

**SUMMARY FOR FE-15-02**  
**SELECTED AND POSSIBLE CONTRIBUTING FACTORS**

**SELECTED FACTORS**

**Railroad:** Long Island Railroad Company  
**Location:** Malverne, New York  
**Region:** 1

**Month:** June  
**Date:** June 6, 2002  
**Time:** 10:07 p.m., EST

**Data for Fatally Injured Employee(s)**

High Tension Gang Foreman  
36 years old  
15 years of service  
Last rules training: June 6, 2002  
Last safety training: June 3, 2002  
Last physical: July 12, 1999

**Data for All Employees (Craft, Positions, Activity)**

**Craft:** Signal and Train Control

**Positions:**

High Tension Gang Foreman  
Signal Inspector  
Signal Inspector's Helper

**Activity:** Searching for a break in a downed power line

**EVENT**

A High Tension Gang Foreman was electrocuted and fatally injured while searching for a break in a downed power line.

## **SUMMARY FOR FE-15-02 CONTINUED**

### **POSSIBLE CONTRIBUTING FACTORS**

#### **PCF No. 1**

Investigators determined that prior to his death, the Foreman came in contact not with the actual break in the transmission line, but with a splice in the line. While the rest of the cable was insulated, *this splice covered a small area of the uninsulated conductor* used by the communication field rather than the power distribution field; the two ends were soldered together. However, neither OSHA nor NYSDOL (New York State Department of Labor) required power transmission lines of this type to be insulated conductors.

#### **PCF No. 2**

The splice was not lying on the ground at the time, but was suspended by vegetation several feet above the ground. When the Foreman fell down the embankment, he slid under this section of wire, which came in contact with the Foreman and electrocuted him.

**REPORT:** FE-15-2002

**RAILROAD:** Long Island Railroad Company (LIRR)

**LOCATION:** Malverne, New York

**DATE & TIME:** June 6, 2002; 10:07 p.m., EST

**EVENT<sup>1</sup>:** The High Tension Gang Foreman was electrocuted and fatally injured while searching for a break in a downed power line.

**EMPLOYEE:**

Craft:	Signal and Train Control (S&TC)
Activity:	Searching for a break in a downed power line.
Occupation:	High Tension Gang Foreman
Age:	36
Length of Service:	15 years
Last Rules Training:	June 6, 2002
Last Safety Training:	June 3, 2002
Last Physical:	July 12, 1999

### **CIRCUMSTANCES PRIOR TO THE ACCIDENT**

On Thursday, June 6, 2002, an LIRR High Tension Gang Foreman was called at home by the Power Director at 8:30 p.m. His normal tour of duty was 7:30 a.m. to 3:30 p.m. The Gang Foreman was asked to investigate a reported transformer fire at Malverne. At approximately 9 p.m., the Foreman reported from Malverne that the report of the transformer fire was unfounded.

At approximately 8 p.m. on June 6, the LIRR Movement Bureau reported to the Signal Trouble Desk that all circuits had been de-energized on the West Hempstead Branch. This caused all highway-rail grade crossings on the branch to activate continuously. A Signal Inspector and his Helper were sent to investigate. The power to operate the track circuits was provided by a 440-volt, 25-hertz aerial transmission line that ran adjacent to the track. Power was supplied by the railroad's power department, and the line was maintained by the Signal Department. A Motor Generator Set was located in West Hempstead and at Valley Stream. These provided the 44-volt, 25-hertz power. The normal feed was from Valley Stream. While feeding from Valley

---

<sup>1</sup> "Event" is defined as "occurrence that immediately precedes and directly results in the fatality." Possible contributing factors are identified in the following report and attached summary.

Stream, all but three of the grade crossings were in the down position. When feeding from West Hempstead, all other grade crossings returned to normal, except the other three, which were now down. Both motor generators then fed the power department. This restored all circuits on the branch to normal functioning. The Signal Inspector and his Helper met up with the Foreman at the Hempstead Avenue Grade Crossing at approximately 9 p.m. They proceeded east along the right of way in search of the break in the transmission line. The Foreman and the Signal Inspector walked while the Signal Helper drove the signal truck to the Ocean Avenue grade crossing where they all met up again. They continued to proceed east, all of them now walking.

The accident occurred at night, on relatively tangent track. The power line ran along the south side of the West Hempstead Branch. The West Hempstead Branch at this location was a single main track, with an access road paralleling the track. The south side of the track structure was a steep embankment consisting largely of stone ballast, fouled to varying degrees with soil.

All that evening and at the time of the accident, it was raining heavily, with temperatures in the high 50s. The ground was very moist from the heavy rainfall; a flood watch had been issued by the National Weather Service for this area.

### **THE ACCIDENT**

At approximately 10 p.m., the Foreman contacted the Power Director. Power Department statements indicated this contact was only to inform the Power Director that the break had been found. The Signal Inspector later stated that the Foreman had said he was going to request that the power be turned off. The Signal Inspector and his Helper proceeded to return to their truck to retrieve tools and supplies to make repairs. The Foreman remained at the location of the break. As the Signal Inspector and his Helper were returning to the location of the break, they noticed electrical arching in the area of the break and where the Foreman was located. They returned to the location to find the Foreman lying face down on the ground. The 440-volt transmission line was arcing across the back of his lower legs and on the outside of his pants.

The Signal Inspector immediately contacted the Signal Trouble Desk to request that power be removed from the 440-volt line and to request an ambulance. At Approximately 10:10 p.m., the Signal Trouble Desk received the call from the Signal Inspector and instantly relayed it to the Power Director. Power was removed from the 440-volt line at 10:11 p.m. Third rail power was also removed from the track at that location. The Transportation Department placed a block on the track. Once power had been removed, the Signal Inspector removed the transmission line from the Foreman's legs. The Foreman was unresponsive at this time. After removing power from the transmission line, the Power Director attempted to contact the Metropolitan Transportation Authority Police Department and received no response. The Nassau County Fire Command was then contacted and dispatched an ambulance to the scene. The Foreman was removed from the scene and taken to Franklin General Hospital, where he was pronounced dead at 10:50 p.m.

## **POST-ACCIDENT INVESTIGATION**

It was determined that the Foreman came in contact not with the actual break in the transmission line, but with a splice in the line. The splice he came in contact with was known as a Western Union Splice. This splice covered a small area of the uninsulated conductor, with the two ends being soldered together. The rest of this cable was insulated. This type of splice was not used by the power distribution field, but by the communication field. The Communications Department installed and maintained all aerial cables used by the Signal Department. There were no OSHA or NYSDOL (New York State Department of Labor) requirements for a power transmission line of this type to be an insulated conductor. It should be noted that this splice was not lying on the ground at the time, but was being suspended by vegetation several feet above the ground. The Foreman fell down the embankment, and in doing so, slid under this section of wire with which he then came in contact. The non-response from the MTA PD was due to its operators already receiving the requests from both the LIRR Movement Bureau and the Signal Trouble Desk for assistance.

An autopsy was performed by the Nassau County Medical Examiners Office. In the opinion of the Medical Examiner, the Foreman died as a result of electrocution. The Medical Examiner's office reported that all toxicology tests produced negative results.

## **APPLICABLE RULES**

A review of LIRR Electrical Operating Instructions, C.T.290, and of LIRR Corporate Safety Rules for Employees, reveals no applicable rules.