Α	new	JHA	is	rec	quired	whe
	46-	:			-6	

Job Hazard Analysis

TESORO

PART B of PERMIT

Auditor:

1a	Cold Work	Hot Work		Confined	Space	Part A #	
1b	Start Time:	Low Energy High B	Energy	Date:		Part B#	
1c	Company / Tesoro Craft						
1d	Unit / Area			Ops Ra	dio:		
1f	Work Description:	Low:	Medium:	High:			
	*Work Classification Table indicates the level of review require	ed for Low, Medium and High Risk Work.	Description must be	specific to task			
1g							
Ü							
	Special Precautions:						
	Tools Needed To Complete Job		Chemicals Needed to Complete Job (1i)				
1h	, , , , , , , , , , , , , , , , , , , ,						
	Primary Evacuation Area	Secondary Evacuation Area Wind Direction:				on:	
1j 1k	Work on Flare/Hot Drop Out Line, No	•					
11	Time Work Began on Flare/Hot Drop Out:	Time Confirm	ation Received	d:			
	Simultaneous Operations - Describe any near	arby operations that could negatively ef	fect you or how you	could negatively effect others			
11	Hazard A	Analysis Section - For a	Complete De	scription of Hazard Typ	es See Back Side		
	Task to Complete Job (in	2b	I	20	es, occ Back olde		
	sequence)	Hazard Type	lazard Type Actions to Eliminate, Control or Protect			otect	
	Additional IH Testing from I	Lack dentified Hazard Types	l s - Typically	Completed by Ind	lustrial Hvaienis	t - Contact Safetv	
2d	Monitor Hazard	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		onitoring Results / Co			
	(3g) (Minimum PPE is Nomex, Head/Hearing Protection 3a Respi	Hard Hat, Safety Glasses, Hard Protection 3b		<i>ion (except zone c), Sa</i> nd Protection ³ c		etector) ecial Clothing (3d)	
	Dbl. hearing protection		_	istant Gloves	Tyvek	-	
ion		e Lalf Mask e type:	☐ Welders ☐ Nitrile/P	Gloves VC Gloves	☐ Acid Ge	ear cal Gear	
Selection	Eye Protection (3e) Supplied		Leather		Safety		
Sel	Face Shield SCBA		Rubber		Other		
ш	☐ Chemical Goggles ☐ Escape ☐ Dust Goggles ☐ Other	Bottle	∐ Elect. In ☐ Other	sulated Gloves		all Protection (3f)	
PP	Welding Hood		☐ Other☐ Foot Pro	tection		s and Lanyard able Device	
	Other					s for retrieval	
		os or crafts will be working					
*Se 4a	Linit Operator	Printed Name - L	egible	Signa	ture	Date / Time	
	Unit Operator (or Area Supervisor for Zone E) Authorized Employee					'	
	Tesoro Competent Person:					† ,	
	Craft APIC/Entry Supervisor					· /	
	Safety Specialist (or date notified):					1	
4f	Zone/Craft Superintendent					/	
4g	Specific SME/Other					/	
	T: /D / W : 2					dicate the time they where notified	
4h	Time/Date Work Complete in accordance with Work Classification Table Do Not Close Out Part B if Insulation Removal or other actions have created a new hazard - All Hazards Must be Mitigated Prior To Closure						
			or careu				
4i	Post Joint Job Site Visit Completion V	/erification: Operator:		Autho	rized Craft/EM	P:	

Darn Good Questions to Consider Upon Completion of JHA" 5a

- Do you have the information and tools necessary to perform the job safely?
 Has the risk been eliminated or mitigated as much as possible before PPE was determined?
- 3 Is there risk of injury from lifting, carrying, pushing, pulling, working above shoulder level or below knee height?

 Have You Identified, Mitigated and Communicated LINE OF FIRE Hazards

Work Crew Declaration

Company

- 4 Are there mechanical advantage devices available that might be used on this job to reduce your risk exposure? 5 Is the timing or sequence of work critical to the overall job Does everyone understand the sequence?
- 6 Are the individuals responsible for carrying out the task trained, do they have the appropriate qualifications?
 7 Will personnel be working alone?

5b

- 8 Is there a plan in case the job takes longer then expected, has fatigue management been considered?
 9 Do we need any further technical or safety reviews from others?

NAME

- 10 Is there a requirement for additional emergency response or rescue planning
 11 Are you working within close proximity to Instrumentation or Live Electrical Equipment?

Do it safely or not at all There is always time to do it right We operate at the pleasure



Time

Maintenance - CH.1
Construction - CH.10
Security - CH.16

						-	
						-	
				ards Reference			
	Biological			anical		Chemical	
Pathogens, insects,	Limit Exposure	Rotating Equipr		LOTO	Chemical, (corrosive,	List specific chemicals/haz	zards
contaminated water	Respiratory Protection Skin Protection	Conveyor Belts		Machine Guarding in Place Trip Test Procedures	flammable, toxic)	Review SDS Exposure Monitoring	
Boo	dy Mechanics	Vehicle traffic, heavy		Traffic Barricades		Have Proper containers/la	abels
Manual Lifting	Review Lift Method	equipment	loavy	Cones		PPE matches exposure da	
Wandai Liiting	Assisted Lifting/Lowering?	equipment		Signs		Ensure adequate ventilation	
	Use of Mechanical Device			Flagmen / Spotters		Substitution of chemicals	
	Hand Protection/Pinch points			Lane Closure	Lead Paint	Lead paint controls in place	ce
Hand Hazards	Identify sharp tools, material			Communication with Equip Oper		Exposure Monitoring	
	PPE (gloves)			Plans to avoid process equip	Asbestos/Silica	Asbestos controls in place	Э
	Protect sharp edges as needed		Elec	tricity		Exposure Monitoring	
	Identify line-of-fire hazards	De-Energized E	Electrical	Verify LOTO		Environmental	
Pinch Points	List potential pinch points	Equipment		Confirm de-energized	Hazardous Materials S	Spills Adequate Containment	
	Barrier from rotating equipment	t Electrical Tracing		Review and comply with MP 5.4.2		Nearby Equipment/Persor	nnel
	Hand/Body Positioning	Static Electricity	/	Verify grounding/Bonding	Wet Conditions	Rain Gear	
Ergonomic	Twisting while lifting			Use non-sparking tools		GFCI / Assured Grounding	g
	Repetitive Motion		No	oise	Icy Conditions	Snow / Ice Removal	
	Poor body positioning	Noise > 85 dB		Ear Plugs / Muffs		Sanding	
	Gravity			Double Hearing Protection		Slip-on Boot Spikies	
Excavation	Shoring/Sloping/Benching			Noise Barriers		Other	
	Inspection by Competent P			sure	Adjacent work/process		
	Barricades	Hydraulic, Pneu	umatic	LOTO, verify zero energy		Work above/below	
Dropped Objects	Barricades	Process		Elevated PPE		Coordination with crew	
	Tool Lanyards			Barricades		Barriers required	
	Hand Rail Netting			Secure gas cylinders, cap	Hand & Power Tools	Inspect general condition	
	Cover Floor Openings			Use whip checks on connection		Use GFCI	
Ladders	Inspect general condition		Rad	ation		Identify PPE for tool use	
	Ladder tied off or held	X-Rays		Barricades		Guarding in place	
	Proper angle and placement			Communication	Employee Inexperience		
	Review ladder safety			Radiography Procedures		Increased foreman oversign	ght
Scaffolds	Inspect before use			Monitoring	Poor Lighting	Light Plant	
	Tags in place	Heat Stress >90		rmal		Temporary Lights	
	Harness used when required			Heat Stress Monitoring and Plar		Flashlight	
	Materials properly stored			Liquids, Work/Rest, Training	Fatigue	Fatigue Standard	
Slips/Trips/Falls	Good Housekeeping	Fire Hazard		Hot Work Practices		Frequent Breaks	
	Work Surfaces Inspected			Fire Watch, Fire Water Available			
			Plant Commu	ınication			

ergencies - Dial 333 or use a Plant Radio to communicate the emergency to Opera

Refinery Process Units *Refinery Safety Inspectors stay on the zone channel they are assigned to Zone A - CH.3 Zone B - CH.4

Zone C - CH.5 23-OP Supr 5-NHT BSU 24-Op Supr 12-CC Unit 25-Op Supr 18-Tank Farmer 19-Blender 6-Crude Unit 13-FRAC Unit 21-Asphalt Op 7-VF SHU FOB 14-GR Unit 8-Fur/JFT/CWP 9-CFH DHT 10-CR RSC Splitter 15-Treaters 16-Boilers 41-Loader/Gauge Zone C - CH.6 20-B/H Operator 32-BI Bu Unit 11-Rose/CGS 33-Alky Reactors 22-Efflo Zone A - CR/NHT - (Zone B - Alky - CH.7 Zone C - Wharf Op

JHA Audit Notes