

Company Name:	Equipment/Job Identification: U/G Production Miner
Mine Name:	
Date of Analysis:	
	Type of Equipment: Cutting Machine
	Make: Joy
	Model: 17 RU
	Year:
	Use: Under Cutting Salt

Pre-Assessment

All MSHA Part 48 requirements must be met including Task Training
Company policy requirements and SOPs
Task training records must be on file prior to operating any mobile equipment

Duty 1: Start of shift Activities

Learner will explain the importance of start-of shift activities. The learner will explain each job step, why it is conducted, any associated risk, and how to implement appropriate controls. Start-of-shift activities include the following steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
Conduct self assessment.		1		
Tag in.	Failure to tag in and tag out may cause loss of production and/or personal injury due to the blasting schedule. Could be left in the mine.	2		
Punch time clock.		1		
Obtain and put on PPE.		1		Hard hat, cap lamp, and mine belt, eight inch lace up steel toe boots, safety glasses and ID tag.
Examine self-rescuer		1		
Obtain and fill water cooler with water.		1		
Walk to production shaft.		1		
Assure the man cage is spotted.		1		
Assure horn is sounded prior to opening shaft gate.		1		
Open the shaft gate.		1		

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
Open the man cage door.		1		
Enter man cage.		1		
Close the shaft gate.		1		
Close man cage door.		1		
Ride man cage down to the nine hundred 900 foot level after signal is given to the hoist operator.		1		
Assure that horn is sounded prior to opening man cage door.		1		
Open the man cage door.		1		
Assure skip is spotted at landing prior to stepping off.		1		
Open shaft gate.		1		
Exit man cage.		1		
Close man cage door.		1		
Close shaft gate.		1		
Release the man cage.		1		
Enter the air-lock.		1		
Close air-lock doors.		1		
Open inside air-lock door and exit.		1		
Close air lock after last person has exited the air-lock.		1		
Walk to transportation.		1		
Travel to sixteen hundred foot level shop.		1		
Save lunch in lunch room.		1		
Attend pre-shift line up with supervisor.	Failure to attend this pre-shift with supervisor could reduce production by not knowing location of equipment. Safety and or maintenance issues information may be missed.	2		
<ul style="list-style-type: none"> Location of under cutter 		1		
<ul style="list-style-type: none"> Where is the next face 		1		

Duty2: Workplace Inspection

Learner will demonstrate how to safely and efficiently perform a workplace inspection. The learner will also explain the job duties, why they are conducted, any associated risk, and how to implement appropriate controls. Safe and efficient performance of a workplace inspection includes the following steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
Check atmospheric condition		1		
<ul style="list-style-type: none"> Smell the air for any unusual odors 				Smell of rotten eggs would indicate presence of hydrogen sulfide gas
<ul style="list-style-type: none"> Observe changes in lighting 				Amber color would indicate high nitrogen dioxide concentration
Inspect ground conditions for loose scales.	Failure to inspect could cause disabling injury or death by loose ground falling on persons. Equipment damage could occur from falling material which would cause production to stop.	3		
<ul style="list-style-type: none"> Back 				
<ul style="list-style-type: none"> Face 				
<ul style="list-style-type: none"> Ribs 				If any loose ground is found report to supervisor, communicate with scale operator about scale to be removed. Back under cutter out if needed.
Inspect floor for slip trip and fall hazards.	Failure to inspect floor could cause disabling injury or death by slip, trip and fall hazards. Equipment damage could occur from running over large chunks of salt on floor. Running over chunks could cause injury due to flying salt pieces.	3		If any unsafe condition is found contact supervisor and or correct unsafe condition.
Check travel route for under cutter		1		
<ul style="list-style-type: none"> Inspect for loose and deep soft salt. 				Loose deep salt could cause the under cutter to get stuck and or will cause equipment damage.
<ul style="list-style-type: none"> Assure no other equipment will be blocked by cable when under cutter enters face area. 				Notify supervisor to have equipment moved.

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
Fill out work place inspection form immediately after work place inspection is completed.	Failure to fill out and submit inspection form may cause unsafe conditions to go uncorrected or addressed.	1		Responsibility of the operator to complete form. If form is not completed the employee would be disciplined.

Duty 3: Conduct Pre-Shift Inspection

Learner will demonstrate how to safely and efficiently perform the pre-shift inspection on the 17 RU Joy under Cutter. The learner will also explain the job duties, why they are conducted, any associated risk, and how to implement appropriate controls. Safe and efficient performance of the pre-shift on the 17 RU Joy under Cutter includes the following steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
Conduct a general walk around of under cutter		1		
<ul style="list-style-type: none"> Check to assure equipment is not tagged out of service 		1		If equipment is tagged out notify supervisor.
<ul style="list-style-type: none"> Look for any unusual / unsafe condition around and under the under cutter 		1		
<ul style="list-style-type: none"> Look for large puddles of fluid on floor, around and under cutter. 		1		
Check electrical cable and clamp.		1		
<ul style="list-style-type: none"> Never handle energized cables. 		1		
<ul style="list-style-type: none"> Use cable hook or attached rope if cable has to be handle. 		1		Never try to attach a rope to an energized cable.
<ul style="list-style-type: none"> Look for nicks, cuts and bare wires. 		1		
<ul style="list-style-type: none"> Insulated strain clamp must be secured to cutter cable. 				Ensure slack is provided between the attached clamp and plug.
Ensure chain from insulated clamp is attached to the cutter.		1		
Walk the length of the cable from the cutter to the transformer looking for nicks, cuts and bare wires.		1		
<ul style="list-style-type: none"> Follow lock out tag out procedures if cable is damaged and notify supervisor. 				
Plug cutter cable into transformer if disconnected.		1		
<ul style="list-style-type: none"> Ensure breaker is in off position. 		1		
<ul style="list-style-type: none"> Lift receptacle cover 		1		

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
<ul style="list-style-type: none"> Raise the plug and engage the hooks onto the holding bar. 		1		Ensure proper lifting procedures are used
<ul style="list-style-type: none"> Rotate plug down into position. 		1		
<ul style="list-style-type: none"> Apply downward pressure to assure plug is properly seated. 		1		
<ul style="list-style-type: none"> Listen for clicking sound of latching mechanism and or try to raise rear plug. 		1		Do not energize cutter cable until after checking GM 200.
Check labels on plug and breaker.		1		
<ul style="list-style-type: none"> Ensure breaker and plug is properly identified. 		1		
<ul style="list-style-type: none"> Locate and use magnetic labels if not properly identified. 		1		
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Remove proper magnetic label from door 		1		
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Place on correct cutter breaker. 		1		
<ul style="list-style-type: none"> Ensure cable is secured to transformer with attached rope. 		1		
Check G.M. 200		1		
<ul style="list-style-type: none"> Push test button 		1		
<ul style="list-style-type: none"> Turn breaker back on if breaker trips. 		1		
<ul style="list-style-type: none"> Lock and tag out if breaker does not trip 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> Notify supervisor if breaker does not trip. 				
Check ground trip system.		1		
<ul style="list-style-type: none"> Push test button. 				
<ul style="list-style-type: none"> Turn breaker back on if breaker trips. 				

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
<ul style="list-style-type: none"> Lock and tag out if breaker does not trip. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> Notify supervisor if breaker does not trip. 				
Energize cable if needed.	Failure to follow company procedures could cause disabling injury or death and stop production.	3		
<ul style="list-style-type: none"> Stand off to the right side of breaker when energizing. 		1		
<ul style="list-style-type: none"> Raise breaker handle to energize. 		1		
Check cutter head oil level.		1		
<ul style="list-style-type: none"> Remove tope plug to assure proper oil level. 				Plug is located front center of the head.
<ul style="list-style-type: none"> Notify supervisor and or serviceman if no oil is present 		1		
Check head cover plate.		1		
<ul style="list-style-type: none"> Assure bolts are in place and tight. 		1		
<ul style="list-style-type: none"> Notify supervisor if bolts are missing or loose. 		1		
Check cutting bar and chain, Dovetail, and bolts.		1		
<ul style="list-style-type: none"> Look for missing rivets and damage wear strips on the cutting bar. 		1		
<ul style="list-style-type: none"> Check for excessive play on hanger bar and dove tail. 		1		Excessive play is more than a one inch gap between hanger bar and dove tail.
<ul style="list-style-type: none"> Notify supervisor of any defects 		1		
<ul style="list-style-type: none"> Check for broken or missing bits on the chain 		1		Cutter operator will install new / used bits after completing pre-shift inspection using proper bit changing procedures. .

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
<ul style="list-style-type: none"> ○ Assure no more than five or more bits are broken off flush with block or any two in a row. 		1		Cutter must not be operated until bits are replaced.
<ul style="list-style-type: none"> ○ Assure cutter is tagged out and not operated. 		1		
<ul style="list-style-type: none"> ○ Notify supervisor if above condition is found. 		1		
<ul style="list-style-type: none"> ● Check for loose chain 		1		
<ul style="list-style-type: none"> ○ Assure there is no more than one inch play between the sprocket and end of the cutter ... bar. 		1		
<ul style="list-style-type: none"> ○ Assure Cutter is tagged out and not operated if this condition is found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> ○ Notify supervisor if the above condition is found. 		1		
<ul style="list-style-type: none"> ● Check exposed chain guides for excessive wear. 		1		
<ul style="list-style-type: none"> ○ Assure no sharp edges are visible on chain guide. 		1		
<ul style="list-style-type: none"> ○ Assure Cutter is tagged out and not operated if this condition is found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> ○ Notify supervisor if the above condition is found. 		1		

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
<ul style="list-style-type: none"> Assure dove tail bolts are in place and tight. 		1		
<ul style="list-style-type: none"> Check for cracks and metal fatigue on the dovetail. 		1		Metal fatigue can be identified by discolored metal.
Check front U-joint and bolt.		1		
<ul style="list-style-type: none"> Assure by visual inspection that all bolts are in place and safety wire is in tact. 		1		
<ul style="list-style-type: none"> Assure Cutter is tagged out and not operated if this condition is found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> Notify supervisor if the above condition is found. 		1		
Check back U-joint and bolts.		1		
<ul style="list-style-type: none"> Assure by visual inspection that all bolts are in place and safety wire is in tact. 		1		
<ul style="list-style-type: none"> Assure Cutter is tagged out and not operated if this condition is found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> Notify supervisor if the above condition is found. 		1		
Check transmission oil level.		1		
<ul style="list-style-type: none"> Assure oil is in site glass. 		1		Located at bottom right side of transmission.
<ul style="list-style-type: none"> Contact serviceman if oil is needed. 		1		
Check water level.		1		
<ul style="list-style-type: none"> Assure water tank is full by opening cap on top of tank. 		1		

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
<ul style="list-style-type: none"> Contact serviceman if water is needed. 		1		
Check water hoses.		1		
<ul style="list-style-type: none"> Look for wetness, cracks around the hose. 		1		
Check hydraulic oil level.		1		
<ul style="list-style-type: none"> Remove top plug to assure proper oil level. 		1		Plug is located between operators cab and left steering tire.
<ul style="list-style-type: none"> Notify supervisor and or serviceman if no oil is present 		1		
Check hydraulic hoses and fittings for oil leaks.		1		
<ul style="list-style-type: none"> Visually inspect for damaged hoses such as loose fittings, frayed and or obvious wear. 		1		
<ul style="list-style-type: none"> Notify supervisor if leak is detected 		1		
Check control valve.		1		
<ul style="list-style-type: none"> Assure valve is not leaking hydraulic oil. 		1		
<ul style="list-style-type: none"> Notify supervisor if leak is detected. 		1		
<ul style="list-style-type: none"> Assure all levers are in place. 		1		
Check steering cylinders, pins, mounts and retainers.		1		
<ul style="list-style-type: none"> Assure pins, mounts and retainers are in place and no visible leak on steering cylinder. 		1		
<ul style="list-style-type: none"> Tag out if any defects that effect safety are found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> Notify supervisor if any defects that effect safety are found. 		1		
Check stab jack cylinders, pins mounts, and retainers.		1		
<ul style="list-style-type: none"> Assure pins, mounts and 		1		

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
retainers are in place and no visible leak on stab jack cylinder.				
<ul style="list-style-type: none"> Notify supervisor if any defects are found. 		1		
Check cutter electric motors.		1		
<ul style="list-style-type: none"> Assure guards are in place. 		1		
<ul style="list-style-type: none"> Assure fan is on back of motor. 		1		
<ul style="list-style-type: none"> Assure electrical connections are in tact. 		1		
<ul style="list-style-type: none"> Tag out if any defects that effect safety are found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> Notify supervisor if any defects that effect safety are found. 		1		
Check electrical boxes.		1		
<ul style="list-style-type: none"> Assure all wires are properly bushed where it enters and exit the box 		1		
<ul style="list-style-type: none"> Assure the doors are closed and latched 		1		
<ul style="list-style-type: none"> Assure there is no exterior damage to the box. 		1		
<ul style="list-style-type: none"> Tag out if any defects that effect safety are found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> Notify supervisor if any defects that effect safety are found. 		1		
Check fire extinguishers (2).	Failure to check fire extinguisher may cause disabling injury or death from fire, and equipment damage from faulty equipment not working when needed. Production would be stopped.	3		Underground mine fires cause carbon monoxide gas and oxygen deficient atmosphere and can be explosive with right mixture of oxygen.
<ul style="list-style-type: none"> Assure pin is in place and retained. 		1		
<ul style="list-style-type: none"> Assure it is fully charged. 		1		

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
<ul style="list-style-type: none"> Check for cracks in the hose. 		1		
<ul style="list-style-type: none"> Assure monthly inspection is current. 		1		
<ul style="list-style-type: none"> Assure the extinguisher is type ABC 		1		
<ul style="list-style-type: none"> Tag out if any defects that effect safety are found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> Notify supervisor if any defects that effect safety are found. 		1		
Check lights.		1		
<ul style="list-style-type: none"> Assure front and rear lights are functional. 		1		
<ul style="list-style-type: none"> Assure lights are properly mounted to the cutter frame. 		1		
<ul style="list-style-type: none"> Tag out if any defects that effect safety are found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> Notify supervisor if any defects that effect safety are found. 		1		
Check wheel lug.		1		
<ul style="list-style-type: none"> Assure all are present and tight. 		1		
<ul style="list-style-type: none"> Tag out if any defects that effect safety are found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> Notify supervisor if any defects that effect safety are found. 		1		
Check headache rack.		1		
<ul style="list-style-type: none"> Check for cracks in the welds. 		1		
<ul style="list-style-type: none"> Tag out if any defects that effect safety are found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
<ul style="list-style-type: none"> Notify supervisor if any defects that effect safety are found. 		1		
Check housekeeping.		1		
<ul style="list-style-type: none"> Check for trash and remove if necessary. 		1		
Check boom lift cylinders, pins, mounts, and retainers.		1		
<ul style="list-style-type: none"> Assure pins, mounts and retainers are in place and no visible leak on bar tilt cylinders. 		1		
<ul style="list-style-type: none"> Tag out if any defects that effect safety are found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> Notify supervisor if any defects that effect safety are found. 		1		
Check boom swing cylinders pins, mounts and retainers.		1		
<ul style="list-style-type: none"> Assure pins, mounts and retainers are in place and no visible leak on bar tilt cylinders. 		1		
<ul style="list-style-type: none"> Tag out if any defects that effect safety are found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> Notify supervisor if any defects that effect safety are found. 		1		
Check bar swing cylinders, pins, mounts and retainers.		1		
<ul style="list-style-type: none"> Assure bar swing pins, mounts and retainers are in place and no visible leak on bar tilt cylinders. 		1		
<ul style="list-style-type: none"> Tag out if any defects that effect safety are found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
<ul style="list-style-type: none"> Notify supervisor if any defects that effect safety are found. 		1		
Check boom roll guard bolts.		1		
<ul style="list-style-type: none"> Assure bolts are in place and tight. 		1		
<ul style="list-style-type: none"> Tag out if any defects that effect safety are found 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> Notify supervisor if any defects are found. 		1		
Check tires.		1		
<ul style="list-style-type: none"> Assure tire is not peeling off of the rim. 		1		
<ul style="list-style-type: none"> Check for missing chunks on the tires. 		1		
<ul style="list-style-type: none"> Notify supervisor if any defects are found. 		1		
Turn on hydraulic motor.		1		
<ul style="list-style-type: none"> Push green indicator button labeled pump start. 		1		
Check bar tilts cylinder, pins, mounts and retainers.		1		
<ul style="list-style-type: none"> Raise cutter head by lifting boom lift control lever. 		1		Tilt cylinder is located below the cutter head.
<ul style="list-style-type: none"> Tag out if any defects that effect safety are found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> Notify supervisor if any defects that effect safety are found. 		1		
<ul style="list-style-type: none"> Assure pins, mounts and retainers are in place and no visible leak on bar tilt cylinders 		1		
Check brakes.		1		

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
<ul style="list-style-type: none"> Engage brake by pushing brake control lever down to set brakes. 		1		
<ul style="list-style-type: none"> Apply brakes and attempt movement of cutter to assure brakes are holding. 		1		
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Push down on slow tram control levers. 		1		
<ul style="list-style-type: none"> Notify supervisor if brakes are not holding. 		1		
Check tram motor and chains.		1		
<ul style="list-style-type: none"> Release brakes and push down on tram control levers one at a time to assure operations of motors. 		1		
<ul style="list-style-type: none"> Assure chain is in tact with out excessive slack 		1		Excessive slack is chain dragging on ground or rubbing the cutter frame.
<ul style="list-style-type: none"> Tag out if any defects that effect operation of the tramming components are found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> Notify supervisor if any defects that effect operation of the tramming components are found. 		1		
Check bug duster components (2).		1		
<ul style="list-style-type: none"> Assure bolts are in place and tight. 		1		
<ul style="list-style-type: none"> Check for hydraulic fluid on floor. 		1		
<ul style="list-style-type: none"> Push bug duster levers down to assure proper rotation. 		1		
<ul style="list-style-type: none"> Ensure both augers are turning freely. 		1		

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
<ul style="list-style-type: none"> Tag out if any defects that effect operation of the bug duster components are found. 	Failure to tag out equipment could result in accident causing personal injury and loss of production due to equipment damage.	2		
<ul style="list-style-type: none"> Notify supervisor if any defects that effect operation of the bug duster components are found. 		1		
Report any safety defects and immediately shut down and tag out and report to supervisor and all equipment defects or unusual conditions to supervisor.	Failure to shut down and tag equipment could result in disabling injury and or death due to the operation of defective equipment. Failure to tag out equipment when defects are noted would result in disciplinary action.	3		
Fill out pre-shift inspection form immediately after conducting pre-shift inspection.	Failure to fill out and submit pre-shift form may cause unsafe conditions to go uncorrected or addressed.	1		Responsibility of the operator to complete form. If form is not completed the employee would be disciplined.

Duty 4: Changing Cutter Bits

Learner will demonstrate how to safely and efficiently perform the changing of cutter bits. The learner will also explain the job duties, why they are conducted, any associated risk, and how to implement appropriate controls. Safe and efficient performance of the changing cutter bits includes the following steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
Raise and level cutter bar chest high.		1		Never position yourself under a raised component.
Lower rear stab jack.		1		
<ul style="list-style-type: none"> Push stab jack lever down to lower stab jack. 		1		
Turn off hydraulic motor		1		
<ul style="list-style-type: none"> Push red button labeled pump stop. 		1		
Lock and Tag main disconnect using dual lock out procedure.	Failure to tag out the cutter prior to changing the bit may cause someone to be entangled in the rotation of the cutter chain and bits if the cutter was inadvertently started causing disabling injuries and/or death.	3		
Gather required PPE.		1		Gloves and full face shield
Obtain the bit wrench and new bits from tool area.		1		Located on the right hand side of the cutter
Proceed to the cutter bar.		1		
Don full face shield.	Failure to put on face shield when hammering on steel may cause disabling injuries due to flying pieces of metal.	3		
Place bit wrench into notch in bit.		1		
Pry the bit from the chain.		1		
Repeat the above two steps until all worn bits are removed		1		

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
Place new bits into hole and drive into place using the striking side of the bit wrench.		1		
Repeat the previous step until all bits are replaced.		1		
Gather worn bits and place in bucket and return to storeroom at end of shift.		1		
Remove lock and tag		1		
Energize machine by lifting both disconnect handles in a raise position.		1		Notify supervisor if there are five or more bits broken or no more than two in a row that are broken.

Duty 5: Cutter Operation

Learner will demonstrate how to safely and efficiently perform cutter operation. The learner will also explain the job steps, why they are conducted, any associated risk, and how to implement appropriate controls. Safe and efficient cutter operation includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
Tram cutter into designated room.		1		
<ul style="list-style-type: none"> Start hydraulic motor by pushing the green pump start button. 		1		
<ul style="list-style-type: none"> Raise cutter and bar off floor by lifting boom lift control. 		1		
<ul style="list-style-type: none"> Raise the stab jack by lifting the stab jack control lever. 		1		
<ul style="list-style-type: none"> Release brakes by lifting the brake control lever. 		1		
<ul style="list-style-type: none"> Push down the left and right fast tram control levers. 		1		
<ul style="list-style-type: none"> Obtain assistance to assist the tramping of the cutter. 	Failure to obtain assistance while tramping could result in disabling injury or death and lost of production because of damage to cable or transformer.	3		
<ul style="list-style-type: none"> Maintain visual contact with the assistant to watch for signal that additional cable needs to be dropped. 	Failure to maintain visual contact with assistant while tramping could result in disabling injury or death and lost of production because of damage to cable or transformer.	3		Cap lamp signal will be used to notify operator.
<ul style="list-style-type: none"> Assure traffic cones are being distributed to mark the cable. 	Failure to properly mark cutter cable while tramping could result in disabling injury or death and lost of production because of damage to cable.	3		Cones are located on rear of under cutter.
<ul style="list-style-type: none"> Steer cutter using the steering control lever. 		1		To steer to the left push control lever down and to steer to the face pull control lever up.

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
<ul style="list-style-type: none"> Tram cutter toward right side of room aligning left front tram wheel with #4 line stopping when bar is six inches from face. 		1		
Sump cutter into face	Failure to follow these procedures listed below could result in equipment damage causing lost of production	2		
<ul style="list-style-type: none"> Swing boom to right aligning head between #5 and #6 lines by lifting boom swing control lever. 	Failure to follow this procedure could result in equipment damage causing loss of production	2		
<ul style="list-style-type: none"> Swing bar to the right aligning tip of bar with # 7 line by lifting bar swing lever. 	Failure to follow this procedure could result in equipment damage causing loss of production	2		
<ul style="list-style-type: none"> Level cutting bar by placing hand held level on center of bar. 	Failure to level cutting bar and ensuring a level cut could result in a rapid development of poor ground conditions and failure of roof support resulting in a high probability of causing an accident and equipment damage.	2		
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Note reading of level on bar for comparison of level reading on head. 	Failure to level cutting bar and ensuring a level cut could result in a rapid development of poor ground conditions and failure of roof support resulting in a high probability of causing an accident and equipment damage.	2		
<ul style="list-style-type: none"> Place level on the head and shim level on head to match the bar. 	Failure to level cutting bar and ensuring a level cut could result in a rapid development of poor ground conditions and failure of roof support resulting in a high probability of causing an accident and equipment damage.	2		
<ul style="list-style-type: none"> Level the boom roll by placing the level across cutting head and adjusting with boom roll control lever. 	Failure to level cutting bar and ensuring a level cut could result in a rapid development of poor ground conditions and failure of roof support resulting in a high probability of causing an accident and equipment damage.	2		

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
<ul style="list-style-type: none"> Select forward on the cutter motor directional switch. 	Failure to follow this procedure could result in equipment damage causing loss of production	2		
<ul style="list-style-type: none"> Push green start button to start cutting motor. 	Failure to follow this procedure could result in equipment damage causing loss of production	2		
<ul style="list-style-type: none"> Turn water on by opening ball valve. 	Failure to follow this procedure could result in equipment damage causing loss of production	2		Valve located on left hand side of seat below control lever.
<ul style="list-style-type: none"> Tram into face using the fast tram levers 	Failure to follow this procedure could result in equipment damage causing loss of production	2		
<ul style="list-style-type: none"> Adjust tram feed into face slowly feathering the fast tram levers. 	Failure to follow this procedure could result in equipment damage causing loss of production	2		Entering the face too quickly could cause mechanical damage to the cutter.
<ul style="list-style-type: none"> Continue process of trimming Into face until dove tail is two feet from contacting face surface. 	Failure to follow this procedure could result in equipment damage causing loss of production	2		
Cutting the face.		1		
<ul style="list-style-type: none"> Start bottom and top bug duster by pushing down on the bottom and top bug duster control levers. 		1		
<ul style="list-style-type: none"> Lower rear stab jack by pushing down on the stab jack control lever. 		1		
<ul style="list-style-type: none"> Start cutting by pushing and holding down on the bar swing lever until bar is slightly left of center of cutting head. 		1		
<ul style="list-style-type: none"> Use the boom swing lever by pushing and holding down on the lever, swing the boom to left until setup is complete 		1		Swing until boom will not travel any further.

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
<ul style="list-style-type: none"> Assure cable is clear of cutter before repositioning cutter 				
<ul style="list-style-type: none"> Raise rear stab jack by lifting stab jack control lever. 		1		
<ul style="list-style-type: none"> Back cutter out approximately six inches by lifting the fast tram control lever 		1		Failing to back up could cause chain to slow down or stop.
<ul style="list-style-type: none"> Turn off bug duster 		1		
<ul style="list-style-type: none"> Lower boom onto floor until front tires are off the floor approximately six inches by pushing down on the boom lift control lever. 		1		
<ul style="list-style-type: none"> Raise boom swing control lever up moving the front of the cutter to the left until it stops. 		1		
<ul style="list-style-type: none"> Raise the bug duster off the floor by lifting boom lift lever. 		1		
<ul style="list-style-type: none"> Swing boom back to the left stopping at existing cut. 		1		
<ul style="list-style-type: none"> Raise the boom lift control lever until the back of the cutter is off of the ground approximately six inches off of floor. 		1		
<ul style="list-style-type: none"> Swing the rear of cutter to the left by pushing down on the boom swing lever. 		1		
<ul style="list-style-type: none"> Lower the boom lift raising the front tires off the floor. 		1		
<ul style="list-style-type: none"> Raise boom swing control lever up moving the front of the cutter to the left until it stops. 		1		
<ul style="list-style-type: none"> Raise the head until boom moves freely. 		1		

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
• Restart bug dusters.		1		
• Lower the rear stab jack.		1		
• Follow above steps until face is completely cut.		1		
Tramming out of face.		1		
• Obtain assistance to help with cable.	Failure to obtain assistance while tramming could result in disabling injury or death and lost of production because of damage to cable	3		
• Plan route of travel with assistance.		1		
• Raise rear stab jack		1		
• Turn bug dusters off.		1		
• Slowly back out of face using the fast tram levers by lifting up on the tram control levers..		1		
• Raise bar by lifting boom lift lever approximately chest height off of floor once clear of face.		1		
• Roll boom 90 degrees by pushing boom roll control lever down.		1		This will remove salt off of bar.
• Roll boom back to level position once excess salt is clear of bar.		1		Continue to let chain rotate and water run during this process until chain is washed.
• Turn off the water by closing ball valve		1		
• Turn off cutting motor by pushing red button.		1		
• Place selector switch in the middle.		1		
• Back away from the face by steering to center of room lifting up on fast tram levers until desired distance is traveled.		1		Approximately 45 feet from face.
• Maintain visual contact with assistant and cable.	Failure to maintain contact with assistance while tramming could result	3		

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
	in disabling injury or death and lost of production because of damage to cable			
<ul style="list-style-type: none"> Proceed to tram out of face by pushing down on the fast tram levers while steering in a forward direction. 		1		
<ul style="list-style-type: none"> Tram cutter to safe distance away from face 	Failure to tram a safe distance from face could result in equipment damage from flying rock salt due to blasting	2		A safe distance is four hundred feet and park between pillars.
<ul style="list-style-type: none"> Lower head to floor by pushing boom lift lever down until head contacts floor. 		1		
<ul style="list-style-type: none"> Turn hydraulic pump drive off by pushing the red pump stop button. 		1		
<ul style="list-style-type: none"> Mark cable and bar with traffic cone. 	Failure to properly mark cutter cable and bar while tramming could result in disabling injury or death and lost of production because of damage to cable and bar	3		Traffic cones are located on rear of cutter.

Duty 6: End of Shift Activities

Learner will demonstrate how to safely and efficiently perform end of shift activities. The learner will also explain the job steps, why they are conducted, any associated risk, and how to implement appropriate controls. Safe and efficient end of shift activities includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
Remove used cutter bits from cutter and return to store room.		1		
Leave job site approximately 45 minutes prior to end of shift and travel to lunch room.		1		
Communicate with supervisor and turn in pre-shift and work place inspection reports.	Failure to submit pre-shift form may cause unsafe conditions to go uncorrected or addressed.	2		Communicate to supervisor drilling process completed.
Leave lunch room approximately 30 minutes prior to end of shift.		1		
Travel to 900 foot level production shaft.		1		
Wait until supervisor calls the man cage (approximately 2-3 minutes).		1		
Enter the air- lock.		1		
Close air-lock.		1		
Open inside air-lock door and exit.		1		
Close air lock after last person has exited the air-lock.		1		
Assure the man cage is spotted.		1		
Assure horn is sounded prior to opening shaft gate.		1		
Open man cage door.		1		
Enter man cage.		1		
Close man cage.		1		
Close shaft cage door.		1		
Ride man cage to surface after signal is		1		

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
given to the hoist operator.				
Assure that horn is sounded prior to open man cage door.		1		
Open the man cage door.		1		
Open shaft gate.		1		
Exit man cage.		1		
Close man cage door.		1		
Close the shaft gate.		1		
Release the man cage.		1		
Walk to the change room.		1		
Punch out time clock.		1		
Save mine light and place on charger.		1		
Tag out.	Failure to tag in and tag out may cause loss of production and/or personal injury due to the blasting schedule. Could be left in the mine.	2		
Replace PPE in personal locker.		1		
Walk to vehicle.		1		

Duty 7: Mining cycle Preparation

Learner will demonstrate how to safely and efficiently perform mining cycle preparation. The learner will also explain the job steps, why they are conducted, any associated risk, and how to implement appropriate controls. Safe and efficient procedures for mining cycle preparation include the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
Marking grade line		1		
<ul style="list-style-type: none"> Locate existing grade line on rib 		1		Grade line can be identified by a red line mark on ribs approximately five feet above floor
<ul style="list-style-type: none"> Obtain tri-pod, laser level and red spray paint from tool storage area on cutter 		1		
<ul style="list-style-type: none"> Set up tri-pod in center of room approximately forty feet from face 		1		
<ul style="list-style-type: none"> Install laser on tri-pod threading onto collar of tri-pod 		1		
<ul style="list-style-type: none"> Level laser by adjusting thumb screws until bubble is centered. 	Failure to level laser and ensuring a level grade line could result in a rapid development of poor ground conditions and failure of roof support resulting in a high probability of causing an accident and equipment damage.	2		
<ul style="list-style-type: none"> Turn laser on 		1		
<ul style="list-style-type: none"> Adjust laser to the establish grade line by adjusting tri-pod 	Failure to properly adjust laser to establish grade line could result in a rapid development of poor ground conditions and failure of roof support resulting in a high probability of causing an accident and equipment damage.	2		To adjust laser up turn the elevation adjusting handle to desired height. To adjust laser down shorten the legs of the tri-pod and re-level laser
<ul style="list-style-type: none"> Locate the laser line on the face 		1		

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
<ul style="list-style-type: none"> Advance grade line from rib to rib using red spray paint 	Failure to advance grade line could result in a rapid development of poor ground conditions and failure of roof support resulting in a high probability of causing an accident and equipment damage.	2		Beware of slip trip and fall hazards from loose rock salt
<ul style="list-style-type: none"> Remove laser from tri-pod and return laser case 		1		
<ul style="list-style-type: none"> Return laser, tri-pod, and paint to tool storage 		1		
<ul style="list-style-type: none"> Return laser to tool storage area 		1		
Drill pattern layout		1		
<ul style="list-style-type: none"> Locate center of face <ul style="list-style-type: none"> Paint Measuring tape 		1		
<ul style="list-style-type: none"> Locate center of face <ul style="list-style-type: none"> Walk to estimated center of face Turn around and line up with center poles 		1		
<ul style="list-style-type: none"> Mark center of face with vertical line seven feet above floor 	Failure to mark center of face properly and ensure that lines are marked seven feet above floor could result in a rapid development of poor ground conditions and failure of roof support resulting in a high probability of causing an accident and equipment damage.	2		
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Indicate center of room by marking (CL) on center of face 		1		Refer to drill pattern diagram for reference
<ul style="list-style-type: none"> Measure out from center three and one half feet to right and mark as number one line 		1		
<ul style="list-style-type: none"> Mark face according to drill pattern diagram once center line has been established. 	If lines are not properly marked this could cause loss of production from blast energy	2		