

**STANDARD OPERATING PROCEDURE****Facility Construction****SOP No:015-CPF****SOP Title: Onsite Fabricating****SOP Number    #015-CPF****SOP Title        Onsite Fabricating for Facility Construction**

	<b>NAME</b>	<b>TITLE</b>	<b>SIGNATURE</b>	<b>DATE</b>
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**1. PURPOSE**

- This procedure is a guideline on the proper way to fabricate supports, piping, and other materials as needed for facility construction. Employees at BBGCI will use this as a guide to help them perform their duty in a safe and productive manner.
- BBGCI will be in compliance with all government regulations as well as the regulations set forth by our clients.

**2. INTRODUCTION**

- BBGCI understands that all jobs are different. This SOP is set in place as a guideline to help employees understand the proper procedure to follow while welding and fabricating steel pipe for facility construction.

**3. SCOPE**

- This procedure has been set in place for BBGCI equipment operators, spotters, welders, helpers, and supporting personnel who will be performing operations for the fabricating, welding, and installing materials as needed for facility construction.

**4. DEFINITIONS**

- Jack Stand - A stand with adjustable height which is used to support pipe during fabrication.
- Welding Pass- A single progression of welding along the steel joint.
- Qualified Welder- Qualified in structural and pipe wilding per BBGCI standards.
- Line of Fire- The path of a moving object that can potentially injure or the potential path of an object that may move.
- Pipe- The continuous section of steel.
- Buffer Zone- The area where operation occurs, that is deemed not safe for unauthorized personnel or equipment.
- Well head - the component at the surface of an oil or gas well that provides the structural and pressure-containing interface for the drilling and production equipment.
- Established Welding Area – Area is designated based upon minimum traffic from personnel, vehicles, and mobile equipment. Area also has to be safe distance (based on client requirements) from well head. Area also has to be safe distance from vegetation and any other flammable material.

NOTE: For basic welding terms, please refer to [www.keenovens.com/articles/welding-terms.htm](http://www.keenovens.com/articles/welding-terms.htm)

**5. RESPONSIBILITIES**Qualified Spotter

1. Participate in tailgate meeting and JSEA.
2. Understand the scope of work and the hazards involved in his/her specific job duty.

3. Maintain good communication with the Equipment Operator and supporting personnel at all times.
4. Ensure that the buffer zone is free of any unauthorized equipment or personnel at all times.
5. Maintain a safe working distance away from any mobile equipment while work is in progress.
6. Be aware of traffic and pedestrians and make sure the equipment operator knows when equipment or a vehicle is approaching.

Qualified Equipment Operator

(Equipment includes: Forklift)

Note: For Forklift Operation refer to **Forklift Loading/Offloading SOP**

1. Participate in tailgate meeting and JSEA.
2. Complete equipment inspection.
3. Understand the scope of work prior to beginning work.
4. Establish good communication with the spotter prior to beginning work.
5. Commence work and maintain safe operations.

Qualified Welder /Welders Helper

1. Participate in tailgate meeting and JSEA.
2. Inspect all welding equipment used for welding operations.
3. Scan out work area to ensure any flammable material is not present.
4. Understand the scope of work prior to beginning task.
5. Maintain good communication with the spotter and supporting personnel during operations.
6. Commence work and maintain safe operations (Able to locate fire extinguisher and fire blankets as required).

Qualified Rigger

1. Participate in tailgate meeting and JSEA.
2. Inspect all lifting devices and make certain of capacities.
3. Maintain a safe working distance away from any mobile equipment while work is in progress.
4. Understand the scope of work prior to beginning task.
5. Use proper rigging techniques.
6. Maintain good communication with all employees involved in this process.

## 6. SPECIFIC PROCEDURE

### Welder/Fabricator

1. Establish a safe workspace to fabricate and weld materials.
2. Use appropriate safety techniques according to BBGCI standards. (proper shades, face shields ect...)
3. Welding should be accomplished using industry approved techniques that meet or exceed industry standards.
4. Welds will meet QA/QC standards established by BBGCI and/or client.

### Welding Steel Pipe on Pipeline

*(Personnel Involved: Equipment Operator, Spotter, Welder, Welders Helper, and Qualified Rigger)*

1. Before work can commence, properly complete all JSEA's, work permits, safety tailgate meetings.
2. Equipment inspections will be completed by qualified personnel.
3. Establish the scope of work, and ensure everyone knows their specific job duty.
4. Spotter will maintain a safe buffer zone and inform the operator that it is safe for work to commence.
5. Using proper lifting devices, supporting personnel will begin to rig up to the joint of steel pipe.
6. The joint of steel pipe will be transported to established welding area.
7. Pipe will be placed on jack stands.
8. Welder and helper will adjust pipe to make sure it is level and square.
9. Welders will begin to make their welding passes steel pipes. After each pass the Welder's Helper will grind and dress out the weld as needed. Once the last welding pass is completed, the Welders Helper will use a buffing wheel to buff down the weld.

## 7. JOB RELATED HAZARDS

### ***Slips, Trips and Fall Hazards:***

- Inspecting equipment
- Climbing on and off equipment.
- Walking on uneven surfaces or rocks
- Working around welding leads and hoses
- Working around existing piping

### ***Pinch Points and Line of Fire Hazards:***

- Moving equipment
- Walking in unauthorized work areas/ buffer zone
- Walking near overhead loads

- Positioning pipe
- Arc Flash
- Burns and Electric Shock
- Sparks from welding/grinding
- Flying debris from grinding
- Ignition source/ fire explosion
- Working at heights

***Fire Hazards:***

- Welding
- Grinding

**8. REQUIRED PPE**

- Hard hat
- Safety Glasses
- Steel Toe Boots
- Gloves
- Welding Gloves
- Fire Resistant Clothing (FRC's)
- Reflective Vest for Spotter
- Personal Gas Monitors (Site Specific)
- Welding Hood/ or pancake style hood
- Face Shield while grinding or using torch to cut pipe
- Goggles or Spoggles while grinding
- Hearing Protection while grinding

*Note: Grinding operation requires goggles or spoggles and a face shield. Cutting operation requires safety glasses and face shield with one being shade 5 or higher.*

**9. FORMS/TEMPLATES TO BE USED**

- JSEA
- Work Permits (If Required)
- Equipment Inspection Forms
- Client Required Forms

**10. INTERNAL AND EXTERNAL REFERENCES**

**10.1 Internal References**

**10.2 External References**