| | | | | | | |
|---|---|---|---|---|---|---|
| **Title** | Risk Assessment Exercise | | | | | |
| **Target Population** | Field Engineers & Field Specialists | | | | | |
| This requirement is applicable to: | ✓ | JFE | | FST | | EOT |
| | ✓ | FE1 | ✓ | FS1 | | EO1 |
| | ✓ | FE2 | ✓ | FS2 | | EO2 |
| | | | ✓ | FS3 | | EO3 |
| | | | | | ✓ | GEO |

**Objective:**

The objective of this task is to train the employees on how to apply the principles of Risk Management to an actual operational risk situation in CT operations.

**Tasks:**

- Identify operational risks in a job at location
- Write a risk management plan to safely operate in the face of the identified risk
- Gain an expert comment on the risk whenever required and obtain the appropriate management approval to perform the job.

Please attach a risk management plan as an evidence.

Note:

- Exemptions are exclusively used to obtain "permission" for operations that violated the conditions of safety standard.
- Exemptions are required to be created, documented and communicated across the team to increase awareness on that particular risks.

**REQUIRED EVIDENCE:**

1 Risk Management Plan ✓

| OVERALL SCORE | STRONG | | | ADEQUATE | | | IMPROVEMENT NEEDED | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10 | 9 | 8 | 7 | (6) | 5 | 4 | 3 | 2 |

MENTOR / ASSESSOR's Comments & Recommendation:

The personal was able to elaborate the Hazid term and element in the JHA.

| | | | |
|---|---|---|---|
| Signature | | Assessment Date | 8/12/2024. |
| Name | AHMAD BIN AB MAJID SNR. EXECUTIVE HSSE & FACILITY DIMENSION BID (M) SDN. BHD. | Position | HSSE Executive. |

| | | | |
|---|---|---|---|
| | | | |

| | | | |
|---|---|---|---|
| FSM / OM Comments & Recommendation:<br>-Able to manage risk properly. | | | |
| Signature | | Assessment Date | 8/12/24 |
| Name | RIDHWAN AZIZAN | Position | FSM |

| | |
|---|---|
| ) SITE: ANGSI | Zone 0 ☐ |
| WORK ORDER NO: | Zone 1 ☐ |
| SUB AREA: Main Deck | Zone 2 ☑ |
| | Non Hazardous Area ☐ |
| | Non Hydrocarbon Area ☐ |

nping Equipment for Acid Wash Treatment on Well D-7

☐ DIVING CERT. No:_____
☐ LIFTING CERT. No:_____
☐ LoEAC. No:_____
☑ JHA. No: JHA 00254 DA
☐ EXCAVATION CERT. No:_____
☐ ELECTRICAL ISOLATION CERT. No:_____
☐ PHYSICAL ISOLATION CERT. No:_____
☐ RADIATION CERT. No:_____

☐ SAFETY SYSTEM BYPASS/OVERRIDE C
☐ VEHICLE ENTRY CERT. No:_____
☐ PORTABLE ELECTRICAL TEMPORARY II
☐ WORK METHOD STEPS. No:_____
☑ SUPPORTING DOCUMENT. No:NOWIP
☐ WORKING AT HEIGHT CERT. No:_____
☐ VENTILATION PLAN. No:_____
☐ PRESSURISED HABITAT CERTIFICATE

## SECTION 6: ACKNOWLEDGEMENT REQUIRED AS IDENTIFIED BY APPROVING AUTHORITY (e.g. CSR)

| | |
|---|---|
| Position | CSR |
| Name | Saiful Akmal M Noor M Noor |
| Initial/Date | 24 Oct 2024 10:53 AM |

## SECTION 7: AUTHORIZATION

| RECEIVING AUTHORITY | AUTHORISED SUPERVISOR | |
|---|---|---|
| Name: zainuddin yaacob<br>Signature: Submitted<br>Date: 22 Oct 2024<br>Time: 9:34 PM | Name: M Khalil Azman (PMO/Upstream)<br>Signature:<br>Date: 23 Oct 2024<br>Time: 8:52 AM | Name: Shahri<br>Signature: App<br>Date: 24 Oct 2<br>Time: 10:38 A |

## SECTION 8: JOINT SITE VISIT BEFORE WORK COMMENCES (AAR & RA/WL)

I have personally checked the area and equipment to be worked on and I am satisfied that the work requested can be carried out safe
reason why :-

| WORK LEADER | APPROVING AUTHOR |
|---|---|
| Name: zainuddin yaacob<br>Signature: Performed<br>Date: 24 Oct 2024 Time: 1:45 PM | Name: M Ariffuddin B A Halim (PMO/Upstrea<br>Signature:<br>Date: 24 Oct 2024 Time: 1:46 PM |

## TIVITIES (APPLICANT &AS)

☐ High Traffic
☑ Hot Surface
☑ Hydrocarbon Liquid/Gas
☐ Hydro-jetting
☐ Lifting
☐ Mercury
☐ Metal Drilling
☐ Needle Gun
☑ Noise
☐ Pressure Test
☐ Radiation
☑ Rotating Equipment
☐ Saw/Cold Cut
☐ Scaffolding
☐ Static Electricity
☐ Steam
☐ TENORM
☐ Toxic Substance/Chemical
☐ Underground piping/cables/drains
☐ Vehicle
☐ Volatile Liquid
☑ Wellhead Activities
☐ Wireline Activities
☐ Working at Height
☐ Working Overboard
☐ Others :

Note: AS is responsible to ensure hazards / hazardous activities are identified adequately

## /PRECAUTIONS (APPLICANT/RA & AS)

tinguisher on work site
ged/ventilated
e Removal of Energy
e Removal of Energy
d erected and safe to
tools/materials against
entification (tagging)
x Meeting

☐ Valves chain lock closed
☐ Valves chain lock open
☐ Valves Spading/Blinding
☑ Warning sign/notice required
☑ Worksite free of combustibles
☐ Others ☐ Gas test required
Gas Monitoring
☐ Continuous
☐ Every _____ HRS

**Additional Precautions**

Note: AS is responsible to ensure worksite preparation/ precautions are identified adequately

## QUIPMENT (APPLICANT/RA & AS)

**Face ction**
ce Shield
oggles
elding Mask
**ng Protection**
r Muff

**Fall Protection**
☐ Fall Arrester
☐ Full Body Harness
**Body Protection**
☐ Apron
☐ Chemical Boot

**Hand Protection**
☐ Chemical Gloves
☑ Cotton Gloves
☑ Impact Glove
☐ Leather Gloves
☐ Rubber Gloves
**Others**

**Personal monitoring Equipment**
☑ H2S Meter
☐ Personal Distress Unit
☐ Personal Dosimeter/Film Badge/Survey Meter
☐ Personal O2 Monitor
☐ _____

## SECTION 9: DAILY PERMIT RETURN AND SUSPENSION (WL & AAR) – due to e.g. End of Shift, Stop Work, Drill, Eme

| Date/Shift | 24/10/2024 /Day | 24/10/2024 /Night | 25/10/2024 /Day | 25/10/2024 /Night | 26/10/2024 /Day | 26/10/2024 /Night | 27/10/2024 /Day | 27/10/2024 /Night | 28/10/2024 /Day | 28/10/2024 /Night | 29 /D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WL Sign | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| WL Name | | | | | | | | | | | |
| AAR Sign | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| AAR Name | | | | | | | | | | | |
| Due to | | | | | | | | | | | |

## SECTION 10: DAILY REVALIDATION & ENDORSEMENT (WL, AAR & AA)

| Date/Shift | 24/10/2024 Day | 24/10/2024 /Night | 25/10/2024 /Day | 25/10/2024 /Night | 26/10/2024 /Day | 26/10/2024 /Night | 27/10/2024 /Day | 27/10/2024 /Night | 28/10/2024 /Day | 28/10/2024 /Night | 29 /D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suspended reason | | | | | | | | | | | |
| AA Signature | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Name | | | | | | | | | | | |
| WL Signature | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Name | | | | | | | | | | | |
| AAR Signature | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Name | | | | | | | | | | | |

## SECTION 11: HANDBACK & CLOSE (WL, AAR & AA)

| | | | |
|---|---|---|---|
| | ANGSI<br>AREA/UNIT<br>ANDP-D | D-7<br>EQUIPMENT SERVICE<br>..... | 22 Oct |

**TER DETAILS (AGT)**

PERSONAL ID NO: .....
ISSUE DATE: .....

COMPANY: .....
EXPIRY DATE: .....

**GT)**

| E | %O2 | % LEL | H2S (ppm) | Mercury (mg/m3) | Benzene (ppm) |
|---|---|---|---|---|---|
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**GAS TEST ACCEPTABLE PARAMETERS**

**Working in a Confined Space**

O2 : 19.5% to 23.5% without Breathing Apparatus

**Work other than Confined Space**

O2 : 20% to 20.9%

PETRONAS

# JOB HAZARD ANALYSIS (JHA) WORKSHEET

| | | | | | |
|---|---|---|---|---|---|
| ***JHA NO.*** | JHA 0025419A | ***PTW NO.*** | 0025419 | ***WORK PERMIT TYPE*** | Cold Work |
| ***FACILITY*** | PMA | ***LOCATION*** | ANGSI | ***SPECIFIC WORKSTATION*** | ANDP-D |
| ***EQUIPMENT NO.*** | D-7 | ***WORK DESCRIPTION*** | To Perform Rig Up Pumping Equipment for Acid Wash Treatment on Well D-7 | | |

| OVERALL RISK RATING (Tick ✔) | ☐ Low | ✔ Medium | ☐ High | ☐ Very High |
|---|---|---|---|---|

***NOTE***

1. *JHA Shall be applicable for all work activities which required PTW.*
2. *Personnel carrying out the work shall be fully familiar with the written Work/Operating Procedures develop for the job. The Work/operating procedures shall describe, in step-by-step instructions, the correct method of executing the specified work.*
3. *Prior to commencement of work, the task-specific JHA shall be discussed amongst all personnel involved in the execution; and requirements contained shall be fully understood and agreed by all involved personnel.*
4. *Overall Risk Rating to be based on PETRONAS Risk Matrix 5x5*
5. *STOP WORK AUTHORITY to be enforced for any deviation from JHA job step*

| ***JOB STEP*** | ***DESCRIPTION OF JOB STEP*** | ***POTENTIAL HAZARD*** | ***POTENTIAL CONSEQUENCES*** | ***CONTROL BARRIERS*** | ***ACTION PARTY*** | ***MONITORING REQUIREMENT (Y/N)*** | ***RECOVERY BARRIERS*** | ***ACTION PARTY*** | ***MONITORING REQUIREMENT (Y/N)*** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Toolbox Meeting | H.20.01 H2S (hydrogen sulfide, sour gas) / *H2S (hidrogen sulfida, gas masam) | Hazardous gas, personal injury | Attended H2S Awareness Training | All Worker - db crew | N | Standby escape set at site | All Worker - db crew | Y |
| | | | | To have H2S detector at all time | All Worker - db crew | Y | First aid kit and medical services. | Medic | N |
| | | H.24.06 Other communicable diseases / Penyakit berjangkit lain | SPREAD OF INFECTIOUS DISEASE (COVID-19) | Good practice of personal hygiene | All Worker - db crew | N | Case isolation and effective treatment | All Worker - db crew | N |
| | | | | Social distancing whenever possible | All Worker - db crew | N | Site clinic facilities / Medical Services. | Medic | N |
| 2 | Mobilize to worksite | H.9.01 Weather / Cuaca | ADVERSE WEATHER CAN CAUSE AN ACCIDENT | Stop work for adverse weather conditions (heat stress etc ). | All Worker - db crew | N | Others-Stop work and go to safe sheltered | All Worker - db crew | N |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | H.30.01 High-level noise / *Bunyi bising yang kuat | Hearing injury | Limit exposure duration through job rotation. | All Worker - db crew | N | Annual audiometric testing. | All Worker - db crew | N |
| | | | | Wear Ear Plug/Ear Muff with sufficient noise reduction rating (NRR). | All Worker - db crew | Y | Others-Use double ear protection | All Worker - db crew | Y |
| 3 | Spot the equipment accordingly to space availability | Pinch Point | Finger or hand injury | Maintain safe distance from pinch point area | All Worker - db crew | N | Wear high impact glove | All Worker - db crew | N |
| | | Miscommunication | Personnel injury (Body injury) Equipment damage | Conduct toolbox talk and make sure everyone clearly understands their task and associated hazard. | All Worker - db crew | N | Stop work and get clarification if not clear about the task | All Worker - db crew | N |
| 4 | Lifting pumping equipment by using crane | H.30.02 Intrusive noise / *Bunyi bising mengganggu | Hearing impairment | Limit exposure duration through job rotation. | All Worker - db crew | N | Job rotation. | All Worker - db crew | N |
| | | Pinch Point | Body injury | Maintain safe distance from pinch point area | All Worker - db crew | N | Stop work and step back to assess the condition | All Worker - db crew | N |
| 5 | Manual lifting treating iron for surface line | Ergonomic/Bodily position | Back pain | Ensure proper body posture while doing the job | All Worker - db crew | N | Seek immediate medical attention for back pain/injury | All Worker - db crew | N |
| | | H.26.11 Work Environment / Persekitaran Kerja | Slip, Trip and Fall (Body,hands and leg injury) & Defects on equipment | Work arrangement and procedures | All Worker - db crew | N | Others-Work condition/practice improvement | All Worker - db crew | N |
| 6 | Rig up 4" hose from storage tank to single pump | H.25.10 Incompatible hand controls / Kawalan tangan yang tidak serasi | Finger injury | Others-Correct manual material handling procedure | All Worker - db crew | N | Work condition/practice improvement | All Worker - db crew | N |
| | | | | Use right tool for the job | All Worker - db crew | N | Medical services. | Medic | N |
| | | H.25.01 Manual materials handling / *Pengendalian barang secara manual | Personnel injury or back pain | Apply buddy system | All Worker - db crew | N | Work condition/practice improvement | All Worker - db crew | N |
| 7 | Rig up treating iron from single pump to pumping tee and well injection | H.25.01 Manual materials handling / *Pengendalian barang secara manual | Personnel injury or back pain | Correct manual material handling procedures | All Worker - db crew | N | Others-Apply buddy system | All Worker - db crew | N |
| | | Pinch Point | Hand or finger injury | Correct hand placement/ positioning | All Worker - db crew | Y | Wear high impact glove | All Worker - db crew | Y |
| | | | | Maintain safe distance from pinch point area | All Worker - db crew | N | First Aid/Medical Treatment | Medic | N |
| 8 | Connect hydraulic hose on pumping equipment | Trapped Pressure | Personnel Injury | Bleed off any trapped pressure | All Worker - db crew | N | First Aid/Medical Treatment | Medic | N |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 9 | Housekeeping work area | H.26.11 Work Environment / Persekitaran Kerja | Slip, trip and fall | Work arrangement and procedures | All Worker - db crew | N | Others-Stop work and step back to assess the condition | All Worker - db crew | N |
| | | | | Others-Maintain housekeeping during working period | All Worker - db crew | N | | | |

25419

## JHA PRECAUTIONARY CONTROL BARRIER (JPCB) CHECK

***NOTE***

*1. Barriers to be extracted from JHA and timing for Barrier Verification Frequency to be agreed with PTW AA and PTW WL.*

*2. JPCB check to be filled for every PTW revalidation.*

4.00 pm

| No. | JHA Barriers (Date: 24/10/2024) | 2.00 pm | Barrier Verification Frequency (Tick ✔ and timestamp where applicable) | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|
| 1 | To have H2S detector at all time | / | / | | | | | |
| 2 | Standby escape set at site | / | / | | | | | |
| 3 | Wear Ear Plug/Ear Muff with sufficient noise reduction rating (NRR). | / | / | | | | | |
| 4 | Others-Use double ear protection | / | / | | | | | |
| 5 | Correct hand placement/ positioning | / | / | | | | | |
| 6 | Wear high impact glove | / | / | | | | | |

25419

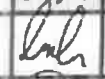
## JHA APPROVAL DURING PTW APPLICATION

| REVIEWED BY | | APPROVED BY | |
|---|---|---|---|
| NAME | M Khalil Azman (PMO/Upstream) | NAME | M Khalil Azman (PMO/Upstream) |
| DESIGNATION | AS/SSE | DESIGNATION | AS |
| SIGNATURE |  | SIGNATURE |  |
| DATE | 23/10/2024 | DATE | 23/10/2024 |

AFTER PTW HAS BEEN APPROVED

**WORK TEAM (CONFIRMATION THAT JHA HAS BEEN COMMUNICATED TO WORK TEAM AS PART OF PRE_JOB/TOOLBOX MEETING _ AFTER PTW HAS BEEN APPROVED)**

24/10

| Name (S) | Designation | Signature | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 |
| Zainuddin | SupV |  | | | | | | |
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| Name (S) | Designation | Signature | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 |
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To be filled every PTW suspension / stop work authority, daily

| ***DEBRIEF***<br>***(TO BE FILLED BY WORK LEADER)*** |
| --- |
| • What went well?<br>• What did not happen as planned?<br>• How can it be done better?<br>• Unsafe observations<br>• Other feedback from workers |
| Date: |
| Remarks: |