Client: ConocoPhillips Australia Business Unit (ABU)

Document: Storyboard for **Management of Change (MOC) Awareness of Downstream Operations (DSO)**

Version History:

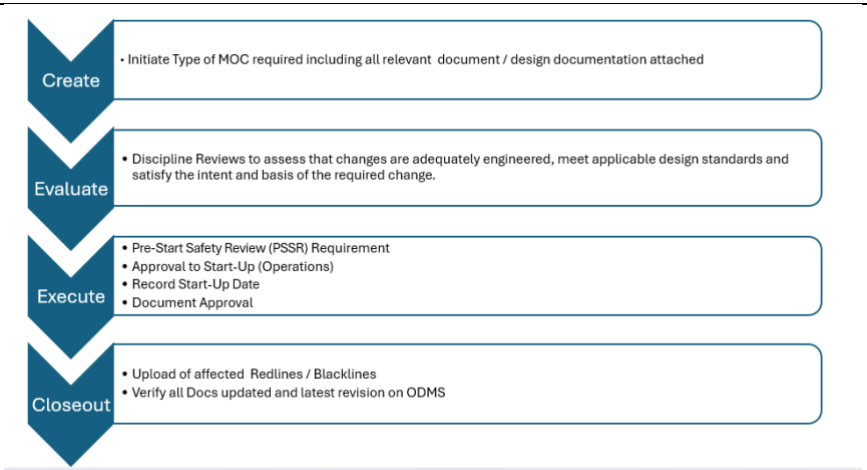
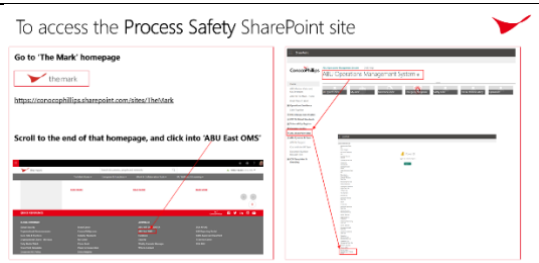
Version No.	Edited By	Date	Remarks
001	Sheetal Mehta	January 3, 2025	Framework SB creation

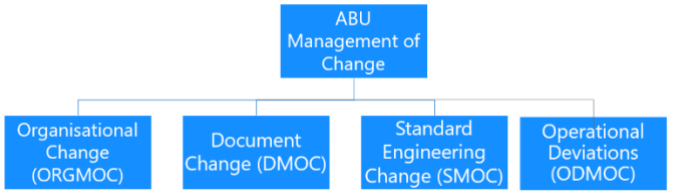
Contents

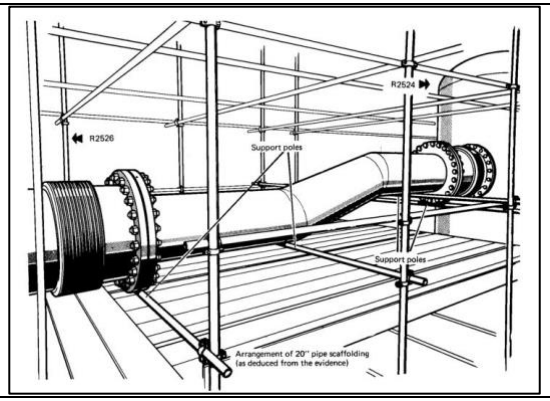
Topic	Management of Change (MOC) Awareness for Downstream Operations (DSO)		Screen type	
Screen Title	*Introduction*		Screen number	001
No.	**Audio/VO**	**On Screen Text**	**Visuals and Development instructions**	
1.	In today's dynamic industrial landscape, the ability to effectively manage change is crucial for maintaining operational integrity and safety.	 2524909687	*APLNG Image added of whole site and ship in forefront*	
2.	The Management of Change (MOC) process is a structured approach that ensures all modifications to processes, equipment, or operations are thoroughly evaluated and controlled.	1411219403 	*APLNG Image added of viewing platform*	
3.	This module will equip you with the knowledge and skills needed to understand Management of Change (MOC).	 2346903777	*APLNG Image added of control room*	
<next>				

Topic	Management of Change (MOC) Awareness for Downstream Operations (DSO)		Screen type	
Screen Title	*Learning Objectives*		Screen number	002
No.	**Audio/VO**	**ON SCREEN TEXT**	**Visuals and Development instructions**	
1.	By the end of this module, you will be able to: • Comprehend the purpose and importance of Management of Change (MOC) • Understand the four categories of MOC • Learn the key steps in the MOC process at ABU and • Identify examples of change	By the end of this module, you will be able to: • Comprehend the purpose and importance of Management of Change (MOC) • Understand the four categories of MOC • Learn the key steps in the MOC process at ABU • Identify examples of change		
<next>				

Topic	Management of Change (MOC)		Screen type	
Screen Title	*Management of Change (MOC)*		Screen number	003
No.	**Audio/VO**	**ON SCREEN TEXT**	**Visuals and Development instructions**	
1.	**What is MOC?** Management of Change (MOC) is about making sure that any changes to the plant, process, personnel, or procedures are carefully assessed. It's crucial to assess these changes to: • minimise the risk of hazardous situations that could result from temporary and permanent changes to process operations and / or facility configuration. • Ensure process changes / facility modifications do not compromise the safeguards built into the design or introduce unknown hazards. • Identify any potential operational risks introduced by the change • Ensure that these risks are manged so far as is reasonably practicable and managed throughout the entire lifecycle of the change, including initiation, implementation, and close out	When changes are made to the plant, process, personnel, or procedures, it's crucial to assess these changes to: • Identify any potential operational risks introduced by the change • Ensure that these risks are minimized So Far As is Reasonably Practicable (SFARP) and managed throughout the entire lifecycle of the change, including initiation, implementation, and close out MOC provides for identification, risk assessment, authorization, communication and documentation of changes in order to avoid potential major incidents or other unwanted operational incidents.	.	
2.	All changes, whether they are permanent, temporary, or urgent, must be properly managed and conform to the relevant MOC procedures.	All changes must be properly managed and conform to the relevant MOC procedures.		
3.	Let’s take a look at MOC Process Workflow.	**MOC Process Workflow**		

	The flow chart guides you through the broad steps of a process workflow for Management of Change. The sub points are examples depending on the type of MOC initiated.		
4.	For more information or assistance regarding *MOC workflow*, *contact the Process Safety Team or go to the Process Safety Engineering SharePoint site to access FAQs and Guides*		*Guide to access the Process Safety SharePoint site*
5.	Let's check what you have learned so far. Select the correct option and submit.	1.What do you think is the purpose of Management of Change? a) To manage HS&E risks associated with changes to plant, people and procedures b) To ensure risks associated with changes are identified, managed and mitigated c) To ensure risks associated with change are identified and managed throughout the lifecycle of the change **d) All of the above**	
6.	There are four categories involved with Management of Change at ABU. Each of these categories have their own procedure, which provides guidance on	ABU MOC Categories • Standard MOC (SMOC) for Engineering Changes	*Tab Activity* *Insert an Image like:*

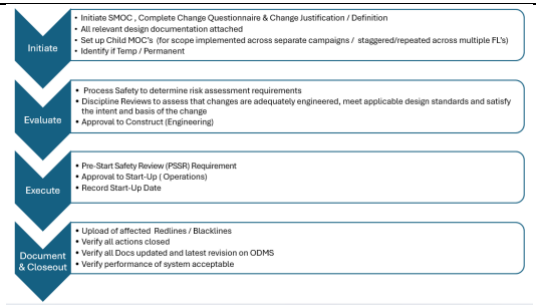
	executing and managing respective MOC processes and applies to all COP employees and contractors working at any COP ABU operated facility.	○ Temporary SMOC (SMOC) • Operational Deviations (ODMOC) ○ Short Term Inhibits Register • Document MOC (DMOC) • Organisational MOC (ORGMOC) for HSE Risks	
<next>			

Topic	Management of Change (MOC)		Screen type	Blended
Screen Title	*Standard MOC (SMOC) for Engineering Changes*		Screen number	004
No.	**Audio/VO**	**ON SCREEN TEXT**	**Visuals and Development instructions**	
1.	Before diving into the Standard MOC, let's learn more about the event that highlighted its importance.	Why SMOC is important?		
2.	On June 1, 1974, during a routine inspection at the Nypro chemical plant in Flixborough, in the rural part of Northern England, reactor 5 was found to have developed a crack. To address this issue, production was halted, and reactor 5 was removed for repairs.	 2283250743	*Flixborough Image required*	
3.	To maintain operations, a temporary bypass pipe was installed to link reactors 4 and 6 together. This bypass consisted of a 20-inch steel pipe with flexible ends. To support the weight of the pipe, a nest of scaffolding was erected beneath it.		*Correct image*	
4.	Unfortunately, the temporary bypass pipe was not adequately tested for the high pressures and mechanical stress it would face. This oversight led to a catastrophic failure, resulting in a massive explosion that devastated the plant, injured 36 people and claimed 28 lives.		*Correct image*	

	What do you think would have led to such a disaster?		
5.	The plant modification occurred without full assessment of the potential consequences: • Modification went through no formal design or testing process • No comprehensive Integrity calculations conducted of Bypass arrangement • No pressure testing was carried out on the installed pipework modification • No adequately engineered pipe supports of the bypass line (scaffold used) • Maintenance Procedures Design Codes – Pipework - use of flexible pipes	• Modification went through no formal design or testing process • No comprehensive Integrity calculations conducted of Bypass arrangement • No pressure testing was carried out on the installed pipework modification • No adequately engineered pipe supports of the bypass line (scaffold used)	
6.		Poor management & control of changes to plant and process increase risk to plant people and environment.	
7.	Standard *Engineering* Change applies to any change to process, chemicals, technology, or equipment, as specified by current design and / or specifications	Standard Engineering Change applies to any change to: • Process	

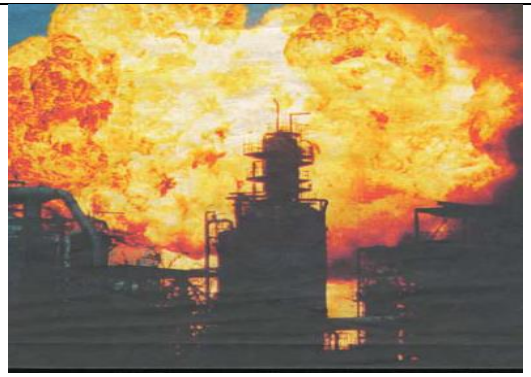
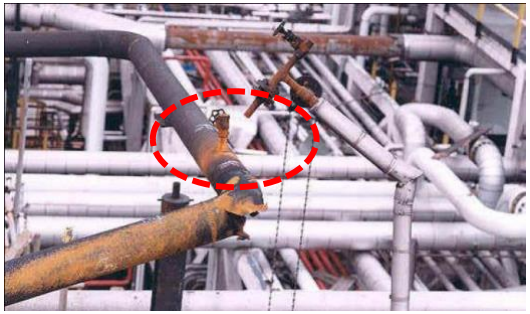
	except for a change that is a like-for like-replacement.	• Chemicals • Technology • Equipment Standard Engineering Change does not apply to like-for-like replacements.	
8.	Let's look at some examples of Standard MOC.		*Image of WHRU project executed under an approved SMOC*
9.	Some examples of engineering changes include, but are not limited to: • Additions or modifications to process plants. • Changes to equipment or piping materials. • Maintenance repair work that expands to become a modification. • Changes to the design basis. • Introduction or removal of temporary equipment. • Conversion of temporary equipment to permanent equipment. • Changes to the type or amount of chemical additives	Standard Engineering MOC Examples • Additions/modifications of process plant Changes to equipment/piping materials • Maintenance repair work that expands to become modification • Change to design basis • Introduction/removal of temporary equipment • Conversion of temporary equipment to permanent equipment • Changes to the type or amount of chemical additives	

		• Changes requiring revision to plant technical information / P&ID's • Changes to facility throughput or feedstocks or product outside of unit design specifications • Changes to set points or operating limits, including pressures, temperatures, densities, flow-rates, etc, which are different from ranges designated in the original safe operating limits, mechanical design.  	
10.	Refer to document: *ABUE-000-SF-N05-C-00005: Engineering Management of Change Procedure*	Refer to document: *ABUE-000-SF-N05-C-00005: Engineering Management of Change Procedure*	

11.	The Standard Engineering MOC (SMOC) process flow diagram provides an overview, with the following points detailing each step. Click on the link for a quick view highlighting SMOC workflow and key steps at each phase. Initiate Phase - at initiation, the proposed change is submitted for review and approval. The finalised design and all affected design documentation/plant information / records and drawings are updated and attached to reflect the proposed change at Initiate phase. Evaluate phase – in evaluate phase, the risk assessment requirements are assessed before relevant disciplines are required to technically review and approve the SMOC prior to the Engineering Manager formally approving Construction to commence. Execute Phase – in execute phase, construction is competed with all start-up requirements met & PSSR completed prior to site management (the GFM) formally approving Start Up of the implemented change. Upon start-up of an SMOC, the change owner must ensure the start-up date is recorded in SAP and outstanding post start-up PSSR actions assigned, with all remaining redlines submitted within 48 hrs of change implementation Document & Close Out Phase – this is the final phase of the change where all documentation is managed, and plant information updated to reflect the change. The change owner is responsible for ensuring the		*A couple of pop ups requested here on this slide as these tie in with test questions:* *When navigating the screen, it's important to highlight, via pop ups, key requirements, i.e. click on "evaluate" --> pop up to read-->* ***Before construction can commence, the evaluate stage must be completed, involving ensuring all relevant disciplines have reviewed and endorsed the change and the Engineering Manager's Approval to Construct Secured.*** *Click on "Execute" --> pop up to read -->****Once construction is completed & prior to start-up, the change owner must ensure the PSSR requirement step is completed (the PSSR is important to ensure readiness of the facility to commence safe start up and ongoing operations) As change owner, you must also ensure the start-up date is formally recorded.***

	MOC progresses through the closeout process, verifying all post start-up actions are completed and all document update tasks confirmed as complete.		
12.	The SMOC process for temporary engineering changes follows the same steps as permanent changes, but the change is authorised for only as long as the situation warrants. Temporary changes may incur a higher level of short-term risk; therefore, appropriate risk mitigation measures must be identified and implemented in order to manage the short-term risk. Ongoing monitoring and a strict extension process is in place to manage the temporary change until it is either reversed or made permanent, thus minimising risk at all times.	Temporary SMOC Change Before the authorised temporary change implementation period expires, one of the following must occur: • The system must be returned to its original condition / reversed, or • The MOC must be made permanent, with affected documentation updated and approval from discipline leads / approving authorities obtained, or • The change extended via escalated approvals through Operations Management.	
13.	Here's some examples of Temporary SMOC	Temporary SMOC Examples *Use of a temporary effluent tank and associated piping whilst replacing the permanent tank* *Use of temporary equipment for purging for shutdown or startup of equipment.* *Trial involving the Installation and Operation of wireless pressure transmitters* *Temporary isolation of a drain line by spading with a flange until repaired*	

		Trial lube oil compressor alternative cooler belt type Any temporary additions such as piping, utility connections, or electrical equipment or connections	
14.	Let's look at one more event that highlights importance of SMOC.		*Image of FLNE New Gangway executed under an approved SMOC*
15.	In 2001, a catastrophic failure occurred at the Humber Refinery due to a ruptured pipe. The rupture released a massive cloud of ethane/propane, which ignited, causing a massive explosion and fire. Fortunately, it happened on a public holiday, so there were no fatalities, but buildings up to 400 meters away were badly damaged. The incident was caused by the installation of a new water injection point in an overhead gas pipe to prevent fouling. This "quick fix" job used the existing vent valve to connect the water, causing erosion of the downstream piping and eventual hole through. The water injection point was installed without any Management of Change (MoC) process which would have reviewed the technical and safety aspects of	**UK Humber Refinery Explosion & Fire (2001)** **1668330391** 	

	the proposed change, identifying the corrosion risk introduced by the change /new injection point.	  	

<table>
<tr><td></td><td></td><td>  </td><td></td></tr>
<tr><td>16.</td><td></td><td>An effective MOC system is essential to ensure that process changes and/or facility modifications do not compromise the safeguards built into the design or introduce new, unknown hazards. All technical and safety aspects of a proposed change are assessed before implementation.</td><td></td></tr>
<tr><td>17.</td><td>Let's check how well you have grasped the concepts. Given below are some statements. Can you identify which category these statements belong to?</td><td colspan="2">1.Can you identify whether these statements are examples of Standard MOC?

Select the radio buttons to mark the statements either Standard MOC or Like for Like and Submit.

<table>
<tr><th>Question Text</th><th>Standard MOC</th><th>Like for Like</th></tr>
<tr><td>Changes to equipment, piping or their materials.</td><td></td><td></td></tr>
<tr><td>Bolts, gaskets and flanges meeting the piping specification.</td><td></td><td></td></tr>
<tr><td>Additions/modifications of plant equipment, process and associated systems.</td><td></td><td></td></tr>
</table>

2.Prior to commencing construction / execution, whose approval to construct is required?</td></tr>
</table>

	Let's check your understanding further.	(a) None **(b) Engineering Manager** (c) Operations Start-up Approval **3.**Who is accountable for ensuring the relevant SAP MOC workflow tasks are completed before execution or start up commence? (a) Discipline Leads, who technically review and approve the change proposal (b) **The Change Owner / MOC Coordinator** (c) Engineering Manager **4.**Before starting-up an SMOC, the change owner must ensure the following requirements are met? (a) *Operations start-up approval* obtained from GFM (b) PSSR completed (c) **Both a and b**

5.Can you identify when do you need to perform a PSSR?

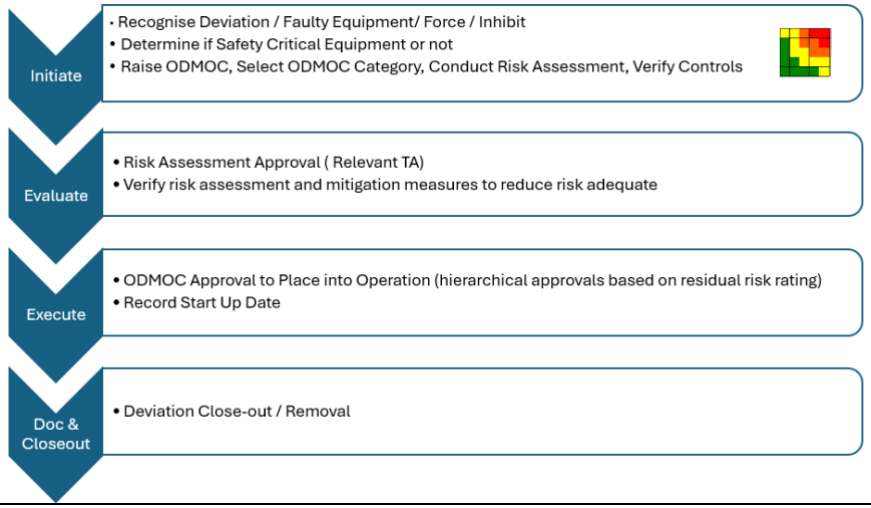
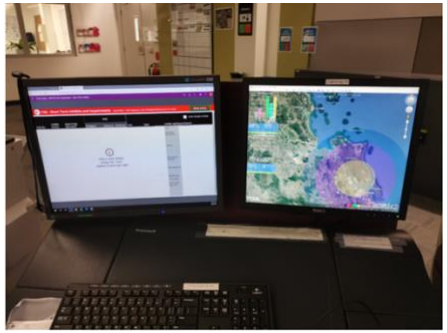
Select the radio buttons to mark the statements either PSSR Required or PSSR Not Required and Submit.

Question Text	*PSSR Required*	*PSSR Not Required*
Any physical change or modification is made to the facility.		
Returning a temporary change to original design.		
Starting up de-commissioned equipment.		

6.Upon start-up of an SMOC, the change owner must ensure the following requirements are met?

		(a) The Start-Up date recorded (b) All remaining redlines submitted within 48 hrs of change implementation (c) **Both a and b**
<Go to 002-6>		

Topic	Management of Change (MOC)		Screen type	Blended
Screen Title	*Operational Deviations MOC (ODMOC)*		Screen number	005
No.	**Audio/VO**	**ON SCREEN TEXT**	**Visuals and Development instructions**	
1.	ConocoPhillips Australia (COP ABU) recognizes that uncontrolled deviations to equipment, processes, and procedures have been linked to past industry incidents, often due to normalizing deviations or failing to manage associated risks. Managing changes and their associated risks to normal operation is crucial for process safety and is a key part of the Operating Integrity Framework. The Operational Deviation MOC process identifies, records, manages, and mitigates operational risks and temporary changes during normal day to day running of plant operations.	• ConocoPhillips Australia (COP ABU) recognizes that uncontrolled deviations to equipment, processes, and procedures have been linked to past industry incidents. • These incidents often involved normalizing deviations or failing to properly identify and manage the associated risks. • Managing operational changes or deviations is crucial for process safety and is a key part of the Operating Integrity Framework. • The Operational Deviation MOC process is used to identify, record, manage, and mitigate operational risks and temporary changes or deviations during normal plant operations.		
2.	Operational Deviations may be in the form of: • Impaired Safety Critical Element which does not meet their Performance Standard. • Inhibiting or bypassing a Safety Critical Element for maintenance and operations activities. • Bypassing or bridging of non-safety critical hardware or software • Use of Maintenance Overrides • Deviations from established HSE, Maintenance or Operating Procedures	Operational Deviations may be in the form of: • Impaired Safety Critical Element which does not meet their Performance Standard. • Inhibiting or bypassing a Safety Critical Element for maintenance and operations activities. • Bypassing or bridging of non-safety critical hardware or software • Use of Maintenance Overrides • Deviations from established HSE, Maintenance or Operating Procedures • Competency to Operate risks.		

	• Competency to Operate risks.		
3.	**Operational Deviations (ODMOC) - Process Flow** The diagram is an overview of the process. The following points explore each step in more detail.	
4.	It's Important to highlight that ABU utilises two tools for Force / Inhibit management: SAP MOC (ODMOC) & the Electronic Short Term Inhibits Register (displayed in the CCR), depending on the type of force / inhibit and its application. The STI register is intended to assist with management of routine planned **low risk** inhibits of short duration (within a shift duration) to facilitate short term troubleshooting or planned maintenance activities such as routine building fire and gas detection testing. Inhibits extending beyond a shift duration or greater than a RR Score of 4 must be raised as Operational Deviations	The STI Register applies to inhibits which meet the following timeframe and risk criteria: • Are expected to persist less than a shift duration & • Are of Low Residual Risk (RR 4) Examples of Inhibits qualifying for inclusion in the STI register include: ½ hr outage of a FWM to repair a valve Monthly building F&G detection Level Transmitter Calibration 

<table>
<tr>
<td></td>
<td></td>
<td>Inhibits qualifying as ODMOCs include:
• Troubleshooting a faulty Level Transmitter that has initially been recorded within the STI register (Low RR Risk) but will extend beyond a shift duration for repair work (Low RR > shift duration)
• Application of a MOS to a SIS Level Transmitter for troubleshooting / Investigation (exceeds allowable RR Risk as is Med RR Risk)
• GE Force on a turbine to prevent step to idle which will exceed shift duration (Low RR > shift duration)</td>
</tr>
<tr>
<td>5.</td>
<td>Let’s look at the Operational Deviations Risk Assessment. Operational Deviations can only be approved once effective mitigation measures to reduce the risk associated with the deviation have been identified and the residual risk of operating with the deviation is reduced SFARP. The risk assessment for an Operational Deviation will therefore be required to be reviewed and endorsed by a Technical Authority or delegate in line with the Type / Category of the Operational Deviation.
The ODMOC risk assessment must assess the most credible risk associated with operating with the Operational Deviation in place and to identify mitigating controls (active / required) to reduce the risk SFARP.</td>
<td>• Operational Deviation Risk Assessments Require a minimum of two attendees, as a minimum.
  • Operational Deviation Change Owner, and an
  • Operations Representative (an Operations Specialist is minimum for residual risks rated as medium or greater)
  • Note, Relevant discipline engineers / specialists should be engaged as appropriate or required.

SCE deviations shall always have safety consequence assessed in addition to any other Hazards identified.

The risk assessment for an Operational Deviation is reviewed and endorsed by a Technical Authority or delegate in line with the Type / Category of the Operational Deviation as shown in below table
<table>
<tr><th>ODMOC Category / Type</th><th>Risk Approver / Technical Authority</th></tr>
<tr><td>SCE – Full / Partial Impairment / Inhibit / Override</td><td>Process Safety Engineer (note, the Process Safety Eng may engage the Relief TA’s approval if the SCE ODMOC involves alt relief paths/ reduced depressuring capacity)</td></tr>
<tr><td>Temp– Hardwired electrical bridges</td><td>Electrical Specialist</td></tr>
<tr><td>Temp– Deviation to normal mode / procedure</td><td>Facilities Engineer</td></tr>
<tr><td>Temp – non-SCE Faulty Instrument</td><td>Instrument Specialist</td></tr>
</table>
</td>
</tr>
</table>

		Temp– Software Force	**Automation Specialist**
		Temp – Rotating Equipment	**Rotating Equipment Engineer**
		Document/ Procedural Deviation - HSE	**HSE Advisor**
		Document/ Procedural Deviation – Maintenance & Ops	**Facilities Engineer**
		Temp Change – Deviations to Eng Std/Specs/Codes/Practices	**Relevant TA**
		CTO - Competency to Operate	**Operations Superintendent**
		Once the risk assessment is reviewed and endorsed by the relevant TA, the ODMOC requires Operations approval to formally place into operation. The level of approval required to operate with the Operational Deviation is hierarchical and will vary depending on the residual risk ranking assigned during the risk assessment process. Deviation approvals are embedded within the workflow and in line with ABU risk management guidelines.	
Activity Ends			
6.	Let's look at an event that highlights importance of ODMOC.	Why ODMOC is important?	
7.	At Buncefield (UK) in 2005, during gasoline storage tank fill operations, safety systems failed, releasing 300 tonnes of gasoline over 30 minutes. Flammable vapours spread 250 meters around the tank and ignited, causing a powerful explosion that devastated the	**Buncefield Explosion, UK (2005)**	

	fuel depot. The incident, occurring on a Sunday morning, resulted in 43 injuries but no fatalities. The key issues were that the automatic tank gauging system on the tank was faulty, and an independent high-high level switch installed in July 2004 was left inoperable following testing. Proper overfill protection could have prevented the incident. This highlights the importance of recognizing and managing risks through the Operation Deviation MOC process.	 Key Issues: • The automatic tank gauging system on the tank was faulty • An independent high-high level switch installed in July 2004 was left inoperable following testing • There was a normalisation of deviation at the facility with no risk assessment or mitigation of the impaired tank gauging system	
8.	Recognising impaired equipment and formally assessing risks and controls required to manage risks is important and at ABU is managed via ODMOC.	Uncontrolled “deviations” to equipment, process and procedures have been associated with past plant incidents, particularly where there was a tendency to normalise the deviation or improperly identify and manage the risks introduced by the deviation / abnormal operating condition.	

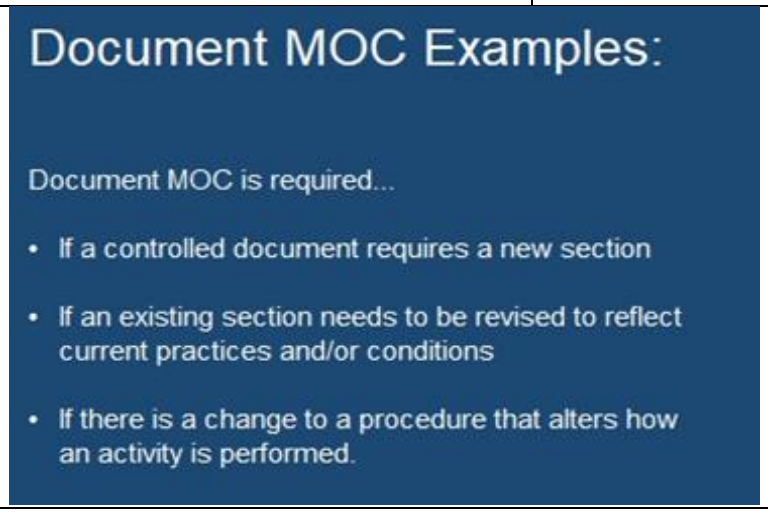
<table>
<tr><td></td><td></td><td>The Operational Deviation MOC process is used to identify, record, manage, and mitigate operational risks and temporary deviations during normal plant operations. It is a key part of process safety management and the Operating Integrity framework at ABU.</td><td></td></tr>
<tr><td>9.</td><td>Let’s look at the differences between Temp SMOC (Engineering/Physical change) and ODMOC (Plant Operational Risks).</td><td colspan="2"><table>
<tr><th>Temp SMOC (Engineering/Physical change)</th><th>ODMOC (Plant Operational Risks)</th></tr>
<tr><td>Temp additions/modifications of plant equipment systems</td><td>Impaired Safety Critical Element</td></tr>
<tr><td>Temp changes to equipment/piping materials</td><td>Operation outside of procedures / operating windows</td></tr>
<tr><td>Temp change to design basis</td><td>Temporarily operating with inhibited / bypassed equipment</td></tr>
<tr><td>Introduction/removal of temporary equipment</td><td>Change in normal process plant operating configuration.</td></tr>
</table></td></tr>
<tr><td>10.</td><td>Let's evaluate your grasp of the concepts.</td><td colspan="2">1.Can you identify whether these statements are examples of Temporary SMOC or ODMOC or Short Term Inhibits Register?

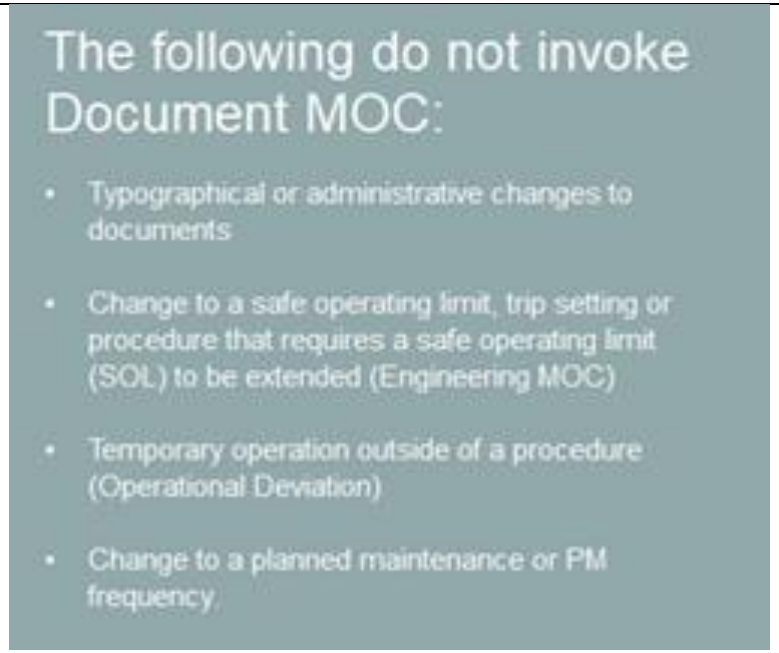
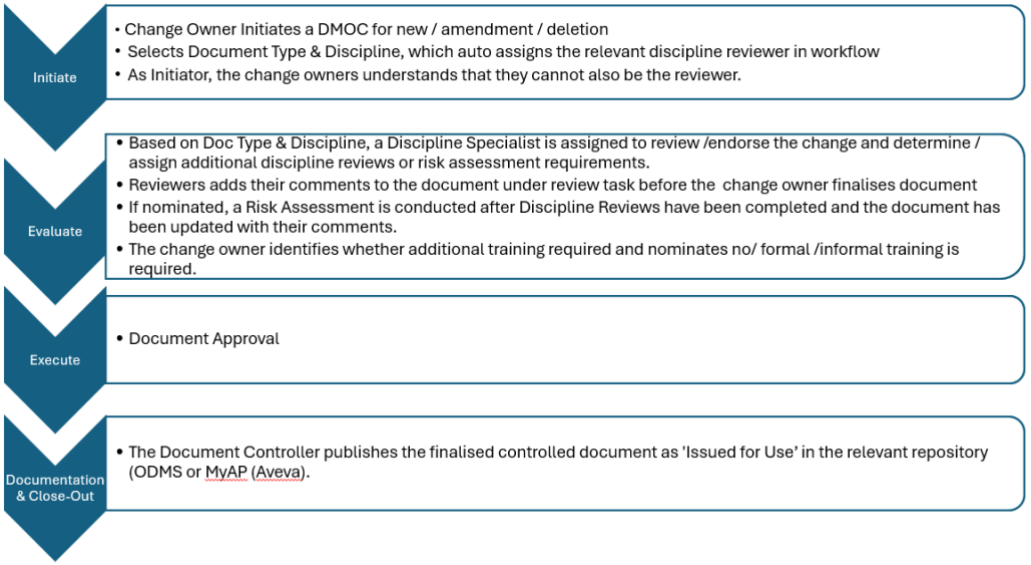
Select the radio buttons to mark the statements either Standard MOC or Like for Like and Submit.<table>
<tr><th></th><th>Temp SMOC</th><th>ODMOC</th><th>STI Register</th></tr>
<tr><td>Use of temporary hire compressor hooked into plant*?</td><td></td><td></td><td></td></tr>
<tr><td>Temporary install of a pipe clamp?</td><td></td><td></td><td></td></tr>
<tr><td>Application of an override or bypass for maintenance activities that is of Low RR and less than a shift duration.</td><td></td><td></td><td></td></tr>
</table></td></tr>
</table>

		Safety related shutoff valve operating slower than design **	
		* Yes, this would be an example of Temporary SMOC, as it involves the introduction of temporary equipment that alters the process plant's configuration, albeit for a short duration. Temporary measures like these require careful evaluation and adherence to safety protocols to ensure no adverse impact on the plant's operations or ignition risks. Ensuring that the temporary compressor meets all safety and operational standards is crucial before integrating it into the plant. Documentation and proper authorisation are also necessary to track this change and revert to the original configuration after its use. ** Yes, that is correct, ODMOC ensures operating risk is managed and visibility exists until repaired. **2.**Select the correct statement with regards to ODMOC risk assessment? (a) A minimum of two risk assessors are required for ODMOC's • Operational Deviation Change Owner, and an • Operations Representative (b) An Operations Specialist is required for residual risks rated as medium or greater (c) Relevant discipline engineers / specialists should be engaged as appropriate or required. (d) all of the above are correct requirements	
11.	Click on Short Term Inhibit Examples and Exclusions to learn more. Will go under slide 6 of this ODMOC module	Click on Short Term Inhibit Examples and Exclusions to learn more. • Examples • Exclusions	*Tab activity*
12.		***Examples***	
13.		• ½ hr outage of FWM to repair a valve • Investigate / repair level transmitter < shift • Monthly Building F&G detection • Repair / Calibrate Faulty Tx	

		• Inhibit Fire Suppression System to enable core idle inspections less than a shift duration • Opening manual bypasses around a control valve to allow a control valve or shut-off valve (XV) to be stroked • Erratic Gas Detector • ½ hr Outage of fast response vehicle • LT MOS to inhibit interlock to allow final element CFT stroke test of XV	
14.		***Exclusions***	
15.		• A Level Transmitter MOS extends beyond shift duration as troubleshooting revealed fault requiring repair • MOS to 0HV-24094 to open / close valve as part of isolation requirements whilst maintenance carried out on 0LA-2402 (exceeded shift duration) • GE Force on 2TC1421 to prevent step to idle (not routine, exceeded shift duration) • apply MOS to LT for SDP Investigation (not routine, Med Risk).	
16.		***Activity ends***	
<Go to 002-6>			

Topic	**Management of Change (MOC)**	**Screen type**	Blended
Screen Title	*Document MOC (DMOC)*	**Screen number**	006

No.	**Audio/VO**	**ON SCREEN TEXT**	**Visuals and Development instructions**
1.	Document changes include alteration to any new or existing controlled document or procedure.	Document changes include: • Alteration to any new controlled document • Alteration to any existing controlled document or procedure	*Build the screen in sync with the VO.*
2.	Controlled documents include, but are not limited to ABU Functional Team procedures, associated Check Sheets and Forms, Standards or Manuals.	Controlled Documents → ABU Functional Team Procedures + Check Sheets and Forms + Standards or Manuals	
3.	This includes, but is not limited to, any changes to departmental procedures or facility operations procedures such as electronic operating documents and work instructions.		
4.	Examples of when Document MOC is required.		

5.	Let's look at events which do not invoke DMOC.	
6.	The Document Management of Change (DMOC) process flow diagram provides a clear overview of its workings. Let's break down each step to get a better understanding.	
7.	Each DOCMOC submission will invoke a Discipline Specialist to review & approve the	

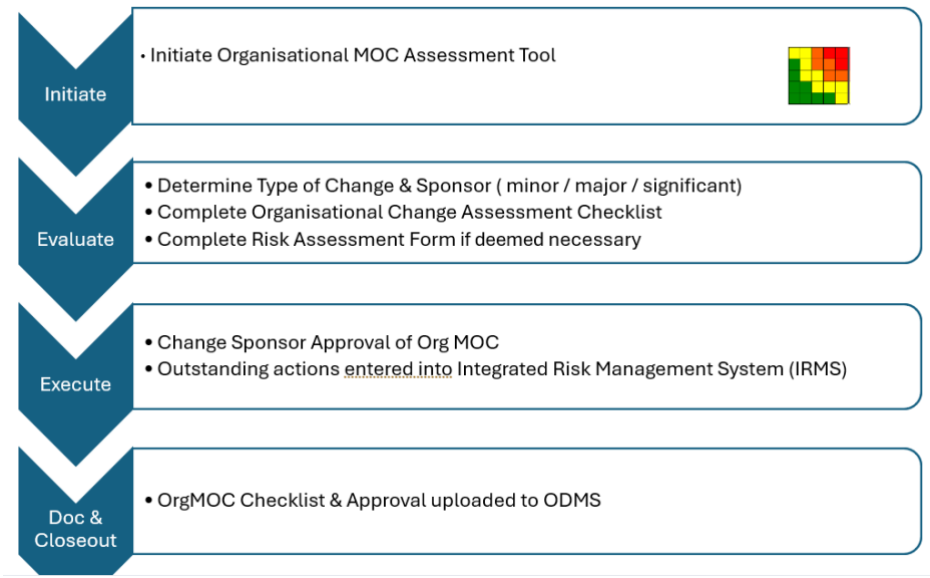
<table>
<tr><td></td><td>change or new document. The discipline specialist is auto assigned based on MOC document discipline and has the opportunity to seek a risk assessment or additional reviewers for the MOC. Following this, a final approver is engaged to endorse the change, verifying all necessary reviews have been conducted.</td><td colspan="2"></td></tr>
<tr><td>8.</td><td>For more information, refer to Document Management of Change Procedure.</td><td>ABUE-000-SF-N05-C-0003: Document Management of Change Procedure</td><td></td></tr>
<tr><td>9.</td><td>Now, let’s check your understanding of events that invoke Document MOC. Given here are some statements. Could you try to identify which events invoke Document MOC?</td><td colspan="2">1.Can you identify which events invoke Document MOC?

Select the radio buttons to mark Engineering, Operational Deviation, Document, or Organizational and Submit.

<table>
<tr><th>Question Text</th><th>Document MOC</th><th>Not Document MOC</th></tr>
<tr><td>Typographical or administrative changes to a document.</td><td></td><td></td></tr>
<tr><td>A new section added to a controlled document.</td><td></td><td></td></tr>
<tr><td>A change to an operating procedure that alters how an activity is performed.</td><td></td><td></td></tr>
<tr><td>Permanent change to an alarm setting (not a trip setting) within a SOL.</td><td></td><td></td></tr>
</table></td></tr>
<tr><td>9.</td><td></td><td>3.The role of the Discipline specialist, at the Evaluate stage, includes determining if a risk assessment is required for the proposed changes.</td><td></td></tr>
</table>

		State whether this is true or false. • **True** • False	
<Go to 002-6>			

Topic	Management of Change (MOC)		Screen type	Blended
Screen Title	*Organisational MOC (ORGMOC)*		Screen number	007
No.	**Audio/VO**	**ON SCREEN TEXT**	**Visuals and Development instructions**	
1.	Organisational MOC applies to all ABU organisational changes affecting HSE Critical Positions. An effective Organisational Management of Change (MOC) system ensures that Health, Safety, and Environmental (HSE) risks associated with changes in critical positions are managed before, during, and after these key changes.	An effective Org MOC system ensures HSE risks related to changes in critical positions are managed prior to, during and following key changes to HSE critical positions.	*Build the screen in sync with the VO.*	
2.	These changes must be managed via the Organisational MOC process.	**ABU Organisational Changes** to HSE **Critical Positions → Managed via Organisational MOC Process**		
3.	These include, but are not limited to modification to existing organisational structure, reporting relationship or staffing levels, consolidation of roles or functions, etc.			
4.	For more information regarding *Organisational Management of Change Procedure*, please refer to the document.	*Organisational Management of Change Procedure* Document: *ABUE-000-SF-N05-C-00006*		
5.	Let's look at some examples of Organisational MOC.	Organisational MOC Examples: • Changes to individuals fulfilling HSE Critical positions (personnel replacement, reporting line changes, or substantive changes to responsibilities). • Introduction, removal and/or consolidation of any individual HSE critical position. • Alteration to the organisational structure of an entire department or function* • Alteration to the physical location where a department or functional group is based.* *Includes non-HSE critical positions and functions. Refer to document ABUE-000-SF-N05-C-00006 for more information.		

6.	The Organizational Management of Change (ORGMOC) process flow diagram gives you a good overview of how it all works. Let's dive into each step to understand it better.		
7.	Let's examine a tragic event that underscores the critical importance of organizational Management of Change (ORGMOC).	Esso Longford Explosion & Fire (1998)	
8.	In 1998, at the Esso Longford gas plant in Victoria, Australia, a brittle fracture in a heat exchanger led to a catastrophic failure and rupture. This caused a significant loss of containment, resulting in a vapor cloud that ignited into a devastating explosion and fire. The explosion claimed the lives of two workers and injured eight others. Investigations revealed that the low temperature, caused by the loss of lean oil, was a critical factor in the heat exchanger's failure and the failure to conduct an organisational Management of Change (MOC) process when senior engineering staff were relocated to the head office in Melbourne several years earlier.	 (Image referenced from the internet) 	

<table>
<tr>
<td></td>
<td>This oversight meant that crucial expertise was not available on-site, contributing to the disaster.</td>
<td>Key Findings
• Low temperature due to loss of lean oil
• Failure to conduct Org MOC for relocating senior staff to head office several years earlier</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Now, let’s check your understanding of the types of change. Given here are some statements. Could you try to identify which type of change each statement belongs to?</td>
<td colspan="2">1.Can you identify which type of change each statement belongs to?

Select the radio buttons to mark Engineering, Operational Deviation, Document, or Organizational and Submit.
<table>
<tr><th>Question Text</th><th>SMOC (Engineering change)</th><th>Operational Deviation</th><th>Document</th><th>Organizational</th></tr>
<tr><td>Temporary deviation from the way equipment is usually operated, according to established procedures or performance standards.</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Changes to reporting relationships for HSE Critical Positions or staffing levels, individual HSE Critical roles that increase or change responsibilities or the consolidation of departments and service groups.</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Any maintenance that results in a modification, or temporary equipment which becomes permanent equipment.</td><td></td><td></td><td></td><td></td></tr>
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</td>
</tr>
</table>

		Any change to a controlled document such as a procedure.					
<Go to 002-6>							

Topic	Management of Change (MOC)		Screen type	Blended
Screen Title	*QUIZ*		Screen number	008
No.	**Audio/VO**	**ON SCREEN TEXT**	**Visuals and Development instructions**	
1.	This quiz will help us evaluate what you have learned with final wrap-up questions on the overall MOC intent and responsibility.			
2.		1. Who does the MOC process apply to? a) Only COP ABU employees b) Only contractor employees **c) All COP ABU and contractor employees involved in the operation, maintenance, engineering, or modification of processes or equipment** d) None of the above		
3.		2. As a change owner what are my accountabilities?		

		a) Overseeing the progression & maintaining compliance with the MOC SAP workflow and ensuring all MOC requirements & deliverables are met during each phase. b) Subject matter expert for the proposed change c) Ensures the Change is communicated, and appropriate training of affected parties has been completed **d) All of the above**	
4.		3. What changes does OrgMOC apply to? **a) HSE Critical Position Changes Only** b) All Personnel Changes c) All positions acting in roles	

Topic	Course Completion Screen		Screen type	
Screen Title	*Thank you*		Screen label	009
No.	**Audio/VO**	**ON SCREEN TEXT**	**Visuals and Development instructions**	
	Standard course completion screen	***Thank You and Congratulations!*** ***You have completed the Management of Change Awareness Module.*** *Process Safety is* ***Everyone's*** *responsibility!*