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| **Continuous Improvement (CI) initiatives in COG projects, Nigeria** |
| **Terms of Reference (TOR) for OABP CI initiatives**  Date: October 2019 |
| **Project Background/Overview:** |
| One of the key functions of the Onshore Asset Brownfield project team is to carry out construction, repairs and replacement (sectional replacement & leak repairs) of flowlines, and well hook-up works for the different Asset team (Land east, Central East & Swamp West).  Presently it takes an average time of 14/21 days (Land and Swamp respectively) for the flowline contractors to complete one (1km) kilometre of flowline construction/repair and handover work activities after being mobilised to site.  This situation poses the following challenges:   * Prolonged/increased deferments. * Production loss * Reputational issues * Financial losses * Security/communities challenges. * Increased possibility of HSSE violations * Loss of time and delays   There is an opportunity to reduce the current cycle time for the construction and handover of flowline works. This will ensure a reduction in the associated deferment and cost from the delayed flowline works, enable effective project delivery.  The plan is to look at different means of reducing both land and swamp flowline construction & handover works to 11/17 days respectively for flowlines of length less than 3km. And for lines that are 3km and above, the plan is to use different execution strategy of deployment of 2 or more spreads taking into consideration the additional construction cost this will incur.  Embedding the components of the Shell FFF-WWW, PT2020 & PDM, where continuous improvement, integrated delivery, collaboration, an efficient & effective organisation is required to assist in achieving efficient execution delivery. |
| **Project Objectives:** |
| To reduce the execution time by 20% (3/4) days for all flowline construction & handover works after mobilisation to site for Land & Swamp Asset team respectively. |
| **Scope of work** |
| Detailed scope includes the following but not limited to;   1. Mobilization of Contractor’s construction equipment, materials and personnel to sites 2. Boundary re-opening of ROW, bush clearing and ditch-line setting 3. Flushing of flowlines to free it of hydrocarbon 4. Excavation of flowline trench 5. Laying, stringing, welding and tie-ins of flowlines 6. Radiography/NDE of all welded joints, power brush and wrapping of all accepted welded joints 7. Carry out cathodic protection. 8. Flushing/hydrotest flowline 9. Hook-up and commission flowline 10. Backfill flowline trench. 11. Site clean-up and demobilize 12. Handover to asset |
| **Supporting Processes – (Strategy)** |
| A step by step approach for efficient planning, collaboration, integration and execution of flowlines repairs and construction project work.  This include  **Execution method:** Prompt issuance of SPDC Materials -shrink sleeves & fittings, state of equipment on site, Late PTW approval process, Asset team & CWi personal collaboration/integration, efficient execution work methodology.  **Timeline** for delivery: Late start time and early closing time, Travel time to accommodation, security consideration, Community Trust Support (CTS)  **Resources**: Personnel (Break/lunch time optimization, Welders/fitters Association stoppages/over bearing demands, crew management-Work methodology.  **Focus Area:** Productivity index- Deploy HoTT, use dedicated AHSS where possible and improve collaboration & integration.  **Technology:** Flexible Composite Pipes (FCP) and Reinforced Thermoplastic Pipes (RTP) |
| **Success Criteria** |
| * + Reduced project cycle time by 20% (3/4) days   + On schedule delivery: Execute and deliver flowline replacement & construction works safely, on time delivery (on schedule) and avoid cost escalation)   + Improved Productivity (Early production delivery)   + Quality delivery (Zero failure after handover) |