audit Department.

5 PROCESS FLOW

5.1 Conventions

The following diagrammatic conventions are used in the representation of processes:

Table 5-1 Diagram Conventions

Symbol	Meaning
	The **initiation point** of a process flow.
	A **process** that contains activities and/or decisions.
	An **activity** describes an action that is to be completed.
	A decision that must be made to determine the process, activity, or decision that follows.
	A flow of information between processes, activities, and decisions.

5.2 Types of Change

The following table contains a guide to determining whether a change is subject to the modification process or not.

Table 5-2 Type of Plant Modification Guide

Change Type	Applicable Process

Permanent Plant Modification	Follow the Plant Modification Process (Section 6) if any of the following apply:
	• You are making a change to a physical asset which has the potential to:
	  ○ Increase the safety risk to people, the environment, or plant
	  ○ Alter a plant assets strategy, reliability, efficiency, operability, or maintainability
	  ○ Breach compliance with any statutory or design standards
	• As a result of this plant change, any of the following needs to be updated:
	  ○ Drawings, operating and maintenance manuals, or process and training manuals
	  ○ Standard isolation sheets, return to service check sheets, operating or maintenance procedures
	  ○ Safety instrumented systems, cable schedules, ICMS screens or data bases
	  ○ SAP master data, preventative maintenance routines, plant labelling, plant/ equipment strategies
	  ○ Stock item spare parts or details
	• As a result of this plant change, the engineering, operating, or maintenance personnel require specific communication or training.

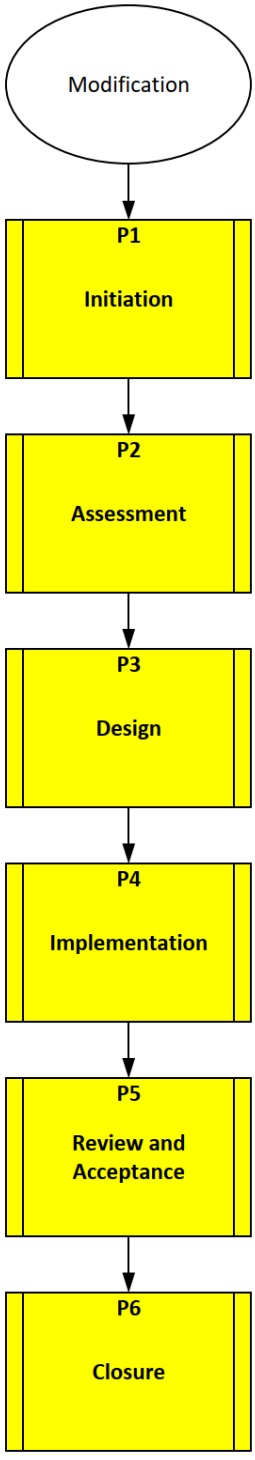
Temporary Plant Modification	Follow the Temporary Plant Modification Process (Section 7) if the response to any of the following is "**Yes**": • Can a change to plant be made (low risk to perform) to mitigate a potential risk of damage to people or plant, loss of generation, or non-compliance? • Is temporary equipment to be connected for a commissioning, maintenance, or storage activity? (e.g., Lubrication filtration, dehumidifiers, etc)

Emergency Plant Modification	Follow the Emergency Plant Modification Process (Section 0) if the following applies:
	• You are making a change on a true emergency basis because of any of the following conditions:
	  ○ To correct a deficiency that would otherwise cause a hazardous condition that is an immediate threat to personnel or the environment
	  ○ To correct a deficiency that would otherwise result in a trip of the unit and/or damage to the plant due to equipment fault or design error

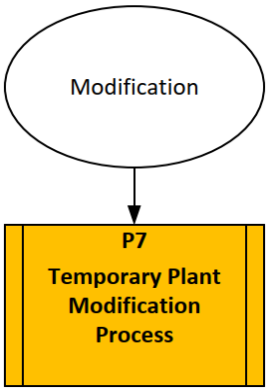
Like for Like Replacement	If the replacement equipment/component is the same manufacturer/model as the original, follow the Like for Like Replacement Process (Section 9).
Not a Plant Modification	If the replacement component is being manufactured, and is the same material and specification as original, the change is not a Plant Modification.
Strategy/Routine	Follow CS-AM-002: Equipment Strategy Development and Review (B/D/12/44052) if the change is with respect to Asset Management, Plant Strategies, or Maintenance Routines.
Other	Consult the Senior Engineer / Engineering Superintendent if the change type is in doubt.

The relationship between the various processes of Plant Modification is shown in the following diagram and further detailed in Section 6:

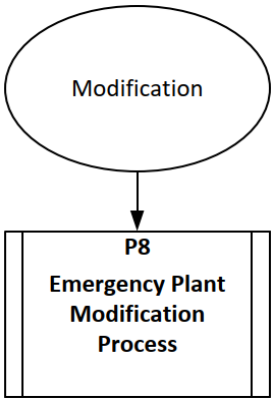
HOLD – There are several hold points (Decision 1.4, Decision 2.7, Decision 3.8, Activity 4.5, Decision 5.3, and Activity 6.2) that prevent progress to the next sub-process unless approved by the relevant responsible individual.



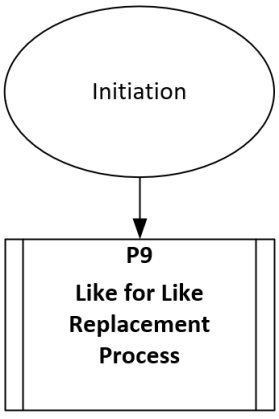
The process for Temporary Plant Modification is shown in the following diagram and further detailed in Section 7:



The process for Emergency Plant Modification is shown in the following diagram and further detailed in Section 8:



The process for Like for Like Replacement is shown in the following diagram and further detailed in Section 9:



5.3 Aims / Outcomes

The outcomes required from the execution of this procedure are:

- Classification of a proposed Plant Modification as permanent, temporary, or emergency
- Risk assessment of each proposed Plant Modification
- Design development, documentation, and technical approval for the Plant Modification
- An implemented, reviewed, and accepted Plant Modification with plans for further modification or removal, if applicable

5.4 Description of Processes

5.4.1 Initiation (P1)

The initiation process takes the initial concept/idea to improve the plant or process to approval to proceed with design, creation of a modification in J5 Platform (eMOC number assigned).

- Any CS Energy personnel may initiate a Plant Modification.

5.4.2 Assessment (P2)

Concept Brief developed to allow initial risk assessment.

An extremely important step to assess the risks associated with the proposed change. Requires approval dependent on residual risk level.

5.4.3 Design (P3)

Design commences with the identification of Technical and Support Requirements and the ongoing amendments to requirements as the design progresses.

Signifies that the modification design and associated risk assessment have been reviewed, revised, and are ok to implement. This ensures that all the risk assessment control measures are satisfied and both regulatory and engineering requirements have been met.

5.4.4 Implementation (P4)

Approved change is implemented in accordance with all relevant safety, project, and work control processes.

The implementation process approves and releases the SAP work order to initiate implementation of the Plant Modification through to completion and commissioning of the Plant Modification.

5.4.5 Review and Acceptance (P5)

The review and acceptance process ensures the completion of the works, testing and commissioning, acceptance from all stakeholders, technical & support requirements met, and affected personnel are aware of the change and have received relevant training.

5.4.6 Closure (P6)

Final Closure approval signifies completion of all technical and support requirements, filing of documentation, and close out of Modification File and SAP work order.

5.4.7 Temporary Plant Modification Process (P7)

While Temporary Modifications have a limited duration, they may affect plant performance, risk, and design. They require control and rigor to regulate their use. Temporary Modifications shall have a specified end date.

5.4.8 Emergency Plant Modification Process (P8)

An emergency change is a change that must be performed on a true emergency basis because of any of the following conditions:

- To correct a deficiency that would otherwise cause a hazardous condition that is an immediate threat to personnel or the environment
- To correct a deficiency that would otherwise result in a trip of the unit and/or damage to the plant due to equipment fault or design error

Such changes may involve the **temporary** bypassing, bridging, or forcing of a piece of equipment, software or ICS code or alarm such that the intended functionality is altered.

5.4.9 Like for Like Replacement Process (P9)

A replacement of one item of equipment or component by another that satisfies the same design specification and performance characteristics and does not change the function of the plant / process. Like for like are not modifications but do require evaluation and approval.

6 PLANT MODIFICATION PROCESS

6.1 Initiation

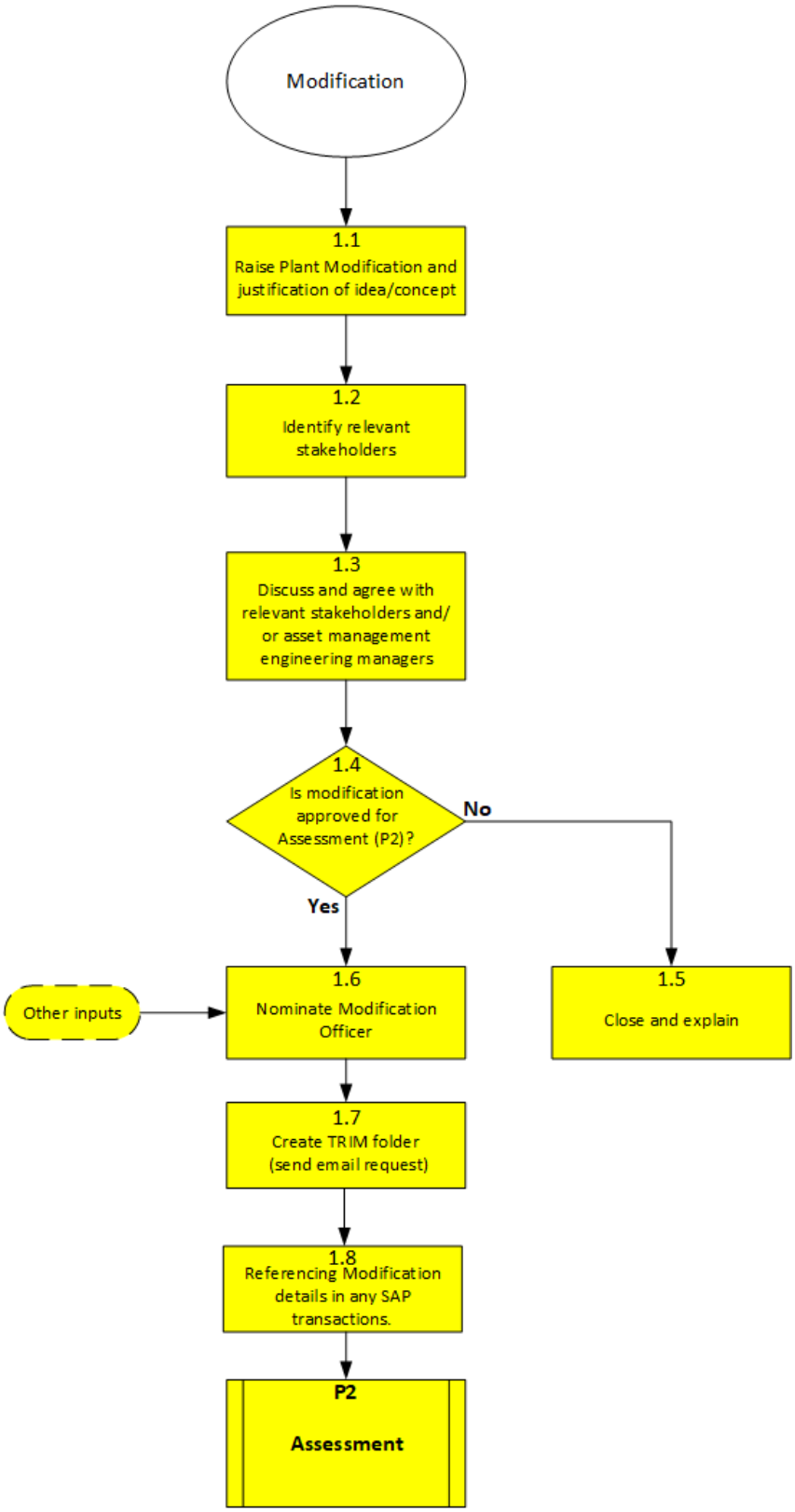
The initiation process takes the initial concept/idea to improve the plant or process to approval to proceed with design, assignment of a modification number, and collation of information into the Modification Register.

6.1.1 Aims / Outcomes

The aim of the Initiation phase is to:

- Develop the justification for the change
- Identify the key stakeholders associated with the change
- Begin documenting the change.

6.1.2 Process P1 – Initiation



6.1.3 Description of Activities

6.1.3.1 Activity 1.1 – Raise Plant Modification and justification of idea/concept

The initial idea or concept may also come from other inputs and projects.

Complete Section 1.1 to 1.6 of Plant Modification Quality Plan in J5.

Attach all relevant details to the modification, including:

- Modification description (dot points)
- Purpose for modification (how does it improve the Plant/process)
- Suggested solution
- Sketches
- Photos

6.1.3.2 Activity 1.2 – Identify relevant stakeholders

Identify relevant stakeholders of the Plant Modification.

Identify the relevant Budget Owner. The Budget Owner is required to approve associated costs in the subsequent phases.

6.1.3.3 Activity 1.3 – Discuss and agree with relevant stakeholders

Discuss and agree with relevant stakeholders and/or asset management engineering managers.

6.1.3.4 Decision 1.4 – Is modification approved for Assessment?

The Senior Engineer / Engineering Superintendent is required to approve the modification proceeding to the Assessment Phase (P2).

6.1.3.5 Activity 1.5 – Close and Explain

Notify/consult all stakeholders of decision to cancel modification.

6.1.3.6 Activity 1.6 – Nominate Modification Officer

Nominate the Modification Officer.

6.1.3.7 Activity 1.7 – Create TRIM folder

Create TRIM folder/tag – Email Request template included below;

- **Request for - FOLDER - Modification - Callide** *(Specific Red Folder)*
- **Request for - FOLDER - Modification - Kogan** *(Specific Red Folder)*
- **Request for - FOLDER - Modification - Battery** *(Specific Red Folder)*

6.1.3.8 Activity 1.8 – Reference any relevant work orders

Reference modification details e.g. eMOC#, in any SAP work orders/purchase orders, etc required to execute work.

6.1.4 RACI

Process Activity	Head of Unit Plant, Station Plant, Electrical Engineering	Modification Initiator	Senior Engineer/ Engineering Superintendent	Budget Owner	Modification Officer	Relevant Stakeholders	Document Management Officer
Activity 1.1 – Raise Plant Modification and justification of idea/concept	A	R	I			I	
Activity 1.2 – Identify relevant stakeholders	A		R	C		I	
Activity 1.3 – Discuss and agree with relevant stakeholders	A		R			C	
Decision 1.4 – Is modification approved for Assessment?	A		R				
Activity 1.5 – Close and Explain	A		R			C	
Activity 1.6 – Nominate Modification Officer	A		R				
Activity 1.7 – Identify relevant stakeholders	A		R				
Activity 1.7 – Create TRIM folder (email request)	A				A		R
Activity 1.8 – Referencing Modification details in any SAP transactions.	A				RA		

R – Responsible A – Accountable C – Consulted I - Informed

- There can only be one “R” for an activity. The same role can be both “R” and “A”.

6.2 Assessment

Concept Brief developed to allow initial risk assessment.

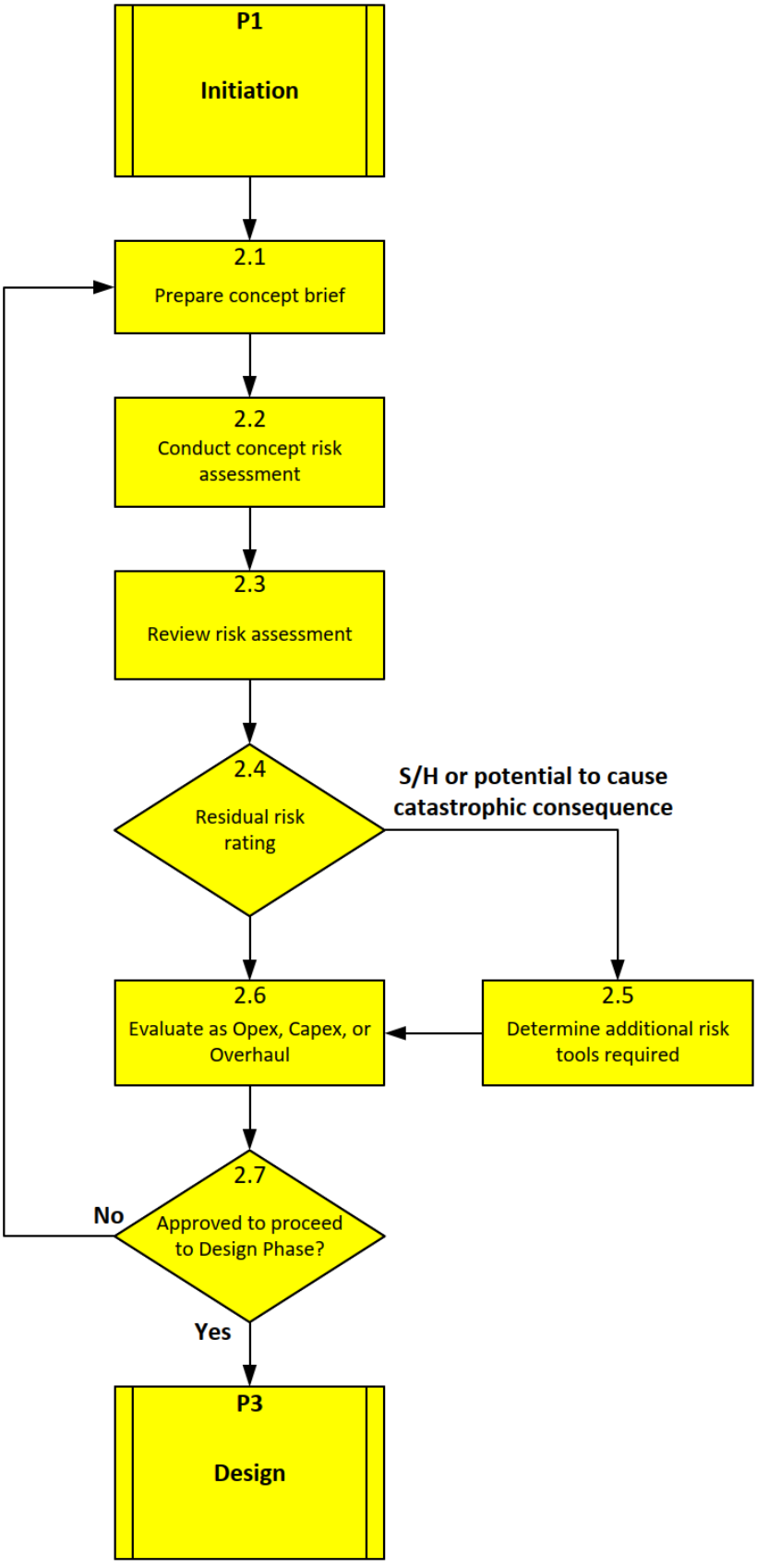
An extremely important step to assess the risks associated with the proposed change. Requires approval dependent on residual risk level.

6.2.1 Aims / Outcomes

The aim of the Assessment phase is to:

- Understand the risk associated with the proposed change
- Approve the change via the correct authority
- Issue the work order to capture costs associated with the change

6.2.2 Process P2 – Assessment



6.2.3 Description of Activities

6.2.3.1 Activity 2.1 – Prepare concept brief

Prepare a Concept Brief. This can be used as a basis for the Investment Approval if the modification is funded through the Project Management Framework (Intranet Link).

6.2.3.2 Activity 2.2 – Conduct concept risk assessment

Assess concept risk in conjunction with other relevant specialists / disciplines as required. Use Plant Modification Design Risk Assessment Template (B/D/22/2643).

Basis of risk assessment: what potential hazards/risks may be introduced, or current control measures affected by the proposed plant change?

6.2.3.3 Activity 2.3 – Review risk assessment

Evaluate and approve risk assessment.

6.2.3.4 Decision 2.4 – Residual risk rating

Significant/High risks or risks with potential to cause a catastrophic consequence are to be escalated to the Head of Unit Plant, Station Plant, Electrical Engineering for evaluation/approval according to CS Energy Risk Management Guidelines.

6.2.3.5 Activity 2.5 – Determine additional risk tools required

Head of Unit Plant, Station Plant, Electrical Engineering to evaluate what additional risk tools are required (e.g., HAZOP, safety in design reviews etc.).

6.2.3.6 Activity 2.6 – Evaluate as Opex, Capex, or Overhaul

Evaluate and determine whether the modification will be implemented as an operational expense, capital project, or overhaul project.

Capital projects and overhaul work is to be implemented using the Project Management Framework (Intranet Link).

6.2.3.7 Decision 2.7 – Approved to proceed to Design Phase?

Based on all the information to date the Senior Engineer / Engineering Superintendent and Budget Owner approves (or not) the promotion of the modification to the Design phase.

6.2.4 RACI

Process Activity	Head of Unit Plant, Station Plant, Electrical Engineering	Senior Engineer/ Engineering Superintendent	Budget Owner	Modification Officer	Relevant Stakeholders
Activity 2.1 – Prepare concept brief	A			R	
Activity 2.2 – Conduct concept risk assessment	A	C		R	C
Activity 2.3 – Review risk assessment	A	R		C	C
Decision 2.4 – Residual risk rating	A	R		C	
Activity 2.5 – Determine additional risk tools required	RA	C		C	
Activity 2.6 – Evaluate as Opex, Capex, or Overhaul	A	R		C	
Decision 2.7 – Approved to proceed to Design Phase?	A	R	R	C	

R – Responsible A – Accountable C – Consulted I - Informed

- There can only be one “R” for an activity. The same role can be both “R” and “A”.

6.3 Design

Design commences with the identification of Technical and Support Requirements and the ongoing amendments to requirements as the design progresses.

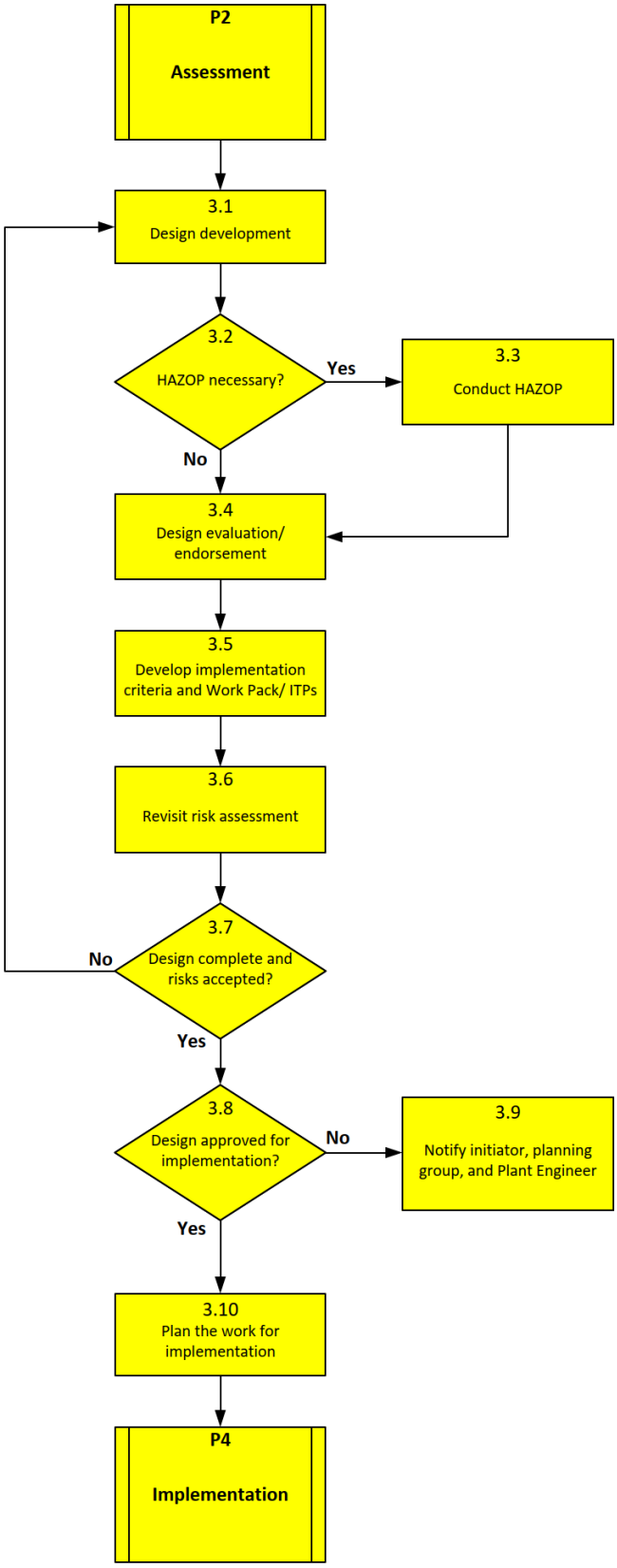
Signifies that the modification design and associated risk assessment have been reviewed, revised, and are ok to implement. This ensures that all the risk assessment control measures are satisfied and both regulatory and engineering requirements have been met.

6.3.1 Aims / Outcomes

The aim of the Design phase is to:

- Finalise the design meeting all CSE requirements
- Produce the necessary design documentation and implementation workpacks
- Approval of the design to proceed to implementation

6.3.2 Process P3 – Design



6.3.3 Description of Activities

6.3.3.1 Activity 3.1 – Design development

Facilitate the design development through the relevant internal or external resource/s. Ensure all statutory & engineering requirements are met. Consider all safety and environmental regulatory requirements.

Populate the Technical and Support Check Sheet and maintain the currency of the Check Sheet throughout the project.

6.3.3.2 Decision 3.2 – Is a HAZOP required?

For proposed Plant Modifications where the risk has been assessed as requiring a HAZOP study.

6.3.3.3 Activity 3.3 – Conduct HAZOP

Initiate a HAZOP study. Close out all resulting actions. A copy of the HAZOP study report shall be included with the Final Design in the review process. Refer to CS-AM-024 Hazop Guide (B/D/12/85976) for more details on the process.

6.3.3.4 Activity 3.4 – Design evaluation/endorsement

Consult / review with Stakeholders and gain Approval from RPEQ's / Advisors. The Senior Engineer / Engineering Superintendent signs the Quality Plan and Check Sheet (J5 platform) where RPEQ disciplines / Advisors not required. Refer to:

- CS-GOV-09 Compliance with Professional Engineers Act 2002 (QLD) (RPEQ) (B/D/12/66355)
- CS-GOV-10 Determination of RPEQ Responsibility for Engineering Work (B/D/12/66357)

6.3.3.5 Activity 3.5 – Develop implementation criteria and Work Pack/ITPs

Requirements will vary from one modification to another. Refer to Work Pack examples – Work Packs / ITP's are important for implementation.

Work packs for Plant Modification may include:

- Final design
- Drawings
- Technical specification
- Implementation criteria
- Inspection and test plans
- Commissioning plans
- Commissioning procedures
- List of support documentation to be updated (Section 3A of the Quality Plan and Check Sheet (J5 platform)

6.3.3.6 Activity 3.6 – Revisit risk assessment

Revisit risk assessment and finalise in conjunction with RPEQ's and relevant Advisors (Safety & Environment). Gain approval for revised risk assessment & controls.

6.3.3.7 Decision 3.7 – Is the design complete and risks have been accepted?

Approval signifies Modification design & risk assessment have been reviewed & approved. Risk control measures are satisfied and both statutory and engineering standard requirements are met.

Note: Head of Unit Plant, Station Plant, Electrical Engineering shall approve significant or high risk modifications.

6.3.3.8 Decision 3.8 – Is the design approved for implementation?

Head of Unit Plant, Station Plant, Electrical Engineering to approve design for implementation.

6.3.3.9 Activity 3.9 – Notify relevant stakeholders

Notify stakeholders of decision to defer or cancel the modification.

6.3.3.10 Activity 3.10 – Plan the work for implementation

Utilise necessary work management processes to implement the modification.

6.3.4 RACI

Process Activity	Head of Unit Plant, Station Plant, Electrical Engineering	Senior Engineer/ Engineering Superintendent	Budget Owner	Modification Officer	Relevant Stakeholders
Activity 3.1 – Design development	A	C		R	C
Decision 3.2 – Is a HAZOP required?	A	C		R	C
Activity 3.3 – Conduct HAZOP	A	C	I	R	C
Activity 3.4 – Design evaluation/endorsement	A	C		R	
Activity 3.5 – Develop implementation criteria and Work Pack/ITPs	A	C		R	
Activity 3.6 – Revisit risk assessment	A	C		R	C
Decision 3.7 – Is the design complete and risks have been accepted?	RA	C		C	I
Decision 3.8 – Is the design approved for implementation?	RA	C	I	C	I
Activity 3.9 – Notify relevant stakeholders	A	I	I	R	I
Activity 3.10 – Plan the work for Implementation	A			R	

R – Responsible A – Accountable C – Consulted I - Informed

- There can only be one “R” for an activity. The same role can be both “R” and “A”.

6.4 Implementation

Approved change is implemented in accordance with all relevant safety, project, and work control processes.

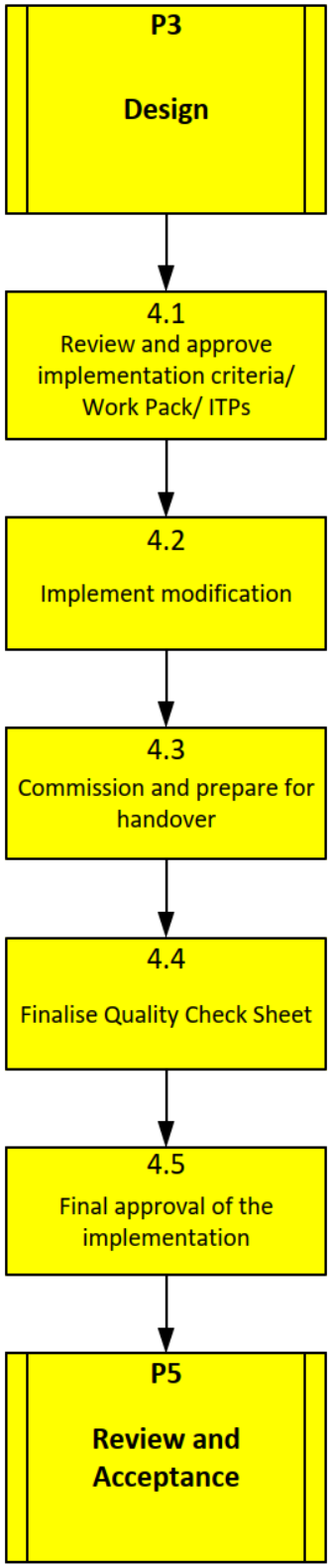
The implementation process approves and releases the SAP work order to initiate implementation of the Plant Modification through to completion and commissioning of the Plant Modification.

6.4.1 Aims / Outcomes

The aim of the Implementation phase is to:

- Implement the change to an acceptable level of quality
- Commission the assets ready for handover
- Finalise the change documentation

6.4.2 Process P4 – Implementation



6.4.3 Description of Activities

6.4.3.1 Activity 4.1 – Review and approve implementation criteria/Work Pack/ITPs

Review and approve the implementation criteria including work packs and ITPs.

6.4.3.2 Activity 4.2 – Implement modification

Implement Modification.

6.4.3.3 Activity 4.3 – Commission and prepare for handover

Commission and prepare package for handover.

Note: If engineering approval is required it shall be included in the modification quality documents.

6.4.3.4 Activity 4.4 – Finalise Quality Check Sheet

Finalise all aspects of the Quality Plan and Check Sheet (J5 platform).

6.4.3.5 Activity 4.5 – Final approval of the implementation

The Project Manager and the Modification Officer must sign the Quality Plan and Check Sheet (J5 platform) to indicate that the modification has been implemented in accordance with the approved design and ready for handover.

6.4.4 RACI

Process Activity	Head of Unit Plant, Station Plant, Electrical Engineering	Plant Engineer/ Senior Engineer/ Engineering Superintendent	Budget Owner	Modification Officer	Project Manager	Relevant Stakeholders
Activity 4.1 – Review and approve implementation criteria/Work Pack/ITPs	A	R		C		
Activity 4.2 – Implement modification	A	C	C	C	R	C
Activity 4.3 – Commission and prepare for handover	A			R		C
Activity 4.4 – Finalise Quality Check Sheet	A			R		
Activity 4.5 – Final approval of the implementation	A			R		

R – Responsible A – Accountable C – Consulted I - Informed

- There can only be one “R” for an activity. The same role can be both “R” and “A”.

6.5 Review and Acceptance

The review and acceptance process ensures the completion of the works, testing and commissioning, acceptance from all stakeholders, technical & support requirements are met, and affected personnel are aware of the change and have received relevant training.

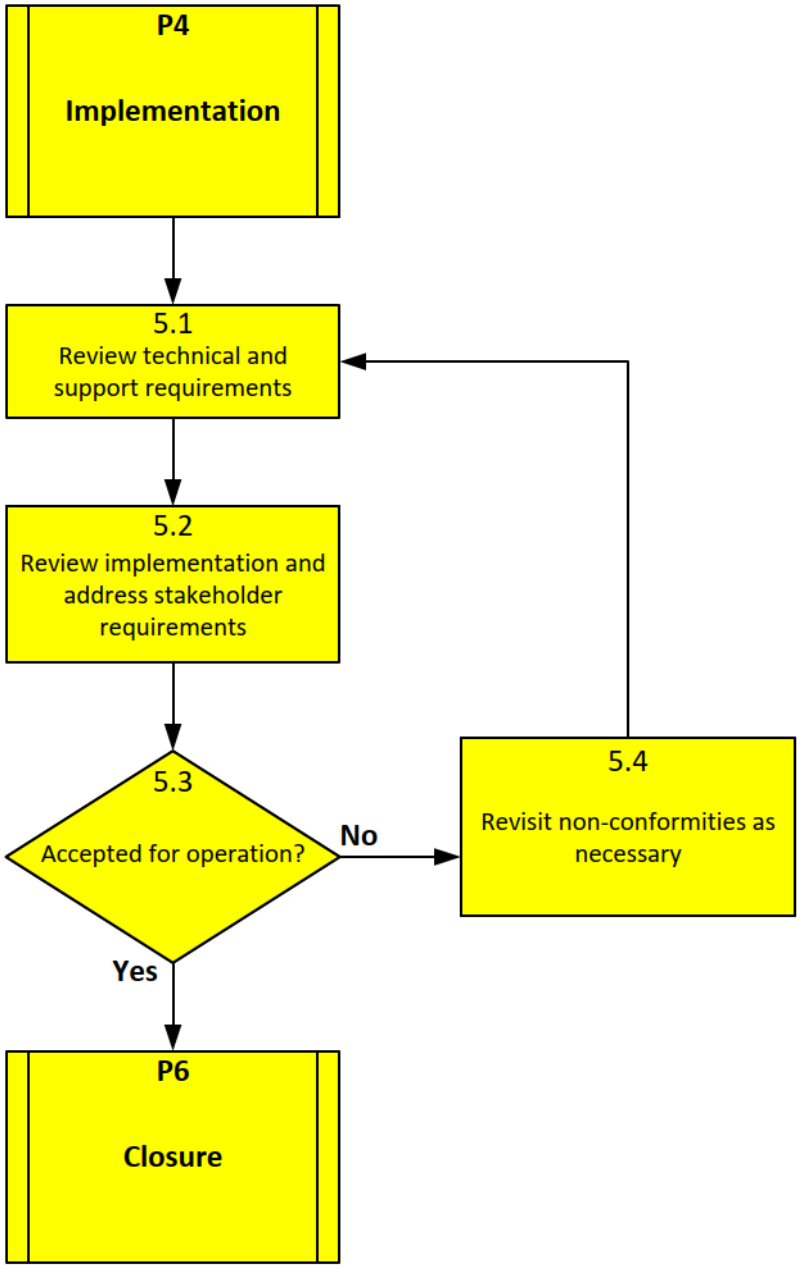
6.5.1 Aims / Outcomes

The aim of the Review and Acceptance phase is to:

- Handover the change to operations

- Rectify any non-conformities preventing successful handover

6.5.2 Process P5 – Review and Acceptance



6.5.3 Description of Activities

6.5.3.1 Activity 5.1 – Review technical and support requirements

Ensure all technical & support requirements are complete, or a plan and date is noted in J5.

6.5.3.2 Activity 5.2 – Review implementation and address stakeholder requirements

Final review to be carried out by Modification Officer and relevant RPEQ's / Advisors / stakeholders - consideration of physical result and documentation required.

6.5.3.3 Decision 5.3 – Accepted for operation?

Signifies that the modification is implemented to final design and that:

- All requirements are met
- All affected personnel have been communicated with and trained as necessary
- All technical and support requirements have been completed or an agreed plan and date is in place to finalise.

6.5.3.4 Activity 5.4 – Revisit non-conformities as necessary

Revisit non-conformities and correct as necessary before returning to “Accepted for Operation”.

6.5.4 RACI

Process Activity	Head of Unit Plant, Station Plant, Electrical Engineering	Senior Engineer/ Engineering Superintendent	Maintenance Manager and Production Manager	Modification Officer	Relevant Stakeholders
Activity 5.1 – Review technical and support requirements	A			R	
Activity 5.2 – Review implementation and address stakeholder requirements	A			R	C
Decision 5.3 – Accepted for operation?	A	R (J5)	R	I	I
Activity 5.4 – Revisit non-conformities as necessary	A	C		R	C

R – Responsible A – Accountable C – Consulted I - Informed

- There can only be one “R” for an activity. The same role can be both “R” and “A”.

6.6 Closure

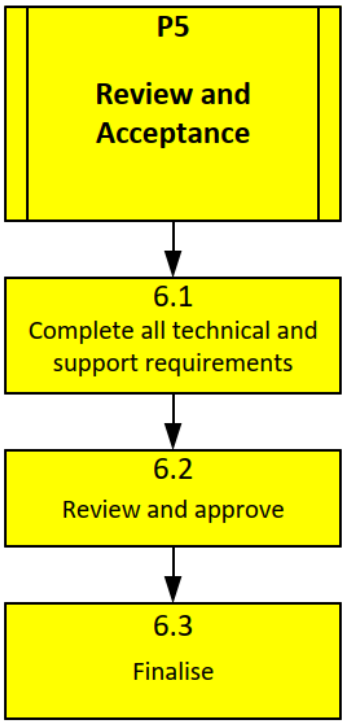
Final Closure approval signifies completion of all technical and support requirements, filing of documentation, and close out of Modification File and SAP work order.

6.6.1 Aims / Outcomes

The aim of the Closure phase is to:

- Finalise and close out the change

6.6.2 Process P6 – Closure



6.6.3 Description of Activities

6.6.3.1 Activity 6.1 – Complete all technical and support requirements

Ensure all technical & support requirements are complete.

6.6.3.2 Activity 6.2 – Review and approve

Verification of completion of all requirements and performance of modification.

6.6.3.3 Activity 6.3 – Finalise

Finalise work orders/ update modification in J5 / close files.

Notify all stakeholders of Plant Modification completion.

6.6.4 RACI

Process Activity	Head of Unit Plant, Station Plant, Electrical Engineering	Senior Engineer/ Engineering Superintendent	Modification Officer	Document Management Officer	Relevant Stakeholders
Activity 6.1 – Complete all technical and support requirements	A	C	R		
Activity 6.2 – Review and approve	A	C	R	C	
Activity 6.3 – Finalise	A	I	R	C	I

R – Responsible A – Accountable C – Consulted I - Informed

- There can only be one “R” for an activity. The same role can be both “R” and “A”.

7 TEMPORARY PLANT MODIFICATION PROCESS

While Temporary Modifications have a limited duration, they may affect plant performance, risk, and design. They require control and rigor to regulate their use. Temporary Modifications shall have a specified end date.

The Temporary Modification process shall only apply when:

- The initiator considers the effects to be low risk **and** the modification either:
  - Solves an urgent need to protect people, plant, or production
  - Is planned to be reversed on repair or modification of Plant
  - Is required as trial to confirm the effectiveness before making permanent
- A temporary system or equipment has to be connected to the permanent installation for a limited period of time.

These situations may arise:

- When something physically breaks
- When a short-term configuration change is required during significant maintenance refurbishment or upgrades
- When recommissioning or plant maintenance required third party equipment to be connected to the permanent system

7.1 Risk Assessment

Prior to implementing a temporary modification, a risk assessment shall be performed by the Modification Initiator or a technical person responsible for the plant area. The risk assessment must consider the following aspects:

- All hazards/ risks that may be introduced by the proposed modification
- All hazards/ risks that may be introduced during the act of implementing the modification
- All current risk controls that the modification may mitigate when implemented

7.2 Approval for Implementation

The Senior Engineer / Engineering Superintendent shall approve the implementation of a Temporary Modification. This approval shall be documented via the Plant Modification Quality Plan and Check Sheet in J5. This documentation shall clearly state that this is a temporary modification and the specified end date.

7.3 Approval for Continued Use

The site Senior Engineer / Engineering Superintendent or delegate shall review the implemented Temporary Modification prior to the specified end date at which point the modification is to be:

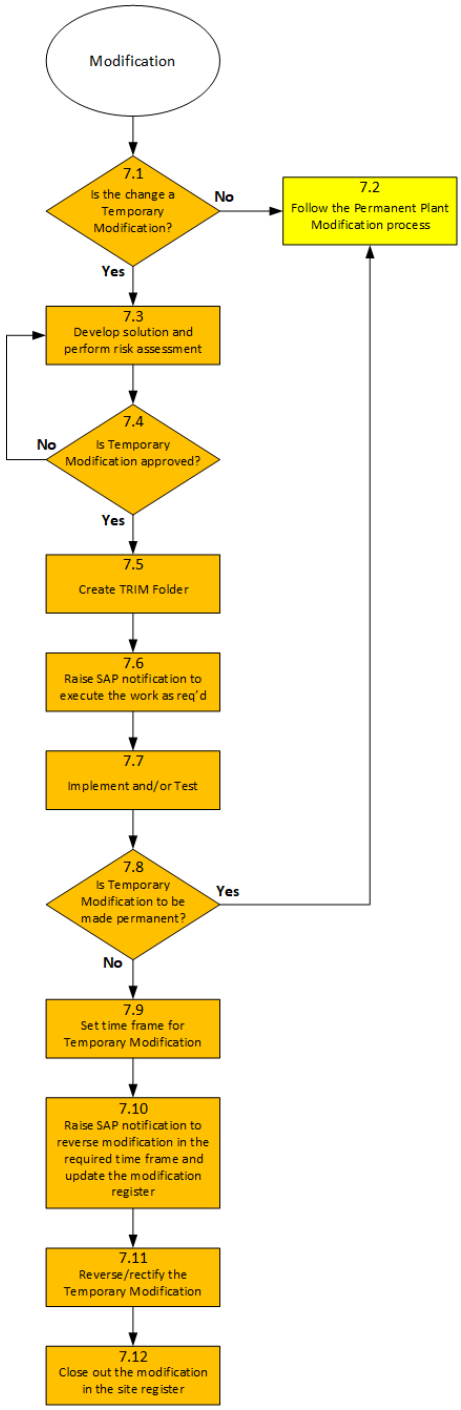
- Removed and the plant reinstated to the prior state, or
- Made permanent by the application of the Plant Modification Process

7.4 Aims / Outcomes

The aim of the Temporary Plant Modification Process is to:

- Ensure a temporary modification is acceptable to operate over an agreed timeframe considering risks to people, plant and production.
- Documenting the change from an engineering perspective.

7.5 Process P7 – Temporary Plant Modification



7.5.1 Description of Activities

7.5.1.1 Decision 7.1 – Is the change a Temporary Modification?

The Temporary Modification process shall only apply when:

- The initiator considers the effects to be low risk **and** the modification either:
  - Solves an urgent need to protect people, plant, or production
  - Is planned to be reversed on repair or modification of Plant
  - Is required as trial to confirm the effectiveness before making permanent
- A temporary system or equipment has to be connected to the permanent installation for a limited period of time.

Is the change a Temporary Modification?

- No – Go to section 6.0
- Yes – Go to section 7.2

7.5.1.2 Activity 7.2 – Initiate the Modification in J5

Complete Plant Modification Quality Plan in J5.

7.5.1.3 Activity 7.3 – Develop solution and perform risk assessment

Document suggested solution and associated risks avoided and created using the Plant Modification Design Risk Assessment Template (B/D/22/2643).

7.5.1.4 Decision 7.4 – Is Temporary Modification approved?

Approve the temporary modification after consultation with relevant technical staff. If the residual risk is high, the modification needs to be signed off by the Head of Unit Plant, Station Plant, or Electrical Engineering.

7.5.1.5 Activity 7.5 – Create TRIM folder

Create TRIM folder/tag – Email Request template included below;

- **Request for - FOLDER - Modification - Callide** *(Specific Red Folder)*
- **Request for - FOLDER - Modification - Kogan** *(Specific Red Folder)*

7.5.1.6 Activity 7.6 – Raise SAP notification to execute the work as required.

Raise corrective maintenance notification (Z100) (and/or purchase order) to execute the rectification/testing work required. Reference modification details e.g. eMOC#, in any SAP work orders/purchase orders, etc

7.5.1.7 Activity 7.7 – Implement and/or test

Document implementation

7.5.1.8 Decision 7.8 – Is Temporary Modification to be made permanent?

Is the modification to remain indefinitely?

- If yes, assign Modification Officer to commence the Plant Modification Process per Section 6.

7.5.1.9 Activity 7.9 – Set time frame for Temporary Modification

Determine and set the review frequency for the temporary modification.

7.5.1.10 Activity 7.10 – Raise SAP notification to reverse modification

Raise corrective maintenance notification (Z100) (and/or purchase order) to e reverse / rectify the temporary modification. Reference modification details e.g. eMOC#, in any SAP work orders/purchase orders, etc

7.5.1.11 Activity 7.11 – Reverse/rectify the Temporary Modification

Rectify and close out the Temporary Modification.

7.5.1.12 Activity 7.12 – Close out the modification in J5

Enter and attach all information

7.5.2 RACI

Process Activity	Head of Unit Plant, Station Plant, Electrical Engineering	Modification Initiator	Senior Engineer/ Engineering Superintendent	Assigned Workgroup	Document Management Officer
Decision 7.1 – Is the change a Temporary Modification?	A	R	I		
Activity 7.2 – Follow the Permanent Plant Modification process	A	R	I		
Activity 7.3 – Develop solution and perform risk assessment	A	R	C		
Activity 7.4 – Is Temporary Modification approved?	A	I	R		
Activity 7.5 – Create TRIM folder		I	A		R
Activity 7.6 – Raise SAP notification to execute the work as required	A	R	I		
Activity 7.7 – Implement and/or test	A	R	I	C	
Decision 7.8 – Is Temporary Modification to be made permanent?	A	I	R		
Activity 7.9 – Set time frame for Temporary Modification	A	I	R		
Activity 7.10 – Raise SAP notification to reverse modification	A	R	I		
Activity 7.11 – Reverse/rectify the Temporary Modification	A	I		R	
Activity 7.12 – Close out the modification	A	I	R		

R – Responsible A – Accountable C – Consulted I - Informed

- There can only be one “R” for an activity. The same role can be both “R” and “A”.

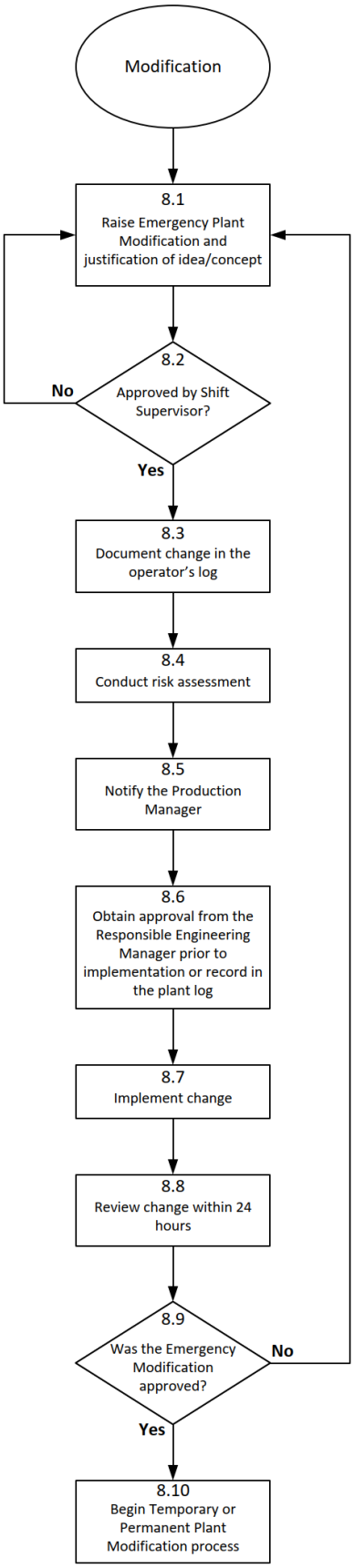
8 EMERGENCY PLANT MODIFICATION PROCESS

An emergency change is a change that must be performed on a true emergency basis because of any of the following conditions:

- To correct a deficiency that would otherwise cause a hazardous condition that is an immediate threat to personnel or the environment
- To correct a deficiency that would otherwise result in a trip of the unit and/or damage to the plant due to equipment fault or design error

Such changes may involve the **temporary** bypassing, bridging, or forcing of a piece of equipment, software or ICS code or alarm such that the intended functionality is altered.

8.1 Process P8 – Emergency Plant Modification



8.1.1 Description of Activities

8.1.1.1 Activity 8.1 – Raise Emergency Plant Modification

Raise an Emergency Plant Modification to address an immediate threat to personnel or the environment, or a deficiency that would otherwise result in a trip of the unit and/or damage to the plant due to equipment fault or design error.

8.1.1.2 Decision 8.2 – Is the change approved by the Shift Supervisor?

Emergency Modifications are to be approved in the first instance by the shift supervisor.

8.1.1.3 Activity 8.3 – Document change in the operator's log

Emergency Modifications are to be documented in the operator's log.

8.1.1.4 Activity 8.4 – Conduct risk assessment

A risk assessment must be performed to the extent possible and may not be documented.

8.1.1.5 Activity 8.5 – Notify the Production Manager

The shift supervisor should notify the Production Manager of the Emergency Modification.

8.1.1.6 Activity 8.6 – Obtain approval and maintain record

All attempts shall be made to gain verbal approval from the Senior Engineer / Engineering Superintendent / Head of Unit Plant, Station Plant, Electrical Engineering before implementation, approval or otherwise shall be recorded in the plant log.

8.1.1.7 Activity 8.7 – Implement change

Implement the Emergency Modification.

8.1.1.8 Decision 8.8 – Review the change within 24 hours

Within 24 hours, the change shall be reviewed and approved by both the Production Manager and a relevant RPEQ.

8.1.1.9 Activity 8.9 – Was the Emergency Modification approved?

If the Emergency Modification was approved by both the Production Manager and RPEQ, initiate the appropriate modification process.

If the Emergency Modification wasn't approved, reverse the modification and develop another solution.

8.1.1.10 Activity 8.10 – Begin Temporary or Permanent Plant Modification process

If the Emergency Modification was approved, initiate either the Temporary Plant Modification process (Section 7) or the Permanent Plant Modification process (Section 6).

8.1.2 RACI

Process Activity	Senior Engineer/ Engineering Superintendent/ Head of Unit Plant, Station Plant, Electrical Engineering	Shift Supervisor	Production Manager	Modification Initiator	Relevant RPEQ
Activity 8.1 – Raise Emergency Plant Modification		C		R	
Decision 8.2 – Is the change approved by the Shift Supervisor?		RA		C	
Activity 8.3 – Document change in the operator's log		A		R	
Activity 8.4 – Conduct risk assessment		C		R	
Activity 8.5 – Notify the Production Manager		RA	I		
Activity 8.6 – Obtain approval or maintain record	C	A	I	R	
Activity 8.7 – Implement change	I	C	C	R	
Decision 8.8 – Review the change within 24 hours	C	C	R	C	C
Activity 8.9 – Was the Emergency Modification approved?	I		R	I	C
Activity 8.10 – Begin Temporary or Permanent Plant Modification process	I	I	I	R	I

R – Responsible A – Accountable C – Consulted I - Informed

- There can only be one "R" for an activity. The same role can be both "R" and "A".

9 LIKE FOR LIKE REPLACEMENT PROCESS

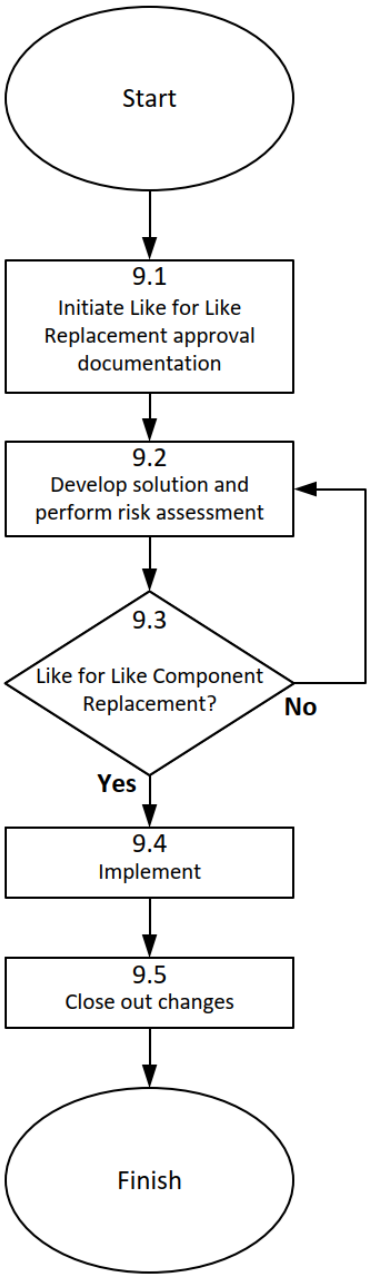
9.1 Responsibility for Progression

The Maintenance Supervisor shall be accountable and one of their team shall be responsible for the progression of the Like for Like component evaluation, implementation, and closure. The Asset Engineer (RPEQ) shall be responsible to complete technical review and approve the component replacement.

9.2 Approval for Implementation

The Asset Engineer (RPEQ) shall approve the implementation of a Like for Like Component Replacement. This approval shall be documented in J5.

9.3 Process P9 – Like for Like Replacement



9.3.1 Description of Activities

9.3.1.1 Activity 9.1 – Initiate Like for Like Replacement approval documentation

Like for Like Component change form in J5, to be created and populated.

9.3.1.2 Activity 9.2 – Develop solution and perform risk assessment

Compile documentation of original equipment and recommended replacement.

9.3.1.3 Decision 9.3 – Like for Like Component Replacement

Review and Approve use of replacement.

9.3.1.4 Activity 9.4 – Implement

Implement the component change.

9.3.1.5 Activity 9.5 – Close out changes

Document completion with Approval for closure by Maintenance Supervisor.

9.3.2 RACI

Process Activity	Maintenance Supervisor	Resource nominated by Maintenance Supervisor	Asset Engineer (RPEQ)
Activity 9.1 – Initiate Like for Like Replacement approval documentation	A	R	I
Activity 9.2 – Develop solution and perform risk assessment	A	R	C
Decision 9.3 – Like for Like Component Replacement	A	I	R
Activity 9.4 – Implement	A	R	I
Activity 9.5 – Close out changes	A	R	I

R – Responsible A – Accountable C – Consulted I - Informed

- There can only be one “R” for an activity. The same role can be both “R” and “A”.

10 DEFINITIONS

Term	Definition
Advisor	Person with relevant knowledge in a certain area, e.g. WH&S Advisor, Environmental Advisor, operations specialist, maintenance specialist, etc. Referred to on the Quality Plan and Check Sheet for supporting evaluation of the modification.
As Built	State of the plant and process as per the Approved design and manufacture, including any Approved modifications which have since been implemented
Asset	A physical asset that has potential or actual value to CS Energy. Physical assets usually refer to plant and equipment, inventory and properties owned by CS Energy. A grouping of assets referred to as an asset system could also be considered as an asset. Is inclusive of integrated systems such as control systems.
Asset Management	Coordinated activity of an organisation to realise value from physical assets. Realisation of value will normally involve a balancing of costs, risks, opportunities and performance benefits.
Asset Management System	A management system for asset management.
Emergency Changes	A change necessary to avoid personnel injury, equipment damage, environmental impacts, community complaints and the situation means that it is not possible to utilise the normal plant modification process. Generally, the situation is such that action is required quickly, and the persons required to provide approvals may not be available to meet the requirements of the written MOC process.
HAZOP	Hazard and Operability Study
Head of Unit Plant, Station Plant, Electrical Engineering	The Manager accountable for all technical / engineering matters.
ICMS	Integrated Control and Monitoring System
ITP	Inspection Test Plan
KKS	Identification System for Power Stations
MOC	Management of change
Modification	Any change to the physical asset or process from the “As Built” status which may result in a change in process, operation, maintenance, or performance, requires a new drawing or a change to an existing drawing / procedure, and which may affect the safety or integrity of people, process or plant. Modifications can be permanent, temporary, or emergency changes.
Modification File	An official registry file created to contain all documentation relevant to the modification. TRIM is the Document Management System used to manage the official files.
Modification Register	J5 Platform for the recording and tracking of modification details and status, for all modification types; Permanent Temporary and Like for Like.
Operating Envelope	If you define a set of parameters that are critical to the operation of something, then the operating envelope is the space between the minimum allowed and maximum allowed values for each parameter. Parameters may be temperature, flow rate, pressures, etc.
P&ID	Piping and Instrumentation Diagram
Physical Asset	Plant, machinery, property, buildings, vehicles and other items and related systems that have a distinct and quantifiable business function or service and includes any software code that is critical to the delivery of the function of the asset
Plant	Plant means Physical Asset
Plant Modification Review Committee	The Plant Modification Review Committee is the governance body to oversee the Plant Modification process.
PLC	Programmable Logic Controller

Term	Definition
Like for Like	The replacement of one item of equipment or component by another that is functionally identical, of similar design standards, specifications and performance characteristics (e.g. size, dimensions, pressure rating, flow rating, metallurgy, etc). Includes: • Changes in operating parameters / setpoints within approved safe operating / design limits If a replacement is an improvement on the original, then it is most likely a modification. A change in supplier may indicate a modification.
Senior Engineer / Engineering Superintendent	Engineer responsible for an engineering function, discipline or area of plant. This is a defined plant modification process role where depending on the scope the responsibility can be owned by plant operations or asset management engineering managers. The titles for these roles include – Senior Engineer, Superintendent.
RPEQ	Registered Professional Engineer of Queensland
Technical and Support Requirements	All requirements necessary to support the asset over all phases of its life. Includes, but is not limited to - drawings, manuals, competency & training, spares, procedures, schedules, BOMS, identification, labelling, signage, ITP's, SDS's, maintenance routines, operating procedures, etc.
Temporary Modification	Plant Modification which can be implemented for short term durations, not exceeding 60 days, used to resolve unexpected risks associated with safety, Plant failure, unusual process issues or non-compliance.
TRIM	Document management system
WH&S	Work health and safety
Work Pack	Package of documents to detail the complete scope of work for the Plant Modification Implementation phase. This pack should include at a minimum the Final Design, technical specification, drawings for construction, ITPs, Inspection and test procedures, commissioning plans and procedures.

11 REFERENCES

Reference No	Reference Title	Author
B/D/21/3722	Plant Modification - General Awareness Presentation	CS Energy
B/D/12/66357	Procedure - CS-GOV-10 - Determination of RPEQ Responsibility for Engineering Work	CS Energy
B/D/12/66355	CS-GOV-09 Compliance with Professional Engineers Act 2002 (QLD) (RPEQ)	CS Energy
B/D/11/39713	CS-FIN-01 Authorities and Delegations	CS Energy
B/D/12/63934	CS-RISK-01 Risk Management Framework	CS Energy
Intranet Link	Project Management Framework	CS Energy
B/D/12/85976	CS-AM-024 Hazop Guide	CS Energy
B/D/14/21279	CS Energy Registered Document Review Process	CS Energy
B/D/22/3270	PM Change Procedure OPS-WM-0009	CS Energy
B/D/22/2643	Form - S2361 - Plant Modification Design Risk Assessment Template	CS Energy
B/D/20/7497	Form - S2303 - Plant Modification Self-Assurance Checklist	CS Energy
B/D/20/9246	Charter - Plant Modification Review Committee	CS Energy
Network Link	Email Request - Modification Folder – Callide	CS Energy
Network Link	Email Request - Modification Folder – Kogan Creek	CS Energy
B/D/09/15048	TRIM RM Tip - 06j EDIT - Adding Notes to a Document for Approval	CS Energy

12 RECORDS MANAGEMENT

In order to maintain continual improvement, suitability, safety and effectiveness of the organisation, registered documents will be reviewed on a two-yearly basis or at intervals specified by legislative or regulatory requirements. Review of registered documents should occur where it has been identified that there are changes in technology, legislation, standards, regulation or where experience identifies the need for alteration to the content. Registered documents should also be reviewed following an incident, change management process, modification or where directed as part of a risk assessment process. A 'review' can simply mean that it has been identified, confirmed and appropriately recorded that no changes are required and that the existing process remains the same.

Government Owned Corporations must ensure that records are retained according to accountability, legal, administrative, financial, commercial and operational requirements and expectations. In compliance with records retention and disposal, all documentation created in relation to business must be retained in line with minimum retention periods as detailed in legal retention and disposal schedules.