

MoC Id	110528
Workflow Status	APPROVED
Title	Replacement of 2" Gas line from IA Scrubber to IA Workshop
Location	Shell Nigeria SPDC Pipelines Onshore PIPELINES EAST
FLOC	NG.TPL.PIPEE.ZP.TNGEDLG01
FLOC Description	2" 1st TNGE M/F - I.A WORKSHOP GAS LINE
Equipment	2" IA SCRUBBER MANIFOLD - IA WORKSHOP
MoC Type	Permanent Process - Hardware
Function	Other
Created Date	September 21, 2021
Initiator	Williams Akudu
Look Back Required	No
Priority	Medium
Proposed Startup Date	March 31, 2022
Valid To	
MoC Request Owner	Cletus Ujah
MoC Implementer	Adebayo Bademosi
MoC Request Authoriser	Uche Ojiako
Emergency MoC	No
Screen	Yes
Turnaround	Yes
Description	

Description of Change:

The 2" IA gas supply line to workshop (about 0.7km) has deteriorated due to age (about 30-yrs) and integrity report indicates various levels of concerns In 2017, a risk assessment of the gas distribution pipelines was done; and recommended a complete replacement of this gas supply line. Recently in 2021, there was a tier-2 leak incident and the RCA done concluded that the line be put out of service until a replacement is carried out

This request is to secure CCMP approval for:

1. A route change from the original ROW of 2" IA to Workshop GL due to obstruction that would impact on constructability and maintainability of a replacement scope. The existing RoW has a drilling pipe rack on it with a distance of over 150m. Since this above ground obstruction hampers maintenance, hence need to divert the gas line through an alternate route.
2. Replacement of old bare 2" pipe, with PE coated 2" pipe for improved external corrosion control.

Reason for change:

- A 150m section of the existing gas line route now runs under drill-pipe stack (Moveable yard area) which will prevent easy access for maintenance activities, and repair should there be a leak. New pipeline route is unencumbered.
- Implement required corrosion mitigation in line with DEP, new pipeline will now be PE coated.

Justification and benefits:

Installation of the new gas line with improved corrosion protection will significantly reduce external corrosion risk; and avoiding the moveable yard area, will provide 100% access to the pipeline (RoW) for maintenance and repairs, ensuring people and the environment are safe from LOPC.

Normalization Plan:

Attachments

<u>Attachment Name</u>	<u>Description</u>	<u>Created by</u>	<u>Created Date</u>	<u>Last Modified by</u>	<u>Last Modified Date</u>
2" IA Scrubber - Workshop Pipeline.xlsx	2" IA Scrubber - Workshop gas PL	Sangoyinka, Habib (As SPDC-CCMP-Secretary,)	November 15, 2021		
2inch IA Scrubber to Workshop Pipeline Selection Report (002).pdf	Route Selection Report	Ukaoha, Franklin	September 28, 2021		
CCMP Hazard Analysis Checklist - MOC 110528.pdf	MOC Hazard Analysis Checklist	Sangoyinka, Habib (As SPDC-CCMP-Secretary,)	November 17, 2021		
CP Design for IA Gas Distribution Pipelines.pdf	CP design	Sangoyinka, Habib (As SPDC-CCMP-Secretary,)	November 15, 2021		
Complete IA distribution design summary (002).pdf	Design Summary	Ukaoha, Franklin	September 28, 2021		
RA IA to Workshop Gas Line Installation Signed 1 7th Sept 2021.pdf	Risk Assessment	Akudu, Williams	September 21, 2021		
Route Assessment Matrix for IA Gasline Replacement.pdf	Route Assessment Matrix	Akudu, Williams	September 21, 2021		
Route Investigation Study for 2inches IA Gasline Replacement update d.pdf	Route investigation Report	Akudu, Williams	September 21, 2021		

Risk Assessment

Overall Risk	YELLOW
People	YELLOW
Environment	D.BLUE
Assets	YELLOW
Community	D.BLUE

Comment on Overall or Specific Risks:

Do Nothing (Install 2" Gas line along existing ROW):

High Construction risks to:

1. Relocate the Well Engineering Drill pipes Laydown area occupying sections of the existing gas line ROW .
2. Demolish the Pipe-racks, Pipe-stand and Drill pipes along sections of the existing Gas line ROW.
3. Work around the Telecoms facilities and Caravans along ROW

People - C4, Asset - C3, Community - C2, Environment - C2

Post Implementation:

1. Corrosion.
2. Mechanical impact (from trucks, excavation equipment/ tools, etc.) along new ROW.
3. Mal-operation of the riser valves and unintended gas supply to the gas line/workshop.
4. Installed Pipeline with wrong
5. Facilities/ Buildings.

People - C4, Asset - C3, Community - C2, Environment - C2

Risk Assessment Participants:

1. Williams Akudu
2. Nwida Barikpoa
3. Wodemenem Isaac
4. Anthony Yarhere
5. Obani Chika
6. Tochukwu Nnabugwu
7. Ukaoha Franklin
8. Bademosi Adebayo
9. Oluoma Oraemeka

Mitigations:

User	Cletus Ujah	Frequency	Once	Due Date	December 31, 2021
Role	Project Owner	Completed	No	Completed Date	
Mitigation	1. Provide adequate pipeline protection for road crossings. 2. Provide pipeline ROW markers and demarcations, in line with standard pipeline separation distances. 3. Pipeline burial depth in line with approved standard practice. 4. Ensure gas line is fully rated for gas supply from the				
Reason For Mitigation	To ensure integrity of the gas line.		Acceptance Criteria	All mitigations to be complete	

Screeners:

User	Role	Completed	Screen Date	Comments
Oladipo Alonge	Senior MCI Engineer	Yes	September 24, 2021	Supported
Franklin Ukaoha	Principal Pipelines Engineer	Yes	September 24, 2021	Screened Ok. See pre-implementation actions
Chika Obani	Sr. Pipeline Integrity and Capacity Engr	Yes	September 23, 2021	Screened ok.
SPDC-CCMP-Secretary	CCMP Secretary	Yes	September 28, 2021	Screened ok.

Reviewers:

<u>User</u>	<u>Role</u>	<u>Lead</u>	<u>Completed</u>	<u>Review Date</u>	<u>Comments</u>
Ayoola Olatunji		Yes	Yes	September 29, 2021	Supported. Close out outstanding actions.
SPDC-CCMP-Secretary	CCMP Secretary	No	Yes	November 17, 2021	Supported.
Jimoh Umoize	Special Project Lead	No	Yes	September 29, 2021	Selected route is supported. Ensure all indicated recommendations are implemented before, during and after field execution/installation of replacement pipeline.
Humphrey Ezeife	Head, Materials and Corrosion	No	Yes	November 17, 2021	Supported: The Barrier status should be reviewed. All are not green

Approvers:

<u>User</u>	<u>Role</u>	<u>Approved</u>	<u>Completed Date</u>	<u>Comments</u>
Olabanji Raimi	Engineering Manager	Yes	November 22, 2021	Approved
Christopher Grif	MoC Approver	Yes	November 22, 2021	Approved. Robust RA and good route selection taken reducing risk and improving maintainability in the event of a defect.

Pre Implementation Actions:

2/9/2022

<u>Task</u>	<u>Assigned</u>	<u>DueDate</u>	<u>User</u>	<u>RequiredFor</u>	<u>Comments</u>	<u>Completed</u>	<u>Completion Date</u>	<u>CompletionComments</u>
Pipeline Wall Thickness Report	Yes	September 27, 2021	Williams Akudu	PENDING APPROVAL		Yes	November 22, 2021	completed
Pipeline Route Selection Report	Yes	September 27, 2021	Williams Akudu	PENDING APPROVAL		Yes	November 19, 2021	Completed.
Pipeline Installation and Pre-commissioning Procedure	Yes	September 27, 2021	Williams Akudu	PENDING APPROVAL		Yes	November 22, 2021	completed
Road Crossing and End tie-in Drawings.	Yes	September 27, 2021	Williams Akudu	PENDING APPROVAL		Yes	November 22, 2021	completed.
Ensure that the line pipes are duly coated and effective Cathodic Protection is in place for external corrosion mitigation	Yes	September 27, 2021	Williams Akudu	PENDING APPROVAL		Yes	November 19, 2021	CP design and visual inspection of pipe completed.

Implementation Actions

<u>Task</u>	<u>DueDate</u>	<u>User</u>	<u>Required for GoLive</u>	<u>Required</u>	<u>Completed</u>	<u>Completion Date</u>	<u>Comments</u>
Confirm all Marked-up/CAD drawings affected by change are properly updated.	March 31, 2022	Cletus Ujah	No	Yes	No		Kindly update all as-built drawings including the plan of profile for the new pipeline route.
Conduct baseline Cathodic Protection survey following the pipeline installation	March 30, 2022	Williams Akudu	Yes	Yes	No		

Look Back

Look Back Description:

Effectiveness of the solution:
 Np. of days the MoC was active:
 Any FCN/FCR's completed:
 Any change in the HSSE assessment:
 If lessons learned were entered into the database:
 Budget/WO

Budget Description:

Budget Type:

Estimated Cost:

WBS #:

Z8 Notification #:

Technical Assurance Review

Comments:

Authorisation

Signature:
