

JOB SAFETY ANALYSIS (JSA) FORM					Rev 1 Feb 24
Unit/Area:	Specific Location:	Work Authorizer (if applicable):	Supervisor / Work Lead:	Date:	
Job Description for Tasks with High Potential Consequence (i.e., life-altering injuries or Consequence Level 1 process safety events including HC 1&2 events) (include Equipment Numbers as Practical):					
Check LSRA(s) that apply and review Start Work Check(s). Complete Page 2 with any additional task steps with high potential consequence or if there is no applicable LSRA.					
 Confined Space Entry Obtain authorization before entering a confined space ☐		 Bypassing Safety Controls Obtain authorization before overriding or disabling safety controls ☐		 Energy Isolation Verify isolation and zero energy before work begins ☐	
<ol style="list-style-type: none"> 1. I confirm energy sources are isolated 2. I confirm the atmosphere has been tested and is monitored 3. I check and use my breathing apparatus when required 4. I confirm there is an attendant standing by 5. I confirm a rescue plan is in place 6. I obtain authorization to enter 		<ol style="list-style-type: none"> 1. I understand and use safety-critical equipment and procedures which apply to my task 2. I obtain authorization before: <ul style="list-style-type: none"> • Disabling or overriding safety equipment • Deviating from procedures • Crossing a barrier 		<ol style="list-style-type: none"> 1. I have identified all energy sources 2. I confirm that hazardous energy sources have been isolated, locked, and tagged 3. I have checked there is zero energy and tested for residual or stored energy 4. I never remove or tamper with energy control devices without authorization 5. I confirm equipment is back to safe operating condition prior to re-energizing 	
 Safe Mechanical Lifting Plan lifting operations and control the area ☐		 Hot Work Control flammables and ignition sources ☐		 Working Around Mobile Equipment See and be seen; maintain a safe distance ☐	
<ol style="list-style-type: none"> 1. I confirm that the equipment and load have been inspected and are fit for purpose 2. I only operate equipment that I am qualified to use 3. I establish and obey barriers and exclusions zones 4. I never walk under a suspended load 5. I understand the lift plan prior to starting work and keep hands off load unless authorized 6. I establish and maintain communication with lifting and rigging personnel 		<ol style="list-style-type: none"> 1. I identify and control ignition sources 2. Before starting any hot work: <ul style="list-style-type: none"> • I confirm flammable material has been removed or isolated • I obtain authorization 3. Before starting hot work in a hazardous area, I confirm: <ul style="list-style-type: none"> • A gas test has been completed • Gas will be monitored continually 		<ol style="list-style-type: none"> 1. I plan work to separate workers and mobile equipment 2. I only operate mobile equipment if qualified and use spotters where required 3. I verify safety devices are functional on mobile equipment 4. I establish clear means of communication with equipment operator 5. I stay out of the equipment's exclusion zone while in operation 6. I confirm controls are in place to prevent unintentional movement of mobile equipment and/or loads 	
 Breaking Containment/OPE Manage ignition sources and exposure to energy & hazardous substances ☐		 Driving Follow safe driving rules ☐		 Work Authorization Work with a valid permit when required ☐	
<ol style="list-style-type: none"> 1. I verify opening/break location(s) 2. I confirm energy isolation is complete 3. I manage ignition sources and confirm gas testing is completed when required 4. I use appropriate PPE and defensive behaviors when opening process equipment 		<ol style="list-style-type: none"> 1. I always wear a seatbelt 2. I do not exceed the speed limit, and reduce my speed for road conditions 3. I do not use phones or operate devices while driving 4. I am fit, rested and fully alert while driving 5. I follow journey management requirements 		<ol style="list-style-type: none"> 1. I have confirmed if a permit is required 2. I am authorized to perform the work 3. I understand the permit 4. I have confirmed that hazards are controlled, and it is safe to start 5. I stop and reassess if conditions change 	
				 Line of Fire Keep yourself and others out of the line of fire ☐	
				<ol style="list-style-type: none"> 1. I position myself to avoid: <ul style="list-style-type: none"> • Moving objects • Vehicles • Pressure releases • Dropped objects 2. I establish and obey barriers and exclusion zones 3. I take action to secure loose objects and report potential dropped objects 	
Confirm these safeguards are in place and effective prior to starting work using the applicable SWC(s). During the task, if safeguards are no longer in place or effective, STOP Work.					

Are there any additional high potential consequence hazards present?

Electrical Energy 	Moving Objects 	Lighting & Visibility 	Simultaneous Operations (SIMOPS) or Stacked Work 
Stored Energy 	Hazardous Substances 	Noise & Vibration 	
Thermal Energy 	Radiation 		

High Potential Consequence Task Steps (Description)	Check off to indicate Hold Point	POTENTIAL HAZARDS & CONSEQUENCES Include applicable Error Prone Situations and Triggers	SAFEGUARDS (Actions & Physical Safeguards) Eliminate or Mitigate the hazards
	Hold Point ☐		
	Hold Point ☐		
	Hold Point ☐		
	Hold Point ☐		
	Hold Point ☐		

Confirm these safeguards are in place and effective prior to starting work using this JSA.
During the task, if safeguards are no longer in place or effective, STOP Work.

Lessons Learned (as needed): What improvements should be made for future work? Discussion leader to provide feedback to update planning package.

LAI HAZARD ANALYSIS

LAI HAZARD ANALYSIS											
Project Number:		Project Task: Working at Height						Location:			
Prepared By:			Date:		Reviewed By:				Date:		
Ref. Number	High Potential Consequence Task Steps	POTENTIAL HAZARDS & CONSEQUENCES Include applicable Error Prone Situations and Triggers	Target Check off to indicate Hold Point	Preliminary Risk Assessment			Control Type	SAFEGUARDS (Actions & Physical Safeguards) Eliminate or Mitigate the hazards	Final Risk Assessment		
				H	M	L			H	M	L
1	Overhead work within and around the GOLD project   	Personnel exposure to falling objects from overhead work resulting in injury	P <div style="border: 1px solid black; width: 20px; height: 20px; margin-left: auto; margin-right: auto;"></div>	X			D/E /S/ W/A A S A/S	<p>Prior to starting a task, Evaluate the Lifesaving Rules and actions (LSRA) start work Checks (SWC) that may apply to that task review START/STOP work expectations and implement, Verify & Validate (V&V) the appropriate behaviors and or control Safeguards per the ExxonMobil PSMS and site HSE Procedures during the pre-task brief</p> <p>Ensure JSA for specific LAI tasks address proper hazard control methods</p> <p>Areas below overhead work areas will be barricaded to prevent personnel exposure. Barricades must be located so that the objects that fall are contained within the barricade area.</p> <p>Personnel in the construction area are required to wear hardhats.</p>		X	

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				H	M	L			H	M	L
							A	When possible, work shall be planned and coordinated to eliminate work by multiple crews in the same area.			
							A	Tools and materials shall be properly stored when not in use.			
							S	Where appropriate solid work surfaces will be placed over open grating to prevent objects from falling through the grating.			
							A	Rigging equipment for material handling shall be inspected prior to use on each shift and as necessary during its use to ensure that it is safe. Defective rigging equipment shall be removed from service.			
							A	Rigging has permanently affixed, and legible identification markings as prescribed by the manufacturer that indicate the recommended safe working load.			

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				H	M	L			H	M	L
								A Rigging not be loaded in excess of its recommended safe working load as prescribed on the identification markings by the manufacturer; and A Rigging not be used without affixed, legible identification markings. A Rigging equipment, when not in use, shall be removed from the immediate work area so as not to present a hazard to employees. A Only Qualified Riggers shall preform rigging operations. A Only Qualified Signal Persons shall perform signal operations. D/E /S/ A All employees are trained and aware of the site-specific work requirements for raising and lowering tools and materials via rope.			

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				H	M	L			H	M	L	
							D/E /S/ A A	All employees are trained and aware of and will implement the site-specific Stop the drop procedure and required controls including the teetering of tools and materials above 4 ft. Complete a Last Minute Risk Assessment (LMRA) prior to beginning each task				
2	Overhead work within and around the project 	Falling objects from overhead work resulting in damage to equipment	F/E ☐		X		S/A S A A	Critical equipment below overhead work areas will be protected from potential falling objects. Where appropriate, tools shall be tethered to minimize the potential for falling or being dropped. Utilize critical lift plan process to control lifts. Limit access to process unit to essential personnel only.			X	

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				H	M	L			H	M	L
							A	Ensure that crane operators are trained and certified to operate equipment.			
							A	Ensure that crane has been inspected and in proper working condition.			
							A	A spotter shall be used to assist when lifting over congested area or when material is being moved out of the operator's line of sight.			
							A	When possible, work shall be planned and coordinated to eliminate work by multiple crews in the same area.			
							D/E /S/ A	All employees are trained and aware of the site-specific work instruction for raising and lowering tools and materials via rope.			

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				H	M	L			H	M	L
							D/E /S/ A A	All employees are trained and aware of and will implement the site-specific Stop the drop procedure and required controls. Complete a Last Minute Risk Assessment (LMRA) prior to beginning each task			
3	Work at heights or near leading edge of scaffolding, within and around the GOLD project 	Fall exposure to personnel.	P ☐	X			D/E /S/ W/A	Prior to starting a task, Evaluate the Lifesaving Rules and actions (LSRA) start work Checks (SWC) that may apply to that task review START/STOP work expectations and implement, Verify & Validate (V&V) the appropriate behaviors and or control Safeguards per the ExxonMobil PSMS and site HSE Procedures during the pre-task brief		X	

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				H	M	L			H	M	L
							A	Ensure JSA for specific LAI tasks address proper hazard control methods			
							S/A	Fall hazard control shall be provided in the form of fall prevention systems, which includes guardrail systems, scaffolds, aerial lifts, barricades, and hole covers. Fall protection measures include the use of personal fall arrest systems (body harness and SRL's) at or above (6) four feet.			
							S/A	SRL's will be placed on all scaffolding ladders 10 feet and above and will be fitted with swing gates.			
							A	Only Qualified persons shall modify scaffolding			

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				H	M	L			H	M	L
							A	A Scaffolding Competent Person will perform inspections prior to initial use, before each work shift, and upon any occurrence that may affect the structural integrity of the scaffold as required by Worley Scaffolding, Ladders, Stairs and Walkways Standard PHP-0045-COR-EN			
							A/S	Employees working from Scaffolding from an elevation of six feet or more, shall use fall protection equipment (harness and double SRL's)			
							A	Employees who are required to use ladders will be required to complete the Ladders and Stairway Training Program.			

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				H	M	L			H	M	L
							A	Inspect ladder before use. Use 4:1 ratio for ladder angle. Ensure base area is level. Request assistance if needed.			
							A/S	Use fall protection device when working at elevation greater than 6 ft. Ensure ladder is tied off.			
							D/E	Swing gates will be utilized at all scaffolding ladder points to assure safe entry and egress.			
							E/A	Vertical lifelines will be utilized on all scaffold ladders 10 foot or greater to eliminate fall potential while climbing, descending, or transitioning from ladder to work platform or vice versa.			
							A	Complete a Last Minute Risk Assessment (LMRA) prior to beginning each task			

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				H	M	L			H	M	L
5	Scaffold Erection & Dismantling within and around the GOLD project   	Personnel exposure to falling objects from overhead work resulting in injury.	P ☐	X			D/E /S/ W/A A W/S	Prior to starting a task, Evaluate the Lifesaving Rules and actions (LSRA) start work Checks (SWC) that may apply to that task review START/STOP work expectations and implement, Verify & Validate (V&V) the appropriate behaviors and or control Safeguards per the ExxonMobil PSMS and site HSE Procedures during the pre-task brief Ensure JSA for specific LAI tasks address proper hazard control methods Areas below overhead work areas will be barricaded to prevent personnel exposure. Barricades must be located so that the objects that fall are contained within the barricade area.		X	

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				H	M	L			H	M	L
							A/S	Personnel in the construction area are required to wear hardhats.			
							A	When possible, work shall be planned and coordinated to eliminate work by multiple crews in the same area.			
							A	Tools and materials shall be properly stored when not in use.			
							S	Where appropriate solid work surfaces will be placed over open grating to prevent objects from falling through the grating.			
							D/E /S/ A	All employees are trained and aware of the site-specific work requirements for raising and lowering tools and materials via rope.			

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				H	M	L			H	M	L
							D/E /S/ A	All employees are trained and aware of and will implement the site-specific Stop the drop procedure and required controls.			
							S/D	Employees working bellow others during scaffolding dismantling shall wear sealed eye protection (goggles/Spogles) to prevent eye injury due to falling dust or debris.			
							A	Complete a Last Minute Risk Assessment (LMRA) prior to beginning each task			

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				H	M	L			H	M	L
6	Scaffold erection and use within and around the GOLD project	Personnel exposure to damaged or incomplete scaffolding resulting in falls or injury.	P		X		A	A Scaffolding Competent Person will perform inspections prior to initial use, before each work shift, and upon any occurrence that may affect the structural integrity of the scaffold as required by Scaffolding, Ladders, Stairs and Walkways Standard PHP-0045-COR-EN			X
							A/S	Employees working on, Erection or Dismantling Scaffolding from an elevation of six feet or more, shall use fall protection equipment (harness and double SRL's)			
							D/E	Swing gates will be utilized at all scaffolding ladder points to assure safe entry and egress.			
							A	Complete a Last Minute Risk Assessment (LMRA) prior to beginning each task.			

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				H	M	L			H	M	L
							A	The platform must be attended at all times by a lift operator while any personnel are exiting or accessing an elevated platform.			
							A/S	100% tie off must be maintained while exiting or entering the platform. The employee will secure a second lanyard to an anchorage point outside the basket before disconnecting their lanyard from the lift and exiting. When re-entering, secure second lanyard to the lift only after both feet are on the floor of the basket, and then release the lanyard tied to outside anchorage.			
							A	The floor of the basket or lift should be at the same level as the structure to be accessed.			
							A	At no time should employees exit or enter over the lift controls.			

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				H	M	L			H	M	L
							A	Access gates are to be utilized, if at all possible, to exit or enter the elevated platform.			
							A	If the manufacturer prohibits egress and access of an elevated lifting platform, such practices are prohibited unless written approval is obtained from the manufacturer.			
							A	Body harness shall be inspected daily and prior to each use.			
							A	Complete a Last Minute Risk Assessment (LMRA) prior to beginning each task.			

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				H	M	L			H	M	L
8	Elevated work inside of energized electrical substations and MMC within and around the GOLD project    	Fall exposure to personnel/ damage to or temporary shutdown of unit, electrical equipment, or facility due to sensitive nature of energized switches and inadequate fall protection/prevention methods	P/F/E		X		D/E /S/ W/A A A	Prior to starting a task, Evaluate the Lifesaving Rules and actions (LSRA) start work Checks (SWC) that may apply to that task review START/STOP work expectations and implement, Verify & Validate (V&V) the appropriate behaviors and or control Safeguards per the ExxonMobil PSMS and site HSE Procedures during the pre-task brief Ensure JSA for specific LAI tasks address proper hazard control methods Due to the sensitive nature of energized switches and electrical equipment, extra consideration must be taken in the choice of fall protection methods within energized substations to protect personnel and equipment.			X

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							A/S /W A/D /S	Mitigation options should be evaluated and implemented on a case-by-case basis by Qualified Persons of the project team and may include one or more of the following: <ul style="list-style-type: none"> • Guardrail Systems • 100% complete scaffolding (Green tagged) • Horizontal Lifeline systems with yo-yo type self-retracting devices • Arc flash rated harness, SRL's Elevated HRC PPE			
9	Removal of any Component Creating a Risk of Falling  	Injury from falls or dropped objects	P ☐		X		E/S /W/ A A	Prior to the removal of any part of any access walkway or handrail, Authorization is required. Follow site-specific requirements. i.e. a floor grating / handrail removal approval form shall be completed and approved, and prior to the work commencing: A hazard checklist and JSA shall be completed.			X

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				H	M	L			H	M	L
								S/W A substantial barricade with appropriate signage shall be erected at all approaches to the area where the grating will be removed. S Any personnel working inside the barricaded area shall wear appropriate fall protection; and The area below the intended opening that may be affected by overhead hazards shall be barricaded and sign-posted to prevent access. A/S After work has been completed and prior to the barricade being removed, all grating or floor plates and handrails are to be checked and approved to verify that all clamps and clips have been secured.			

Target: **P**=Personnel, **F**=Facilities and equipment, **E**=Environment

Control Type: **D**=Design hazard out or minimize, **E**=Engineering control, **S**=Safety device, **W**=Warning device, **A**=Administrative control