

CALIFORNIA PUBLIC UTILITIES COMMISSION
Consumer Protection and Safety Division
Utilities Safety and Reliability Branch
Incident Investigation Report

Report Date: 11/29/2011

Investigator: Ryan Yamamoto

Incident Number: E 20081115-03

Utility: Southern California Edison (SCE)

Date and Time of the Incident: 11/14/2008, 10:20:00 PM

Location of the Incident: 13000 Sayre Road
Sylmar, CA
County: Los Angeles

Summary of Incident:

On November 14, 2008, a fire referred to as the Sayre Fire started just north of the city of Sylmar. Based on the evidence, I did not find any violations of (General Order) GO 95 by SCE.

Fatality / Injury: There were no major injuries or fatalities.

Property Damage: \$13,490,957

Utility Facilities involved: Veterans, 16 kV Circuit

Witnesses:

Name	Title	Phone Number
Paul Pimentel	SCE Senior Claims Investigator	626-302-6988
Aurelia A. Baker	SCE Claims Investigator	626-302-6972
JoAnne Baldwin	U.S. Forest Service Special Agent	818-601-0441
Mark J. Felling	Felling Engineering, Inc.	303-988-6000
Marion Mathews	U.S. Forest Service Special Agent	559-304-3705
Robert Ramos	SCE Claims Investigation Manager	626-302-3136

Evidence:

<u>Source</u>	<u>Description</u>
SCE	Initial report
CPUC	Field investigation on 11/15/08
CPUC	Field investigation on 11/20/08
SCE	Data request response dated 1/7/09
SCE	Data request response dated 6/5/09
SCE	Data request response dated 6/24/09
CPUC	Meetings with USFS on 6/24/09, 7/23/09
USFS	Emails dated: 6/25/09 7/22/09, 7/27/09, 8/19/09
SCE	Data request response dated 7/30/10
SCE	Data request response dated 8/5/09
SCE	Data request response dated 9/9/09
SCE	Data request response dated 10/7/10

Observations and Findings:

On November 14, 2008, SCE's 16 kV Veterans circuit, out of the San Fernando Substation, faulted. The circuit first opened at 2121 hours and reclosed two seconds later, opened a second time at 2229 hours, and was manually reclosed by the substation operator at 2232 hours (as required by SCE procedures). Special Agent JoAnne Baldwin, of the U.S. Forest Service, stated that a witness saw the fire starting around 2232 hours and took photos. The fire was later named the Sayre Fire, which burned 11,262 acres, destroyed 487 residential structures, one commercial building and 142 outbuildings. Four minor injuries were reported.

On November 15, 2008, I met with Paul Pimentel of SCE and representatives from the Los Angeles County Fire Department at the site of the fire and discovered numerous conductors on the ground and damaged poles (See Photos 1 and 2 titled *Burn Area* and *Damaged Cross-arm*, respectively). I took photos of area that was accessible and cleared by the Fire Department.

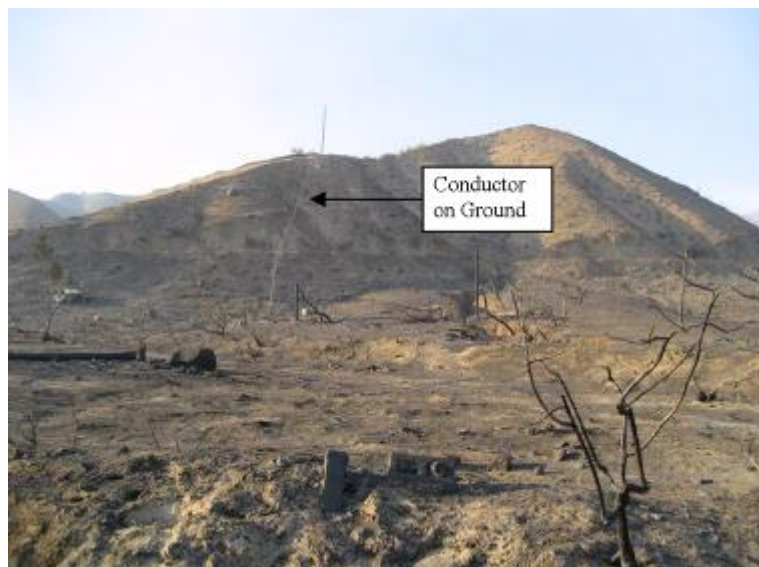


Photo 1
Burn Area



Photo 2
Damaged Cross-arm

On November 20, 2008, I met with the U.S. Forest Service, Mark J. Felling (U.S. Forest Service Consultant), staff from the Los Angeles County Fire Department Arson Unit, and SCE staff at the fire location. I took photos, observed numerous destroyed and damaged SCE facilities (See Photo 3, titled *Damaged SCE Facilities*) and a line of metal fragments (See Photos 4 and 5 titled *Line of Metal Fragments #1 and #2*, respectively), believed to be aluminum, on the ground from the north phase conductor of the Veterans Circuit. This was the only conductor of three fallen conductors for this circuit within the subject span between poles 1154864E and 1154863E that sustained damage (See Photo 6, titled *Subject Conductors*). The conductor melted as a result of the heat and/or fire. The center and south phase conductors were attached with tie wire on post-type insulators. The north phase conductor was attached by a clamp-type insulator. The Los Angeles Arson Unit staff stated to me that they believe SCE's overhead facilities are located where the fire originated.



Photo 3
Damaged SCE Facilities

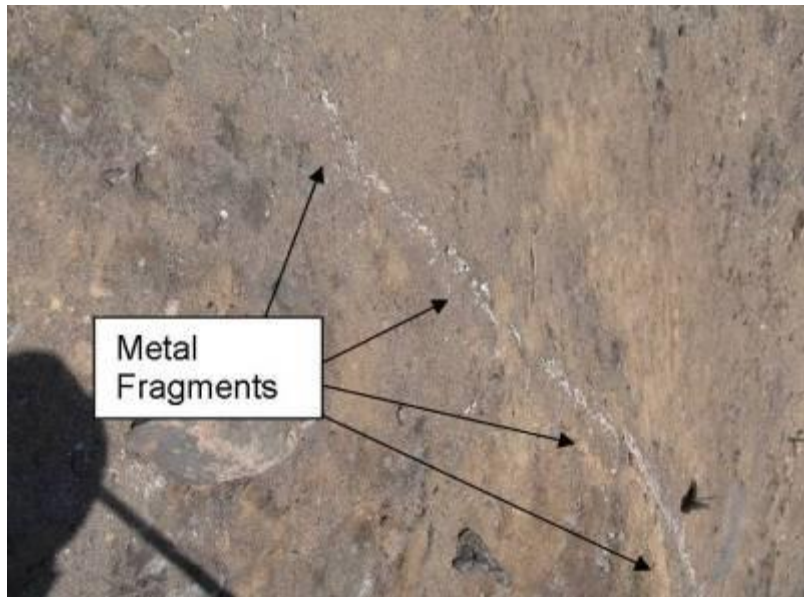


Photo 4
Line of Metal Fragments #1

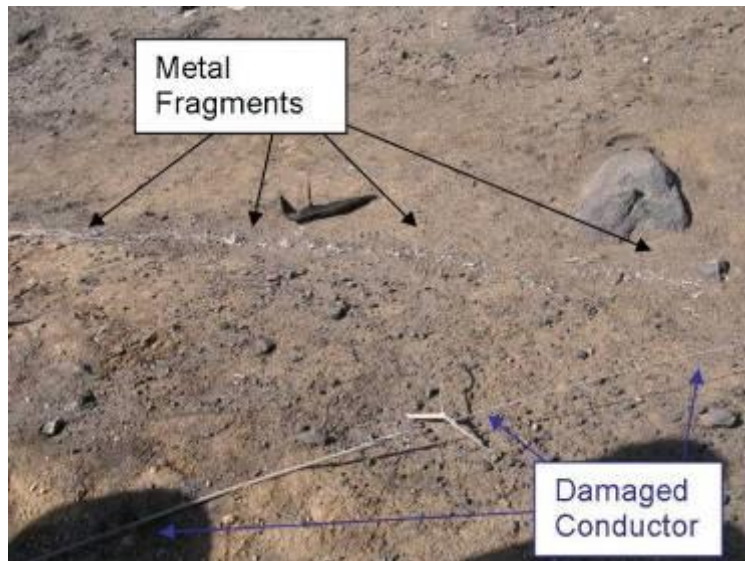


Photo 5
Line of Metal Fragments #2



Photo 6
Subject Conductors

Weather Station Camp 9 (CNIC1) on top of a hill at an elevation of approximately 4000 feet and approximately 1.5 miles northeast of the incident site, recorded wind speeds 19-23 mph with gust up to 61 mph around the time of the start of the fire. Weather Station CW5015 Sylmar (C5015) in a residential area at an elevation of approximately 1650 feet and approximately one mile southwest of the incident site, recorded wind speeds 9-13 mph with gust up to 32 mph around the time of the start of the fire. See Figure 1, titled *Weather Station Map* for an overview of the weather station locations relative to the fire location. According to the City of Los Angeles Fire Department, the winds were blowing steadily at approximately 50-60 mph and gusting 70-80 mph. According to the Los Angeles County Fire Department the winds were blowing steadily at 40 mph with gusts up to 70 mph.



Figure 1
Weather Station Map

Initially, SCE did not formally report this incident. However, aside from the “formal” reporting of the incident, CPUC had numerous discussions about the investigation of the subject fire with SCE. Pursuant to CPSD’s request, SCE formally reported this incident, on July 5, 2009, based on the assumption that the damages to SCE facilities would exceed \$50,000.

SCE’s facilities sustained fire damage to several poles and conductors. SCE determined that numerous conductors between pole numbers 1154861E and 4717630E fell to the ground subsequent to the poles burning. The conductors within the subject span of pole numbers 1154864E and 154863E were still attached to the cross-arm at pole number 1154863E after the pole broke and partially burned but one (north phase) of the three conductors was melted. See Figure 2, titled *Pole Line Map* for an overview of facilities near the incident site. SCE is the sole owner of the poles, but at one time General Telephone Company was a joint owner of some of the damaged poles.

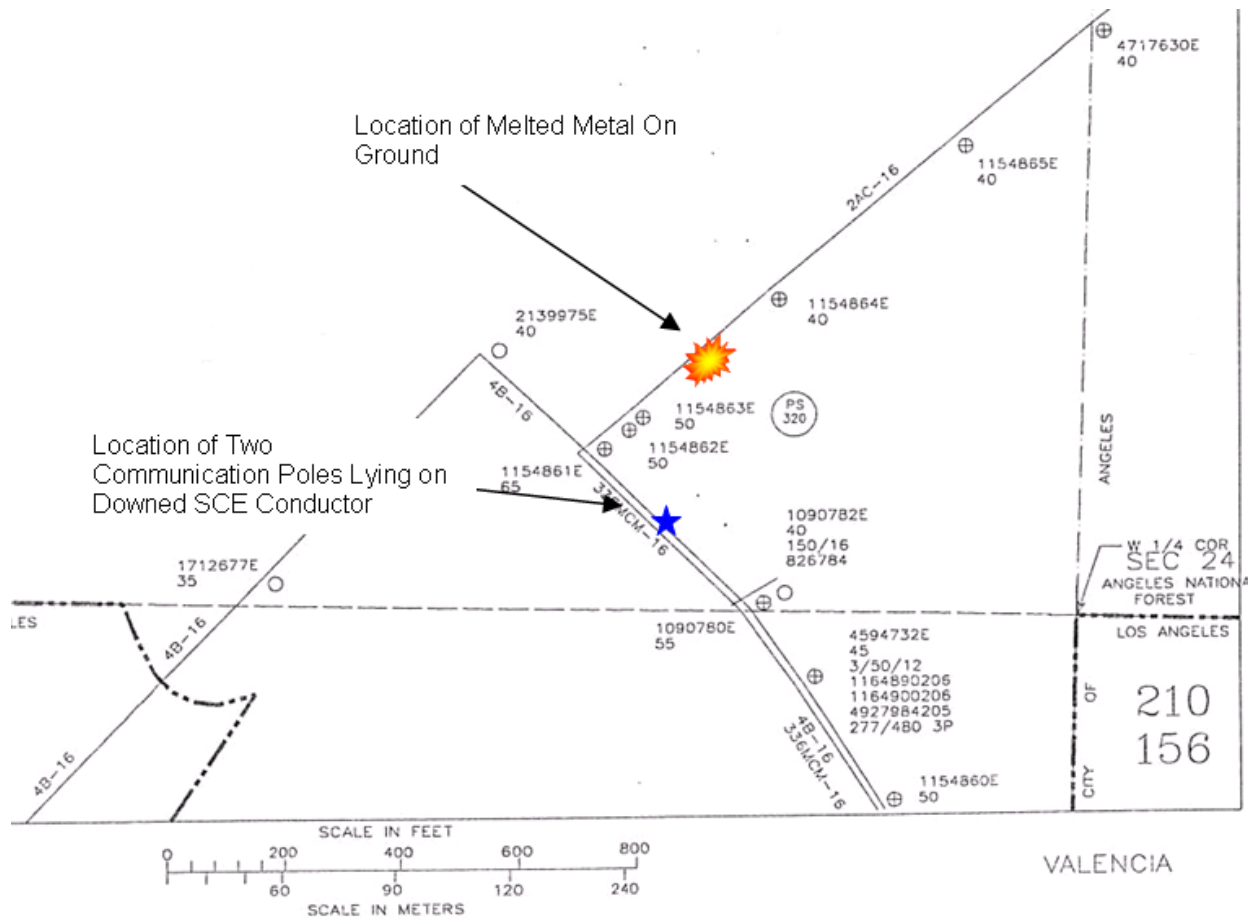


Figure 2
Pole Line Map

The 16 kV circuit registered two fault operations on the date of the incident. The first operation involved an A to B phase fault and the second involved an A-phase (north conductor) to ground fault.

The calculated fault current on the circuit was as follows:

Type of Fault	MVA	Amps	kV	Pole Number
Three-phase	38.9	1299	17.28	1154863
Phase-to-ground	27.5	918	17.28	1154863
Three-phase	38.2	1277	17.28	1154864
Phase-to-ground	27.1	904	17.28	1154864

The poles involved in the incident were installed in 1956. Additionally, in a data response dated June 24, 2009, Aurelia Baker, an SCE investigator stated “[i]t is unknown what the ratings/specification were for the original pole line.”

This report has been delayed due to: 1) CPSD was waiting for the USFS to conduct tests on some equipment to determine what caused the fire and, 2) delayed responses to many CPSD data requests.

Preliminary Statement of Pertinent General Order, Public Utilities Code Requirements, and/or Federal Requirements:

General Order	Rule
General Order 95	Rule 31.1
General Order 95	Rule 49.3
General Order 95	Rule 11

Conclusion:

SCE’s conductors and conductor fastenings were required to have a safety factor of two, which is required to not fail at wind speeds less than 65 mph. This investigation cannot determine conclusively the wind speed at the time of the incident; therefore, I cannot determine if SCE’s facilities meet the required safety factors.