

Method Statement

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Date required for Revision:	15/04/2019
Created By:	A Llewellyn

Plant	Process, off plots, Jetty, Fire Pond and Cogen units
Plant System:	
Plant Item:	
Responsible Process Team:	Dragon Operations

Brief Description of Job to be Undertaken:		PPE Required							
Erect, Modification & Dismantle of scaffolding within the Process, off plots and Cogen units (Not within a Confined Space) in accordance with: TG20:13, Hertel standard solutions or bespoke design drawings & NASC SG4:15, preventing falls in scaffolding. All scaffolders will be adequately trained and certified by CISRS.									
		✓	✓	✓	✓				
		Other Please State:							
Contingency Plan & Emergency Arrangements:									
Station Emergency Telephone Number: 333									
		✓	✓						
Reference Documents(PTW , SCS,4 WHATS)		Tools & Equipment:		Trade / Competence		COSHH Ref:		Reason for Revision: (Y/N if applicable)	
- CPR/ POWRA Form - Risk Assessment (SCAFFDLNGRA001) - Hertel Standard Solutions or Bespoke Design Drawing - Permit to Work / WA - Rescue Plan A / B		- Inertia blocks - Hand Tools - WRAPPA Sling - Scaff Step		- Scaffolders - Scaffold labourer		N/A		Updated Risk Assessment	Updated Method Statement
								Incident Investigation	New/Modified Plant
								Change in Legislation	

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TASK		
Task Step	(This section should be complete as a step by step method of how to complete safely)	Additional Information
1.	Prior to starting work the supervisor will brief the working party on the documentation and sequence of work to be complete.	
2.	A CPR / POWRA will be completed to identify any additional hazards in the area.	
3.	Pre-use checks to be carried out on all equipment used in association with the task.	
4.	Surrounding area must be cordoned off to allow control of works and to prevent any unauthorised access.	
5.	All materials must be fit for service, maintained and free from additional hazards e.g. protruding nails in scaffold boards.	
6.	Materials should be stored in a safe and sufficient way to prevent falling from height that could cause, personal injury and equipment damage, e.g. materials should not be stored vertically against any surface unless a cage is erected around the tubes & boards at all times.	
7.	The work environment must be kept clean and tidy at all times with clean as you go policy must be adopted.	
8.	No materials are to be left at height unless secured on designed/designated loading platform capable of withstanding the load.	
9.	Damaged/contaminated materials must be segregated and stacked ready to be placed in a quarantine area.	
10.	A scaffold-tag holder must be placed on the scaffold as soon as scaffold erection commences.	
11.	Once the scaffold is complete, the supervisor will inspect it and inform the scaffold inspector.	
12.	All waste materials will be disposed of in the correct designated deporal receptacles.	
13.	Supervisors will be responsible for ensuring work areas are free of debris and for the removal of surplus materials prior to signing permits off.	
14.	All permits/ WA's must be signed off on completion of works.	
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EMERGENCY & RESCUE PROCEDURES TFS will assist in rescue and emergency response if required. Call333 Chanel 1		JOB COMPLETION • Work area is to be left clean and tidy with no loose items left at height or at ground level. • Scaffold to be inspected by a trained and competent Scaffold Inspector and relevant "SAFE TO USE" tag to be placed on scaffolding. • All equipment returned to scaffold trailer / Yard.
Signature Sheet		
I have read and discussed the attached Method Statement/Risk Assessment; I fully understand it and will comply with all its requirements.		
PRINT NAME	SIGNATURE	POSITION DATE
Signature Sheet		

Method Statement

I have read and discussed the attached Method Statement/Risk Assessment; I fully understand it and will comply with all its requirements.

PRINT NAME	SIGNATURE	POSITION	DATE

RISK ASSESSMENT

Task / Activity		General Units and Off-Plots, Jetty and fire pond; Erection, Modification and Dismantling of <i>Scaffold Structures</i> as defined by TG20:08/13.			
Location		Assessment Date		Completed By	
Dragon LNG, Main Rd Waterston, Milford Haven, SA73 1DR.		16/04/2018		Adrian Llewellyn	
Site Supervisor		Checked By		Revision	
Liam Morrison		Liam Morrison		01	
HSEQ		Review Date		15/04/2019	

Description of Task	Erection, Dismantle and Modifications of scaffold structures and associated tasks, on General Unit, off-plots Jetty and fire pond. (RA does not cover Confined Spaces).			
Main Hazards Identified	Yes, adjacent.			
Conclusions	All hazards identified have been assessed and have been reduced as far as reasonably Practicable.			
Recommendations	Employees must read and sign this RA. Always follow Permit /WA requirements in accordance with this risk assessment.			

No.	Likelihood of Occurrence	Description
1	Not Likely	A freak combination of factors would be required for an incident to result. Normal state.
2	Possible	A rare combination of adverse factors would be required for an incident to result.
3	Quite Possible	Only happens if additional factors are present, but is unlikely to occur otherwise.
4	Likely	Less than 100% certainty that an incident will occur, but an additional factor may be required to cause the event.
5	Very Likely	Almost 100% certainty that an incident will occur under the circumstances.

No.	Severity	Description
1	Negligible	Results in negligible injury with no absence from work or negligible loss of function/production with no damage to equipment or the environment.
2	Slight	Minor injury requiring first aid treatment, damage to equipment requiring minor repair, minor loss of production or impact to the environment.
3	Moderate	Injury leading to a Lost Time Accident, localised damage to equipment requiring extensive repair, significant loss of function/production or moderate pollution incurring some restitution costs.
4	High	Involving a single death or severe injury, damage to equipment resulting in production shutdown and significant production loss. Severe pollution with short term localised implications incurring significant restitution costs.
5	Significant	Multiple deaths, major plant or equipment damage, major pollution with long term implications and very high restitution costs.

Risk Potential = Likelihood of Occurrence x Hazard Severity				
Risk Category	Numerical Value	Guidance		
High	15 - 25	Unacceptable, more control essential. Work must not be approved.		
Medium	6 - 12	Tolerable, more control is practicable. Approval from relevant supervisory level required.		
Low	1 - 5	Manageable, but reasonably practicable controls to be considered.		

Risk Matrix					
Hazard Severity					
Likelihood of Occurrence	5	4	3	2	1
	25	20	15	10	5
	20	16	12	8	4
	15	12	9	6	3
	10	8	6	4	2
5	4	3	2	1	

RISK ASSESSMENT

Hazards Identify	Risk Effects	Severity 1-5	Likelihood 1-5	Initial Risk			Control Measures Prevention	Severity 1-5	Likelihood 1-5	Residual Risk			Responsible Person
				H	M	L				H	M	L	
Working at Height	Falls from Height	4	4	16			• Work within the guidelines of SG4:10 'Preventing Falls in Scaffolding' and TG20:08/13 'Technical Guidance on the use of BS EN12811-1 Volume 1&2', using The One Metre lift, Safety Step, and or Fall Arrest System • Identification for Safe Method of erection/ dismantle/modification for intended scaffold to be referenced to the specific Work Task Assessment Form. • 100% fall protection policy to be adopted at all times during scaffold activities, assisted by the use of a WRAPPA sling and twin tail lanyard. • Labourers must work from a fully completed working platform with double guard rails. • Ensure suitable anchor point for inertia block, where access can be gained at all times. Do not exceed 30 degrees on the horizontal plane; this reduces the pendulum effect should a fall occur. Ensure inertia line connection is connected to the dorsal D ring on the harness, NOT the lanyard. • Scaffolders must not undertake lone working under any circumstances on an incomplete scaffold. If this occasion arises you must remove yourself to a safe environment/grade. • Gotcha rescue loop to be available to assist with suspension trauma	4	1			4	Employees
Falling Material	Personal injury/multiple Injuries.	4	4	16			• Suitable barriers/exclusion zones must be defined and maintained, with the relevant warning signs displayed. • Raise and Lower materials with suitably tested lifting equipment displaying the correct inspection tag, e.g. Gin Wheel and rope or Hand Line. • Ensure correct rope knot is used defined by the equipment lifted, by a competent person. • Lifting bags must be fit for service and NEVER exceed the weight limit defined by the manufacturer. • Never stand directly below materials being raised or lowered. • If chaining materials, line of sight MUST be maintained at all times and ensure verbal confirmation from receiver that they have firm grip on materials before releasing items. • Items must be stored in boxes or bags where practical. •	4	1			4	Employees, Others
Fallen Operative	Personal injury.	4	4	16			• The supervisor will consider emergency actions when erecting or dismantling scaffolds and refer to the rescue plan. • Gotcha rescue loop to be available to assist with suspension trauma • In the event of an emergency where the individual cannot be moved, call operations on channel 1 or 333 on the nearest telephone stating the nature and	4	1			4	Employees

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Working close to / over water	Drowning	5	4	20		- Personal buoyancy aid to be worn at all times when working over water, with suitable inspection tag displayed. - Use retractable inertia block where applicable. - Safety boat must be in attendance at all times at a maximum distance of 75 yards where multiple squads are working on the Jetty. - The safety boat crew must have a direct line of sight of each working gang, when multiple gangs are being covered. - EPIRB to be worn in foggy, dark or rough conditions that limit visibility of the safety boat team.	5	1		5	Employees
Manual Handling	Personal injury.	3	4	12		- Think of the Task, Individual, Load and Environment - Ensure load to be moved is assessed prior to lifting. - Minimize manual handling by using mechanical methods where practical, e.g use of a Fork lift truck for beams. - Use gin wheels/hand lines or more operatives in the case of bulky or hard to carry items e.g. Beams, System Scaffolding etc. - All scaffold boards must be de nailed before and after use.	3	1		3	Employees
Poor Access/ Egress and Housekeeping	Personal injury, Falling objects	3	3	9		- Define safe route for access/egress, using designated purpose built routes where practical. - Keep materials stacked neat and tidy and not blocking gangways, access routes, critical equipment (e.g. pump safety devices), and emergency equipment (e.g. fire hydrant), etc. - Do not lean or stack equipment in an upright position against process equipment or where it could slide and fall over. Do not leave tube or boards in an upright position unattended. - Remove all surplus materials from area once work has been completed. - Ensure footwear is in good condition. Rigger style boots are not permitted. - Lighting MUST be in suitable working order, sufficient for the task with no undue shadowing in the workplace.	3	1		3	Employees, Others
Use of Crane	Major injury, Plant Damage	5	3	15		- Ensure that a trained/competent, slinger/banks man, is used. - Ensure that lifting baskets have been inspected and tagged accordingly before use. - Ensure that Lifting Plan is signed by the appointed person and crane is set up accordingly. - Barriers MUST be setup and maintained to prevent unauthorised access. - Ensure load has landed prior to approaching the lifting basket. NEVER stand directly under a suspended load.	5	1		5	Employees, Others

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Noise	Hearing Damage	3	3	9	- Hearing protection MUST be worn at all times in the designated hearing protection zones. - Where noise levels are suspected to be above 80 db outside of designated hearing zones, then hearing protection MUST be worn.	3	1	3	Employees
Plant Induced Dust	Foreign body in eye	2	4	8	- All scaffold lifts MUST be cleaned of objects and dust prior to dismantling. - Upgrade eye protection to goggles when activity generates dust, e.g. near fin fans, dismantle scaffolds, overhead work etc.	2	1	2	Employees
Liquid Natural Gas and un-lagged cryogenic pipework	Personal Injury, Fatality	5	5	25	- All operatives MUST have undertaken the Dragon LNG and Cryogenic induction prior to being allowed to work on site. - All work to be carried out to permit instructions and conditions. - Correct PPE MUST be worn at all times. - Report any detected leaks or suspected leaks of LNG immediately.	5	1	5	Employees
Scaffold lubricant & ID paints	Acute or chronic health effects	3	4	12	- All users of lubricants and paints MUST have read, understood the COSHH for the product. - Users MUST maintain all control measures identified.	3	1	3	Employees
Hand Tools	Personal Injury	2	3	6	- All hand tools MUST be in good working order. - Any tools that are not serviceable MUST be replaced.	2	1	2	Employees

Mandatory PPE: Hard hat, safety glasses, flame retardant overalls, safety footwear, gloves, hearing protection.

NB: Always comply with Permit requirements.

RISK ASSESSMENT

I have read and understood the contents of the risk assessment and agree to adhere to the controls for the work activity

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Risk Assessment -			Project: DRAGON LNG jetty various areas	16.10.2018
Task: Maintenance Works to Jetty Structural Steelwork, by means of Abrasive Blast Cleaning & Airless Spray Application of Coating System Persons at risk: Supervision, Operator, 3 rd parties.			RA No.1578	

Hazards & Associated Risks	Assessment no controls			Control Measures to Reduce Risk			Assessment with controls		
	S	L	R				S	L	R
Site Set-Up & Material Delivery									
Lifting Equipment Failure	4	3	12	Ensure that BDS personnel are trained, competent and experienced in loading and unloading of plant & equipment. (B, D)			4	1	4
Manual Handling of Equipment & Materials	3	4	12	Use safe, kinetic lifting techniques. Maximum weight to be lifted should be one 25kg bag of grit abrasive or one 20 litre drum of paint. Enough labour should be available to lift heavier weights, mechanical assistance if the load is too heavy to lift manually. (A, B, E, F)			3	1	3
Siting & Setting Up of Plant & Materials	4	2	8	Plant & Materials will be in a safe place on site as previously agreed during site review visits. Only experienced and competent personnel will set up the equipment. Condition of hoses will be checked, whip checks will be attached to each hose connection, deadman system will be in place and checked. Access and egress points to be always kept clear. Emergency roads to be always kept clear. (A, B, C, D, E, F)			4	1	4
Communication	3	3	9	Good communication between standby man and operatives is always mandatory. This can be visually by hand signals or verbally through two-way radio. (A, B, C, D, E, F)			3	1	3
Access /Egress Slip/trips/falls/ trailing hoses.	3	4	12	Ensure all access and egress points are always kept clear. Maintain good housekeeping can cable management at access/egress points. Visually inspect work area for potential hazards such as slips, trips and falls prior to commencement of work. Report findings to supervision. (A, B, E, F).			3	1	3

Site Set-Up & Material Delivery	S	L	R		S	L	R
Injury from use of grinder	3	2	6	Ensure grinder is 110v and examined before use. Wear full face visor and safety glasses, appropriate gloves. Only trained staff to use angle grinders. Fire extinguisher located at job site. (A, B, D)	2	2	4
Injury Associated with Abrasive Blast Cleaning. Contact with Shot	4	4	16	Only experienced and competent operators to carry out the process. Warning signs to be positioned advising of the blasting operation in progress. Blasting helmet and breathing air supply line will always be used during the blasting process. Safety standby man to be in attendance to ensure that no unauthorised persons enter the work area and that no persons are in the line of fire. All plant to be examined prior to being taken onto site. Chalwyn valve and spark arrestors to be fitted to all diesel driven compressor units. Deadman system to be fitted, in use and tested at regular intervals. Whip checks to be fitted to all hose connections. Potman to be aware of requirement in respect of safe use of blast pot and hoses. Expected sound levels could reach 102db, laser lite disposable ear plugs or ear defenders be worn always to reduce the noise level to below 80 db. Good supervision always to ensure that the work is being carried out safely and to the client's specification. (A, B, C, D, E, F)	4	2	8
Application of protective Coatings. (Overcome by fumes)	4	4	16	Following the preparation process the prepared areas will be coated in compliance with the client's detailed protective coatings specification. All coatings will be stored, handled, mixed and applied according to manufacturers recommendations and requirements. Full PPE will always be issued and worn. Good housekeeping standards will be maintained with a regular manual clean up of empty product containers. All collected containers to be returned to BDS yard to be disposed of by the licensed contractor.	4	2	8
Scaffolding	3	4	12	Only access the scaffold if it is accompanied by an in date Scaffold tag. Under no circumstances must operatives alter or modify any scaffold. All work must be carried out inside the guard rails. Operatives must not work off the middle or top guard rails. Do not store any excessive materials on the scaffolds. Do not place or store any items or equipment in scaffold tubes. If you observe a defect in the scaffold remove the Scaffold tag and report it directly to supervision or scaffold company. (A, B, C, F)	3	2	6
Dehydration	3	3	9	Operatives should take regular breaks and drink sips of water. Do not wait until you are thirsty. (A, B, F)	3	1	3

Site Set-Up & Material Delivery	S	L	R		S	L	R
Adverse Weather	3	3	9	Operatives must be aware that extreme adverse weather conditions, such as thunder storms, high winds, tidal currents etc. All work will cease immediately during such times. (A, B, C, D, E, F)	1	3	3
HAV	2	3	6	Operators to be advised of hand arm vibration syndrome caused by continuously operating machinery. Job rotation and regular breaks should be taken to reduce the risks. (A, B)	2	2	4
Exposure to hazardous noise	3	3	9	Earplugs/defenders must be worn by all operatives likely to be affected by noise levels. At extreme levels or during long periods of exposure a combination of both ear plugs and ear defenders may be necessary. (A, B)	3	1	3
Environmental issues.	3	3	9	Environmental issues will be reviewed with the importance of housekeeping requirements emphasised. The scaffold will be fully sheeted containing the spent blast media/rust/paint, Iron silicate blast media will be used which has been tested as inert with no effect on marine life. At the end of each shift the spent waste will be disposed of in skips provided for safe disposal. Housekeeping will be continual throughout the shift. Good supervision always.	3	1	3

Hazards & Associated Risks	Assessment no controls			Control Measures to reduce risk & person responsible for implementation	Assessment with controls		
	S	L	R		S	L	R
COSHH	3	3	9	Follow all precautions and PPE as stipulated on the Material Safety Data Sheet (MSDS) (A, B)	3	1	3
Fumes & Dust	3	3	9	Follow all procedures detailed on the COSHH assessment and the Material Safety Data Sheet. Ensure adequate ventilation is present and/or appropriate respiratory protection is worn. (A, B, C, D, E, F)	3	1	2
Fire Fighting Equipment	3	3	9	Fire extinguishers will be sited with all plant. Operatives will be trained in the use of fire fighting equipment. In the event of a fire alarm to be raised via radio and DRAGON LNG Safety Department notified.	3	1	3
Housekeeping	3	3	9	Housekeeping to be maintained throughout operation and area cleared on completion (A, B)	3	1	3
Emergency Procedures	3	3	9	All operatives will discuss and agree the BDS/Puma procedure to adopt in the event of an emergency. (A, B, C, D, E, F)	3	1	3

Hazards & Associated Risks	Assessment no controls			Control Measures to reduce risk & person responsible for implementation	Assessment with controls		
	S	L	R		S	L	R
Environmental							
Spillages	3	3	9	If during the task a spillage occurs that could be a potential risk to the environment the spillage must be cleared up immediately following COSHH risk assessment procedures, safety department and MHPA informed. (A, B, E)	3	1	3
Waste Disposal	3	3	9	Waste (empty paint tins, grit bags, etc) to be transferred to BDS Head Office for disposal.	3	1	3
Health Hazards	4	2	8	Ensure a COSHH assessment and Safety Data Sheets are available for any harmful substances, Good personal hygiene is mandatory, always wash hands before eating, drinking, smoking or contact with contaminated clothing/equipment. Any cuts should be covered with waterproof plasters. (A, B, C, D, E, F)	4	1	4

Likelihood	Severity of Occurrences			
	No injury (1)	Minor Injury (2)	Major Injury (3)	Death (4)
Improbable (1)	1	2	3	4
Remote (2)	2	4	6	8
Possible (3)	3	6	9	12
Probable (4)	4	8	12	16
Likely (5)	5	10	15	20

Key:
S = Severity
L = Likelihood
R = Risk Rating
High Risk
Medium Risk
Low Risk

Key to Responsibilities
A Operative
B Supervisor
C Area Engineer
D Safety Advisor
E Principal Contractor
F Standby Man

PPE Required Y / N
Hard Hat
Overalls & Boots
Eye & Ear Protection
Gloves
RPE
Safety Harness