

Client: ConocoPhillips Australia Business Unit (ABU)

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

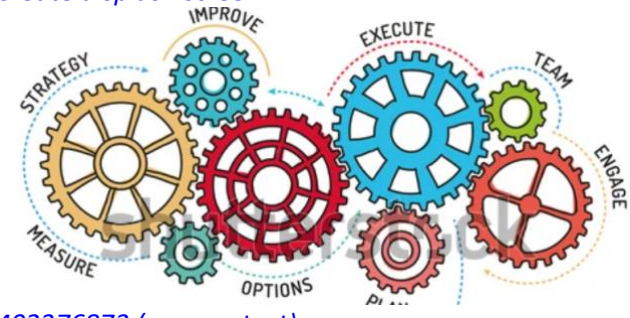
Version History:



Version No.	Edited By	Date	Remarks
001	Sheetal Mehta	January 3, 2025	Framework SB creation
002	Sheetal Mehta	March 13, 2025	SB creation
003	Sheetal Mehta	March 28, 2025	SB updates

Please refer to *conocophillips_ABU Management of Change (MOC) Awareness Module_ 2024 Review_ FINAL_for Learning Factor.pptx* for images.

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Topic		Management of Change (MOC) Awareness for Downstream Operations (DSO)	Screen type	Image
Screen Title		<splash screen>	Screen number	010A
No.	Audio/VO	On Screen Text	Visuals and Development instructions	
1.	Welcome to the Conoco Phillips Management of Change (MOC) Awareness training.	Management of Change (MOC) Awareness Training	<p><i>Create a splash screen.</i></p>  <p><i>402376873 (remove text)</i></p>	
2.	Click on the start button to begin.	Start		


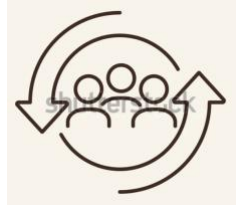

Topic		Management of Change (MOC) Awareness for Downstream Operations (DSO)	Screen type	Image
Screen Title		Introduction	Screen number	010
No.	Audio/VO	On Screen Text	Visuals and Development instructions	
1.	In today's dynamic industrial landscape, the ability to effectively manage change is crucial for maintaining operational integrity and safety.		<p><i>Display the image with camera spanning from left to right slowly in sync with VO.</i></p>  <p><i>APLNG Image of whole site and ship in forefront.</i></p>	
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.		<p><i>Transition to a closer view of the building.</i></p>  <p><i>APLNG Image of viewing platform</i></p>	
3.	This module will equip you with the knowledge and skills needed to understand Management of Change (MOC).		<p><i>Transition to an interior shot of the control room inside the building.</i></p>	







APLNG Image of control room

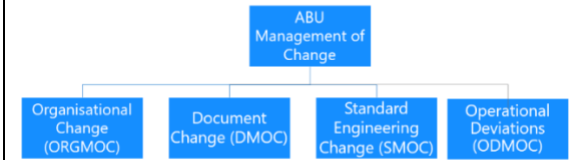
<next>

Topic		Management of Change (MOC) Awareness for Downstream Operations (DSO)		Screen type	Image and text
Screen Title		Learning Objectives		Screen number	020
No.	Audio/VO	On Screen Text	Visuals and Development instructions		
1.	<p>By the end of this module, you will be able to:</p> <ul style="list-style-type: none">• 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	<p>By the end of this module, you will be able to:</p> <ul style="list-style-type: none">• 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	<p><i>Display OST in sync with VO.</i></p> <p><i>Design Learning Objective screen.</i></p>		
<next>					



Topic		Management of Change (MOC) Awareness for Downstream Operations (DSO)	Screen type	Blended
Screen Title		Management of Change (MOC)	Screen number	030
No.	Audio/VO	ON SCREEN TEXT	Visuals and Development instructions	
1.	What is MOC?	What is MOC?	<p><i>Display OST.</i> <i>Typography</i> <i>Global for all questions.</i></p>	
2.	Management of Change (MOC) is about making sure that any changes to the plant, process, personnel, or procedures are carefully assessed.	Management of Change (MOC)	<p><i>Create similar animated icon cloud using icons given below for VO.</i></p> <p><i>Shutterstock image id: 1106263299</i> <i>(Video for reference only)</i></p>  <p><i>2436706307</i></p>  <p><i>1387806620</i></p>  <p><i>2500557017</i></p>	
3.	<p>It's crucial to assess these changes to:</p> <ul style="list-style-type: none"> Minimise the risk of hazardous situations that could result from temporary and permanent changes to process operations and / or facility configuration. Ensure process changes or facility modifications do not compromise the 	<p>It's crucial to assess these changes to:</p> <ul style="list-style-type: none"> Minimise the risk of hazardous situations from changes to process operations or facility configuration Ensure process changes or facility modifications do not compromise the safeguards built into the design or introduce unknown hazards Identify any potential operational risks introduced by the change 	<p><i>Display OST in sync with VO.</i> <i>Infographic.</i></p>	

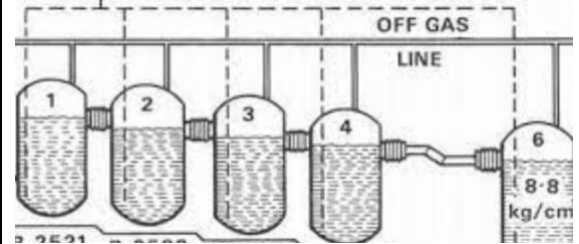
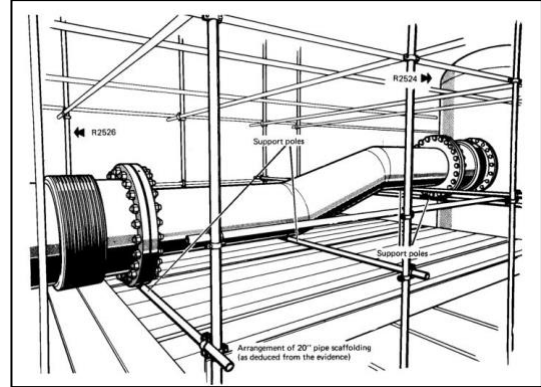

	<p>safeguards built into the design or introduce unknown hazards.</p> <ul style="list-style-type: none"> Identify any potential operational risks introduced by the change. Ensure that these risks are managed as far as is reasonably practicable and throughout the entire lifecycle of the change, including initiation, implementation, and close out. 	<ul style="list-style-type: none"> Ensure that these risks are managed as far as is reasonably practicable and throughout the entire lifecycle of the change 	
4.		MOC provides for identification, risk assessment, authorisation, communication and documentation of changes in order to avoid potential major incidents or other unwanted operational incidents.	<p><i>Refresh screen.</i></p> <p><i>Typography:</i></p> <p><i>Highlight with a bold font and a different colour.</i></p> <p><i>Use a border or background shading to make OST stand out.</i></p>
5.	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.	<p><i>Display OST in sync with VO.</i></p>  <p>2427685747</p>
6.	<p>Let's take a look at MOC Process Workflow. The flow chart guides you through the broad steps of a process workflow for Management of Change.</p> <p>The sub points are examples depending on the type of MOC initiated.</p>	<p>MOC Process Workflow</p> <ul style="list-style-type: none"> Create Evaluate Execute Closeout <p><i>Select each step of the process workflow to learn more.</i></p>	<p><i>Clickable infographic flip card activity.</i></p> <p><i>Display OST and the respective icons on the front.</i></p>  <p>2519013597(Remove numbers)</p> 




			1688952 019 (for 1 st bullet point)	1048277 092 (for 2 nd bullet point)	2227791 681 (for 3 rd bullet point)	1369705 136 (for 4 th bullet point)
Create						
7.		<ul style="list-style-type: none">Initiate Type of MOC required including all relevant document/ design documentation attached				
Evaluate						
8.		<ul style="list-style-type: none">Discipline Reviews to assess that changes are adequately engineered, meet applicable design standards and satisfy the intent and basis of the required change				
Execute						
9.		<ul style="list-style-type: none">Pre-Start Safety Review (PSSR) RequirementApproval to Start-Up (Operations)Record Start-Up DateDocument Approval				
Closeout						
10.		<ul style="list-style-type: none">Upload of affected Redlines/BlacklinesVerify all Docs updated and latest revision on ODMS				
Activity Ends						
11.	<p>For more information or assistance regarding the MOC workflow, contact the Process Safety Team or visit the Process Safety Engineering SharePoint site to access FAQs and guides.</p> <p>To access the Process Safety SharePoint site, go to 'The Mark' homepage, scroll to the bottom, and click on 'ABU East OMS'.</p>	<p>For more information regarding the MOC workflow, contact the Process Safety Team or visit the Process Safety Engineering SharePoint site to access FAQs and guides.</p>	<p><i>Highlight 'The Mark' and 'ABU East OMS' in sync with VO.</i></p> <p><i>Guide to access the Process Safety SharePoint site</i></p> <p>To access the Process Safety SharePoint site</p> 			
12.	<p>Let's check what you have learned so far. Select the correct option and submit.</p>	<p>1.What do you think is the purpose of Management of Change?</p> <p>a) To manage HS&E risks associated with changes to plant, people and procedures</p>	<p><i>Display OST.</i></p> <p><i>MCQ</i></p> <p><i>Answer is in bold.</i></p>			



		<p>b) To ensure risks associated with changes are identified, managed and mitigated</p> <p>c) To ensure risks associated with change are identified and managed throughout the lifecycle of the change</p> <p>d) All of the above</p>	<p><i>Right answer:</i> <i>That's correct.</i></p> <p>The purpose of Management of Change is to manage HS&E risks associated with changes to plant, people, and procedures. It ensures that risks associated with changes are identified, managed, and mitigated throughout the lifecycle of the change.</p> <p><i>Wrong answer:</i> <i>That's incorrect.</i></p>
13.	<p>There are four categories involved in the Management of Change at ABU. Each of these categories has its own procedure, which provides guidance on executing and managing the respective MOC processes and applies to all COP employees and contractors working at any COP ABU-operated facility.</p> <p>Select each category to learn more.</p>	<p>ABU Management of Change</p> <ul style="list-style-type: none"> Standard Engineering Change (SMOC) (Go to 040) <ul style="list-style-type: none"> Temporary SMOC (SMOC) Operational Deviations (ODMOC) (Go to 050) <ul style="list-style-type: none"> Short Term Inhibits Register Document Change (DMOC) (Go to 060) Organisational Change (ORGMOC) for HSE Risks (Go to 070) <p><i>Select each category to learn more.</i></p>	<p><i>Tab Activity</i> <i>This is the landing screen.</i> <i>Build below given clickable flowchart in sync with VO.</i> <i>When learner clicks a tab, they are taken to a new screen (In the bracket of bullet points OST) with corresponding information.</i> <i>The learner must click on each tab before this topic is completed.</i></p>  <pre> graph TD A[ABU Management of Change] --> B[Organisational Change (ORGMOC)] A --> C[Document Change (DMOC)] A --> D[Standard Engineering Change (SMOC)] A --> E[Operational Deviations (ODMOC)] </pre> <p><i>Note: Text in the bracket not to be displayed on the screen</i></p>















<next>

Topic		Management of Change (MOC) Awareness for Downstream Operations (DSO)	Screen type	Blended
Screen Title		Standard MOC (SMOC) for Engineering Changes	Screen number	040
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?	<i>Display OST.</i> <i>Typography</i>	
2.	<p>On June 1, 1974, during a routine inspection at the Nypro chemical plant in Flixborough, in the rural part of Northern England,</p> <p>reactor 5 was found to have developed a crack. To address this issue, production was halted, and reactor 5 was removed for repairs.</p>	Flixborough Explosion (1974), UK	<i>Refresh screen.</i> <i>Display OST and the image (in black and white) in sync with 1st para of VO.</i>  <p>2283250743</p> <i>Create a Reactor image like the images given below in sync with 2nd para of VO.</i>  <p>(For reference only)</p>	


			 <p>(For reference only)</p>
3.	<p>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.</p> <p>To support the weight of the pipe, a nest of scaffolding was erected beneath it.</p>		<p>Refer slide 6 for image.</p> <p>Fade in image. Zoom on bypass pipe in sync with 1st para of VO.</p>  <p>Zoom out from the pipe to show scaffolding in sync with 2nd para of VO.</p>
4.	<p>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.</p> <p>What do you think would have led to such a disaster?</p>		<p>Refer slide 6 for image.</p> <p>Fade out the image.</p> <p>Fade in the image in sync with VO.</p> 


5.	<p>The plant modification occurred without full assessment of the potential consequences:</p> <ul style="list-style-type: none"> • 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 not followed • Design Codes for pipework not adhered to, including the use of flexible pipes 	<p>Key Findings:</p> <ul style="list-style-type: none"> • 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 not followed • Design codes for pipework not adhered to, including the use of flexible pipes 	<p><i>Retain the screen.</i> <i>Blur the image.</i> <i>Display OST in sync with VO.</i></p>
6.		<p>Poor management & control of changes to plant and process increase risk to plant people and environment.</p>	<p><i>Refresh screen.</i> <i>Typography:</i> <i>Highlight with a bold font and a different colour.</i> <i>Use a border or background shading to make OST stand out.</i></p>
7.	<p>Standard <i>Engineering</i> Change applies to any change to process, chemicals, technology, or equipment, as specified by current design and / or specifications except for a change that is a like-for like replacement.</p>	<p>Standard Engineering Change applies to any change to:</p> <ul style="list-style-type: none"> • Process • Chemicals • Technology • Equipment <p>Standard Engineering Change does not apply to like-for-like replacements.</p>	<p><i>Refresh screen.</i> <i>Display OST along with their respective icons in sync with VO.</i></p> <div>  <p>2481035915</p> </div> <div>  <p>2427247103</p> </div> <div>  </div>

			<p>1907618299</p>  <p>161727344</p>
8.	Before exploring some Standard Engineering MOC examples, let's look at the WHRU project executed under an approved SMOC.	WHRU project executed under an approved SMOC	<p><i>Display OST and the image.</i></p> 
9.	<p>Examples of engineering changes include, but are not limited to:</p> <ul style="list-style-type: none"> • 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. 	<p>Standard Engineering MOC Examples</p> <ul style="list-style-type: none"> • 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 	<p><i>Retain the screen.</i></p> <p><i>Move the image to the left side of the screen.</i></p> <p><i>Display OST on the right side in sync with VO.</i></p>

	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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, feedstocks, or product that fall outside unit design specifications Changes to set points or operating limits (pressures, temperatures, densities, flow-rates, etc.) that differ from the original safe operating limits and mechanical design 	  <p>Images</p>								
10.	For more information, refer to document: <i>ABUE-000-SF-N05-C-00005: Engineering Management of Change Procedure</i>	Refer to document: <i>ABUE-000-SF-N05-C-00005: Engineering Management of Change Procedure</i>									
11.	<p>The Standard Engineering MOC (SMOC) process flow diagram provides an overview, with the following points detailing each step.</p> <p><i>Click on the icons to learn more.</i></p> <p>Click on the link for a quick view highlighting SMOC workflow and key steps at each phase.</p>	<p>Standard Engineering MOC (SMOC) Process Flow</p> <ul style="list-style-type: none"> Initiate Evaluate Execute Document & Close out <p><i>Click on the icons to learn more.</i></p> <p><i>Click on the link for a quick view highlighting SMOC workflow and key steps at each phase.</i></p>	<p><i>Display OST in sync with VO.</i> <i>Refer slide 8.</i> <i>Tab activity.</i> <i>Display OST and their respective icons in sync with VO.</i> <i>When a tab is clicked, it expands to open into a pop-up box with a close (X) button on the top-right corner.</i></p> <table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>16889520 19 (for 1st bullet point)</td> <td>10482770 92 (for 2nd bullet point)</td> <td>22277916 81 (for 3rd bullet point)</td> <td>13697051 36 (for 4th bullet point)</td> </tr> </table>					16889520 19 (for 1 st bullet point)	10482770 92 (for 2 nd bullet point)	22277916 81 (for 3 rd bullet point)	13697051 36 (for 4 th bullet point)
											
16889520 19 (for 1 st bullet point)	10482770 92 (for 2 nd bullet point)	22277916 81 (for 3 rd bullet point)	13697051 36 (for 4 th bullet point)								

Initiate			
12.	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.	The proposed change is submitted for review and approval. The finalised design, along with all affected design documentation/plant information/records, and drawings, is updated and attached to reflect the proposed change.	
Evaluate			
13.	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.	Before construction can commence, the evaluation stage must be completed. This involves ensuring that all relevant disciplines have reviewed and endorsed the change, and that the Engineering Manager's Approval to Construct is secured.	
Execute			
14.	Construction is completed 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	Once construction is completed and prior to start-up, the change owner must ensure the PSSR requirement step is completed. The PSSR is important to ensure the facility is ready for safe start-up and ongoing operations. As the change owner, you must also ensure the start-up date is formally recorded.	
Document & Close Out			
15.	This is the final phase of the change, where all documentation is managed and plant information is updated to reflect the change. The change owner is responsible for ensuring the MOC progresses through the closeout process, verifying that all post start-up actions are completed and all document update tasks are confirmed as complete.	All documentation is managed, and plant information is updated to reflect the change. The change owner is responsible for ensuring the MOC progresses through the closeout process, verifying that all post start-up actions are completed and all document update tasks are confirmed as complete.	
Activity Ends			

16.	<p>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.</p> <p>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.</p>	<p>Temporary SMOC Change</p> <p><i>Click the photo to learn more about temporary changes.</i></p> <ul style="list-style-type: none">• Higher Short-Term Risk• Identify and implement Risk Mitigation measures	<p><i>Display OST and the image.</i></p>  <p>shutterstock 1430400629</p> <p><i>Place the photo horizontally and show the instructional text below it. When the learner clicks the photo, reveal the bullet points below the photo as shown in sync with the audio.</i></p> <table border="1"><tr><td colspan="2"><i>Photo</i></td></tr><tr><td colspan="2"><i>Click the photo to learn more about temporary changes.</i></td></tr><tr><td>•</td><td>•</td></tr></table>	<i>Photo</i>		<i>Click the photo to learn more about temporary changes.</i>		•	•
<i>Photo</i>									
<i>Click the photo to learn more about temporary changes.</i>									
•	•								
17.	<p>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.</p> <p>Let's take a look at some examples of Temporary SMOC.</p> <p>Click on the Temporary SMOC Examples button to learn more.</p>	<p>Before the authorised temporary change implementation period expires, one of the following must occur:</p> <ul style="list-style-type: none">• The system must be returned to its original condition/reversed• The MOC must be made permanent, with affected documentation updated and approval from discipline leads/approving authorities obtained• The change extended via escalated approvals through Operations Management	<p><i>Display OST.</i></p> <p><i>A 'Temporary SMOC Example' button will be shown at the end.</i></p> <p><i>The user will be able to click the button to see the information below in a pop up with a close button.</i></p> <p>Temporary SMOC Examples</p>						

		<p><i>Click on the Temporary SMOC Examples button to learn more.</i></p>	<p>Use of a temporary effluent tank and associated piping whilst replacing the permanent tank</p> <p>Use of temporary equipment for purging for shutdown or startup of equipment.</p> <p>Trial involving the Installation and Operation of wireless pressure transmitters</p> <p>Temporary isolation of a drain line by spading with a flange until repaired</p> <p>Trial lube oil compressor alternative cooler belt type</p> <p>Any temporary additions such as piping, utility connections, or electrical equipment or connections</p>
18.	<p>Here's the FLNE New Gangway executed under an approved SMOC.</p> <p>Now, let's look at one more event that highlights importance of SMOC.</p>	FLNE New Gangway	<p><i>Display OST and the image.</i></p> 
19.	<p>In 2001, a catastrophic failure occurred at the Humber Refinery due to a ruptured pipe.</p> <p>The rupture released a massive cloud of ethane/propane, which ignited, causing a massive explosion and fire.</p>	UK Humber Refinery Explosion & Fire (2001)	<p><i>Refresh screen.</i></p> <p><i>Display OST and the image in sync with VO (1st para).</i></p> <p>1668330391</p>

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



Fade out image.



(Refer slide 11) Fade in above image in sync with VO (2nd para).

Fade out image.



*(Refer slide 11) Fade in above image in sync with VO (3rd para).
Fade out image.*






*(Refer slide 11) Fade in above image in sync with VO (4th para).
Fade out image.*

















			<i>(Refer slide 11) Fade in above image in sync with VO (5th para).</i>		
20.		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.	<i>Refresh screen.</i> <i>Typography:</i> <i>Highlight with a bold font and a different colour.</i> <i>Use a border or background shading to make OST stand out.</i>		
21.	Let's check how well you have grasped the concepts.	1.Can you identify whether these statements are examples of Standard MOC or Like for Like? <i>Select the radio buttons to mark the statements either Standard MOC or Like for Like and Submit</i>	<i>Question Text</i>	<i>Standard MOC</i>	<i>Like for Like</i>
			Changes to equipment, piping or their materials.		
			Bolts, gaskets and flanges meeting the piping specification.		
			Additions/modifications of plant equipment, process and associated systems.		
			<i>Right answer:</i> <i>That's correct.</i> Changes to equipment, piping, or their materials, and additions/modifications of plant equipment, processes, and associated systems are examples of Standard MOC. Bolts, gaskets, and flanges meeting the piping specification are examples of Like for Like. <i>Wrong answer:</i> <i>That's incorrect.</i>		

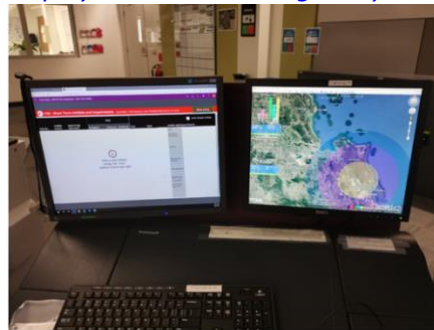
22.		<p>2. Prior to commencing construction/execution, whose approval to construct is required?</p> <p>(a) None</p> <p>(b) Engineering Manager</p> <p>(c) Operations Start-up Approval</p>	<p><i>MCQ</i></p> <p><i>Answer is in bold.</i></p> <p><i>Right answer:</i> <i>That's correct.</i></p> <p>Prior to commencing construction/execution, the Engineering Manager's approval to construct is required.</p> <p><i>Wrong answer:</i> <i>That's incorrect.</i></p>
23.		<p>3. Who is accountable for ensuring the relevant SAP MOC workflow tasks are completed before execution or start up commences?</p> <p>(a) Discipline Leads, who technically review and approve the change proposal</p> <p>(b) The Change Owner/MOC Coordinator</p> <p>(c) Engineering Manager</p>	<p><i>MCQ</i></p> <p><i>Answer is in bold.</i></p> <p><i>Right answer:</i> <i>That's correct.</i></p> <p>The Change Owner/MOC Coordinator is accountable for ensuring that the relevant SAP MOC workflow tasks are completed before execution or startup commences.</p> <p><i>Wrong answer:</i> <i>That's incorrect.</i></p>
24.		<p>4. Before starting up an SMOC, the change owner must ensure the following requirements are met?</p> <p>(a) <i>Operations start-up approval</i> obtained from GFM</p> <p>(b) PSSR completed</p> <p>(c) Both a and b</p>	<p><i>MCQ</i></p> <p><i>Answer is in bold.</i></p> <p><i>Right answer:</i> <i>That's correct.</i></p> <p>Before starting up an SMOC, the change owner must ensure that the Operations start-up approval is obtained from GFM and that the PSSR is completed.</p> <p><i>Wrong answer:</i> <i>That's incorrect.</i></p>


25.	Let's check your understanding further.	<p>5.Can you identify when do you need to perform a PSSR?</p> <p>Select the radio buttons to mark the statements either PSSR Required or PSSR Not Required and Submit.</p>	<table><tr><th>Question Text</th><th>PSSR Required</th><th>PSSR Not Required</th></tr><tr><td>Any physical change or modification is made to the facility.</td><td></td><td></td></tr><tr><td>Returning a temporary change to original design.</td><td></td><td></td></tr><tr><td>Starting up de-commissioned equipment.</td><td></td><td></td></tr></table> <p>Right answer: That's correct.</p> <p>A PSSR is performed when any physical change or modification is made to the facility, when returning a temporary change to the original design, and when starting up de-commissioned equipment.</p> <p>Wrong answer: That's incorrect.</p>	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.		
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.															
26.		<p>6.Upon start-up of an SMOC, the change owner must ensure the following requirements are met?</p> <p>(a) The Start-Up date recorded</p> <p>(b) All remaining redlines submitted within 48 hrs of change implementation</p> <p>(c) Both a and b</p>	<p>MCQ</p> <p>Answer is in bold.</p> <p>Right answer: That's correct.</p> <p>Upon start-up of an SMOC, the change owner must ensure that the start-up date is recorded and all remaining redlines are submitted within 48 hours of change implementation</p> <p>Wrong answer: That's incorrect.</p>												
<Go to 030-13>															


Topic		Management of Change (MOC) Awareness for Downstream Operations (DSO)	Screen type	Blended
Screen Title		Operational Deviations MOC (ODMOC)	Screen number	050
No.	Audio/VO	On Screen Text	Visuals and Development instructions	
1.	<p>ConocoPhillips Australia (COP ABU) recognises that</p> <p>uncontrolled deviations to equipment, processes, and procedures have been linked to past industry incidents, often due to normalising deviations or failing to manage associated risks.</p>	<ul style="list-style-type: none"> Uncontrolled deviations to equipment, processes, and procedures have been linked to past industry incidents. These incidents often involved normalising deviations or failing to properly identify and manage the associated risks. 	 <p>1196644195</p>  <p>2553176399</p>  <p>1637642677</p> <p><i>Transition and animate the above three separate images into a cohesive image in sync with VO.</i></p> <p><i>Display OST in sync with VO.</i></p>	
2.	<p>Managing changes and their associated risks to normal operation is crucial for process safety and is a key part of the Operating Integrity Framework.</p>	<ul style="list-style-type: none"> Managing operational deviations is a key part of the Operating Integrity Framework. 		



			 <p>2413694241</p>
3.	<p>The Operational Deviation MOC process identifies, records, manages, and mitigates operational risks and temporary changes during normal day to day running of plant operations.</p>	<p>Operational Deviation MOC Process</p> <ul style="list-style-type: none"> • Identify • Record • Manage • Mitigate • Operational Risks • Temporary Changes • Deviations • Normal Plant Operations 	<p>Create a word cloud in sync with VO.</p>
4.	<p>Operational Deviations may be in the form of:</p> <ul style="list-style-type: none"> • 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. 	<p>Operational Deviations may be in the form of:</p> <ul style="list-style-type: none"> • 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 	<p>Display OST in sync with VO. Infographic</p>
5.	<p>Let's take a look at the Operational Deviations (ODMOC) process flow, which provides an</p>	<p>Operational Deviations (ODMOC) Process Flow</p> <ul style="list-style-type: none"> • Initiate • Evaluate 	<p>Refer slide 17.</p>


	<p>overview, with the following points detailing each step.</p> <p><i>Click on the icons to learn more.</i></p>	<ul style="list-style-type: none"> Execute Doc & Close out <p><i>Click on the icons to learn more.</i></p>	<p><i>Create a clickable infographic. OST will appear on the same screen.</i></p>  <p>2478889679</p> <table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>16889520 19 (for 1st bullet point)</td> <td>10482770 92 (for 2nd bullet point)</td> <td>22277916 81 (for 3rd bullet point)</td> <td>13697051 36 (for 4th bullet point)</td> </tr> </table>					16889520 19 (for 1 st bullet point)	10482770 92 (for 2 nd bullet point)	22277916 81 (for 3 rd bullet point)	13697051 36 (for 4 th bullet point)
											
16889520 19 (for 1 st bullet point)	10482770 92 (for 2 nd bullet point)	22277916 81 (for 3 rd bullet point)	13697051 36 (for 4 th bullet point)								
Initiate											
6.		<ul style="list-style-type: none"> Recognise deviation/faulty equipment/force/inhibit Determine if the equipment is safety critical or not Raise ODMOC, select ODMOC category, conduct a risk assessment, and verify controls 									
Evaluate											
7.		<ul style="list-style-type: none"> Risk Assessment Approval (Relevant TA) Verify risk assessment and mitigation measures to reduce risk adequate 									
Execute											
8.		<ul style="list-style-type: none"> ODMOC Approval to Place into Operation (hierarchical approvals based on residual risk rating) Record Start Up Date 									
Doc & Close out											

9.		<ul style="list-style-type: none"> Deviation Close-out/Removal 	
Activity Ends			
10.	It's Important to highlight that ABU utilises two tools for Force / Inhibit management: SAP MOC (ODMOC) & the Electronic Short Term Inhibits (STI) Register depending on the type of force / inhibit and its application.	ABU utilises two tools for Force/Inhibit management: <ul style="list-style-type: none"> SAP MOC (ODMOC) The Electronic Short Term Inhibits Register 	<i>Display OST and the image in sync with VO.</i>  <i>Refer Slide 28</i>
11.	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 that meet the following timeframe and risk criteria: <ul style="list-style-type: none"> Expected to last less than a shift duration Classified as low residual risk (RR 4) Inhibits extending beyond a shift duration or greater than a RR Score of 4 must be raised as Operational Deviations .	<i>Retain the screen.</i> <i>Display OST in sync with VO.</i>
12.	Let's look at some Short Term Inhibit Examples and Exclusions. Click on Examples and Exclusions to learn more.	Short Term Inhibit <ul style="list-style-type: none"> Examples Exclusions <i>Click on Examples and Exclusions to learn more.</i>	<i>Tab activity</i> <i>When a tab is clicked, it expands to open into a pop-up box with a close (X) button on the top-right corner.</i>
Examples			
13.		<ul style="list-style-type: none"> 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 	

		<ul style="list-style-type: none"> 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 	
Exclusions			
14.		<ul style="list-style-type: none"> A Level Transmitter MOS extends beyond shift duration as troubleshooting revealed fault requiring repair MOS to OHV-24094 to open/close valve as part of isolation requirements whilst maintenance carried out on OLA-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) 	
Activity ends			
15.	<p>After reviewing STI examples and exclusions, let's examine the Operational Deviations Risk Assessment.</p> <p>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 as far as reasonably practicable (SFARP).</p> <p>Operational Deviation Risk Assessments require a minimum number of attendees.</p>	<p>Operational Deviations Risk Assessments</p> <p>Approve Operational Deviations only after these conditions are met:</p> <ul style="list-style-type: none"> Identify effective mitigation measures to reduce the risk associated with the deviation Ensure the residual risk of operating with the deviation is reduced SFARP <p>Require a minimum of two attendees:</p> <ul style="list-style-type: none"> Operational Deviation Change Owner Operations Representative (note, an Operations Specialist is required for residual risks rated as medium or greater) Relevant discipline engineers/specialists should be engaged as appropriate or required 	<p><i>Retain the previous screen in sync with 1st VO.</i></p> <p><i>Fade out.</i></p> <p><i>Fade in header and the image in sync with 2nd VO.</i></p>  <p>2508667763</p> <p><i>Display highlighted OST as two column headers and the rest of the OST in sync.</i></p>

16.	<p>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, as the examples shown in the table.</p>	<p>For example, an SCE related deviation will automatically assign a Process Safety Engineer as the risk approver / technical authority whereas a Temporary Software force deviation will require automation approval.</p> <table><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>																													<p>Create animated table.</p> <p>An information icon will be shown at the end of the table.</p> <p>The user will be able to click the icon to see the information below in a pop up with a close button.</p> <div> SCE deviations shall always have safety consequence assessed in addition to any other Hazards identified.</div> <p>A 'Note' button will be shown at the end of OST 'Process Safety Engineer'.</p> <p>The user will be able to click the button to see the information below in a pop up with a close button</p> <p>Note:</p> <p>The Process Safety Engineer may engage the Relief TA's approval if the SCE ODMOC involves alt relief paths/reduced depressuring capacity.</p> <p>A 'Deviation Approval' button will be shown at the end of the table.</p> <p>The user will be able to click the button to see the information below in a pop up with a close button.</p> <p>Once the risk assessment is reviewed and endorsed by the relevant TA, the ODMOC requires Operations approval to be formally placed 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 are in line with ABU risk management guidelines.</p>
17.	<p>The ODMOC risk assessment must assess the most credible risk associated with operating</p>		<p>Animate a magnifying glass moving on each risk for the entire VO.</p>																												

	with the Operational Deviation in place and to identify mitigating controls (active/required) to reduce the risk SFARP.		 <p>2449570381</p>
18.	Now let's look at an event that highlights importance of ODMOC.	Why ODMOC is important?	<p><i>Typography</i></p>
19.	<p>At Buncefield (UK) in 2005, during gasoline storage tank fill operations, safety systems failed, releasing 300 tonnes of gasoline over 30 minutes.</p> <p>Flammable vapours spread 250 meters around the tank and ignited, causing a powerful explosion that devastated the fuel depot. The incident, occurring on a Sunday morning, resulted in 43 injuries but no fatalities.</p> <p>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.</p> <p>Proper overfill protection could have prevented the incident. This highlights the importance of recognizing and managing risks through the Operation Deviation MOC process.</p>	<p>Buncefield Explosion, UK (2005)</p> <p>Key Issues:</p> <ul style="list-style-type: none"> • 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 	<p><i>Refresh screen.</i></p> <p><i>Display OST (Buncefield Explosion, UK (2005)) and the upper part of the image with camera spanning from top to bottom slowly in sync with 1st para of VO.</i></p>  <p><i>Fade out the image.</i></p> <p><i>Fade in the image given below in sync with 2nd para of VO.</i></p>

			 <i>2528480339</i> <i>Blur the image and show OST in sync with 3rd and 4th para of VO.</i>																													
20.		Recognising impaired equipment and formally assessing risks and controls required to manage risks is important and at ABU is managed via ODMOC.	<i>Refresh screen.</i> <i>Typography:</i> <i>Highlight with a bold font and a different colour.</i> <i>Use a border or background shading to make OST stand out.</i>																													
21.	Let’s explore the differences between Temp SMOC (Engineering/Physical change) and ODMOC (Plant Operational Risks).	<table><tr><th><i>Temp SMOC (Engineering/Physical change)</i></th><th colspan="4"><i>ODMOC (Plant Operational Risks)</i></th></tr><tr><td>Temp additions/modifications of plant equipment systems</td><td colspan="4">Impaired Safety Critical Element</td></tr><tr><td>Temp changes to equipment/piping materials</td><td colspan="4">Operation outside of procedures/operating windows</td></tr><tr><td>Temp change to design basis</td><td colspan="4">Temporarily operating with inhibited/bypassed equipment</td></tr><tr><td>Introduction/removal of temporary equipment</td><td colspan="4">Change in normal process plant operating configuration</td></tr></table>						<i>Temp SMOC (Engineering/Physical change)</i>	<i>ODMOC (Plant Operational Risks)</i>				Temp additions/modifications of plant equipment systems	Impaired Safety Critical Element				Temp changes to equipment/piping materials	Operation outside of procedures/operating windows				Temp change to design basis	Temporarily operating with inhibited/bypassed equipment				Introduction/removal of temporary equipment	Change in normal process plant operating configuration			
<i>Temp SMOC (Engineering/Physical change)</i>	<i>ODMOC (Plant Operational Risks)</i>																															
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Introduction/removal of temporary equipment	Change in normal process plant operating configuration																															
22.	Let's assess how well you understand these concepts.	1.Can you identify whether these statements are examples of Temporary SMOC or ODMOC or Short Term Inhibits Register?	<table><tr><td></td><td><i>Temp SMOC</i></td><td><i>ODM OC</i></td><td><i>STI Register</i></td></tr></table>					<i>Temp SMOC</i>	<i>ODM OC</i>	<i>STI Register</i>																						
	<i>Temp SMOC</i>	<i>ODM OC</i>	<i>STI Register</i>																													

Select the radio buttons to mark the statements either Temporary SMOC or ODMOC or Short Term Inhibits Register and Submit.

Use of temporary hire compressor hooked into plant	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Temporary install of a pipe clamp	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Application of an override or bypass for maintenance activities that is of Low RR and less than a shift duration.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Safety related shutoff valve operating slower than design	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Wrong answer:

That's incorrect.



You may have answered either all or some of them incorrectly. If you are unclear about any of these statements, please review the content before moving on.



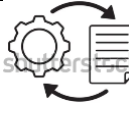

Right answer:

That's correct. You got all of them right.

The use of a temporary hire compressor hooked into the plant 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

			<p>proper authorization are also necessary to track this change and revert to the original configuration after its use.</p> <p>The temporary installation of a pipe clamp is also an example of Temporary SMOC.</p> <p>The application of an override or bypass for maintenance activities that is of Low RR and less than a shift duration is an example of an STI register.</p> <p>A safety-related shutoff valve operating slower than design is an example of ODMOC, which ensures operating risk is managed and visibility exists until repaired.</p>
23.		<p>1. Select the correct statement with regards to ODMOC risk assessment:</p> <p>(a) A minimum of two risk assessors are required for ODMOC:</p> <ul style="list-style-type: none"> • Operational Deviation Change Owner • Operations Representative <p>(b) An Operations Specialist is required for residual risks rated as medium or greater.</p> <p>(c) Relevant discipline engineers/specialists should be engaged as appropriate or required</p> <p>(d) All of the above are correct requirements</p>	<p><i>MCQ</i></p> <p><i>Answers are in bold.</i></p> <p><i>Wrong answer:</i></p> <p>That's incorrect.</p> <p><i>Right answer:</i></p> <p>That's correct</p> <p>A minimum of two risk assessors are required for ODMOC: an Operational Deviation Change Owner and an Operational Representative.</p> <p>An Operations Specialist is required for residual risks rated as medium or greater.</p> <p>Relevant Discipline engineer or specialist can be engaged as required.</p>
<Go to 030-13>			




Topic		Management of Change (MOC) Awareness for Downstream Operations (DSO)	Screen type	Blended
Screen Title		Document MOC (DMOC)	Screen number	060
No.	Audio/VO	On Screen Text	Visuals and Development instructions	
1.	Document changes include alteration to any new or existing controlled document or procedure.	<p>Document changes include:</p> <ul style="list-style-type: none"> Alterations to new controlled documents Alterations to existing controlled documents or procedures 	<p><i>Display OST in sync with the VO.</i></p>  <p>shutterstock 2315954947</p>	
2.	Controlled documents include, but are not limited to ABU Functional Team procedures, associated Check Sheets and Forms, Standards or Manuals.	<p>Controlled Documents include:</p> <ul style="list-style-type: none"> ABU Functional Team Procedures Check Sheets and Forms Standards or Manuals 	<p><i>Display OST and the respective icons in sync with VO. Infographic</i></p>  <p>2424741277</p> <p>1459677599</p> <p>2018095550</p>	
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.	<p>Changes include</p> <ul style="list-style-type: none"> Departmental procedures Facility operations procedures (electronic operating documents and work instructions) 	<p><i>Display OST in sync.</i></p>	







4.	Let's look at examples when Document MOC is required and events that do not invoke DMOC. <i>Click on each section to learn more.</i>	<div><div>Examples: Document MOC is required</div><div>Events: Document MOC is not invoked</div></div> <i>Click on each section to learn more.</i>	<i>Create a clickable infographic. OST will appear on the same screen.</i>			
Examples: Document MOC is required						
5.		<ul style="list-style-type: none">• If a controlled document requires a new section• If an existing section needs to be revised to reflect current practises and/or conditions• If there is a change to a procedure that alters how an activity is performed				
Events: Document MOC is not invoked						
6.		<ul style="list-style-type: none">• Typographical or administrative changes to documents• Change to a safe operating limit, trip setting or procedure that requires a safe operating limit (SOL) to be extended (Engineering MOC)• Temporary Operation outside of a procedure (Operational Deviation)• Change to a planned maintenance or PM frequency				
Activity ends						
7.	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. Click on the icons to learn more.	Document Management of Change (DMOC) Process Flow <ul style="list-style-type: none">• Initiate• Evaluate• Execute• Documentation & Close-out <i>Click on the icons to learn more.</i>	<i>Build the clickable infographic. As the learner clicks on the icon, the content is revealed on the same screen.</i> <div><div> 1688952019 (for 1st bullet point)</div><div> 1048277092 (for 2nd bullet point)</div><div> 2227791681 (for 3rd bullet point)</div><div> 1369705136 (for 4th bullet point)</div></div>			















Initiate			
8.		<ul style="list-style-type: none"> Change Owner initiates a DMOC for new/amendment/deletion Selects document type and discipline, which auto-assigns the relevant discipline reviewer in the workflow As the initiator, the change owner understands that they cannot also be the reviewer 	
Evaluate			
9.		<ul style="list-style-type: none"> Based on the document type and discipline, a Discipline Specialist is assigned to review/endorse the change and determine/assign additional discipline reviews or risk assessment requirements. Reviewers add their comments to the document under the review task before the change owner finalises the document. If nominated, a risk assessment is conducted after discipline reviews have been completed and the document has been updated with their comments. The change owner identifies whether additional training is required and nominates no/formal/informal training as needed. 	
Execute			
10.		<ul style="list-style-type: none"> Document Approval 	
Documentation & Close-out			
11.		<ul style="list-style-type: none"> The Document Controller publishes the finalised controlled document as 'Issued for Use' in the relevant repository (ODMS or MyAP (Aveva)). 	
Activity ends			



12.	<p>Each DOCMOC submission will invoke a Discipline Specialist to review & approve the change or new document.</p> <p>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.</p> <p>Following this, a final approver is engaged to endorse the change, verifying all necessary reviews have been conducted.</p>	<pre>graph TD; DS[Discipline Specialist] --> RA[Review & approve]; RA --> DCS[DOC MOC submission]; DCS -- seeks --> RAR[Risk Assessment/Reviewers]; RAR --> EV[endorses & verifies]; EV --> FA[Final Approver]; FA --> DCS;</pre>	Create a flowchart.									
13.	For more information, refer to Document Management of Change Procedure.	Refer to ABUE-000-SF-N05-C-0003: Document Management of Change Procedure										
14.	Now, let’s check your understanding of events that invoke Document MOC.	<p>1.Can you identify which events invoke Document MOC?</p> <p><i>Select the radio buttons to mark Document MOC or Non Document MOC and Submit.</i></p>	<p><i>Display OST in sync with VO.</i></p> <p><i>Right answer:</i> That’s correct. You got all of them right.</p> <p><i>Wrong answer:</i> That’s incorrect. If you are unclear about any of these statements, please review the content before moving on.</p> <table><tr><th>Question Text</th><th>Document MOC</th><th>Non 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></table>	Question Text	Document MOC	Non Document MOC	Typographical or administrative changes to a document.			A new section added to a controlled document.		
Question Text	Document MOC	Non Document MOC										
Typographical or administrative changes to a document.												
A new section added to a controlled document.												

			<div>A change to an operating procedure that alters how an activity is performed.</div> <div>Permanent change to an alarm setting (not a trip setting) within a SOL.</div>		
15.	Let's check your understanding further.	<div>2.The role of the Discipline specialist, at the Evaluate stage, includes determining if a risk assessment is required for the proposed changes.</div> <div>State whether this is true or false.</div> <div><ul style="list-style-type: none">• True• False</div>	<div>MCQ</div> <div>Answer is in bold.</div> <div>Right answer:</div> <div>That's correct.</div> <div>Wrong answer:</div> <div>That's incorrect.</div>		
<Go to 030-13>					

Topic		Management of Change (MOC) Awareness for Downstream Operations (DSO)	Screen type	Blended
Screen Title		Organisational MOC (ORGMOC)	Screen number	070
No.	Audio/VO	ON SCREEN TEXT	Visuals and Development instructions	
1.	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.	<p><i>Typography</i> Highlight with a bold font and a different colour. Use a border or background shading to make OST stand out.</p>	
2.	Organisational MOC applies to all ABU organisational changes affecting HSE Critical Positions. These changes must be managed via the Organisational MOC process.	ABU Organisational Changes to HSE Critical Positions → Managed via Organisational MOC Process	Build flowchart in sync with VO.	
3.	These include, but are not limited to modification to existing organisational structure, reporting relationship or staffing levels, consolidation of roles or functions, etc.	Organisational MOC Modifications <ul style="list-style-type: none"> • Organisational structure • Reporting relationship • Staffing levels • Consolidation of roles or functions 	 <p>2075608396</p> <p>Use below given icons in place of icons in the image.</p> <div style="display: flex; flex-direction: column; align-items: center;">  <p>(For 1st OST)</p> <hr style="width: 50%; margin: 5px 0;"/>  <p>(For 2nd OST)</p> </div>	


			 (For 3 rd OST)  (For 4 th OST) 2584464097
4.	For more information regarding Organisational Management of Change Procedure, please refer to the document.	Refer to Organisational Management of Change Procedure Document: ABUE-000-SF-N05-C-00006	
5.	Let's look at some examples of Organisational MOC. Click on the icons to learn more.	Organisational Management of Change Examples <i>Click on the icons to learn more.</i> <ul style="list-style-type: none"> • Changes to individuals fulfilling HSE critical positions (personal 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 slide 36 Build a clickable infographic. As the learner clicks on the icon, OST bullet points are revealed. Display OST (Organisational Management of Change Examples) at the centre of the infographic.  (For reference only)  2536495599 (1 st bullet point)  2536495599 (2 nd bullet point)  1115614187 (3 rd bullet point)

			 2474188901 (4 th bullet point)								
6.	<p>The Organizational Management of Change (ORGMOC) process flow diagram gives you a good overview of how it all works.</p> <p>Let's dive into each process to understand it better.</p> <p>Click on the icons to learn more.</p>	<p>Organizational Management of Change (ORGMOC) Process Flow</p> <ul style="list-style-type: none"> Initiate Evaluate Execute Doc & Closeout <p><i>Click on the icons to learn more.</i></p>	<p><i>Display OST in sync with VO.</i></p> <p><i>Refer slide 37.</i></p> <p><i>Build the clickable infographic. As the learner clicks on the icon, the content is revealed.</i></p>  <p>2478889679</p> <table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>1688952019 (for 1st bullet point)</td> <td>1048277092 (for 2nd bullet point)</td> <td>2227791681 (for 3rd bullet point)</td> <td>1369705136 (for 4th bullet point)</td> </tr> </table>					1688952019 (for 1 st bullet point)	1048277092 (for 2 nd bullet point)	2227791681 (for 3 rd bullet point)	1369705136 (for 4 th bullet point)
											
1688952019 (for 1 st bullet point)	1048277092 (for 2 nd bullet point)	2227791681 (for 3 rd bullet point)	1369705136 (for 4 th bullet point)								
Initiate											
7.		<ul style="list-style-type: none"> Initiate Organisational MOC Assessment Tool 									
Evaluate											
8.		<ul style="list-style-type: none"> Determine Type of Change and Sponsor (minor/major/significant) Complete Organisational Change Assessment Checklist Complete Risk Assessment Form if deemed necessary 									
Execute											
9.		<ul style="list-style-type: none"> Change Sponsor Approval of Org MOC 									

		<ul style="list-style-type: none"> Outstanding actions entered into integrated Risk Management System (IRMS) 	
Doc & Close out			
10.		<ul style="list-style-type: none"> OrgMOC Checklist & Approval uploaded to ODMS 	
Activity ends			
11.	Let's examine a tragic event that underscores the critical importance of organizational Management of Change (ORMOC).	Why is Organizational Management of Change (ORMOC) important?	<i>Display OST in sync with VO. Typography (same as 004-01)</i>
12.	<p>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.</p> <p>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.</p> <p>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. This oversight meant that crucial expertise was not available on-site, contributing to the disaster.</p>	<p>Esso Longford Explosion & Fire (1998)</p> <p>Key Findings</p> <ul style="list-style-type: none"> Low temperature due to loss of lean oil Failure to conduct Org MOC for relocating senior staff to head office several years earlier 	<p><i>Refresh screen.</i> <i>Refer slide 38.</i> <i>Display OST and the image in sync with VO (1st para).</i></p>  <p><i>2234573753</i></p> <p><i>Display the image in sync with VO (2nd para).</i></p>  <p><i>Blur the image.</i> <i>Display OST (2nd) in sync with VO (3rd para).</i></p>

13.	Now, let's check your understanding of the types of change.	<div>1.Can you identify which type of change each statement belongs to?</div> <div>Select the radio buttons to mark SMOC (Engineering Change), Operational Deviation, Document, or Organizational and Submit.</div> <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><tr><td>Any change to a controlled document such as a procedure.</td><td></td><td></td><td></td><td></td></tr></table>					Question Text	SMOC (Engineering change)	Operational Deviation	Document	Organizational	Temporary deviation from the way equipment is usually operated, according to established procedures or performance standards.					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.					Any maintenance that results in a modification, or temporary equipment which becomes permanent equipment.					Any change to a controlled document such as a procedure.				
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14.			<div>Wrong answer:</div> <div>That's incorrect.</div> <div>You may have answered either all or some of them incorrectly. If you are unclear about any of these statements, please review the content before moving on.</div> <div>Right answer:</div>																												

			That's correct. You got all of them right.
<Go to 030-13>			

Topic		Management of Change (MOC) Awareness for Downstream Operations (DSO)		Screen type	Blended
Screen Title		Quiz		Screen number	080
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.			<p><i>A splash screen will be designed for the quiz section using the image given below.</i></p> 	
2.		<ol style="list-style-type: none"> 1. Who does the MOC process apply to? <ol style="list-style-type: none"> 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 		<p><i>MCQ</i> <i>Answers are in bold.</i></p> <p><i>Right answer:</i> That's correct.</p> <p>The MOC process applies to all COP ABU and contractor employees involved in the operation, maintenance, engineering, or modification of processes or equipment.</p> <p><i>Wrong answer:</i> That's incorrect.</p>	
3.		<ol style="list-style-type: none"> 2. As a change owner what are my accountabilities? <ol style="list-style-type: none"> a) Overseeing the progression & maintaining compliance with the MOC SAP workflow and ensuring all MOC requirements & 		<p><i>MCQ</i> <i>Answers are in bold.</i></p> <p><i>Right answer:</i> That's correct.</p> <p>Overseeing the progression and maintaining compliance with the MOC SAP workflow, ensuring all MOC requirements and deliverables are met during</p>	

		<p>deliverables are met during each phase.</p> <p>b) Subject matter expert for the proposed change</p> <p>c) Ensures the Change is communicated, and appropriate training of affected parties has been completed</p> <p>d) All of the above</p>	<p>each phase, acting as the subject matter expert for the proposed change, ensuring the change is communicated, and confirming that appropriate training of affected parties has been completed are a change owner's accountabilities.</p> <p><i>Wrong answer:</i> That's incorrect.</p>
4.		<p>3. What changes does OrgMOC apply to?</p> <p>a) HSE Critical Position Changes Only</p> <p>b) All Personnel Changes</p> <p>c) All positions acting in roles</p>	<p><i>MCQ</i> <i>Answers are in bold.</i></p> <p><i>Right answer:</i> That's correct. OrgMOC applies only to HSE critical position changes.</p> <p><i>Wrong answer:</i> That's incorrect.</p>

Topic		Course Completion Screen		Screen type	Image and Text
Screen Title		Thank you		Screen label	090
No.	Audio/VO	ON SCREEN TEXT		Visuals and Development instructions	
1.	Standard course completion screen	<p>Thank You and Congratulations! You have completed the Management of Change Awareness Module.</p> <p>Process Safety is Everyone's responsibility!</p>		<p><i>Display OST.</i></p> 