CALIFORNIA PUBLIC UTILITIES COMMISSION
Safety and Enforcement Division
Electric Safety and Reliability Branch

Incident Investigation Report

Report Date: October 10, 2023

Investigator: Richard Le

Incident Number: E20201026-01

Regulated Entity Involved: SCE

Date and Time of Incident: 10/26/20, 06:47 A.M.

Location of Incident: East Santiago Canyon Road
Silverado, CA
County: Orange

Summary of Incident:

On October 26, 2020, the Silverado Fire occurred in the Santiago Canyon area of Orange County. The fire burned approximately 12,466 acres, destroyed five structures, damaged nine structures, and caused two Orange County Fire Authority (OCFA) firefighters to sustain injuries during suppression efforts. SED's investigation found evidence of damage consistent with arcing or scorching on SCE's and T-Mobile's conductors near to where the fire started. The arcing or scorching on the conductors suggests contact, or significantly reduced clearances, between them. Furthermore, the evidence indicates that SCE and T-Mobile conductors were not installed in accordance with GO 95 clearance requirements.

Fatality / Injury: Two injuries to firefighters

Property Damage:
Approximately $750,000 in damages to SCE,[1] $22,846.80 in replacement work to T-Mobile,[2] $63,439 in replacement work to AT&T,[3] $36,501 in replacement work to Verizon,[4] and $3,088 in replacement work to Cox.[5]

Regulated Entity Facilities Involved: Taiwan, 12 kV Circuit

Violation(s): Yes

[1] SCE Response to Data Request SED-SCE-001, question 5 (SCE-SEDSIL00001084).
[2] T-Mobile's response to request SED-TMobile-001.
[3] AT&T's response to request 4 of SED-ATT-001.
[4] Verizon's response to request 4 of SED-VERIZON-001.
[5] Cox's response to request 4 of SED-COX-001.

I. Summary

On October 26, 2020, the Silverado Fire burned approximately 12,466 acres in the Silverado and Santiago Canyon area of Orange County. The fire destroyed five structures, damaged nine structures, and caused two OCFA firefighters to sustain injuries during suppression efforts. The fire was completely extinguished on November 7, 2020.

A. Rules Violated

Cox Communication	GO 95, Rule 31.2	For failing to follow its own policy in conducting annual inspections for its facilities in an High Fire Threat District (HFTD)
Cox Communication	GO 95, Rule 80.1	For failing to conduct detailed and patrol inspections of the 1419541E and 1419546E (Subject Poles) in the last five years before the incident.
SCE	GO 95, Rule 38	For failing to maintain the minimum vertical separation between its **southmost** conductor and T-Mobile's conductor
SCE	GO 95, Rule 38	For failing to maintain the minimum vertical separation between its **middle** conductor and T-Mobile's conductor
SCE	GO 95, Rule 31.1	For failing to install its **southmost** conductor and T-Mobile's facilities properly to allow them to maintain the GO 95 required clearance during local conditions known at the time of transfer.
SCE	GO 95, Rule 31.1	For failing to install its **middle** conductor and T-Mobile's facilities properly to allow them to maintain the GO 95 required clearance during local conditions known at the time of transfer

B. Witnesses

Name	***Title***	***Phone***
1. Richard Le	CPUC Utilities Engineer	(213) 999-9053
2. Derek Fong	CPUC Senior Engineer	(213) 924-4368
3. Bryan Pena	CPUC Senior Engineer	(626) 234-6781
4. Joan Weber	CPUC Senior Engineer	
5. Tracy McClelland	OCFA Battalion Chief	
6. Oliver Gillespie	OCFA Investigator	
7. Shaun Miller	OCFA Investigator	
8. Justin Russell	OCFA Investigator	
9. Don Ford	OCFA Investigator	
10. Jace Chapin	Cal Fire Battalion Chief	
11. Jason Fairfax	Cal Fire Investigator	
12. Paul Pimentel	SCE Senior Manager	(626) 695-4705
13. Jose Moran	SCE Senior Advisor	(626) 632-7095

C. Evidence

Source	*Description*
1.SCE	Initial Report
2.SCE	Final Report
3.SCE	Responses to SED Data Requests 1 through 7
4.T-Mobile	Data Requests 1 through 5
5.Cox	Data Requests 1 through 4
6.AT&T	Data Requests 1 through 3
7.Verizon	Data Requests 1 through 3
8.CPUC	Site Visit Pictures
9.OCFA	Canyon Line Pictures and Observations
10. OCFA/CAL FIRE	Kerrigan Documents
11. OCFA	20CAORC121364 Investigation Report
12. OCFA	20-121364 Supplemental Report #08
13. OCFA	20-121364 Supplemental Report #11

II. Background

On October 26, 2020, at approximately 6:47 a.m., the Silverado Fire ignited during Santa Ana wind conditions in Silverado, an unincorporated area in Orange County. At approximately 7:00 a.m., SCE Troubleman [redacted] observed fire personnel in the area while conducting a Public Safety Power Shutoff (PSPS) patrol of the nearby Atento 12 kV circuit. SCE reported that the fire personnel at the scene asked [redacted] if the Taiwan 12 kV circuit was de-energized, but did not advise him that SCE facilities were potentially involved in the ignition of the fire.[6]

At 7:23 a.m., SCE initiated a PSPS beyond protective device Remote-Controlled Automatic Recloser (RAR) RAR 0950, which included SCE's primary conductors on poles numbered 1419541E and 1419546E (Subject Poles).

More than 18 months before the incident on March 30, 2019, as a part of routine pole replacement work, SCE replaced the Subject Poles. Par Electrical Contractors (Par Electrical), an SCE contractor, set two new poles and transferred to the new poles SCE's three primary conductors and all five communication conductors.[7] SCE admitted that it does not document the dates of conductor installations.[8]

Neither SCE, nor any of the five communications companies, has records of performing any work on its respective facilities related to the Subject Poles between March 30, 2019 and October 26, 2020.[9]

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[6] SCE's response to request 14 of SED-SCE-006 (SCE-SEDSIL00005997).
[7] SCE's response to requests 22 and 26 of SED-SCE-001 (SCE-SEDSIL00001254 and SCE-SEDSIL00001276).
[8] SCE's response to request 10 of SED-SCE-001 (SCE-SEDSIL00000066).
[9] AT&T's, Verizon's, and Cox's responses to requests 24 to 27 of SED-ATT-01, SED-Verizon-001, and SCE-Cox-001 respectively; SCE's responses to requests 33 to 35 of SED-SCE-001; T-Mobile's responses to requests 22 and 23 or SED-TMobile-002.

III. SED Review and Analysis

On October 26, 2020, SED staff arrived at the incident site and observed three SCE primary conductors and five communication conductors installed between the Subject Poles. The Subject Poles are located in a Tier 3 High Fire Threat District (HFTD). The T-Mobile conductor, the uppermost communication conductor, had broken lashing wire in various locations with parts of the lashing wire hanging down. None of the eight conductors between the Subject Poles fell on the ground.

The closest SCE weather station, SCE Santiago Canyon or SE096, was located approximately 0.75 miles away from the Incident Location. The second closest weather station, SCE Silverado Canyon or SE148, was located approximately 1.00 mile away from the Incident Location. SCE records indicate that at 6:40 a.m. on October 26, 2020, SE096 recorded a wind speed of 9.57 miles per hour (mph) and a wind gust of 27.91 mph, while SE148 recorded a wind speed of 12.77 mph and a wind gust of 34.2 mph. At 6:50 a.m. on October 26, 2020, SE096 recorded a wind speed of 11.89 mph and a wind gust of 30.4 mph, while SE148 recorded a wind speed of 13.99 mph and a wind gust of 29.67 mph.[10]

Additionally, when asked about the wind speed and gust metrics used for the PSPS on the Taiwan circuit, SCE provided weather station data from SE081, located approximately 4 miles away. It recorded the following wind speeds and gusts for the following times:[11]

Time	Wind Speed (mph)	Wind Gust (mph)
5:40 a.m.	24.59	38.58
6:30 a.m.	30.02	50.85
6:40 a.m.	31.72	48.74
6:50 a.m.	31.76	53.34
7:00 a.m.	29.49	54.36
7:30 a.m.	31.31	46.4

The span between the Subject Poles consisted of the following facilities, from top to bottom as shown in the photograph below (Figure 1):

- Three SCE 12 kV primary conductors.
- One T-Mobile communication conductor with associated messenger cable and lashing wire.
- One AT&T Mobility communication conductor with associated messenger cable and lashing wire.
- One Verizon communication conductor with associated messenger cable and lashing wire.
- One Cox communication conductor with associated messenger cable and lashing wire.
- One AT&T California communication conductor with associated messenger cable and lashing wire.

[10] SCE's response to request 52 of SED-SCE-001 (SCE-SEDSIL00000050).
[11] SCE's response to request 15 of SED-SCE-004 (SCE-SEDSIL00005749 and SCE-SEDSIL00005747).

Figure 1: The incident span between the Subject Poles

SED staff were onsite on the below dates and observed the utilities remove the below facilities for OCFA seizure that same day:

October 31, 2020	SCE	Three primary 12 kV conductors between the subject poles, One spacer between phase B (southmost primary conductor) and phase C conductor (middle primary conductor) Six insulators (three on each pole) Two bird guards SCE replaced all facilities except for the spacer on the same day.[12]
November 3, 2020	T-Mobile	Facilities including clamps.[13]
November 5, 2020	Verizon	Facilities including clamps.[14]
November 6, 2020	Cox	Facilities including clamps.[15]
November 11, 2020	AT&T	Facilities including clamps.[16]

[12] SCE response to SED-SCE-001, request 36 (SCE-SEDSIL00000038).
[13] T-Mobile's response to request 3 of SED-TMobile-005.
[14] Verizon's response to request 6 of SED-VERIZON-001.
[15] Cox's response to request 6 of SED-COX-001.
[16] AT&T's response to request 6 of SED-ATT-001.

A. Examination of SCE Conductors

On October 31, 2020, SED staff examined SCE's conductors at the Incident Location after removal from the Subject Poles. SED observed damage and discoloration in multiple locations to the middle and southmost primary conductors (closest to the street). OCFA provided a measurement table (Figure 2) showing points of interest (i.e., damage) along SCE's conductors.

SCE's primary conductors between the Subject Poles are protected by a relay protection[17] out of the Modena substation, where the conductors originate, and a 0950 located on pole No. 4812960E (Figure 9). However, no protective devices operated on SCE's Taiwan 12 kV circuit on October 26, 2020, prior to the PSPS at 7:23 a.m.[18]

Southern California Edison "Road" line (red)		
Evidence Marker	**Approximate distance from West end**	**Description**
A	81' 5"	Physical damage
B	169' 3"	Physical damage
C	196' 4"	Physical damage
D	200' 4"	Physical damage
"Field" line (blue)		
No points of interest identified		
"Center" line (white)		
No points of interest identified		

Figure 2: Table showing OCFA's measurements

At approximately 169 feet from the west end originating from Subject Pole 1419541E, there was evidence of damage and discoloration on SCE's southmost conductor (Figure 3). Similar damage was also visible on SCE's southmost conductor at approximately 196 feet (Figures 4 and 5) and at 154 feet on SCE's middle conductor (Figure 6).

Figure 3: Damage at 169 feet on SCE's southmost conductor

[17] Model DPU-2000R.
[18] SCE's response to SED-SCE-001, requests 12, 13, and 17 of (SCE-SEDSIL00000068, SCE-SEDSIL00000920, and SCE-SEDSIL00000034).

Figure 4: Damage at 196 feet on SCE's southmost conductor

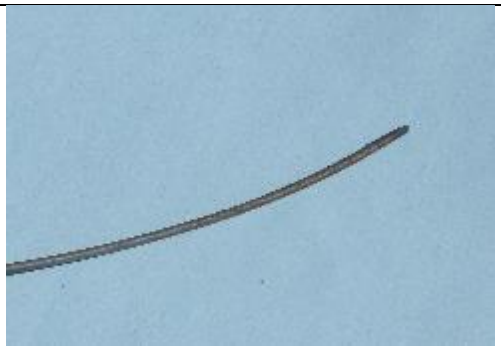
Figure 5: Damage at 196 feet on SCE's southmost conductor

Figure 6: Damage at 154 feet along SCE's middle conductor

B. T-Mobile Conductor Lashing Wires

T-Mobile's conductor had four sections of damaged lashing wire. Two lashing wires separated, each into two dangling wires, for a total of four dangling lashing wires at four separate locations along the conductor. OCFA taped each of the dangling lashing wires with a colored tape to secure and identify the lashing wire and the conductor from which it originally dropped. Additionally, a third section of the lashing wire parted at mid-span, but remained nearly in position and did not drop down. All four dangling section ends of the damaged lashing wire exhibited evidence of discoloration and damage (Figure L4). The third section of the lashing wire that parted away did not dangle also showed signs of discoloration and damage on the ends of the wire and on the nearby messenger cable. This occurred approximately 180 feet from the west end of the conductor where other damage is visible (Figure 7).

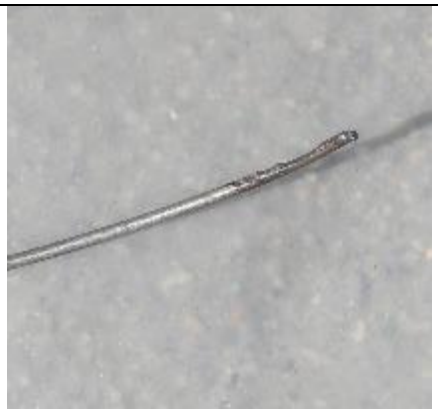
Figure L4: Four T-Mobile lashing wire ends



The westmost (closest to Subject Pole 1419541E) lashing wire end (OCFA white tape)

The second westmost lashing wire end (OCFA green tape)

The third westmost or second eastmost lashing wire end (OCFA red tape)



The eastmost lashing wire end (OCFA orange tape)

Figure 7: Additional damage near where the third lashing wire parted

OCFA provided a measurement table showing points of interest along the T-Mobile conductor. The table identifies the location of each dangling lashing wire with the corresponding tape color, and provides the approximate length of each dangling lashing wire. (See Figure 8)

There is no evidence to determine whether T-Mobile's lashing wires were damaged or parted away prior to the incident or prior to contacting SCE's conductors. Lashing wires usually break if not installed properly, if not maintained properly, or when contacting energized conductors. SCE is the entity that transferred T-Mobile's facilities to the new pole. T-Mobile provided SED with evidence indicating that SCE installed T-Mobile's facilities improperly at the time of SCE's pole replacement work. T-Mobile informed SED that it "discovered a systemic issue in Sothern California Edison's pole replacement practices in the Silverado Canyon." T-Mobile reviewed Google street images of its facilities after the transfer and concluded that nine of the poles replaced during the pole replacement work included "significant nonconformances." The nonconformances identified by T-Mobile consisted of "[l]ashing wire unwinding and not under tension through proper termination at the lashing wire clamp," "[c]able leads secured by what it appeared black electrical tape," a cable "not re-lashed," and a cable "not properly spaced and lowered post transfer creating clearance issues." One of the nonconforming poles that T-Mobile identified was Subject Pole 1419541E.[19]

Nevertheless, as discussed in the next section, the measurement that SCE provided SED indicated that the clearance between T-Mobile conductors and SCE conductors after the transfer did not meet GO 95 clearance requirement.

[19] T-Mobile presentation to CPUC (SED) dated September 24, 2021.

T-Mobile/Sprint Telecommunication Line #1		
Evidence Marker	Approximate distance from West end	Description
A	81' 4"	Dropdown lashing (white tape) (Lashing length – 22'0")
B	115' 5"	Physical damage
C	145' 1"	Dropdown lashing (green tape) (Lashing length – 4' 5")
D	150' 3"	Physical damage
E	179' 6"	Dropdown lashing (red tape) (Lashing length – 2' 1")
F	180' 5"	Physical damage
G	180' 7"	Physical damage
H	200' 6"	Physical damage
I	202' 0"	Physical damage
J	209' 10"	Physical damage
K	217' 1"	Physical damage
L	225' 4"	Dropdown lashing (orange tape) (Lashing length – 11' 2")
M	250' 9"	"knuckle"

Figure 8: Table showing T-Mobile conductor damage locations identified by OCFA

OCFA concluded that "the cause of the fire was an unspecified electrical event between the Subject Poles. . .Video from inside the parked bus depicts a flash of light on the north side of the road and [a] shower of sparks landing in the SOA, subsequently establishing the fire. . .The event that brought the two together was the energized conductor and the telecommunication tenant line making contact."[20]

[20] 20CAORC121364 Investigation Report pages 36 and 37.

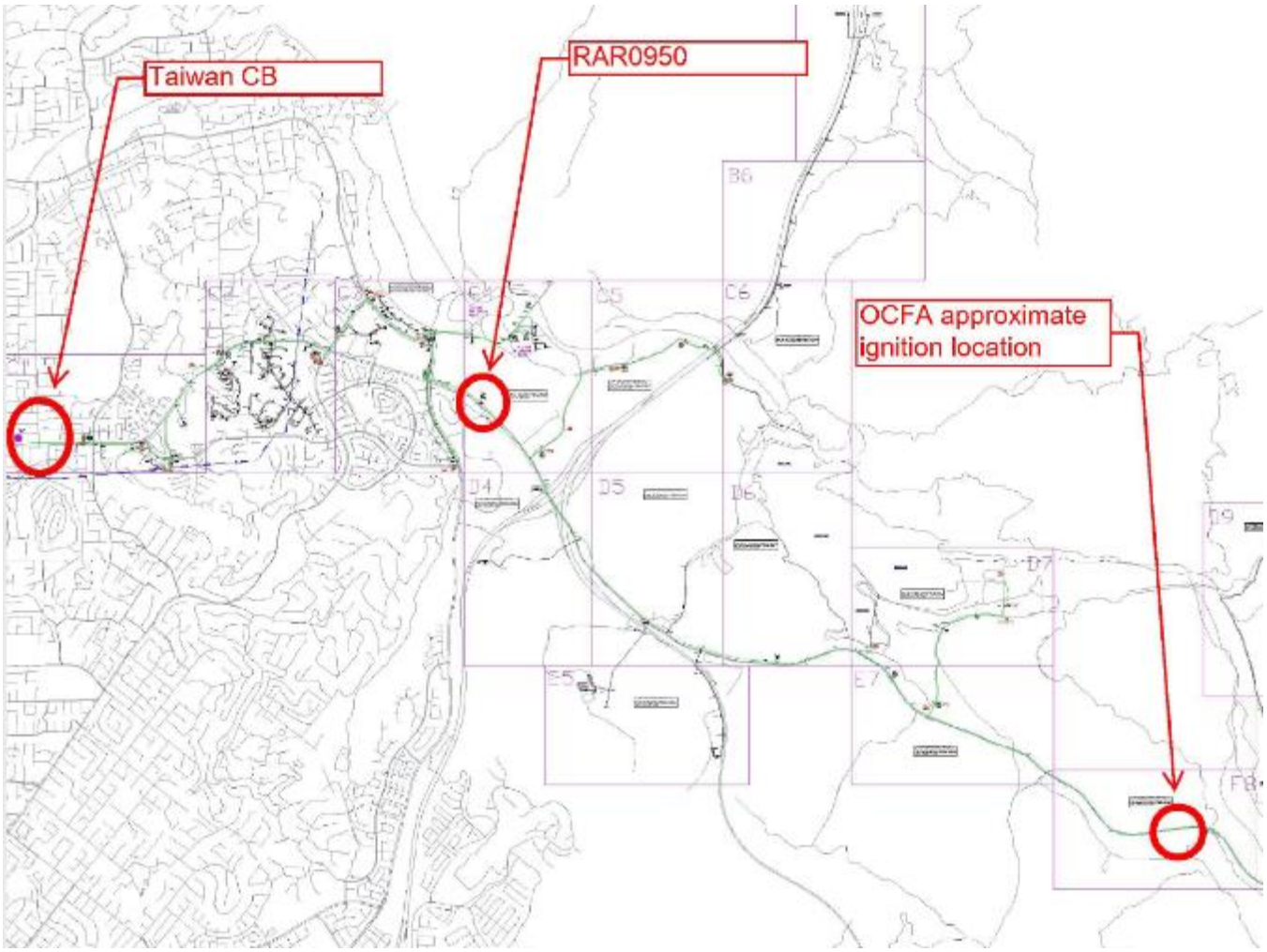


Figure 9: Map showing the approximate locations of the protective devices and Silverado Fire ignition site (SCE)

C. SCE and T-Mobile Conductor Clearance

On April 13, 2021, SED requested that SCE provide specific measurements of the facilities on the Subject Poles as positioned immediately after the ignition of the Silverado Fire.

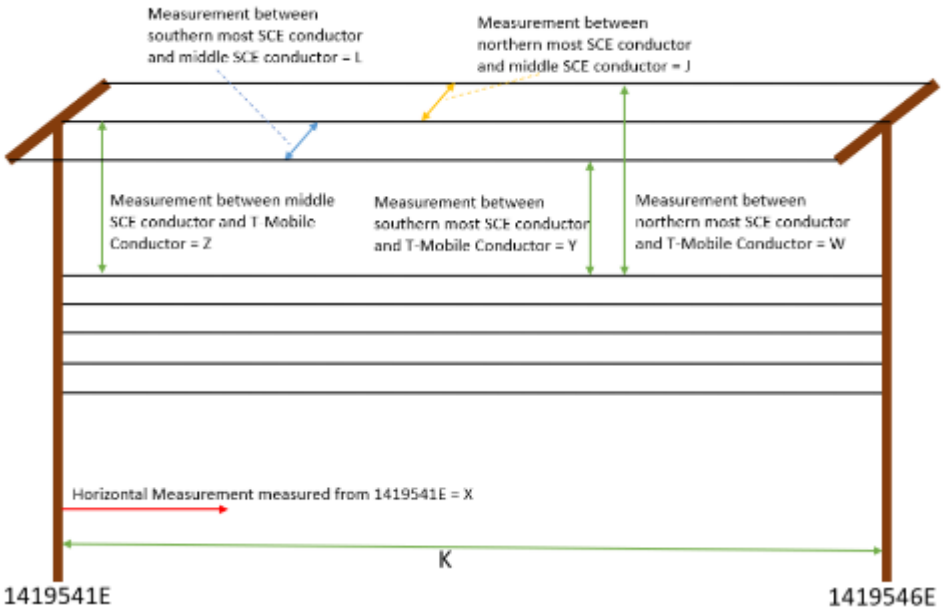


Figure 10: Diagram SED provided to obtain measurements from SCE

The LIDAR measurements provided by SCE indicated that the clearance between SCE's middle conductor, at its closest vertical separation, and T-Mobile's conductor was **66 inches (**5.5 feet). At the closest point, SCE's southmost conductor and T-Mobile's conductor had a vertical clearance of **57.6 inches** (4.8 feet).[21]

GO 95 requires a minimum clearance of 72 inches between 12 kV conductors and communication conductors, this clearance is based on temperature of 60° F and no wind. However, GO 95, Rule 38 does not allow a clearance reduction by more than five percent in a Tier 3 HFTD because of temperature and loading. A five percent reduction in the required minimum vertical clearance would be equal to a separation of **68.4 inches** (5.7 feet).

D. History of Patrol and Detailed Inspections Before the Incident

GO 95, Rule 80.1-A3, defines a detailed inspection for a communication company as "*a careful visual inspection of Communication facilities and structures using inspection tools such as binoculars and measuring devices, as appropriate. Detailed inspections may be carried out in the course of other company business.*"

[21] SCE's response to SED-SCE-003 (SCE-SEDSIL00005670) and request 16 of SED-SCE-006 (SCE-SEDSIL00006000).

GO 95, Rule 80.1-A3, defines a patrol inspection for a communication company as "*a simple visual inspection, of applicable communications facilities equipment and structures that is designed to identify obvious structural problems and hazards. Patrol inspections may be carried out in the course of other company business.*"

Based on each company's records, SCE, AT&T, Verizon, Cox, and T-Mobile (previously Sprint) inspected the Subject Poles prior to the incident as follows:

- SCE last conducted a detailed inspection of Subject Pole 1419541E on October 17, 2020, and of Subject Pole 1419546E on February 1, 2020, with no findings.

- AT&T last conducted a detailed inspection of the Subject Poles in August 2017, prior to the pole replacement in 2019. AT&T's last patrol inspection of the Subject Poles then occurred July 2020, after the pole replacement.

- Verizon last conducted a detailed inspection of the Subject Poles on September 9, 2020. The third-party notifications for Subject Pole 1419541E were for missing fiber tag and missing down-guy insulator for both "TV" and AT&T, and a low span for T-Mobile. The notifications for Subject Pole 1419546E were for missing fiber tag and missing down-guy insulator for T-Mobile, an unsupported splice case/snowshoe and missing down-guy insulator for AT&T, and an unsupported splice case/snowshoe and missing down-guy insulator and low span going west for Verizon.

- Cox did not conduct any inspections on the Subject Poles since 2013.[22]

- Prior to the merger of Sprint and T-Mobile in April 2020, Sprint owned what is currently the T-Mobile conductor between the Subject Poles. Sprint completed visual patrol inspections in 2017, 2018, and 2019. T-Mobile conducted a visual patrol inspection in 2020. Sprint conducted the last detailed inspection of the conductor in 2016 prior to the pole replacement work. The next detailed inspection was not due until 2021.

Cox stated that a database query error caused it to miss annual detailed inspections on 77 miles of its aerial and underground facilities in Tier 2 and 3 HFTDs. This amounts to approximately 0.81% of Cox's facilities in HFTDs, which included the Subject Poles. Cox's policy at the time of the incident was to perform detailed inspections annually on all facilities located in Tier 3 HFTDs, including along Santiago Canyon Road. Cox notified the California Public Utilities Commission (Commission) of the database query error issue in a November 6, 2020 letter to then Commission President Batjer.[23]

E. Requirements for Notice to Joint Pole Users of Work on Poles

When it conducted the pole transfer work in 2019, SCE transferred facilities on poles that the utility shared with communication tenants. The Southern California Joint Pole Committee (SCJPC) Handbook required SCE to send "Form 2," which is a form indicating intent of pole replacement work and

[22] Cox's response to request 20 of SED-Cox-001.
[23] See Attachment 1 to Cox's response to SED-COX-003.

opportunity to approve or disapprove SCE's facilities transfer, to all SCJPC members with facilities on the Subject Poles.

On Form 2, SCE included cost code 83A for the Subject Poles as part of the work to be completed, indicating SCE's intent to conduct a transfer of all five communication conductors.[24]

Four of the communication companies with attached facilities were members of the SCJPC: T-Mobile (Sprint), AT&T California, AT&T Mobility, and Verizon. SCE prepared Form 2 on February 12, 2018, and sent it to all four SCJPC member companies on June 8, 2018. T-Mobile (Sprint), AT&T California, AT&T Mobility, and Verizon provided approvals in response to SCE's Form 2. None of the communication companies sent SCE a disapproval of work prior to SCE performing the pole transfer work.[25] Because Cox is not an SCJPC member, SCE stated that it would have sent a Tenant Notification Form to Cox in accordance with Cox's Tenant Agreement. However, SCE has not located any records regarding notice to Cox.[26]

While Form 2 signals a utility's intent to conduct work and memorializes agreement from other pole users, the form does not communicate any estimated dates of completion. SCE sent Form 2 in 2018, but work did not commence work until 2019. In accordance with the SCJPC Handbook, SCE was required to notify all pole users that work was completed within 30 days of completion.[27] However, SCE did not notify the communication companies of the pole transfer completion date until March 12, 2021.[28]

IV. Applicable Rules

1. **General Order (GO) 95, Rule 38, Minimum Clearances of Wires from Other Wires, Table 2, Case 8, Column F** requires the vertical separation between a 12 kV conductor and a communication conductor, on separate crossarms or other supports at different levels (excepting on related line and buck arms), on the same pole, and in adjoining midspans to be not less than 72 inches.

2. **GO 95, Rule 38, Minimum Clearances of Wires from Other Wires** states in part:

   > *The clearances in Table 2 shall in no case be reduced more than 10 percent, except mid-span in Tier 3 of the High Fire-Threat District where they shall be reduced by no more than 5 percent, because of temperature and loading as specified in Rule 43.*

[24] SCE's response to request 5 of SED-SCE-004 (SCE-SEDSIL00005871) and T-Mobile's response to request 10 of SED-TMobile-003.
[25] SCE's response to request 4 of SED-SCE-005 (SCE-SEDSIL00005926).
[26] SCE's responses to request 2 of SED-SCE-006 (SCE-SEDSIL00005940), request 5 of SED-SCE-006 (SCE-SEDSIL00005988) and request 1 of SED-SCE-007 (SCE-SEDSIL00006168).
[27] SCE is required to notify all occupants that work is completed within 30 days. This is referenced in the SCJPC Routine Handbook, section 18.7 (Handbook provided as part of SCE's response to request 5 of SED-SCE-004 (SCE-SEDSIL00005771).
[28] SCE reply to SED data request (SCE-SEDSIL00005934), and SCE's response to request 5 of SED-SCE-005 (SCE-SEDSIL00005929 and SCE-SEDSIL00005936).

3. **GO 95, Rule 31.2, Inspection of Lines** states in part:

> *Lines shall be inspected frequently and thoroughly for the purpose of insuring that they are in good condition so as to conform with these rules. Lines temporarily out of service shall be inspected and maintained in such condition as not to create a hazard.*

4. **GO 95, Rule 31.1, Design, Construction and Maintenance** states in part:

> *Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service.*
>
> *For all particulars not specified in these rules, design, construction, and maintenance should be done in accordance with accepted good practice for the given local conditions known at the time by those responsible for the design, construction, or maintenance of communication or supply lines and equipment.*

5. **GO 95, Rule 80.1, Inspection Requirements for Communication Lines** states in part:

> *Each company shall maintain records for at least ten (10) years that provide the following information for each facility subject to this rule: The location of the facility, the date of each inspection of the facility, the results of each inspection, the personnel who performed each inspection, the date and description of each corrective action, and the personnel who performed each correction action. Commission staff shall be permitted to inspect records consistent with Public Utilities Code Section 314 (a).*

6. **GO 95, Rule 80.1, Inspection Requirements for Communication Lines** requires that, in Tier 3 of the HFTD, the inspection intervals applicable to detailed inspections shall not exceed five years, and the inspection intervals applicable to patrol inspections shall not exceed one year, for communication lines located on joint use poles (See Rule 21.8) that contain supply circuits (See Rule 20.6-D), and communication lines attached to a pole that is within three spans of a joint use pole with supply circuits.

V. SED Findings

Based on the evidence reviewed, SED's investigation determined the following.

SCE violated GO 95, Rule 38, twice as follows:

1. The first violation relates to SCE's southmost conductor between the Subject Poles. At the closest point, SCE's southmost conductor and T-Mobile's conductor had a vertical clearance of 57.6 inches (4.8 feet), which is less than the required minimum vertical clearance of 68.4 inches (5.7 feet) as previously discussed. SCE transferred T-Mobile's facilities without informing T-

Mobile of the actual transfer date. Therefore, SCE should have ensured that its facilities and T-Mobile's facilities complied with the requirements of GO 95 once the transfer was complete.

2. The second violation relates to SCE's middle conductor between the Subject Poles. At the closest point, SCE's middle conductor and T-Mobile's conductor had a vertical clearance of 66 inches (5.5 feet), which is less than the required minimum vertical clearance of 68.4 inches (5.7 feet) as previously discussed. SCE transferred T-Mobile's facilities without informing T-Mobile of the actual transfer date. Therefore, SCE should have ensured that its facilities and T-Mobile's facilities complied with the requirements of GO 95 once the transfer was complete.

SCE is also violated GO 95, Rule 31.1, twice as follows:

1. The first violation is for not installing its 12 kV southmost conductor and T-Mobile's facilities properly during the pole replacement work. When SCE transferred T-Mobile's facilities, SCE should have ensured that clearance between SCE's 12 kV southmost conductor and T-Mobile's facilities between the Subject Poles, would always meet GO 95, Rule 38's requirements. SCE should have ensured that its 12 kV southmost conductor and T-Mobile's facilities would not contact each other or come close to contacting each other. The clearance between SCE's 12 KV southmost conductor and T-Mobile's conductor (which SCE transferred and installed), did not meet the clearance requirement of GO 95, Rule 38. Therefore, SCE violated GO 95, Rule 31.1 for failing to install its 12 kV southmost conductor and T-Mobile's facilities properly to allow them to maintain the required GO 95 clearance during local conditions known at the time of transfer.

2. The second violation is for not installing its 12 kV middle conductor and T-Mobile's facilities properly during the pole replacement work. When SCE transferred T-Mobile's facilities, SCE should have ensured that the clearance between SCE's 12 kV middle conductor and T-Mobile's facilities between the Subject Poles, would always meet the requirement of GO 95, Rule 38. SCE should have ensured that its 12 kV middle conductor and T-Mobile's facilities would not contact each other or come close to contacting each other. The clearance between SCE's 12 kV middle conductor and T-Mobile's conductor (which SCE transferred/installed) did not meet the clearance requirement of GO 95, Rule 38. Therefore, SCE violated GO 95, Rule 31.1 for failing to install its 12 kV middle conductor and T-Mobile's facilities properly to allow them to maintain the required GO 95 clearance during local conditions known at the time of transfer.

T-Mobile did not violate GO 95 as follows:

1. T-Mobile's 2020 patrol inspection occurred after the pole replacement work and before the incident. However, T-Mobile's personnel did not recognize that the clearance between SCE's conductor and T-Mobile's conductor did not meet the clearance requirements of General Order 95, Rule 38. This is likely because it is difficult to determine if the proper clearances are met through a simple visual patrol inspection, especially given the difference between the required 5.7 feet and the measured field condition 4.8 feet is only 0.9 feet. Usually, such clearances are

more properly identified during a thorough, detailed inspection, which T-Mobile last performed in 2016, prior to the pole replacement work in 2019 and before the incident.

Cox violated GO 95, Rules 31.2 and 80.1 as follows:

1. Cox did not conduct inspections of the Subject Poles in the last five years before the incident. Accordingly, Cox violated GO 95, Rule 31.2 for failing to follow its own policy in conducting annual inspections for its facilities in an HFTD for the purpose of ensuring that the facilities are in good condition. Cox is also in violation of GO 95, Rule 80.1 for failing to conduct detailed and patrol inspections of the Subject Poles in the five years prior to the incident.

Based on the evidence examined by SED, SED did not observe any violation of GO 95 by Verizon or AT&T.

VI. Conclusions

In summary, SED's investigation finds the following violations:

A. SCE

Two violations of GO 95 Rule 38, as follows:

1. For failing to maintain a vertical separation of at least 68.4 inches (72 inches with allowable reduction of 5%) between its 12 kV southmost conductor and T-Mobile's facilities, between the Subject Poles, installed on separate crossarms or other supports at different levels (excepting on related line and buck arms) on the same pole and in adjoining midspans.

2. For failing to maintain a vertical separation of at least 68.4 inches (72 inches with allowable reduction of 5%) between its 12 kV middle conductor and T-Mobile's facilities, between the Subject Poles, installed on separate crossarms or other supports at different levels (excepting on related line and buck arms) on the same pole and in adjoining midspans.

Two violations of GO 95, Rule 31.1 as follows:

1. For failing to install its southmost conductor and T-Mobile's facilities between the Subject Poles properly to allow them to maintain the GO 95 required clearance during local conditions known at the time of transfer.

2. For failing to install its middle conductor and T-Mobile's facilities between the Subject Poles properly to allow them to maintain the GO 95 required clearance during local conditions known at the time of transfer.

B. Cox

1. Violation of GO 95, Rule 31.2 for failing to follow its own policy in conducting annual

inspections for its facilities in a HFTD to ensure they are inspected frequently and thoroughly for the purpose of ensuring that they are in good condition.

2. Violations of GO 95, Rule 80.1 for:

    a. Failure to conduct detailed inspections on its communication lines located on joint use poles (the Subject Poles) that contain supply circuits in Tier 3 of the HFTD within the last five years prior to the incident.

    b. Failure to conduct detailed inspections on its communication lines located on joint use poles (the Subject Poles) that contain supply circuits in Tier 3 of the HFTD within the last five years prior to the incident.