

Pipe confined-space entry and gas testing - JSA - C

en-SG · Supervision, records, handover · v1.0 · 2026-10-14 · Sources: article section 9

Site: | Item ID: | Work area:

Approval	Work supervisor	Technical reviewer	Release / handover authority

1. Job details and team signatures

Date / time	Location / area			Assessor		Supervisor	
Team signatures							

2. Conditions and hold points

Stage	Time	Location / area	Environment / readings	Item / condition	Controls	Plant / tools	Approval / signature
HP-0 Start							
HP-1 Isolate lines							
HP-2 Test atmosphere							
HP-3 Ventilate and permit							
HP-4 Close and hand over							

Complete after actual checks. Recheck after changes, defects or shift handover.

3. JSA risk assessment

Job stage	Hazards and effects	Failure factors	Technical and procedural controls	Site verification	P	S	R	A
1. Entry necessity and boundary	1. Oxygen deficiency 2. Unknown contamination 3. Uncontrolled adjacent work	1. Non-entry option ignored 2. Branches not mapped 3. Nitrogen activity omitted	1. Assess avoiding entry 2. Map service and connections 3. Coordinate adjacent operations	1. Space and task identity 2. Service and isolation map 3. Non-entry and work review				
2. Isolation acceptance	1. Fluid ingress 2. Unexpected motion 3. Residual pressure	1. Valve passes 2. Connection missed 3. Energy not verified	1. Isolate full boundary 2. Remove stored energy safely 3. Verify locks and blinds	1. Isolation and blind register 2. Zero-energy verification 3. Responsible owner and changes				
3. Atmosphere assessment	1. False safe result 2. Undetected toxic gas 3. Remote oxygen deficiency	1. Sensor coverage wrong 2. Hose delay omitted 3. Deep branch unsampled	1. Check full sampling train 2. Test representative route 3. Evaluate against local criteria	1. Instrument and sensor record 2. Locations time and results 3. Safety assessor evaluation				
4. Permit and rescue release	1. Unauthorised entry 2. Entrapment at elbow 3. Delayed rescue	1. Permit evidence incomplete 2. Tripod assumed adequate 3. Attendant not appointed	1. Link supervisor and assessor checks 2. Verify actual rescue geometry 3. Obtain manager permit decision	1. Entry permit and duration 2. Attendant and communication 3. Rescue team equipment and route				
5. Monitoring and withdrawal	1. Changing atmosphere 2. Ventilation loss 3. Secondary casualty	1. Alarm reset without review 2. Adjacent work changes 3. Impulsive rescue entry	1. Maintain monitoring and contact 2. Withdraw on control failure 3. Activate planned outside response	1. Detector and task changes 2. Air path and contact state 3. Cause review and new decision				
6. Closure and operations	1. Person sealed inside 2. Tools left in pipe 3. Premature supply return	1. Roster not reconciled 2. Closure incomplete 3. Isolation released early	1. Verify every physical exit 2. Inventory and inspect closure 3. Formally transfer operations	1. Entrants and tool count 2. Closure and permit status 3. Isolation release and receiver				

P/S/R/A: Complete only after actual site assessment using the site risk method.

4. Pre-work checklist

☐ Space and task identity	☐ Isolation and blind register	☐ Instrument and sensor record
☐ Entry permit and duration	☐ Detector and task changes	☐ Entrants and tool count
☐ Non-entry and work review	☐ Rescue team equipment and route	☐ Isolation release and receiver