OFPC safetyALERT
NY STATE FIRE
April 5 2013

Downed Power lines may cause objects to be energized, possibly with lethal results.

There is no such thing as a "routine" call. The call came in to Miami Dade FD as Fire Out on a chain link fence. Upon arrival it was noted that at various locations on the chain-link, particularly to the posts, there was evidence that serious heat/electrical current had traveled through the fence. Miami Dade firefighters made sure everyone stayed away from the fence, called Florida Power & Light (FPL), and checked the back yards for any live wires possibly coming into contact with the fence. There was no evidence of lines down anywhere. When FPL arrived, through a lengthy investigation they came to the conclusion that the neighbor's house had a main line going into the house that was frayed and exposed about every foot (shown only by spots of gray wire showing here and there). FPL representatives said that the impulses of electricity from the pole was disintegrating an already weakened line into that neighbor's house. Once that electricity entered the pipes of the house it searched for anything/anywhere there was a weak or absent ground. That house had a decent ground; however, it found the open or weak ground.....in the fence of the house the fire department were dispatched to, over 100 feet away. FPL representatives immediately pulled both meters to the houses. FPL said had anyone touched the fence during the intermittent times the surges were going through they would have been "fried" instantly.

This incident was sent by Miami-Dade FD with the warning "Just a heads up and stay safe!"

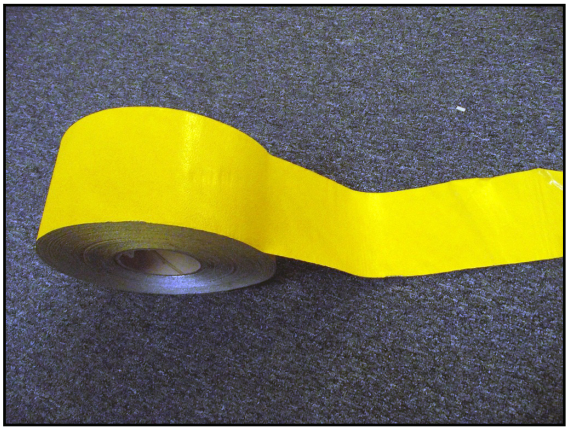
A few years ago there was a similarly "unusual" incident of electricity energizing something strange. In 2010 the Westbury Fire Department (Long Island) sent the following report to OFPC.

Recently an incident occurred where a downed wire, which caused an extremely hazardous condition that could prove lethal to emergency responders and the public, electrified roadway striping.

Incident details: The Westbury Fire Department (Long Island) responded to an alarm on Willets Road in Old Westbury for primary electrical wires down and burning in the roadway, the result of a rainstorm. On arrival, apparatus and chief's vehicles were directed to stage several hundred feet from the downed wire. One of the Assistant Chiefs exited his vehicle and began to approach the scene to confer with Old Westbury police officers. While walking in the roadway, this Assistant Chief heard a buzzing noise originating from the ground near his feet. Looking down, he observed what appeared to be blue electric arc intermittently crossing a crack in the asphalt. The crack in the road asphalt was at least one hundred (100) feet from the area where the downed primary wire was laying in the road and arcing. The crack in the asphalt also cut through the double yellow centerline striping causing an approximate 1" wide separation across the width of the striping. All emergency response personnel were immediately advised of the hazard and were directed to stay out of the roadway. LIPA (Long Island Power Authority) / Keyspan were notified to respond for the downed power line.

Hazard Investigation: After conclusion of the incident, an investigation was done to determine the reason for the electric arc so far away from the downed wire. The downed primary electric wire had fallen and made contact with the double yellow striping in the center of the roadway. Approximately twenty-five (25) feet of the yellow striping had burned and appeared to have melted. Residue from the melted yellow striping exposed what appeared to be the cause of the current flow.

The yellow striping has a metal foil backing running the entire length and width of the stripe. Apparently the downed power line energized the yellow striping and the electric current traveled along the metal foil backing, at least the distance of the crack in the roadway and continued for an undetermined distance. When the current reached the crack in the stripe and the roadway, the current jumped across the opening causing the arcing condition that was observed. It is unknown if the rain conditions increased the ability of the yellow striping to conduct electricity.



Notification: The hazard and concern of electric current travel along roadway striping has been brought to the attention of the Nassau County Department of Public Works for their review. A representative from the Department of Public Works indicated that his department had not been aware of this hazard. He further advised that this striping material was used throughout the county on many roads. They are very concerned regarding this hazard and will be conducting an inquiry into this matter with the manufacturer of the yellow striping. It is unknown if their municipalities utilize this material on roadways under their jurisdiction. The striping is not the type painted onto the surface of the road. Rather, it is rolled out and usually heated to adhere to the road surface. It has a bright yellow reflective surface that is rough to the touch.

Precautions: The seriousness of this safety hazard to fire, police, and emergency medical response personnel, utility workers, victims and pedestrians is readily apparent. This condition could potentially be present wherever downed power lines have occurred; such as at auto accidents, wind, rain, snow, and ice storms, electrical equipment overloads or failure, building collapses etc. All emergency response personnel should exercise care to avoid this hazard. Warnings must be issued to everyone working at the incident scene and entry anywhere near the hazard area must be denied. I ncident Safety Officers must assess the injury potential and provide information back to the Incident Commander. Appropriate scene security and safety measures must be accomplished. Fire Chiefs and/or Safety Officers should contact their local DPW or Highway Maintenance Department to determine if this type of "foil-backed" stripping is used within your response area.

Distributed by the
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