Company Name:	**Equipment/Job Identification:** Portable Crusher Move **Type of Equipment:** Crushers **Make:** CEC (Primary) Cedar Rapids (Secondary) **Model:** **Year:** **Use:**
Mine Name:	
Date of Analysis:	

Pre-Assessment

- **List pre-requisites here**
  - New/Experienced Miner Training
  - Site-specific Hazard Awareness Training
  - Fall Protection Training (video, PPE, etc.)
  - Location of safety equipment, etc.
  - Rigging
  - FEL Safety (videos)

Duty 1: Tear Down (Cedar Rapids Cone Crusher)

Learner will demonstrate how to tear down the Cedar Rapids 124 Cone Crusher including all the steps listed below. The learner will also explain job duties, why they are conducted, any associated risk, and how to implement appropriate controls. A thorough tear down procedure includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Empty crusher				
De-energize power	Could cause personal injury due to accidental start-up, or electrocution			
Lower stacking conveyor				
Clean off catwalks				Be aware of people on ground
Take down spray bar				
Block cone	Could damage cone bearings			
Put stays on screen				

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Remove top two skirt boards				
Remove tie-off cables				This is a new step at this time Use fall protection 10 foot ladder
Unhook the power cords	Could damage power cords			
Wrap the cords up and bind	Could damage power cords			
Clean out from under the crusher				
Hook up the loader to the power pack	Could get pinched between loader and crusher Battery could explode			Discuss PPE, hook positive first, then negative
Raise the crusher to remove the screw jacks				Using power pack
Remove the screw jacks				Keep hands off top of jacks (pinch-point)
Fold up the front legs				Proper lifting procedures, positioning
Remove blocking and steel pads				
Spot truck under crusher				

Duty 2: Mobilization (Cedar Rapids Cone Crusher)

Learner will demonstrate how to mobilize the Cedar Rapids 124 Cone Crusher. The learner will also explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The mobilization process includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Install oversize banner and two flags on tractor				
Hook tractor to jeep				Ensure 5th wheel is locked properly
Check tires and hubs on jeep				

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Get crushing supervisor's approval to hook up				
Clean glad hands and king pin	Will not lock with dirty king pin			Clean with rag HazCom Training
Hook tractor and jeep up				
Untape glad hands	Could result in brake failure			
Hook up air lines and electrical cord	Could result in brake failure			
Check tires and hubs on crusher				
Pull unit to safe area after supervisor approval				
Check all lights and brake performance				Be sure brakes work
Clean unit for loose stones, etc.				
Install line bumpers				
Install banner and flags				One oversize banner on rear, two flags on front, two flags in middle, two flags in the rear
Install strobe light on right rear side				
Have crushing supervisor inspect unit one more time	Supervisor has ultimate responsibility for the move			
Line up escort train				
Proceed to new site • Do not exceed 40 mph • Maintain proper distance • Check for overhead clearance	Could cause an accident, equipment damage, private property damage			Driver must know crusher actual height, width and route. Driver should know that 40 mph provides adequate breaking distance and minimizes damage from debris.
Arrive at new site • Check with supervisor • Park per instructions • De-flag unit				

Duty 3: Tear Down (Primary Crusher Unit)

Learner will demonstrate how to tear down the Primary Crusher Unit 110. The learner will explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The tear down procedures includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
De-energize power	Could cause personal injury due to accidental start-up, or electrocution			
Unhook the power cords	Damage to cords			
Take handrails down				
Take ramps out with Loader				
Clean primary				
Put the stays on				
Drop the electrical box down				
Rollup the cords and place on top of electrical panel/box	Damage of cords could result			
Secure with strap	Damage of cords could result			
Put panel up on crusher with loader	Damage the panel/personal injury			Remain free of suspended loads
Hook loader to power pack	Potential pinch point/battery could explode			PPE, pinch point between the loader and primary, Hook positive up first.
Raise crusher				With power pack
Take out blocks and plywood and put in feeder (use loader)				
Ready for truck				

Duty 4: Mobilization (Primary Crusher Unit)

Learner will demonstrate how to mobilize the Primary Crusher Unit 110. The learner will also explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The mobilization process includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Get approval from crushing supervisor to hook up primary				
Clean king pin	Potential uncoupling			Hazard-Com awareness
Couple tractor to primary	Potential uncoupling			Double check fifth wheel lock
Un-tape glad hands	Potential brake failure			
Hook up air and electric lines	Potential brake failure			
Raise landing gear				
Unhook power pack				Disconnect negative first
Move crusher to safe area to be cleaned				Get supervisory approval
Check all lights and brakes for performance	Potential brake failure			
Check tires and hubs				
Flag crusher				Two on tractor, one on each side of crusher, two on rear of crusher
Have supervisor inspect unit one more time				
Proceed to new site • Do not exceed 50 mph • Maintain proper distance • Check overhead clearances	Could cause an accident, equipment damage, private property damage			Driver must know crusher actual height, width and route. Driver should know that 50 mph provides adequate breaking distance and minimizes damage from debris.
Spot primary at new site				Get supervisors directions
De-flag				

Duty 5: Tear Down (Stacker Unit)

Learner will demonstrate how to tear down the Stacker Unit 126. The learner will also explain job steps duties, why they are conducted, any associated risk, and how to implement appropriate controls. The tear down process includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
De-energize power	Electrocution/accidental start-up			
Wind up the cords	Damage to cords			
Chain up counter weight				Before loosening belt
Loosen belt	Could damage belt			
Lift up one wheel at a time	Potential pinch point hazard			Be sure to check rigging
Take drive chain off and hang and secure to frame				
Pull pin	Potential pinch point hazard			Be aware of bucket hazards
Swing wheel into travel position	Potential pinch point hazard			Be aware of bucket hazards
Re-pin	Potential pinch point hazard			Be aware of bucket hazards
Shovel off pivot plate				
Slide hopper to travel position				
Hook to loader and raise up to proper height				Check rigging Stay clear of suspended loads
Clean fifth wheel plate and pin with shovel	Potential pinch-point/crushing hazard Potential uncoupling hazard			Stay clear of suspended loads
Put on truck with loader				Double check 5th wheel latch
Driver follows loader operator instructions				As crushing crew folds conveyor
Install belt tie-downs				Use fall protection
Unbolt at first pivot point				Use fall protection
Fold conveyor with the loader	Could result in personal injury Potential pinch-points			Stay clear of suspended loads
Lock conveyor into position	Could swing into oncoming traffic			
Unhook loader				Use fall protection
Position loader to other end of conveyor				
Hook loader				Use fall protection
Unbolt second pivot point				Use fall protection
Fold conveyor with loader	Could result in personal injury Potential pinch-points			Stay clear of suspended loads
Lock into position	Could swing into oncoming traffic			

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Unhook loader				
Chain belt down at front pivot				Use fall protection
Lower tie off into transport position with ladder				

Duty 6: Mobilization (Stacker Unit)

Learner will demonstrate how to mobilize the Stacker Unit 126. The learner will also explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The mobilization process includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Clean any stones or rocks off stacker				
Check hubs for oil	Would adversely affect handling			
Look for loose lug nuts	Would adversely affect handling			
Look for soft tires	Would adversely affect handling			
Plug in electrical lines				
Flagging				Install one flag left front; 2 flags middle, one each side; 2 flags rear; two flags front of tractor and “oversize” banner
Pull slow on rough roads (no suspension)	Could damage machine			
Check and maintain height and width clearances	Damage to property and pedestrians			
Pull stacker to new site	See above			
Check with supervisor on site				
Find level area to drop landing gear				
Block wheels on stacker	Equipment could roll			
Drop landing gear				
De-flag				
Unhook electrical lines				

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Uncouple tractor and pull away carefully				

Duty 7: Tear Down (Tool Trailer Unit)

Learner will demonstrate how to tear down Tool Trailer Unit 125. The learner will also explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The tear down process includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Secure contents				Make sure things won't spill
Put steps and hand rails inside trailer (both sides)				
Shut doors and lock				
Ready for the truck				
Have supervisor OK before coupling				
Couple tool trailer	Possible uncoupling			Insure 5th wheel is latched properly
Hook up air and electrical lines	Possible brake failure			
Crank up landing gear				
Back trailer with spotter enough to remove grounding plate	Possible damage to grounding cable			
Hang ground plate in its hanger				

Duty 8: Mobilization (Tool Trailer Unit)

Learner will demonstrate how to mobilize the Tool Trailer Unit 125. The learner will also be able to explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The mobilization process includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Pull trailer to safe area of pit				
Check brakes, hubs, tires, and lights	Possible brake failure			
Move to new site under standard posted speeds unless conditions dictate otherwise	Possible traffic hazard			Maintain proper spacing and standard driving practices, follow posted speed limits
Spot tool trailer per supervisors instructions, un hook lines drop landing gear and uncouple tractor				Ask supervisor about ground plate

Duty 9: Tear Down (Scale conveyor Unit, 30", 24" transfer conveyors)

Learner will demonstrate how to tear down the Scale conveyor Unit 132, the 30" (107 Unit), and the 24" (100 Unit) transfer conveyors. The learner will also explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The tear down process includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
De-energize power	Electrocution/accidental start-up			
Wind up power cords	Damage to cords			Secure with bungee cord

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Place scale cord on tool trailer Place power cord on scale conveyor				
Lower if necessary				
Install bolts in stationary braces and secure				
Clean it off				
Check tires, hubs and lug nuts	Possible equipment break down, lost time			
Pick up with loader to raise legs	Exposure to pinch points			Caution around suspended loads
Attach to truck and hook up electrical cords				Double check pintle hitch

Duty 10: Mobilization (Scale convey or transfer conveyors)

Learner will demonstrate how to mobilize the Scale Conveyor Unit 132, the 30" (Unit 107), and the 24" (Unit 100) transfer conveyors. The learner will also explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The mobilization process includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Check lights				
Check brakes (132 only)	Possible brake failure			
Hook up safety chain	Prevents break away			
Check pintle is locked	Possible uncoupling			
Drive to site	Possible loss of control at higher speed			Be aware of different handling characteristics of different trucks. Minimum 1 ton truck

Duty 11: Tear Down Water Trailer

Learner will demonstrate how to tear down the Water Trailer Unit 105. The learner will also explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The tear down process includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
De-energize	Electrocution/accidental start-up			
Wind up cord	Damage to cords			
Unhook and wind up hoses from Cedar Rapids	Damage to hoses			
Secure lock box				
Unhook hose and drain tank				
Hook to pickup • connect safety chains • Connect electrical	Possible loss of load			Double check pintle hitch
Check lights and tires				
Move to next site				

Duty 12: Tear Down Test Trailer

Learner will demonstrate how to tear down the Test Trailer Unit 49. The learner will also explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The tear down process includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Secure contents and put steps inside	All testing equipment needs to go inside the trailer			

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
De-energize if necessary and wrap cord under tool trailer	Electrocution/accidental start-up			
Raise legs in back				
Hook to pickup • connect safety chains • Connect electrical	Possible loss of load			Double check pintle hitch
Lower jack				
Check lights and tires				
Ensure porta-john is secure				
Move to next site				

Duty 13: Mobilization (Water Trailer and Test Trailer)

Learner will demonstrate how to mobilize the Water Trailer Unit 105 and the Test Trailer Unit 49. The learner will also be able to explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The mobilization process includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Observe speed limits and road conditions	Possible traffic accidents on public road			Observe speed limits and road conditions
Check hubs, tires, fasteners, hitch, safety chains and lights	Possible uncoupling / break away			

Duty 14: Mobilization (Loader)

Learner will demonstrate how to mobilize the loader. The learner will also explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The mobilization process includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Find level area to break deck on lowboy that is clear of overhead obstructions	Possible contact with power lines			Look over site
Pull chains and get approval from supervisor to load loader and gin pole				
Place gin pole on center of lowboy deck				
Put loader on deck, lower bucket	Possible for unit to slide off deck			Center loader, if slick use anti slip material on deck
Hook deck back together				
Chain down loader with a minimum of 5 load rated chains	Possible loss of loader, personal injury			After 15 minutes of travel stop and recheck chains
Tape exhaust pipe and remove antenna	Possible engine damage			Tape exhaust to prevent turbo spin
Close all window and latch all doors				
Flag Vehicle				Attach “oversized” banner on rear of low boy, two flags in the middle at the widest point(the bucket) Attach “oversized” banner on front of the tractor with 2 flags Minimum clearance is 14.5’
Travel to new site (45 mph max)	Possible traffic hazards			Drive defensively
Arrive at new site, find flat area with no overhead obstructions to split deck	Possible contact with power lines			
Unchain, deflag, untape exhaust, install antenna				
Unload loader	Possible falling hazard, loader slipping off low boy in slick conditions			Use caution while entering or exiting the loader while it is on low boy
Remove gin pole from deck (crushing crew)				
Put deck back together, and pick up chains				

Duty 15: Tear Down (Developer Unit)

Learner will demonstrate how to tear down the Developer Unit 106. The learner will also be able to explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The tear down process includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Remove ramp with loader				
Energize system by starting engine				
Lower stacking conveyor into travel position				
Turn engine off (leave key in on position) and open a valve to de-energize	Relieves the pressure on the hose			
Disconnect hoses				
Restart engine				
Lower landing gear to raise machine				
Fold up spill/side plate with loader and secure				
Unpin and raise front legs				
Pull machine ahead with loader				
Clean machine				
Lower truss until collection hopper sits on ground				
Unpin screen angle and drop down				
Unpin the screen				
Take hopper off with loader and gin pole and secure on belt bottom side up	Danger of pinch points, falling materials			Use fall protection Do not guide with hands - use shovel or tag line
Lower truss the rest of the way and put screen into transport position and re-pin				
Clean king pin and un-tape glad hands	Possible brake failure			
Couple tractor and hook up air lines	Possible brake failure			Double check 5th wheel latch
Raise landing gear (crushing crew)				
Shut off engine				
Put key in lock box				
Clean unit				

Duty 16: Mobilization (Developer Unit)

Learner will demonstrate how to mobilize the Developer Unit 106. The learner will also explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The mobilization process includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Check brakes, tires, hubs	Possible brake failure, equipment damage			
Flag unit				2 flags on front of truck 2 flags on rear of unit (one on each side)
Install light bar and check for proper operation				
Check once more for rocks				
Travel to new site • Do not exceed 45 mph	Avoid loss of control			Maintain proper following distance
De-flag and see supervisor for drop location				
Start engine				
Lower landing gear to suitable position				
Remove light bar and air lines				
Disconnect tractor				

Duty 17: Tear Down (Developer Stacker Unit)

Learner will demonstrate how to tear down the Developer Stacker Unit 103. The learner will also be able to explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The tear down process includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Store 2-inch hydraulic hose on top of belt				
Pick up one side with loader, pull pin axle and slide axle in and turn wheel and re-pin				
Repeat steps for other wheel				
Loosen the belt				
Locate 5th wheel plate and place next to end of conveyor				
Hook to tail pulley eye and lift with gin pole on the loader until head pulley is close to ground	Avoid pinch-points, falling material hazards			Be aware of suspended loads
Un-bolt conveyor at hinge point				
Fold conveyor into transport position and re-pin				Avoid pinch-points
Lower conveyor to convenient height and install 5th wheel plate and install bolts	Avoid pinch-points			Fingers subject to pinching between 5th wheel plate and frame
Clean unit				
Raise end to truck appropriate 5th wheel height	Avoid pinch-points, falling equipment			Be aware of suspended loads
Clean king pin	Possible detaching of unit			Clean using shovel - do not clean by hand
Hook up to truck				

Duty 18: Mobilization (Developer Stacker Unit)

Learner will demonstrate how to mobilize the Developer Stacker Unit 103. The learner will also be able to explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The mobilization process includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Flag unit				2 flags on front of truck 2 flags on rear of unit
Install light bar and test				
Check tires and hubs	Failure could result in traffic hazard			
Travel to next site • Do not exceed 50 mph	Avoid loss of control			
Check with supervisor and get directions				
Lower landing gear, install braces				Install braces while still hooked to truck
Remove light bar and flags				
Block tires	Unit could roll if not blocked			
Uncouple				

Duty 19: Site Preparation

Learner will demonstrate how to prepare the site for crusher setup. The learner will also explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. Preparing the site for setup includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Examine site and evaluate any hazards	Unseen hazards can be discovered			Site examination should be done before equipment arrival

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
				Person conducting exam should be trained in site-specific hazards
Correct hazards if possible	Prevent personal injury			
Site specific hazard awareness training given	Prevent personal injury			
Task train for set up activities	Prevent person injury			Required by Part 46 (training requirements)
Level and stabilize pad for primary crusher and cedar rapids crusher with FEL				

Duty 20: Equipment Placement

Learner will explain how to place the equipment at the site. The learner will explain the steps involved in placing the equipment, the importance of the sequence, any associated risk, and how to implement appropriate controls. The equipment placement sequence includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Hook loader to power pack on primary	Battery could explode Avoid pinch-points			Hook negative up last Maintain communications with FEL operator
Raise primary crusher				
Replace temporary blocks under jacks				
Remove electrical and air lines				
Disconnect tractor and pull away				
Place Cedar Rapids Unit 124				
Hook loader up to power pack on Cedar Rapids • Raise discharge/front conveyor out of way • Lock raised conveyor with two	Battery could explode Avoid pinch-points			Hook negative up last Maintain communications with FEL operator

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
chains provide				
Bring jacks down to ground and lift up crusher				
Unhook electrical and air lines				
Pull tractor away				
Set up tool trailer next to pad				
Put down ground plate				While truck is hooked
Place landing gear on the ground on (tool trailer)				
Disconnect electrical and air lines and pull truck away				
Drive truck to stacker unit 126				
Raise tie off cables out of travel position	Possible falling hazard			Use ladder/tie off
Hook up to stacker unit 126				
Lift landing gear				
Go to most level open area available				
Park truck at 90 degree angle to stacker				Driver will remain in cab and follow loader operator instructions
Hook on to head pulley end of conveyor	Possible falling hazard			Tie off Use lifting eyes to lift conveyor
Unfold the stacker with the loader and gin pole and into position	Possible falling machine			Keep clear of suspended loads
Secure the upper section with bolts	Possible falling hazard			Use fall protection
Unhook loader and gin pole	Possible falling hazard			Use fall protection
Relocate loader and hook to other end of stacker	Possible falling hazard			Use fall protection
Remove lock pin				
Unfold into position				Keep clear of suspended loads
Secure lower section with bolts	Possible falling hazard			Use fall protection
Raise conveyor weight off of tractor with loader	Possible falling equipment			Keep clear of suspended loads
Unhook tractor				
Pull tractor away				

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Set conveyor on ground				
Unhook gin pole				
Begin Leveling process • Primary crusher a. Hook up loader to power pack b. Throw all blocking and plywood on ground c. Set level on machine d. Set machine level using jacks and blocks e. Unhook power pack f. Go to cedar rapids unit 124 • Cedar rapids a. Hook up loader to power pack b. Lower legs to blocking position c. Set up machine using jacks and pads d. Lower the front conveyor e. Unhook the loader from the power pack	Battery could explode Possible pinch points Possible explosion Possible explosion Possible explosion			Hook up positive first, negative last Ensure area is clear of all people Unhook negative first Hook up positive first, negative last Unhook negative first
Set scale conveyor unit 132 • Using gin pole and loader, hook to tongue of unit 132 • Pull it into place				
Set stacker unit 126 • Use gin pole and loader to hook onto lift eyes of unit 126 • Pull it into place • Unhook from stacker unit 126				

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Go to primary crusher unit 110 • Hook onto electrical box • Lift off and set on ground • Unhook	Danger of suspended load			Keep ground personnel from under load
Take gin pole off of loader				
Go to stacker unit 126 • Pick one side up and turn wheel to radial position • Repeat for opposite side • Put drive chain on	Possible pinch-point Possible pinch-point			Be aware of bucket hazards Be aware of bucket hazards

Duty 21: Electrical Setup

Learner will demonstrate how to setup the electrical system for site. The learner will also explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The electrical setup procedures include the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Unwrap cords and plug into receptacle into tool trailer				Do not plug in cords with generator running “anything that is rolled up has to be unrolled”
Hang or place cords to prevent damage				Discuss electrical standards: Explain 56.12004 (cable protection) “anything that is rolled up has to be unrolled”
Perform continuity/ground resistance test	Possible shock hazards/electrocution			Discuss electrical standards: Explain 56.12028 (ground testing)

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
				Explain 56.12016 (lock-out/tag-out)

Duty 22: Final Setup

Learner will demonstrate how to perform the final setup activities for the job site. The learner will also explain job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The final site setup includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
Primary Crusher • Place handrails • Remove stays • Set plywood • Build ramp with mid-axle height berms • Tape glad hands	Fall Hazard			Remove stays prior to operation
Cedar Rapids • Take blocks out of cone • Remove stays off of screen • Reattach tie-off cables • Reattach spray bar • Tape glad hands	Fall Hazard Fall Hazard			Remove stays and blocks prior to operation
Stacker • Tighten stacker belt • Remove chain on counter-weight • Remove the belt stays • Put hopper in place	Fall Hazard			Tie off
Scale Conveyor • Calibrate scale				
Set test trailer				

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking 1=Important 2=Very Important 3=Critical	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
• Unhitch from truck • Place steps • Lower stabilizers				
Water trailer • Fill water tank • Unhitch • Reattach water system				
Check appropriate signage				