OFFICE OF ENERGY INFRASTRUCTURE SAFETY
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Caroline Thomas Jacobs, Director

February 24, 2022 NOV_SCE_ATJ_ 20211209-01

TRANSMITTED VIA ELECTRONIC MAIL

February 24, 2022

Erik Takayesu NOV_SCE_ATJ_ 20211209-01

Vice President Asset Strategy and Planning

Southern California Edison

2244 Walnut Grove

Rosemead, CA 91770

NOTICE OF VIOLATION

Mr. Takayesu,

Pursuant to Government Code § 15475.1, the Office of Energy Infrastructure Safety (Energy Safety) has completed a compliance assessment of Southern California Edison (SCE) and determined the existence of one or more violations. In accordance with Government Code § 15475.2 and the California Code of Regulations, Title 14, Division 17 § 29302(b)(2), noncompliance with an approved wildfire mitigation plan (WMP) or any law, regulation, or guideline within Energy Safety's authority is considered a violation.

Anthony Trujillo, Energy Safety staff, conducted a walking inspection in San Bernardino County on December 9, 2021, and discovered the following violation(s):

1. Violation 1: Per SCE's 2021-Q1 quarterly data report (QDR), covered conductor was installed on poles numbered 687838E, 1403136E, 4558869E, 1763105E, and 1414393E. All these structures reported a covered conductor initiative (2021 WMP initiative number 7.3.3.3.1) with a status of "Complete." However, upon inspection, SCE has not even begun covered conductor installation at any of these locations. Energy Safety considers this data accuracy violation to be in the Moderate risk category.
2. Violation 2: Per SCE's 2021-Q1 QDR, covered conductor was installed on poles numbered 687838E, 1403136E, 4558869E, 1763105E, and 1414393E. Upon inspection, Energy Safety staff found no covered conductor installed at the above-mentioned structures. Given SCE's focus on covered conductor as one of its flagship wildfire mitigation programs and the scope of this mitigation program, Energy Safety is greatly concerned about how much

covered conductor work is completed and how prevalent this issue may be. Energy Safety considers this violation related to incomplete WMP work to be in the Moderate risk category.

3. Violation 3: Per SCE's Distribution Overhead Construction Standards (DOH), section PO 300, page 3 of 9, and Distribution Design Standards (DDS), section DDS-10, page 10-26, installation of a fiberglass guy strain insulator is required for distribution guying applications and repairs in high fire risk areas (HFRAs) and shall be installed in conjunction with covered conductor installation.[1] Poles numbered 4931111E, F16868Y, and 549418E had covered conductor installed but failed to install fiberglass guy strain insulators, in accordance with SCE protocol. Energy Safety considers this a violation for failure of adhering to protocol to be in the Minor risk category.
4. Violation 4: Per SCE's Distribution Design Standards (DDS), section DDS-10, page 10-82, "for the 336 (30/7) ACSR covered conductor, vibration dampers shall be installed on every span in both light loading and heavy loading areas." SCE's Distribution Overhead Construction Standards (DOH), section CC 190, page 1 of 11, indicates vibration dampers are required when installing covered conductor. Pole numbers 4931111E, F16868Y, 549418E, and 4421488E had covered conductor installed but failed to install vibration dampers. Energy Safety considers this violation for failure of adhering to protocol to be in the Minor risk category.
5. Violation 5: Per SCE's Distribution Overhead Construction Standards (DOH), "If conductor is exposed, install bolted wedge connector cover." Pole numbered 4931111E did not have bolted wedge connector cover installed on the center phase. Energy Safety considers this a violation for failure of adhering to protocol and in the Minor risk category.
6. Violation 6: Per SCE's Distribution Overhead Construction Standards (DOH), Section CC 150.4, "All overhead equipment shall utilize appropriate wildlife covers."[2] Pole numbered 4931111E had a wildlife fuse cover improperly installed. Energy Safety considers this violation for failure of adhering to protocol to be in the Minor risk category.
7. Violation 7: Per SCE's Distribution Overhead Construction Standards (DOH), section CC 150, jumpers that are connected to covered conductor must be covered. Energy Safety found that pole numbered 4931111E had a jumper connected to covered conductor that was bare before entering a bolted wedge connector cover. Energy Safety considers this violation for failure of adhering to protocol to be in the Minor risk category.
8. Violation 8: Per SCE's Distribution Overhead Construction Standards (DOH), section GR 200.5, "Vice-top insulators with nylon inserts shall only be used in covered conductor systems."[3] Poles numbered 549418E and 4421488E did not have vice-top insulators with

[1] Energy Safety DR-030
[2] SCE's Distribution Overhead Construction Standards (DOH), Section CC 150.4
[3] SCE's Distribution Overhead Construction Standards (DOH), section GR 200.5

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nylon inserts where there was covered conductor. Energy Safety considers this violation for failure of adhering to protocol to be in the Minor risk category.

9. Violation 9: Per SCE's 2021-Q1 quarterly data report (QDR), covered conductor was not installed at pole numbered F16868Y. Structures adjacent were reported under the covered conductor initiative (2021 WMP initiative number 7.3.3.3.1) with a status of "complete." However, upon inspection, it was found that covered conductor was installed at this pole. Energy Safety considers this data accuracy violation to be in the Minor risk category.

In accordance with the Energy Safety Compliance Process, outlined in Table 1 below are the correction timelines for identified violations relative to their risk category. Within 30 days from the issuance date of this notice of violation (NOV), March 28, 2022, advise Energy Safety of corrective actions taken or planned by SCE to remedy the above identified violation(s) and prevent recurrence. This response shall be filed in the Energy Safety e-Filing system under the 2021-NOV docket and the associated file name(s) must begin with the NOV identification number provided above.

Table 1 Energy Safety Violation Correction Timeline by Risk Category

Risk Category	Violation and defect correction timeline
Severe	• Immediate resolution
Moderate	• 2 months (in HFTD Tier 3) • 6 months (in HFTD Tier 2) • 6 months (if relevant to worker safety; not in HFTD Tier 3)
Minor	• 12 months or resolution scheduled in WMP update

Pursuant to Government Code § 15475.4(b), this NOV is served electronically, and SCE may request a hearing to take public comment or present additional information. Per statute, the deadline to request a hearing is within 30 days from the issuance date of this NOV – March 28, 2022. If a petition for hearing is not received by the deadline, then the determination and conditions set forth in this NOV become final.

Pursuant to Public Utilities Code § 8389(g), following receipt of SCE's response to this NOV and resolution of any disputes, this matter may be referred to the California Public Utilities Commission (CPUC) for its consideration of potential enforcement action, as the CPUC deems appropriate.

February 24, 2022 NOV_SCE_ATJ_ 20211209-01

Sincerely,

Koko Tomassian
Compliance Program Manager
Compliance Assurance Division
Office of Energy Infrastructure Safety

Cc:
Gary Chen, SCE
Elizabeth Leano, SCE
Diana Gallegos, SCE
Melissa Semcer, Energy Safety
Edward Chavez, Energy Safety
Anthony Trujillo, Energy Safety

Energy Safety Inspection Report

CALIFORNIA
OFFICE OF ENERGY
INFRASTRUCTURE
SAFETY

Table of Contents

Report Name: ATJ_SCE_20211209-01
Date(s): December 9, 2021
Inspector: Anthony Trujillo
Utility: Southern California Edison
Attention: Erik Takayesu, Vice President Assets Strategy and Planning

I. BACKGROUND

While wildfires are a natural part of California's ecosystem, the “fire season” in California and throughout the West is beginning and finishing earlier and later each year. Climate change and drought are believed to be a major contributor to this unsettling pattern. Utility-ignited wildfires are also a significant contributor to the wildfire risk in the Golden State, as this ignition cause category represents a disproportionate amount of the largest and most destructive fires in state history. Consequently, the Office of Energy Infrastructure Safety (Energy Safety) was established per the California Energy Infrastructure Safety Act (Government Code Sections 15470 – 15476) with the primary purpose of ensuring electrical corporations are reducing wildfire risk and complying with energy infrastructure safety measures. One such method for Energy Safety meeting its objective is to conduct detailed visual inspections of electrical infrastructure.

Inspections are carried out by Energy Safety’s Compliance Division on a regular basis to verify the work performed by utilities, as reported in approved wildfire mitigation plans (WMPs) or subsequent filings and assess general conditions of electrical infrastructure that may adversely impact an electrical corporation’s wildfire risk. Accordingly, Energy Safety inspections are distinguished into two lines of effort. Inspections related to an electrical corporation’s execution of its WMP initiatives is referred to as “WMP Initiative Inspections,” findings of which are detailed in Table 2. Issues discovered during these inspections are categorized as violations and are accompanied by a notice of violation (NOV). In addition to assessing compliance with WMP initiatives, Energy Safety inspectors also visually assess the electrical infrastructure and surrounding vegetation to determine whether conditions are present which increase an electrical corporation’s ignition and wildfire risk. These inspections are referred to as “General Wildfire Safety Inspections” and findings are detailed in Table 3 below. Issues discovered during these inspections are categorized as defects and are accompanied by a notice of defect (NOD).

This report details the findings of a recent Energy Safety inspection.

Section 15475.1. of the Government Code states that:
(a) The office may determine that a regulated entity is not in compliance with any matter under the authority of the office. If necessary, the office may undertake an investigation into whether the regulated entity is noncompliant with its duties and responsibilities or has otherwise committed violations of any laws, regulations, or guidelines within the authority of the office.

(b) The office's primary objective is to ensure that regulated entities are reducing wildfire risk and complying with energy infrastructure safety measures as required by law.

On December 9, 2021, I performed a walking inspection of Southern California Edison (SCE) covered conductor installations, 2021 WMP initiative number 7.3.3.3.1, at various locations within Crestline, California. Detailed findings from this field inspection are laid out in Section II below.

II. RESULTS

In accordance with Energy Safety's Wildfire Mitigation Plan Compliance Process, violations and defects discovered by Energy Safety must be corrected in a timely manner. The timeline for corrective action is dependent on the risk category, location, and potential impact to worker safety of the violation or defect discovered. Risk categories range from severe to minor, and locational risks are determined with tier levels in the California Public Utility Commission's High Fire Threat District (HFTD) map. Table 1 below outlines violation and defect risk categories and their associated correction timelines. The correction timelines identified below apply to the results of both WMP initiative inspections as well as general wildfire safety inspections.

Table 1. Risk Category and Correction Timelines

Risk Category	Violation and defect correction timeline
Severe	• Immediate resolution
Moderate	• 2 months (in HFTD Tier 3) • 6 months (in HFTD Tier 2) • 6 months (if relevant to worker safety; not in HFTD Tier 3)
Minor	• 12 months or resolution scheduled in WMP update

Table 2. WMP Initiative Inspections

Item	Structure ID	HFTD	Initiative Number	Violation Type	Severity	Violation Description
1	687838E	Tier 3	7.3.3.3.1	Data Accuracy	Moderate	Covered conductor reported as completed, and has not started
2	687838E	Tier 3	7.3.3.3.1	Completeness	Moderate	Failure to install covered conductor
3	4931111E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
4	4931111E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Improperly installed fuse cover
5	4931111E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install fiberglass guy strain insulator
6	4931111E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install bolted wedge connector cover on center phase
7	4931111E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Jumper transitioning to T intersection is bare prior to entering bolted wedge connector cover
8	F16868Y	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
9	F16868Y	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install fiberglass guy strain insulator
10	F16868Y	Tier 3	7.3.3.3.1	Data Accuracy	Minor	Pole not submitted to Energy Safety as covered conductor work. Covered conductor work was installed at this pole. Data submitted to Energy Safety is inaccurate
12	549418E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
13	549418E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install fiberglass guy strain insulator

Item	Structure ID	HFTD	Initiative Number	Violation Type	Severity	Violation Description
14	549418E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vice top polymer pin type insulators
15	4421488E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
16	4421488E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vice top polymer pin type insulators with nylon inserts
17	1403136E	Tier 3	7.3.3.3.1	Data Accuracy	Moderate	Covered conductor reported as completed, and has not started
18	1403136E	Tier 3	7.3.3.3.1	Completeness	Moderate	Failure to install covered conductor
19	4558869E	Tier 3	7.3.3.3.1	Data Accuracy	Moderate	Covered conductor reported as completed, and has not started
20	4558869E	Tier 3	7.3.3.3.1	Completeness	Moderate	Failure to install cover conductor
21	1763105E	Tier 3	7.3.3.3.1	Data Accuracy	Moderate	Covered conductor reported as completed, and has not started
22	1763105E	Tier 3	7.3.3.3.1	Completeness	Moderate	Failure to install cover conductor
23	1414393E	Tier 3	7.3.3.3.1	Data Accuracy	Moderate	Cover conductor reported as completed, and has not started
24	1414393E	Tier 3	7.3.3.3.1	Completeness	Moderate	Failure to install covered conductor

Table 3. General Wildfire Safety Inspections

Item	Structure ID	HFTD	Defect Type	Severity	Defect Description
1	GT5560	Tier 3	Vegetation contacting guy wire above insulator	Minor	Vegetation touching guy wire above insulator
2	4558869E	Tier 3	Conductor frayed or broken strands	Minor	Conductor strands are broken
3	1763105E	Tier 3	Conductor frayed or broken strands	Minor	Conductor strands are broken

III. DISCUSSION

In its 2021-Q1 and 2021-Q2 quarterly data reports (QDR) submission on May 1, 2021, and August 2, 2021, respectively, SCE provided initiative data indicating that covered conductor installation projects (WMP initiative number 7.3.3.3.1) in Crestline, CA were completed. These QDR submissions represented the reporting periods of January through March (Q1) and April through June (Q2) of 2021. Based on this information received from SCE, Energy Safety planned an inspection of select structures in these areas to assess the accuracy of SCE data, the completeness of SCE's work, and whether SCE followed its protocols for covered conductor installation. Upon arriving to the inspection location in Crestline, Energy Safety observed that covered conductor was not installed where SCE's QDR indicated covered conductor work had a status of "Complete." Similarly, Energy Safety found a pole that had covered conductor installed, but SCE's QDR did not include the pole as part of the "Complete" covered conductor project. These structures are noted in Table 2 above.

Per SCE's Distribution Design Standards (DDS) and Distribution Overhead Construction Standards (DOH), when installing covered conductor, vibration dampers must also be installed.[1] Energy Safety staff found that no vibration dampers were installed at multiple structures where covered conductor was installed. The structures missing vibration dampers where covered conductor was installed are identified in Table 2 above. On November 19, 2021, SCE submitted a memo to Energy Safety titled, "Interim Deviation from Standards on Vibration Damper for Covered Conductor"[2] (hereafter, "Memo"). This Memo was dated August 18, 2021, and indicates that due to supply chain issues, SCE will suspend the installation of vibration dampers until December 31, 2021. In accordance with SCE's Q2 QDR submission, the covered conductor installations inspected by Energy Safety were completed prior to the issuance of the Memo. Also, SCE informed Energy Safety of this supply chain issue only after inspections commenced. Consequently, Energy Safety finds that SCE is still in violation of its protocols requiring the installation of vibration dampers as part of covered conductor installations.

In accordance with SCE's protocols for covered conductor installation, Distribution Overhead Construction Standards (DOH) PO section 300, SCE states, "In HFRA installations of covered conductor it is required to upgrade down guy/span guy insulation to include Fiberglass Guy Strain Insulators."[3] In addition, SCE's Distribution Design Standards (DDS), section DDS-10 indicate that, "Beginning July 2020, SCE has transitioned to a standard requirement in guying to utilize the fiberglass guy strain insulators where traditional porcelain guy strain insulators have been applied."[4] Further, in response to Energy Safety Data Request (DR-030), SCE stated "In HFRA installations of covered conductor it is required to… upgrade down guy/span guy installation to include Fiberglass Guy Strain Insulators."[5]

[1] **DOH CC section 190, DDS section DDS-10, page 10-82**
[2] **Interim Deviation from Standards on Vibration Damper for Covered Conductor, See Appendix B**
[3] **DOH PO section 300, page 3 of 9**
[4] **DDS section DDS-10, page 10-26**
[5] **Data Request Set, Question 3, ES-SCE-CC Protocols, See Appendix B**

During the inspection, Energy Safety found several instances where fiberglass guy wire strain insulators were not installed where covered conductor work was completed, per SCE's protocols. Structures where this protocol was not followed are noted in Table 2 above.

In accordance with SCE's protocols for covered conductor installation, DOH CC 180, "If conductor is exposed, install bolted wedge connector cover." During the inspection, Energy Safety found one instance where a bolted wedge connector cover was not installed on exposed conductor where covered conductor work was completed, per SCE's protocols. Structures where this protocol was not followed are noted in Table 2 above.

Per SCE's Distribution Overhead Construction Standards (DOH), section GR 200.5, "Vice-top insulators with nylon inserts shall only be used in covered conductor systems." Energy Safety found multiple instances where a covered conductor was not supported by the aforementioned type of insulator. Structures where this protocol was not followed are noted in Table 2 above.

Per SCE's Distribution Overhead Construction Standards (DOH), section CC 150, jumpers that are connected to covered conductor shall be covered. Energy Safety found one instance where a jumper connected to covered conductor was bare before entering a bolted wedge connector cover. These structures are noted in Table 2.

Regarding wildlife fuse covers, per TE connectivity BCAC-G-CUTOUT (referred to by SCE as SAP10184097) product installation instructions, to install SCE SAP 10184097, "position the keyway slot on the bottom of the cover between the 1st and 2nd insulator skirts."[6] Energy Safety found one instance where wildlife fuse cover SAP 10184097, was not installed between the first and second insulator skirts. This structure is noted in Table 2.

In addition to the violations discovered during WMP inspections of SCE's covered conductor installations, Energy Safety discovered vegetation contacting guy wire above the insulator. Guy wires are metallic and can become energized in some circumstances. Insulators break the current path and prevent electricity from reaching the ground where a down guy wire is anchored. However, the portion above the insulator may remain energized until the circuit is deenergized and may cause an ignition if energized while in contact with vegetation. Accordingly, Energy Safety considers vegetation in contact with down guy wires above the insulator a condition that increases an electrical corporation's ignition risk. A structure where vegetation was in contact with the guy wire above the insulator is noted in Table 3.

Energy Safety discovered multiple conductors that had broken and frayed strands. Energy Safety considers the presence of broken or frayed conductor strands a condition that increases the electrical corporation's ignition risk because the broken strands can weaken the conductor. The weakening of

[6] **SCE Data Request Response ES-SCE-Biweekly-01-05-2022-Verbal, Question 2, p. 4.**

conductors can result in heightened risk of conductor failure or of arcing that could result in an ignition. Structures where broken conductor strands were observed are identified in Table 3.

IV. CONCLUSION

Pursuant to its objectives and statutory obligations, Energy Safety has completed the above referenced inspection and discovered violations and/or defects by Southern California Edison. Southern California Edison's required response to these non-compliances and options for hearing are detailed in the associated notice of violation and/or defect, respectively.

V. APPENDICES

APPENDIX A: Photo Log

Structure ID: 687838E
General Photo

	
Item1GImg1: Overall pole	**Item1GImg2**: Pole ID

Initiative Activity #1 Photo

	
Item1IA1Img1: Top level crossing phase showing bare wire and no covered conductor installed	**Item1IA1Img2**: See mid-level of pole where covered conductor work was completed

Structure ID: GT5562

General Photo

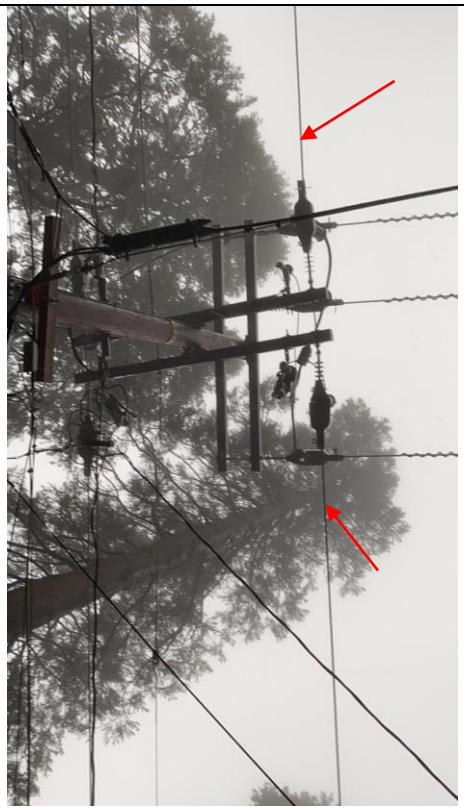
	
Item2GImg1: Overall pole	**Item2GImg2**: Pole ID

Structure ID: 4931111E

General Photo

	
Item3GImg1: Overall pole	**Item3GImg2**: Pole ID

Initiative Activity #1 Photo

	
Item3IA1Img1: No vibration dampers on span (see red arrow)	

Initiative Activity #2 Photo

	
Item3IA2Img1: Fuse cover does not sit between first and second insulator skirt	**Item3IA2Img2**: Close up of fuse cover from previous image

Initiative Activity #3 Photo

	
Item3IA3Img1: Porcelain type guy span insulator	

Initiative Activity #4 Photo

	
Item3IA4Img1: Bare dead-end conductor with no cover	

Initiative Activity #5 Photo

	
Item3IA5Img1: Bare jumper going into bolted wedge connector cover	**Item3IA5Img2**: Overall photo bare jumper going into bolted wedge connector cover

Structure ID: F16868Y

General Photo

	
Item4GImg1: Overall pole	**Item4GImg2**: Pole ID

Initiative Activity #1 Photo

	
Item4IA1Img1: No vibration dampers	

Initiative Activity #2 Photo

	
Item4IA2Img1: Porcelain insulator on down guy wire	**Item4IA2Img2**: Third porcelain type down guy insulator

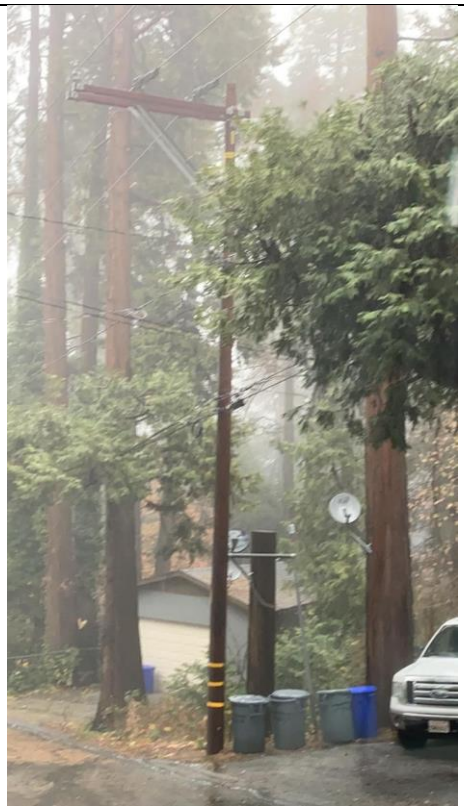
Initiative Activity #3 Photo

Item4IA3Img1: View of pole crossarm with covered conductor	

Structure ID: 549418E

General Photo

	
Item5GImg1: Overall pole	**Item5GImg2**: Pole ID

Initiative Activity #1 Photo

	
Item5IA1Img1: No vibration dampers	

Initiative Activity #2 Photo

	
Item5IA2Img1: Porcelain down guy insulator	

Initiative Activity #3 Photo

	
Item5IA3Img1: Close up view of insulator. Should be vice top polymer pin type insulators.	**Item5IA3Img2**: Overall view of insulators with wildlife covers

Structure ID: 4421488E

General Photo

Item6GImg1: Overall pole	**Item6GImg2**: Pole ID

Initiative Activity #1 Photo

	
Item6IA1Img1: No vibration dampers	

Initiative Activity #2 Photo

	
Item6IA2Img1: Overall view of insulators with cover. Insulators should be vice top polymer pin type insulators with nylon inserts	**Item6IA2Img2**: Close up of insulator from previous image

Structure ID: GT5560

General Photo

	
Item7GImg1: Overall pole	**Item7GImg2**: Pole ID

Guy Wire Question #2 Photo

	
Item7GW2Img1: Vegetation touching guy wire above insulator	

Structure ID: 1403136E

General Photo

	
Item8GImg1: Overall pole	**Item8GImg2**: Pole ID

Structure ID: 4558869E

General Photo

	
Item9GImg1: Overall pole	**Item9GImg2**: Pole brand

Initiative Activity #1 Photo

	
Item9IA1Img1: Close up no covered conductor	**Item9IA1Img2**: Zoomed out view of top of pole with no covered conductor

Conductor Question #4 Photo

	
Item9CD4Img1: Broken support strand	

Structure ID: 1763105E

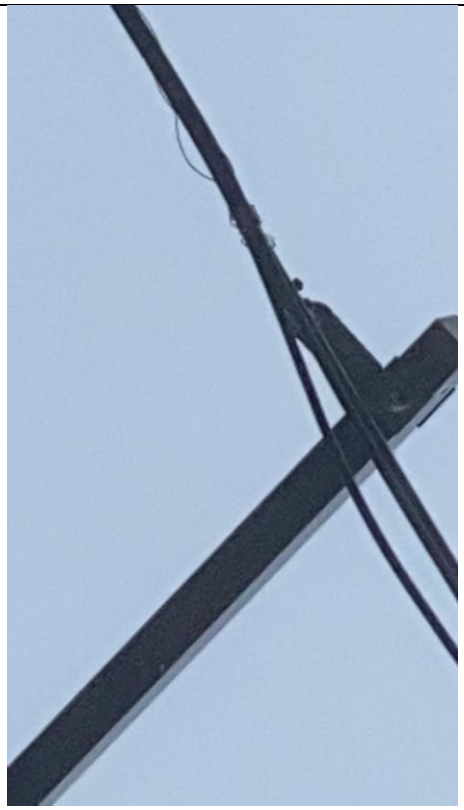
General Photo

	
Item10GImg1: Overall pole	**Item10GImg2**: Pole ID

Initiative Activity #1 Photo

	
Item10IA1Img1: No covered conductor installed	

Conductor Question #4 Photo

	
Item10CD4Img1: Fraying conductor	

Structure ID: 1414393E

General Photo

	
Item11GImg1: Overall pole	**Item11GImg2**: Pole ID

Initiative Activity #1 Photo

	
Item11IA1Img1: No covered conductor installed	

Interim Deviation from Standards on Vibration Damper for Covered Conductor

TRANSMISSION & DISTRIBUTION HOTLINE

PUBLISHED BY T&D CONSTRUCTION METHODS, CHINO

8/18/2021 Ref. No. HL-1921

Interim Deviation from Standards on Vibration Damper for Covered Conductor

This Bulletin Supersedes HL-0821

Purpose

This Hotline Bulletin provides SCE, Contract Construction, and Quality Control Personnel guidance on the requirement for installation of vibration dampers due to the temporary shortage of vibration dampers. This deviation allows installation of covered conductor without dampers.

This deviation only applies if the work location does not have the required dampers to complete the installation and will be in effect until December 31, 2021; dampers are still required to be installed for the work locations that have inventory on hand.

Background

Installing vibration dampers on the covered conductor mitigates Aeolian vibration by protecting the covered conductor from abrasion and fatigue damage. The vibration damper standard was put into effect in October 2020 and is required for all covered conductors in light loading areas (elevation below 3,000 feet). Recently, SCE has been experiencing an acute shortage of Stockbridge Dampers (refer to Figure 1) for 336 ACSR Covered Conductor due to the high demand and supplier constraints. Additionally, the spiral vibration dampers (refer to Figure 2) for 1/0 ACSR, #2 Copper, and 2/0 Copper may be running low on stock.

Figure 1: Stockbridge Damper

Figure 2: Spiral Damper

Discussion

Apart from supply shortages, a review of the orders placed for vibration dampers indicates inconsistent ordering practices at various store locations. For example, the analysis shows that some locations are ordering up to ten times more vibration dampers than needed based on the circuit miles of covered conductors to be installed. On the other hand, the analysis shows that some locations with high covered conductor orders are not ordering enough dampers. To ensure consistent delivery of vibration dampers, the following guidance is developed by Supply Chain and Asset & Engineering Strategy team, and it will be applied towards the field requests.[1]
As more inventories become available, Supply Chain will distribute vibration dampers based on the guidance developed and the covered conductor assigned on-site at the designated location.

- 10214215 Spiral Dampers: 1 damper required per phase per span
  - 30 dampers should be allocated per 5,280 feet of covered conductor [2]

- 10214216 (Spiral), 10214493, 10214494, 10214495, 10214496, 10214497, 10214498, 10214499 Stockbridge Dampers: 2 dampers required per phase per span
  - 60 dampers allocated per 5,280 feet of covered conductor [2]

Action

Deviation from Distribution Overhead Construction Standards CC 190 when dampers are not available is acceptable for the duration of the damper shortage[3], which is projected to last until December 31, 2021. SCE field crews and contractor personnel shall record any spans/locations on the Job Information Sheet (JIS) and Damper Shortage Report, which can be filled out online or in the form attached at the end of this bulletin (refer to Appendix A). The Damper Shortage Report is intended to capture pertinent information where vibration dampers were not installed due to the shortage. The Shortage Reports shall be sent to Niousha Tavakoli biweekly for damper retrofit determination[4]. Then, they will be compiled and sent to the Quality Organization to ensure that no QC corrective actions are given on these work orders. Once the material shortage has been resolved, another bulletin will be published to revoke the deviation process.

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[1] This is distinguished from the standard installation requirement, and it is only for inventory purposes.
[2] Damper allocation assumptions are based on a system average of 180 feet span and should be utilized as guidance, not a one size fits all.
[3] The interim deviation from the standard only applies to construction, and planners need to plan the projects in accordance with the standard as required.
[4] The go back will only target the high vibration susceptibility areas.

Standards Affected

DOH CC 190

Contact Information

If you have any questions related to this bulletin, please contact:

- Niousha Tavakoli: 949-910-8819
  - Niousha.Tavakoli@sce.com

Appendix A- Damper Shortage Report

Date	TD Number	Company Name	District	System Voltage	Structure Number		Circuit Name	Covered Conductor Size
					From	To		

Data Request Set, Question 3, ES-SCE-CC Protocols:

Southern California Edison
WSD Compliance – WSD Compliance

DATA REQUEST SET ES-SCE-CC-Protocols

To: Energy Safety
Prepared by: Jerald Foster
Job Title: Senior Manager
Received Date: 10/11/2021

Response Date: 10/25/2021

7.3.3.3.1: Covered Conductor installation (SH-1)
Per SCE's 2021 WMP update, "In 2021 SCE continues its Wildfire Covered Conductor Program (WCCP), a multi-year program initiated in 2018 that replaces bare overhead conductor with covered conductor in HFRA. SCE also continues installing covered conductor in HFRAs during post-fire restoration work (outside of the WCCP). Poles that require replacement as part of WCCP are replaced with Fire Resistant Poles (FRP)." 1 Pursuant to this statement and SCE's WCCP, Energy Safety requests the following:

1 2021 WMP Update page 213

Question 03:
When installing covered conductors, do SCE's current protocols and construction standards require the simultaneous installation or upgrade of other equipment (i.e., crossarms, insulators, jumper wires, etc.)?
a. If so, list and describe all such installations or upgrades.

Response to Question 03:

Per the attached document titled "DDS_10 Surge Arresters" it is a requirement to install surge arresters on all equipment connected to covered conductor.

The attached "DOH CC section 190" provides requirements to install vibration dampers on covered conductor systems.

In HFRA installations of covered conductor it is required to upgrade wood crossarms with composite, upgrade all insulators to a polymer insulator, install wildlife protection covers, upgrade fuses where applicable, and upgrade down guy/span guy installation to include Fiberglass Guy Strain Insulators. The standards outlining these requirements are attached in the document titled "DDS Requirements Binder" as well as the attached "DOH Section CC".