Lower Manhattan Employee Accident

October 24, 2008
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Accident Summary

- Vehicle/Pedestrian Incident
- 106 Bowery, Manhattan
- October 24 at ~1:30pm
Accident Information

- Theft of service investigation at 152 Bowery
- Vehicle was legally parked
- Employee entering driver’s side of vehicle
- Tractor trailer – lane adjacent to vehicle
Manhole Fire

Euclid Ave and Sutter Ave

October 9th 2008
Network System — Overview

electric service
service box
secondary mains
secondary main
primary feeder
manhole
transformer
primary feeder
Overview of Work to be Performed

• Transformer Load Relief
  – Additional transformer required
  – Additional secondary cables also required
  – All work was completed prior to Summer 2008

• Secondary Conductor Upgrade
  – George Dillman was working at this manhole for six days
  – The upgrade work was to be completed on 10/9
Training/PPE

• Distribution Splicer
  – 18 months in field as a helper
  – 64 days formal training at The Learning Center
  – 7 months in field – as a “rookie splicer”
  – Written and practical test

• PPE
  – Hard Hat
  – Rescue Harness
  – Fire Retardant Clothing
  – Rubber Gloves
  – Safety Glasses
  – Test Lamps
  – Atmospheric Testing Instrument (Drager)
Start of shift - College Point Blvd. - Distribution Splicer George Dillman #01071 & GUW Craig Penney 13876.

Crew leaves College Point Blvd. Per Gate Log Sheet; Vehicle #41690.

Crew arrives at first location - MH 69365 located at s/s Sutter Ave. 35 ft w/o Georgia Ave. The crew indicates on the DCAR sheet that they took atmospheric readings, but the Drager machine shows no readings at this time.

DCAR sheet indicates crew arrives at Incident Manhole (MH 22978) at 10:00 AM, but Drager machine readings show the crew arrived and took readings at 9:46 AM.

Drager shows first spike.

Drager shows additional spike.

10:37:11 - Drager reading shows CO alarm.

10:37:12 - Drager reading shows alarm acknowledged.

Bill Gallo (Material truck driver) delivers material to crew at MH 22978.

11:13:20 - Drager reading shows CO alarm.

11:13:57 - Drager reading shows alarm acknowledged.

Oct 09 2008
11:55:33 - Drager reading shows CO alarm.

11:55:51 - Drager reading shows alarm acknowledged.

Anthony Grotto (Supervisor) arrives at MH 22978. Discusses progress of the job with GD and CP.

12:32:05 - Drager reading shows sensors saturated (readings off scale).

12:32:37 - CP uses “point to point” feature and calls Bill Gallo (BG) Material Truck Driver.

12:33:30 - BG hits Emergency button.

12:33:35 - B/Q Control Center calls BG to confirm emergency and receives location of incident.

12:33:55 - B/Q Control Center calls NYFD.

NFYD arrives at site.
NYFD arrives at site.

Con Edison supervisors arrive at site and start discussions with B/Q Control Center on isolating MH 22978.

NYFD logs indicates “All visible fire knockdown”.

Crews arrive to start isolating MH 22978.

Feeder 9B13 taken out of service but alive on back feed.

Smoke cleared per NYFD log.

Feeder 9B13 grounded and removed from service.

ICS log indicates that PSC and OSHA were notified that MH 22978 was de-energized.

NYFD removes Dillman’s body from MH 22978.
Manhole Wall

Secondary Cables
Cable Failure

MH 22978
Incident Manhole

MH 59058
Manhole South

25’ damaged cable

65’ damaged cable

Satisfactory cable

125 ft
Conclusion

• All procedures were followed
• Safety equipment was in use
• A secondary cable failure occurred in the conduit causing a build up of combustible gas, which led to the fire
Staten Island Electric Shock Incident

SIRTROW & Staten Island Expressway

November 3rd, 2008
Training / PPE / Injury

- General Utility Worker
  - 14 Weeks in field as a helper
  - 4 Weeks formal training at The Learning Center
  - Pole climbing qualified

- PPE
  - Appropriate for “dead as dead” work

- Injury
  - 2nd degree burn on the tip of right middle finger
  - 3rd degree burn on the back of right shoulder
Routine Job

- Dropping dead wire
- Supervisor familiar with feeder configuration
- Safety focus on railroad hazard
- Climbing opportunity
Pole #38333 where injury occurred.

Rockwell Ave. entrance to SIRT

Portion of Feeder 322 that was de-energized.

Grasmere Ct. entrance to SIRT
Three Work Methods

• Live work method

• De-energized, utilizing live work method

• Dead-as-dead
Pole # 38333 where injury occurred

Portion of Feeder 2R92
What went wrong

- Protection on wrong feeder
- Testing dead
- Proper grounding
- Job Briefing
- Review of protection
- Operating Jurisdiction
Contributing Factors

- Open wire where accident occurred was once Feeder 322
- Configuration of 2R92 changed since layout was drawn in 2002
- Incorrect switch symbol on feeder print – 2L-554
- Feeder Scheduling supervisor checks for other facilities near work area – failed to see 2R92
- Restricted movement – stay near flag person
- 20 Employees on location
- One track and 3rd rail active
Why?

- Lack of understanding & familiarity with written procedures
- Planning
- Communication
  - Questioning attitude
  - Job briefing
  - Joint discussion of job scope with Operating Authority
Summary of Electric Shock Incident Findings and Discipline

• Supervisor #1 - Termination
  – Failure to test conductors’ dead at the work location
  – The job briefings did not adequately cover energy source controls
  – No permission from the Operating Authority to place grounds
  – Inadequate review of protection
  – GUW was above the energized secondary without proper qualifications.
Summary of Electric Shock Incident Findings and Discipline

- Chief Line Constructor #1 – Final Warning & 3 Week Suspension
  - No permission from the Operating Authority to place grounds
  - GUW was above the energized secondary without proper qualifications.
Summary of Electric Shock Incident Findings and Discipline

• Chief Line Constructor #2 – Final Warning & 2 Week Suspension
  – Failure to test conductors’ dead at the work location
  – No permission from the Operating Authority to place grounds
Summary of Electric Shock Incident Findings and Discipline

• Chief Line Constructor #3 & #4 – Written Warning & 1 Week Suspension
  – Failure to test conductors’ dead at the work location
Summary of Electric Shock Incident Findings and Discipline

• General Utility Worker #1 – Final Warning & 1 Week Suspension
  – Knowingly worked above the energized secondary without proper qualifications

• General Utility Worker #2 – Verbal Warning
  – Noticed unqualified employee working above the energized secondary without proper qualifications