

Safety Alert



Serious Injury/ Fatality Safety Alert

Title: Contractor Fatality

Incident Date: January 4, 2013

Summary:

A contractor died January 4, 2013 at a Duke Energy International natural gas fractionation facility in Pucallpa, Peru.

He was part of a contract crew that was working to retrofit a Duke-owned 10 kV transmission system. They were installing grounding wires on hollow concrete poles. Ten hollow concrete poles are situated along a road between a substation and the Duke fractionation plant. Also, a 60 kV line runs overhead perpendicular to the 10 kV line. Between poles 6 and 7, the 10 kV line travels underground to avoid the perpendicular 60 kV line overhead.

The contractors were using a manual post hole digger to dig a hole next to pole 7. They intended to install a copper ground wire into the center of the hollow pole and bury it in a hole next to the pole to create a "butt ground". One employee was on a ladder leaning against pole 7 fishing a tape down the pole so he could draw the copper wire up from below. Another employee was bent over at the base of the pole fishing the copper wire into the base so it could be drawn up the pole by the employee above.

A third employee was digging a hole next to pole 7 with a manual post hole digger. He struck the underground 10 kV line next to the pole while digging with the post hole digger. He was thrown back into the road. The employee next to him, who was leaning over at the base of the pole, was electrocuted. It is not known how he made contact but his hands and feet were near the base of the pole.



Post hole digger.



The base of the pole showing the hole they were digging.

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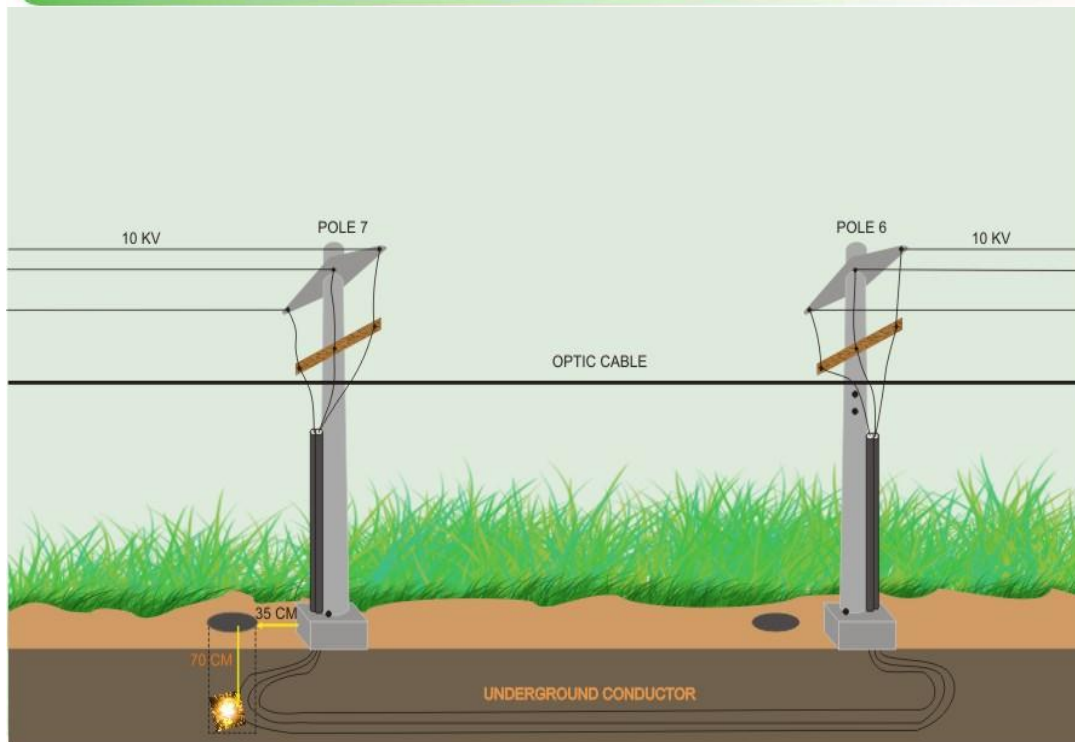


Diagram: 10 kV line is above ground except between poles 6 and 7 where it travels down in conduit and then underground. Note how the cable loops before it gets to its final depth. The contractors struck the underground cable to the left of pole 7 as shown.

Lessons Learned:

A detailed investigation concluded that:

- The contractor was not qualified for high risk work.
- The hazards of the work had not been properly evaluated or communicated.
- The underground lines had not been located or marked. The presence of an underground cable had not been communicated to the contractor.
- Oversight of the contractor was inadequate.
- The DEI contractor EHS management process was not followed.

Numerous corrective actions have been developed and will be implemented to strengthen processes for contractor management at this location.

Other locations should ensure that the core components of the Duke Energy Contractor EHS Management program are applied with rigor and discipline. They include:

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1. Duke Energy personnel involved with contractors will understand their roles and responsibilities.
2. Risks associated with contracted services will be identified and evaluated.
3. Contractor selection criteria will include safety performance.
4. Contracts will include safety performance expectations for contractors.
5. Contractors will develop and communicate their plans for controlling hazards associated with the work.
6. Effective oversight will be applied to contractors.
7. Contractor performance will be evaluated.