

JOB HAZARD ANALYSIS
Removal and Replace Conveyor Pans & Chain

Project Name: Apron Feeder Conveyor Rebuild

Project Number: 11-005

Customer: Shell

Location: Albion Sands

JHA#: HSE-006



JHA R/R Conveyor

Sequence #:

Rev.:

Date Revised: 06/20/2011

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	TASKS	HAZARDS	HAZARD CONTROLS
1.	Mobilization/Setup	<ul style="list-style-type: none"> Unfamiliar (new) work environment (area) Evacuation points New employee to site 	<ul style="list-style-type: none"> All employees to attend Shell Albion Sands specific orientation, OSSA, CSTS, and Waiward Steel 2010 Orientation prior to commencing work. Supervisory Training (Leadership for Safety Excellence, Legislative Awareness, and Permit Receiver if applicable). All operators to be trained and competent. All tickets are to be keeping on file. All employees to review and sign off on this Hazard Assessment. Employees to review Shell rules and Life Saving Rules, Waiward Steel Fabricators Field Safety Manual Section 5.2 – 5.3. Shell rescue is the primary rescue team for all activities Call (780). Smoking in designated areas only Waiward Steel will use a Construction fence to control the work area and a sign in and sign out board. Assembly Area: A  Meeting Point: 2 
2.	Obtain Permit for Specific area. Permit center	<ul style="list-style-type: none"> Working without a permit Working outside of permit area 	<ul style="list-style-type: none"> No work is to commence until a current permit is in place. Review permit daily. Stay with-in defined work area. All supervision and employees must be familiar Safe work permit policy
3.	Personal Protective Equipment (PPE).	<ul style="list-style-type: none"> Personal injury if not worn and maintained Specialized PPE and training Lead Exposure Diesel/carbon build up over the years of use 	<ul style="list-style-type: none"> Mandatory PPE – CSA approved Eye Protection, hard hat, safety boots and approved gloves and reflective stripes. Fire resistant coveralls (FR) are required in this area. All activities with the risk of airborne particles or airborne foreign bodies must follow Waiward Steels Updated Eye Protection Policy Fall Protection – must be OSSA trained for the use and inspection of fall protection used. Respiratory protection – must be OSSA trained for the use and maintenance prior to use. All employees using APR must be fit tested. Additional PPE will be supplied for various tasks. Waiward Steel personnel will follow the new changes to safety eyewear at Oil Sands.

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			<ul style="list-style-type: none"> 100% Spark containment All safety eye wear must be used with safety straps.
4.	Meetings; Daily and Bi-Weekly. Every Wednesday after first coffee break.	<ul style="list-style-type: none"> Poor communication Procedures/Practices and Job Scope not known by all Supervision and Craftspeople 	<ul style="list-style-type: none"> Prior to starting work all workers will be required to attend a 'tool box' safety meeting and sign in. Following the morning meeting all employees will fill out a Field Level Risk Assessment at the jobsite. All FLRA's will be reviewed and time dated by Superintendent and Safety department. All employees will attend and sign in at Bi-Weekly safety meetings Clients discretion as to when.
5.	Site Preparation. Clean all debris from existing steel before any lifting takes place.	<ul style="list-style-type: none"> Working from heights Falling from structure Flying/Falling debris Untrained personnel 	<ul style="list-style-type: none"> Workers will maintain 100% tie-off at all times All workers will be trained in Fall Protection and Aerial Work Platform All work area will be controlled with spotters and Hazard tape. The work area will have a sign in and sign out board for all personnel involved with the work scope. Loose material will be manually cleaned from structure before any lifting takes place.
6.	Site preparation. Prepare hoist/ Overhead crane & set-up area.	<ul style="list-style-type: none"> Personal struck by heavy equipment Equipment collision Crane failure/upset Pinch Point Unauthorized personnel in work area High winds Rocks from underneath the tires of mobile equipment Uneven Ground/Crane pads Unfamiliar with Shell Policies Unscheduled road closure 	<ul style="list-style-type: none"> Review craning and rigging policy Control the area with the appropriate color of ribbon (red or yellow) and use identification tags that indicate; hazard, name of contact person and method of contact for access to area. Signalman to be assigned with a signal gauntlet. Pedestrians are to approach mobile equipment until eye contact is made with operator and O.K. is given to enter machine working area. Soft and uneven areas are to be compacted and leveled as required. Inspect all rigging Use tag lines to control all loads. Do not enter under load. Use fall arrest/restraint above 6 feet. Cranes to cease operations as per manufacture specifications for wind speeds. Use adequate softeners when required. Avoid the side of mobile equipment when it is traversing over rocks on hard packed ground. Waiward Steel and Sterling Personnel will follow Shell Albion sands Standard Lift Authorization Form. All workers operating over head crane must be

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			<p>trained or deemed competent by qualified personnel.</p> <ul style="list-style-type: none"> • Waiward Steel will follow Shell Standard Authorization • Waiward steel will use flag people to control all traffic in work area. • Trailers that are within the hoist radius of crane will either be evacuated or temporarily removed from area.
7.	<p>Dismantling and Assembly (Apron Feeder Conveyor Pans and chain and return rollers).</p> <p>Idler roller potentially Teeth.</p> <p>All openings and handrails are to be safed out.</p>	<ul style="list-style-type: none"> • Falls from elevations • Workers in hoist area • Dropped tools and materials from heights • Heavy Lifting/Pushing and Pulling, be aware of muscle skeletal injury • Working under suspended loads • Poor or lost communication between operator and signalman 	<ul style="list-style-type: none"> • Fall Protection Plan must be established to detail work at heights and determined best fall protection for the task. • Control the hoist area and/or the area below all elevates work. Use information tags • All employees working at heights must have current OSHA fall protection certification on file. • All tools and materials used at heights must be secured to prevent falling. • Waiward steel guidelines for lifting objects over 50lbs – Use mechanical advantage, good body mechanics and break loads down into individual components. • No work to be conducted under suspended load. • Clear line of communication between operator and signal person. • Idlers that can be easily removed will be taken out using nylon slings and crane. • Idlers that are difficult to remove will be strapped to structure with metal band.
8.	<p>Cutting/Burning/Welding operations.</p> <p>Sections of the conveyor may have been welded in place.</p>	<ul style="list-style-type: none"> • Burns, fires, explosions • Use of galvanized and stainless steel • Spark ignition • Flying debris • Other work crews • Unsecured work area • Diesel/carbon 	<ul style="list-style-type: none"> • 20lb. fire extinguisher required at hot work locations, fire watch mandatory for hot work. • Fire watch is to be trained and remain on duty through breaks and one hour after hot work is complete. • Fire extinguishers to be inspected and recorded once per month. • Compressed gas cylinders to be secured in wheeled carts, upright and located away or protected from falling objects. • Flash back arrestors required at the torch and gauge end. • Gauges to be shut off at break times. • Remove regulator assembly and recap compressed gas cylinders at the end of each shift. • Remove combustible material from area. • Use fire blankets to contain all sparks.

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			<ul style="list-style-type: none"> Wear proper PPE as per updated Eye and Face. Proper storage cages for spare and empty gas cylinders. Use welding shields when working around other work crews. 20lb. Propane bottles must be in plastic crates while onsite. All Compressed gas cylinders must be properly secured for transport. 100% Spark Containment.
9.	Mobile Equipment	<ul style="list-style-type: none"> Equipment failure Dropped loads Property or personnel damage or loss 	<ul style="list-style-type: none"> All equipment must be inspected prior to mobilization to site. All equipment to be maintained as per manufactures specification and company policy. All equipment must be inspected daily and inspection forms keep on file. All equipment must be operated by trained and competent employees
10.	Material storage	<ul style="list-style-type: none"> Tripping hazards Congestion Stability 	<ul style="list-style-type: none"> Store all materials in a neat and orderly fashion. Use dunnage to support material.
11.	Housekeeping Scrap metal bin will be utilized to save material for client	<ul style="list-style-type: none"> Tripping hazards Congestion Flagging that is not in use anymore Consumed materials e.g. welding rod stubs, fire blanket Demo materials restricting access and causing tripping hazards. Build up of ice and Steam 	<ul style="list-style-type: none"> A clean work area will be maintained. Work areas will be cleaned up on an ongoing basis as opposed to a daily or weekly basis. Dispose of scraps and construction garbage in appropriate containers. Dunnage to be picked up and stacked neatly on an ongoing basis. Remove unnecessary flagging tape. Cords and welding leads, compressor hoses to be routed overhead where possible. All consumable materials to be contained and cleaned up as used. All demo and scrap material to be removed from unit each break and end of shift. Aerosols and other controlled products used are to be disposed of properly. Labors must clean and steam ice build up from structure before crews enter work site. All concrete foundations will be cleaned and all anchor bolt to be cut to top of concrete.

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12.	Use of power and hand tools.	<ul style="list-style-type: none"> Electrical shock Locks on switches Guards missing Poor condition – tag out Noise levels Use of GFI receptacles Injury from improper use Damage from misuse 	<ul style="list-style-type: none"> All power tools to be visually inspected prior to use. Lock on switch to be removed from all power tools. All guards are to remain in place while tools are being used. All damaged tools are to be taken out of service and tagged for repair. Hearing protection must be worn while operating power tools that cause excessive noise – example impacting. Magnetic drills for field drilling to be tied off. Tag power cord feeding magnetic drill to indicate “mag drill on”. Grinder handles <i>Must not</i> be removed, they are called a kick back handle and if you have to remove the handle, you are using the wrong tool for the job. Etc. use Die Grinder All hand tools to be used for the purpose intended by the manufacturer. Use the right tool for the right job Do not use snipes or cheaters on wrenches. All tools are to be inspected prior to use.
13.	Working from scaffold deck Safety net for dump pocket area	<ul style="list-style-type: none"> Falls from heights Working from unfinished scaffold Untagged scaffold Falling objects 	<ul style="list-style-type: none"> Always read the scaffold tag and check the color of the tag and if there is no tag consider the scaffold as unsafe. An employer must ensure that a safety net meets the requirements of ANSI Standard A10.11-1989 (R1998), Construction and Demolition – Personnel and Debris Nets, Part 22- Safeguards OH&S Code Section 320(1)
14.	Lock-out and Tag-out	<ul style="list-style-type: none"> Unfamiliar with the lockout and Tag out procedure. Working around energized cables Working around energized Fire Water Gun 	<ul style="list-style-type: none"> All workers must be familiar with Shell Albion Sands – Isolation of Equipment Policy. Safety will review Policy prior to starting task. Workers will carry personnel locks for lockout procedure. Shell Personnel will confirm that all lines are de-energized before work starts. Shell Personnel will inspect all monorail and over head cranes in building



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Superintendent – Brian Korchinski

Number: 780-818-2940

Date:

Email: brian.korchinski@waiward.com

Safety -

Number: 780

Date:

Email:

Client EH&S

Number:

Date:

Email:

Client (representative)

Number:

Date:

Email:

Key Contacts Waiward Steel