

Safety Alert No. 339
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Running of Gas Sensing Line in Cable Tray Leads to Fire

On April 14, 2018, personnel on a Gulf of Mexico production platform witnessed a small flame, approximately one foot in length, commencing from a section of an electrical cable tray. The facility was shut-in, personnel mustered, and the fire was extinguished with a portable hand-held extinguisher. The wiring tray was located above the Lease Automatic Custody Transfer (LACT) unit on the platform.



Damaged Area from Fire.



Bottom-view of Cable Damage.

During the incident investigation, a defect was discovered in the electrical wiring within the cable tray. Deterioration appears to have occurred over time to the outer PVC jacket and inner aluminum armor. This condition may have caused internal conductors to be exposed. The defect in the wiring subsequently introduced a hazardous electrical arc. The electrical arc extended across the cable tray, which damaged the ¼ inch gas pressure sensing line that ran within the tray. As a result, the gas pressure sensing line began to leak fluid. The fluid leak in this line, combined with the source of ignition (the electrical arc), produced a small flame that scorched an area approximately one square foot. No injuries resulted from this incident.

Therefore, BSEE recommends that operators consider the following options:

- Review company and/or contractor operating procedures for electrical installations to confirm that the documentation includes verifying that raceways or cable trays containing electrical conductors do not also contain any pipe, tube, or equivalent for steam, water, air, gas, drainage, or any service other than electrical as per API RP 14F that reference NEC 300.8.
- Inspect all raceways or cable trays with electrical conductors to ensure they do not also contain any pipe, tube, or equal for steam, water, air, gas, drainage, or any service other than electrical as per API RP 14F that reference NEC 300.8. Install or reroute non-electrical piping in areas away from trays containing electrical conductors.
- To avoid potential defects in wiring, ensure that personnel (direct and/or contractor employees) have adequate knowledge and skills for the proper installation of electrical conductors within raceways and cable trays.

A **Safety Alert** is a tool used by BSEE to inform the offshore oil and gas industry of the circumstances surrounding an accident or near miss. It also contains recommendations that should help prevent the recurrence of such an incident on the Outer Continental Shelf.