

**STANDARD OPERATING PROCEDURE**

**Lateral**

**SOP No: L--010**

**SOP Title: Poly Pipe Installations**

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

- This procedure is a guideline for the proper way to offload, string, and fuse poly pipe joints along the right-of-way. Employees at BBGCI will utilize this guide in helping 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 overall concept poly pipe installations and the necessary steps needed to be taken.

## 3. SCOPE

- This procedure has been set in place for BBGCI equipment operators, truck drivers, and supporting personnel who will assist in the installation of poly pipe.

## 4. DEFINITIONS

- Fusion- The joining of two pieces of poly pipe by heating and bonding of two separate pieces of pipe.
- Poly Pipe- High-density polyethylene pipe used in the petroleum pipeline industry.
- Buffer Zone- The area where operation occurs, that is deemed not safe for unauthorized personnel or equipment.
- Line of Fire- The potential path of a moving object that may cause injury or damage.

## 5. RESPONSIBILITIES

### BBGCI Qualified Truck Drivers

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. Prior to use, ensure the sucker device is working properly.
6. Complete task in a safe and timely manner

### 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 and eye contact with operator and support personnel throughout the job.
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 throughout the right-of-way, and make sure the equipment/truck driver knows when equipment or a vehicle is approaching.

Qualified Equipment Operator

*(Equipment includes: Forklift, Skid Steer, Fusion Machine, and Wheel Loader)*

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.

**6. SPECIFIC PROCEDURE**

**Offloading of Poly Pipe**

*(Personnel Involved: Truck Driver, Equipment Operator and Spotter)*

1. Before work can commence, properly complete all JSEA's, work permits, safety tailgate meetings, and equipment inspections.
2. Equipment inspections will be completed by a qualified operator.
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. Truck driver will position truck in the required location.
6. Truck driver will then unbind the straps that were securing the poly pipe.
7. Spotters will scan the area for unauthorized personnel or equipment, if all is clear, the spotter will give the operator the signal to begin offloading.
8. The operator of the forklift will begin to position the forks underneath the bundle of poly pipe while ensuring the forks do not extend underneath any other bundle of pipe.
9. The forklift operator will then transport the bundle of poly pipe to the designated location along the right-of-way while being accompanied by a spotter.
10. Once all poly pipe has been properly offloaded and transported to its designated location stringing of poly pipe will occur.

**Stringing of Poly Pipe**

*(Personnel Involved: Equipment Operator and Spotter)*

1. Involved personnel will participate in a tailgate meeting and complete a JSEA prior to performing work.
2. Equipment inspections will be completed by a qualified operator.
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. Equipment operator will lift a single joint of pipe and position it along the right away. This procedure will be repeated until all poly pipe is strung with a 1 foot overlap along the right-of-way with the spotter ensuring no one enters the danger zone.

**Fusion of Poly Pipe**

*(Personnel Involved: Skid Steer Operator, Fusion Equipment Operator & Spotter)*

*\*\*In the event that Temperatures where Poly Fusion Take place, please read Appendix I Fusing Poly Pip during Early Hours for specific Work Hours.*

1. Involved personnel will participate in a tailgate meeting and complete a JSEA prior to performing work.
2. Equipment inspections will be completed by a qualified operator.
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. The Skid Steer Operator will use the equipment forks to position the poly pipe so that the fusion machine is able to roll under the poly pipe.
6. Once two joints of poly pipe are in position in the fusion machine, the fusion operator will begin fusing the pipe.
7. This procedure will be repeated until all poly pipe has been fused along the right-of-way.

*NOTE: Throughout this procedure, a competent person will be assigned to cut out a fused section of the poly pipe with a chainsaw for testing.*

**7. JOB RELATED HAZARDS**

***Slips, Trips and Falls while:***

- While inspecting equipment
- Climbing on and off equipment.
- Walking near open holes/trenches
- Walking on uneven surfaces or rocks.

***Pinch Points and Line of Fire while:***

- Moving equipment
- Walking in unauthorized work areas/ buffer zone
- Binding/ unbinding material
- Working near overhead loads
- Operating a chainsaw.
- Fusion operation
- Contact with heating material during fusion operations

***Biological Hazards while:***

- Encountering wildlife

***Fatigue***

**8. REQUIRED PPE**

- Hard Hat
- Safety Glasses
- Steel Toe Boots
- Gloves (Supporting Personnel)
- Fire Resistant Clothing (FRC's)
- Personal Gas Monitor (Site Specific)
- Face Shield (Chainsaw operations)
- Chaps (Chainsaw operations)

*NOTE:* If client requires, spotter will be equipped with high visibility vest while performing their duties.

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

- JSEA
- Work Permits (If required)
- Equipment Inspection Forms

- DOT Documentation

**10. INTERNAL AND EXTERNAL REFERENCES**

**10.1 Internal References**

**10.2 External References**

**11. CHANGE HISTORY**

## Fusing Poly Pipe during Early Hours

### Reason for Change in Schedule:

Due to the effects of extreme summer heat on the poly pipe it sometimes becomes necessary to adjust the schedule to fuse poly during early hours to allow the poly pipe to cool enough to remove inner beads properly.

When temperatures reach 90 degrees and above the HDPE crew will start operation every day at 4:00am and work until 2:00pm.

### Personnel Required:

A typical Crew make up for Fusing Poly Pipe consists of 1 fusion operator, 1 Skid steer Operator, and 3 laborers.

BBGCI Safety Personnel or Foreman must be on site prior to the crew beginning their work.

### Methods:

Berry Bros shall give Client a minimum 48 Hour notice before changing schedule.

Fusion machine will operate during the early hours for the required time to fuse the poly pipe for given Pipeline but must not exceed 15 days without Divisional Manager Approval.

### Mitigating the affects early hours duty:

Employees will report well rested and fit for duty. Personnel will be off duty a minimum of 10 hours prior to reporting for early hours work. Crews will not work over 12 hours in a day.

All personnel shall be required to wear high visibility reflective vest. All employees will be provided clear safety glasses when not in cabs or trucks.

In addition; Supervisors will ensure Work Permit is issued out even though our policy doesn't require this for fusing, but since the work will be performed well before daylight a permit will be required. Supervisors will also perform a tailgate session. I

BBGCI will provide light plant, flashlights, radios and first aid kits onsite.

Snake chaps must be worn while there is low visibility.

Cutting HDPE with a chainsaw shall be limited to day light hours.