

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

en-SG · Technical failure review · 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. Isolate lines	1. Stored pressure 2. Unexpected motion 3. Heavy blind injury	1. Hidden connection 2. Residual energy 3. Unsupported flange	1. Depressurise safely 2. Verify blind schedule 3. Support heavy parts	1. Zero energy evidence 2. Lock ownership 3. Blind register				
2. Prepare access	1. Dropped objects 2. Delayed rescue 3. Ignition sources	1. Blocked exit 2. Wrong rescue rig 3. Unsuitable lighting	1. Protect access route 2. Prove rescue method 3. Select rated equipment	1. Rescue clearance 2. Equipment suitability 3. Communication test				
3. Test atmosphere	1. Toxic gas pockets 2. Flammable mixture 3. False safe reading	1. Blocked sample hose 2. Short sample time 3. Missed dead leg	1. Check instrument response 2. Allow hose delay 3. Sample full work route	1. Sampling locations 2. Time and conditions 3. Assessor results and limits				
4. Ventilate and permit	1. Exhaust ingress 2. Oxygen enrichment 3. Uncontrolled entry	1. Dirty intake air 2. Fan interruption 3. Incomplete permit	1. Reach work zones 2. Retest after purging 3. Authorise only if ready	1. Power continuity 2. Retest record 3. Authorised manager entry permit				
5. Work and monitor	1. Heat and fatigue 2. Cuts and ignition 3. Loss of contact	1. Damaged cable 2. Sensor alarm 3. Attendant distracted	1. Maintain appointed attendant 2. Keep exit clear 3. Stop at any change	1. Detector trends 2. Contact continuity 3. Task remains in scope				
6. Stop and rescue	1. Secondary casualties 2. Entrapment at bends 3. Unsafe re-entry	1. Unplanned rescue entry 2. Snagged retrieval 3. Reset without review	1. Call planned rescue 2. No impulsive entry 3. Reassess before return	1. Cause investigated 2. Rescue access ready 3. New entry decision				

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

4. Pre-work checklist

☐ Zero energy evidence	☐ Rescue clearance	☐ Sampling locations
☐ Power continuity	☐ Detector trends	☐ Cause investigated
☐ Blind register	☐ Authorised manager entry permit	☐ New entry decision