

APPENDIX D: Lessons Learned



LESSONS LEARNED SAFETY BULLETIN

Job Classification:	Contractor working for Spire Missouri (West)
Incident date/time:	7-16-18 10:23 am
Location:	Missouri West – 1106 Paseo
Job/task performed at time of injury:	Tie-in – Abandoning the existing steel service line
Nature of injury:	Gas Ignition resulting in 2 people burned

What happened?

A contractor for Spire was renewing a service line. The new service line was in place and the contractor crew was abandoning the existing steel service line. The existing service line was plastic to steel. Instead of safely stopping the flow of gas to the gas main or service line, the contractor cut the plastic portion of the existing service line with a ratchet pipe cutting tool resulting in gas escaping from the cut line for several minutes. While trying to insert a Permasert coupling in the open line, the contractor crew did not have a chamfering tool available, so they used a pocket knife instead. The contractor was unable to get the Permasert coupling installed and gas continued to escape. The contractor foreman instructed his employee to use an electric sawzall to cut the steel portion of the existing service line to allow more space to install the coupling. The contractor employee in the excavation expressed concern about using the sawzall, but proceeded with using the sawzall anyway. Within a few seconds an ignition occurred, resulting in serious burns to the contractor employee in the excavation, and also to a contract laborer who had just walked up near the excavation.



The cause

The electric Sawzall is believed to be the ignition source. The contractor's foreman failed to safely lead his crew. Required procedure for service line abandonment was not followed. There was failure to exercise stop work authority to prevent this incident. Work was being conducted in a gaseous environment without wearing a firesuit and fresh air breathing system. There was no fire watch in place.

Recommendations

Understand and follow proper work procedures for the work you are conducting. Ignition sources must always be kept away from gas. Wear all the required Fire protection including a fire suit, Kevlar hood, fire gloves and supplied air respirator when working in gaseous atmosphere. Exercise your "Stop Work Authority" when situations are not safe to proceed.

Source – Company Response to Staff Data Request 0038.1

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Injury Type/Body Part: Gas Release Fire with Employees Burned**Incident Date: 7/16/2018****Location: Midwest Region – Kansas City, MO****Description (What Happened?):**

Two employees were installing a two-inch PE tie-over and abandoning the existing service line. An electric Sawzall was used to cut the existing service line. A flash occurred, and two employees were taken to the KU burn center hospital. One employee was treated and released, and the other employee was released two days later when gas was released. An electric Sawzall was being used to cut the existing service. A flash occurred and the fire burned both employees. EMS was called both employees were taken to the hospital. **One employee received burns to more than 25% of his body.**

Questions to ask your crews:

- Is the work you are performing in conformance with customer and client requirements?
- Do I know the concentration of flammable gas in the area where I am working?
- Are you using the correct tools for the work?
- Do I have the correct PPE?

What we need to do?

- **Do Not** use Sawzalls or any power tool in a potential gaseous atmosphere.
- In all excavations where there is reason to suspect the presence of a flammable gas (e.g., leak repair), the atmospheric environment in and around the excavation shall be tested with a CGI before personnel are allowed access.
- When a hazardous atmosphere exists, access to the excavation shall be limited to authorized personnel equipped with appropriate Personal Protective Equipment.
- When workers are required to be within the hazardous environment there must be an additional person assigned to observe the workers' activities and warn about changes in conditions or initiate rescue activities if necessary.
- Should a sudden, uncontrolled release of gas occur during excavation activities, operation of mechanized equipment shall cease immediately.
- A fire extinguisher shall be placed at a location upwind of the excavation and shall be staffed by an employee trained in the operation of a fire extinguisher.



Source – Company Response to Staff Data Request 0038.2