**COMPANY/PROJECT NAME or ID/LOCATION (City, State)**
Former East Chicago Terminal - PIPING INSTALLATION

**DATE**
Rev> 9/5/12

**NEW**
REVISED

**PAGE 1 of 2**

**WORK ACTIVITY (Description):** Install new pipework to be seamless welded for Treatment Facility skid to new tie-in points as on Figure 2 Prints. Dated 3/28/12

<table>
<thead>
<tr>
<th>DEVELOPMENT TEAM</th>
<th>POSITION / TITLE</th>
<th>REVIEWED BY:</th>
<th>POSITION / TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>XXXXX</td>
<td>Foreman</td>
<td>Aron Yakima</td>
<td>Project Manager</td>
</tr>
<tr>
<td>XXXXX</td>
<td>Laborer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mike Adermann</td>
<td>V.P. Operations</td>
<td>XXXXX</td>
<td>Crane Operator</td>
</tr>
</tbody>
</table>

**MINIMUM REQUIRED PERSONAL PROTECTIVE EQUIPMENT (SEE CRITICAL ACTIONS FOR TASK-SPECIFIC REQUIREMENTS):**
- REFLECTIVE VEST
- HARD HAT
- LIFELINE / HARNESS
- SAFETY GLASSES
- GOGGLES
- FACE SHIELD
- HEARING PROTECTION
- SAFETY SHOES
- AIR PURIFYING RESPIRATOR
- SUPPLIED RESPIRATOR
- GLOVES Cut-resistant
- OTHER Chaps
- PPE CLOTHING

**JOB STEPS**

1. Receiving Permits to Work.
   - Inadequate training resulting in personnel not understanding requirements of PTW, leading to injury & equipment damage.
   - Training to ensure all personnel understand PTWs.
   - Crew to review TSTI/JSA, discuss safest work procedures & practices with work crew, use of correct tools & equipment.

2. Set up welding leads & welder. Set up 240 volt leads.
   - Incorrect operation, poor procedure, inadequate training poor housekeeping leading to equipment damage, injuries to personnel or Fatalities.
   - Place welding machine on level ground, ensure all equipment is correctly tagged, inspect all power tools prior to use, ensure all power leads are hanging from insulated hooks and are not lying on the ground, do not run leads through scaffolds.

3. Grinding & Welding
   - Inadequate guarding, possible ignition source leading to spark fires, Burn injuries to personnel.
   - Correct PPE, Encapsulate hot work area, fire extinguisher, gas testing, cover drains. Maintain Firewatch. Use TSTI/JSA along with Brieser PPE Matrix to identify proper PPE with work procedures.

4. Lifting pipes into position using Terex Stinger 4792- 20 Ton Boom Crane.
   - Lifted load falling from above or uncontrolled lifted load causing injury of damage to equipment. Poor traffic control leading to personnel transiting work area exposing themselves to injury.
   - Certified rigger to sling loads. Secure loads in place using wire rope, chain block or Koma-long. Tag line to be placed on all lifted loads.
   - Correct rigging signals and total communication to be used at all times.
   - Barricade work area, Spotter to control site access.

5. Cleanup/Housekeeping.
   - Poor management, poor procedure & disorganization of the job can lead to personal injury or equipment damage.
   - Perform 2-Minute Drill assessment at any time if anyone in the work group feels it is necessary to do so.

6. 
Each Job or Operation consists of a set of steps. Be sure to list all the steps in the sequence that they are performed. Specify the equipment or other details to set the basis for the associated hazards in Column 2.

A hazard is a potential danger. What can go wrong? How can someone get hurt? Consider, but do not limit, the analysis to: **Contact** - victim is struck by or strikes an object; **Caught** - victim is caught on, caught in or caught between objects; **Fall** - victim falls to ground or lower level (includes slips and trips); **Exertion** - excessive strain or stress / ergonomics / lifting techniques; **Exposure** - inhalation/skin hazards. Specify the hazards and do not limit the description to a single word such as "Caught".

Aligning with the first two columns, describe what actions or procedures are necessary to eliminate or minimize the hazards. Be clear, concise and specific. Use objective, observable and quantified terms. Avoid subjective general statements such as, "be careful" or "use as appropriate".