Phase 1 - Defintion and Scope

Implementation score : | 0% |

Enter a number between 0 and 4 in 'Score' column for each question, as per the guidelines

	Score	Weight	Overall score	Comments
1. Does the MOC process define the following types of changes: • Permanent • Temporary • Emergency and give guidance on the conditions under which they should be used?	0	9	0	
2. For temporary changes (eg repairs), does the process: a. specify the duration of the temporary change? b. have a mechanism to extend the duration of the temporary change? c. have a tracking system?	0 0 0	4 4 4	0 0 0	
3. For emergency changes (an urgent change, typically out of normal office hours), does the process: a. document the change and have a clear approval step? b. have a mechanism for communication of the change to all interested parties? c. have a procedure for follow-up with the full formal MOC process?	0 0 0	4 4 4	0 0 0	
4. Does the MOC process define what is "in scope" with a focus on process safety and what will be handled by other processes?	0	4	0	
5. Are changes to the MOC process effectively managed within the overall management system to ensure up-to-date documentation are available for use?	0	4	0	
6. Is there a complete documentation trail for the MOC process and all associated documentation?	0	4	0	
7. Are the roles and responsibilities defined in detail for those involved in the MOC process, typically: • MOC process owner • MOC administrator • Change owner • Reviewer • Approver?	0	4	0	

Total | 196 | 0 |

Phase 2 - Types of Change

Implementation score : | 0% |

Enter a number between 0 and 4 in the 'Score' column for each question, as per the guidelines

	Score	Weight	Overall score	Comments

8.   Projects
Does the MOC process include all types of projects (eg Major capital projects, minor modifications, pipework jump-overs, demolition, etc)?

| | 0 | 9 | 0 | |

9.   Maintenance
Are changes identified within maintenance systems covered by MOC, such as
- Minor modifications
- Replacements that are not like for like
- Chemical cleaning?

| | 0 | 4 | 0 | |

10.   Operations
Are changes that occur on shift identified and documented, such as
- Addition / removal of hoses, gauges, etc
- Process conditions
- Safe Operating Limits
- Injection and mix points
- Bypasses
- Safety overrides
- Interlocks
- Safety critical devices unavailable
- Startup and shutdown
- Test runs and trials?

| | 0 | 9 | 0 | |

11.   Instrumentation
Are instrumentation changes covered by the MOC process, such as
- Alarms
- Safety Instrumented Systems
- Distributed Control System
- IT systems (such as Databases)
- Programmable Logic Controllers?

| | 0 | 9 | 0 | |

12.   Electrical
Are electrical changes covered by the MOC process, such as
- Back-up power supplies
- Uninterruptible power supplies?

| | 0 | 4 | 0 | |

13.   Organisational change
a.   Does the scope of organisational change include the following,
- Eliminating a position
- Creating a new position
- Training needs analysis
- Significant change in responsibility
- Work pattern
- Moving personnel between jobs
- Change in contractor / subcontractor
- Physical relocation?

| | 0 | 4 | 0 | |

b.   Are the following factors considered as part of the process?

| | 0 | 4 | 0 | |

Competence levels and critical responsibilities are defined for each role
When temporary vacancies are created, critical responsibilities for the vacant role are shared among other personnel
When change in personnel leads to a change in competency within an organisation, a gap analysis is performed and a suitable action plan is put in place
The minimum acceptable level of manning (eg operational, maintenance, technical support, etc) for the plant / facility is considered
Changes to working hours (normal or peak) or workload is considered

14.   Process chemicals
a.   Does the MOC process for process chemicals include the following,
- Additives
- Catalysts
- Acids / Caustics
- Solvents
- Material Safety Data sheets?

| | 0 | 4 | 0 | |

b.   Is the chemical compatibility of any new process chemical considered prior to its introduction (including any impurities and impact from manufacturing route)?

| | 0 | 1 | 0 | |

c. Are changes to injection / mixing points identified and potential corrosion mechanism identified? | 0 | 4 | 0

15. Feedstock
a. Does the MOC process for feedstock include the following,
- Type of hydrocarbon / chemical
- Bulk properties
- Contaminants
- Intermediates and downstream effects? | 0 | 4 | 0

b. Are the following factors considered as part of the process? | 0 | 4 | 0
The chemical compatibility of any new process feedstock is considered prior to its introduction (including any impurities and impact from manufacturing route)

Changes to injection / mixing points and potential corrosion mechanisms are identified

Upstream and downstream units are made aware of changes where required and give agreement to it prior to commissioning
The impact of any new feedstock on operation within safe operating limits is considered prior to implementation?

16. Facilities
Does the Management of Change process specifically include changes to the following facilities and is such change assessed by competent personnel,
a. Occupied buildings, both temporary and permanent, with respect to location, design changes, usage changes and occupancy changes? | 0 | 4 | 0
b. Civil / infrastructure, e.g. structures, roads, culverts, flood defenses, etc? | 0 | 4 | 0
c. Utilities, e.g. steam, power, air, water, nitrogen, etc? | 0 | 4 | 0

17. Management systems

Does the MOC process include changes to policies, procedures and other documents, both in terms of new documents and the revision of existing documents? | 0 | 4 | 0

18. Stores inventory
Does Stores Inventory management include an MOC process to,
- positively remove obsolete parts
- capture specification revisions and their potential impact on Stores holding requirements
- manage Stores inventory levels to negate the risk of stock-out
- approve the use of alternative parts in the event of a stock-out
- positively identify all stores holding to negate the risk of mix up? | 0 | 4 | 0

19. Procurement

Does the Management of Change process require an assessment of the impact of the following changes on Operations and to invoke management of change as necessary,

- a change to contracts
- a change of supplier
- a change to the supplier's manufacturing process? | 0 | 4 | 0

20. Finance
Are changes (such as deletion or postponement) to the budget process that affect process safety based on an appropriate risk assessment? | 0 | 4 | 0

| | Total | 352 | 0 |

Phase 3 - Key Steps

Implementation score : | 0% |

Enter a number between 0 and 4 in the 'Score' column for each question, as per the guidelines

	Score	Weight	Overall score	Comments
21. Change recognition Does the MOC process include a definition of change and of "like for like" replacement (with examples)?	0	4	0	
22. Description of change Is there a specific MOC form that records a description of the change, the reason for the change and the technical basis, with appropriate checklists and additional information?	0	9	0	
23. Screening process Does the MOC process include a screening process to decide whether the proposed change is appropriate and should be progressed as an MOC?	0	4	0	
24. Change Owner Does the MOC system assign a Change Owner?	0	4	0	
25. Appropriate review Does the MOC process,				
a. require a formal review process?	0	9	0	
b. include mandatory reviewers that are impartial?	0	4	0	
c. define who should review a proposal (position, experience, competence)?	0	4	0	
d. involve the relevant specialists in the review (HSE, Instrument, Engineering, Maintenance, Inspection, etc)?	0	9	0	
e. involve Operations in reviewing MOC material?	0	9	0	
f. define that someone qualified in hazard analysis reviews the proposal?	0	9	0	
g. identify that upstream and downstream considerations are made?	0	4	0	
h. allow for suitable risk assessment? (including cumulative effects, relief scenarios Hazardous Area Classification , etc)	0	9	0	
26. Respond to comments a. Have comments identified in reviews been documented and answered appropriately?	0	4	0	
b. If the comments are 'rejected' does the reviewer agree with the final position?	0	4	0	
27. Approval by competent authorised person Are MOCs approved by a competent authorised person trained in MOC?	0	9	0	
28. Change implementation / commissioning a. Does the change identify key areas where updates are required, such as, • Procedures • Maintenance • Inspection • Process Safety Information • P&IDs • Instrument diagrams • Equipment data sheets?	0	9	0	
b. Is any Process Safety Information (such as operating procedures, P&IDs, PFD's, electrical, isometric drawings, etc) impacted by the MOC clearly highlighted (eg "redlined") and included in the MOC package?	0	9	0	
c. Are proposed changes clearly communicated to affected people?	0	4	0	
d. Does the MOC process identify and track an adequate training plan?	0	4	0	
e. Are Pre-Start up Safety Reviews held and adequately documented?	0	4	0	
f. Are actions arising from the Pre-Start up Safety Reviews addressed prior to start up?	0	4	0	
g. Are the PSSRs signed off by a competent / authorised person?	0	4	0	
h. Is equipment effectively commissioned?	0	4	0	
29. Review and evaluation Is there a review of completed MOCs for quality assurance?	0	4	0	
30. Final close out a. Are all non-safety critical actions completed?	0	1	0	
b. Are changes signed off as complete by an authorised individual?	0	1	0	
31. Retention of MOC documentation Is there clear guidance for retention of change documentation and is it being followed?	0	1	0	

Total | 576 | 0 |

Phase 4 - Audit

Implementation score : | 0% |

Enter a number between 0 and 4 in the 'Score' column for each question, as per the guidelines

	Score	Weight	Overall score	Comments
32. Audit protocol				
a. Is there an MOC self assurance process / audit procedure?	0	9	0	
b. What is the frequency of MOC system audits? (Monthly 4 points, quarterly 3 points, annually 2 points)	0	4	0	
c. Is the audit schedule 'risk based'?	0	4	0	
d. Have MOC training needs / competencies been assessed where appropriate?	0	4	0	
e. Is there an approved auditors list?	0	1	0	
f. Is there a formal system for recording audit findings?	0	4	0	
g. Are 'high risk' findings prioritised and are these raised to senior management?	0	4	0	
h. Is there a process to identify overdue temporary MOCs?	0	4	0	
i. Is there a formal process to ensure emergency MOCs are revisited?	0	4	0	
j. Is there a process to ensure that all audit actions are assigned timescales and owners?	0	4	0	
k. Is there a process to confirm that all audit actions are closed out and overdue actions are tracked?	0	4	0	

	Score	Weight	Overall score	Comments
33. Auditing MOC process steps				
a. Do all MOCs follow the correct process steps / procedure to a good quality and in the correct order?	0	4	0	
b. Is there a clear definition of change and do all employees understand when an MOC is required?	0	4	0	
c. Is the screening process used for all change events to determine if an MOC is required?	0	4	0	
d. Are clear roles and responsibilities established within each MOC i.e. change owner etc?	0	4	0	
e. Are all relevant competent parties involved in the change review process?	0	4	0	
f. Is there evidence that comments made, e.g. by subject matter experts have been taken into account and if necessary have change proposals been amended?	0	4	0	
g. Are cumulative change effects identified?	0	4	0	
b. Have all MOCs been approved / signed off by the appropriate authority level before change is implemented and have all recommendations / mitigations been completed?	0	4	0	
c. Is there evidence of communication of changes / risks to relevant personnel?	0	4	0	
d. Is there evidence of a review of changes, particularly for those with potentially high risks to ensure that change was successful?	0	4	0	
e. Have all MOC documents been retained as necessary?	0	4	0	

	Score	Weight	Overall score	Comments
34. Auditing changes that did not follow an MOC Are the following types of information reviewed for evidence of change that has occurred that did not follow the MOC process, • Shift logs • Alarm logs • Maintenance work orders • Permits to work • Inspection data • Organisation charts • Capital and operating expenditure • Incident reports • Types of feedstock • Purchase requisitions • Contracts • Waste streams?	0	9	0	

	Score	Weight	Overall score	Comments
35. Site inspection during audit a. During an audit site inspection, is there any evidence that changes have occurred without MOC, such as, • Presence of new equipment • Works in progress • Occupied and / or temporary building locations • Plant modifications since last audit • Hazardous chemicals inventory changes?	0	9	0	
b. Do audits include the following, • Interviewing site personnel • Review of appropriate documentation • Field verification • Cumulative effect of changes • Completion of MOC action items • Audit report feedback?	0	9	0	

		Total	468	0

Phase 5 - Metrics, Training and Improvement Plan

Implementation score : | 0% |

Enter a number between 0 and 4 in the 'Score' column for each question, as per the guidelines

	Score	Weight	Overall score	Comments
36. Typical metrics Are metrics in place to measure MOC performance, such as, • Overdue temporary MOCs • The number of Temporary, Permanent and Emergency MOCs • The number of incidents due to MOC?	0	9	0	
37. Training Needs Analysis Are competence and training requirements defined within the MOC process?	0	9	0	
38. Induction training Is general induction training provided for all relevant personnel including, • General process description • Change recognition • Change management • Change approval • Change tracking & closure • Change responsibilities?	0	9	0	
39. General awareness training a. Does training cover the key aspects of the MOC process including, • Change recognition • Type of change (Permanent / Temporary / Emergency) • Change authorities & approvals?	0	4	0	
b. Does training include awareness testing via :- • Questionnaire • Practical assignments • Competence assessment?	0	4	0	
40. Job specific MOC training a. Is more detailed training provided to those typically involved in the process, for example :- • Management • Supervisors • Engineers • Operations • Maintenance?	0	9	0	
b. Does training cover all aspects of the MOC process?	0	4	0	
c. Does training cover use of proforma / reporting systems?	0	4	0	
d. Does training clearly detail responsibility, accountability and authority?	0	4	0	
e. Does training include knowledge testing via :- • Questionnaire • Practical assignments • Competence assessment?	0	4	0	
41. Refresher training a. Is MOC included in the refresher training program?	0	4	0	
b. Is training provided whenever changes are made to the MOC process?	0	4	0	
42. Action plan a. Is there a process for reviewing MOC performance and making improvements?	0	4	0	
b. Are all proposed improvements agreed by management and are resources in place to deliver?	0	4	0	
c. Is there a documented action plan to improve the MOC process based on the following? • Action item review • MOC documentation review • MOC metrics • Training feedback • Incident / near miss review Internal audit programme?	0	4	0	
Total		**320**	**0**	