



RISK ASSESSMENT FORM

|                         |   |
|-------------------------|---|
| Department/ Area        | FYIP - FYNAG  |
| Job type/ Equipt System | FYNAG Manual choke and Flowline   |
| Process                 | NAG Flow and Pressure Management from W/153   |
| Task                    | Replacement of Offshore PCV with a spool piece and the use of the manual choke for both flow and pressure management offshore |

Risk Assessment No.

| SEVERITY | CONSEQUENCES                   |                 |                 |                 | INCREASING LIKELIHOOD          |                          |   |   |  |
|----------|--------------------------------|-----------------|-----------------|-----------------|--------------------------------|--------------------------|---|---|--|
|          | People                         | Assets          | Environment     | Reputation      | A                              | B                        | C   | D   | E  |
|          |                                |                 |                 |                 | Never heard of in the Industry | Heard of in the Industry | Has happened in the Organisation or more than once per year in the Industry | Has happened at the Location or more than once per year in the Organisation | Has happened more than once per year at the Location |
| 0        | No injury or health effect     | No damage       | No effect       | No impact       |                                |                          |   |   |  |
| 1        | Slight injury or health effect | Slight damage   | Slight effect   | Slight impact   |                                |                          |   |   |  |
| 2        | Minor injury or health effect  | Minor damage    | Minor effect    | Minor impact    |                                |                          |   |   |  |
| 3        | Major injury or health effect  | Moderate damage | Moderate effect | Moderate impact |                                |                          |   |   |  |
| 4        | PTD or up to 3 fatalities      | Major damage    | Major effect    | Major impact    |                                |                          |   |   |  |
| 5        | More than 3 fatalities         | Massive damage  | Massive effect  | Massive impact  |                                |                          |   |   |  |

| No. | Task/Activity  | Risk/Hazard   | Threats   | Top Event & Consequence  | RAM Rating |    |    |    | Existing Controls  | Recommendations  | Action Party    |
|-----|--|---|---|--|------------|----|----|----|--|--|-----------------|
|     |  |   |   |  | P          | A  | C  | E  |  |  |                 |
| 1   | Do nothing - i. Do not remove PCV and operate as is  | 1. Potential back pressure build up upstream the PCV to the well head             | 1. Loss of instrumenet air to the PCV leading to closure of PCV               | 1. Frequent high pressure trips leading to prodcution deferrment and potential impact on downhole sand control leading to sand production and erosion of the line and other equipments | NA         | C3 | NA | NA | 1. None identified   | 1. Remove PCV and replace with spool piece and use manual choke for both flow and pressure management offshore | Discipline, PMT |
| 2   | Risk During implementation   | All construction and fabrication risks will be managed with JHA and PtW processes |   |  | NA         | NA | NA | NA |  |  |                 |
| 3   | Post Implementation Risk - use of only manual choke for both flow and pressure management offshore | 1. Hydrocarbon gas under pressure   | 1. Potential over pressure of downstream equipmentsand Slugeatcher at the CPF | 1. LOPC with potential for fire, explosion and personnel injury  | C4         | C2 | NA | C1 | 1. Flow line is fully rated<br>2.3123 PZA 001 HH at Pig receiver<br>3. Slug cacther Relief valve 3123 RV 100 |  | Discipline, PMT |

| Risk Assessment Team |                   |   |       |       |
|----------------------|-------------------|---|-------|-------|
| Name:                | Ajilore Linda     | Position: Senior Process Engineer               | Sign: | Date: |
| Name:                | Ebinum Olise      | Position: Senior PACO Engineer                  | Sign: | Date: |
| Name:                | Iloma Izu         | Position: Process Safety Specialist             | Sign: | Date: |
| Name:                | Egodo Edward      | Position: Field operations Supervisor, Forcados | Sign: | Date: |
| Name:                | Okoro Felix       | Position: Production Technologist, Forcados     | Sign: | Date: |
| Name                 | Okolomma Emmanuel | Position: Senior Wells Engineer (CWI)           | Sign: | Date: |
| Approval             |                   |   | Sign: | Date: |
| Name:                | Nwandu Eze        | Position; Lead, FYIP Onshore                    | Sign: | Date: |
| Name:                | Olowu Adesegun    | Position; Engineering Lead                      | Sign: | Date: |

Reference documents:

| PARTICIPANTS                 |  |
|------------------------------|--|
| Presenters (13)              |  |
| Adomokhai, Segun E SP...     |  |
| Agbramu, Atiku A SPDC-...    |  |
| Ajayi, Titilayo R SPDC-UP... |  |
| Ajilore, Linda N SPDC-PT...  |  |
| Dafiadje, Oghenovo SPD...    |  |
| Ebinum, Olise' E SPDC-P...   |  |
| Egodo, Edward E SPDC-U...    |  |
| Godswill-Oguzie, Nkemd...    |  |