State of California – A Natural Resources Agency
Gavin Newsom, Governor

OFFICE OF ENERGY INFRASTRUCTURE SAFETY
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Caroline Thomas Jacobs, Director

TRANSMITTED VIA ELECTRONIC MAIL

April 20,2022

Erik Takayesu

Vice President Asset Strategy and Planning

Southern California Edison

2244 Walnut Grove

Rosemead, CA 91770

NOV_SCE_ATJ_ 20211202-01_Revised

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 Los Angeles County on December 2, 2021, and discovered the following violation(s):

1. Violation 1: Per SCE's 2021-Q2 quarterly data report (QDR), covered conductor was installed on poles numbered 45377945E, 4568486E, OH-7017637, and OH-7017636. 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-Q2 QDR, covered conductor was installed on poles numbered 45377945E, 4568486E, OH-7017637, and OH-7017636. 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 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" and SCE's Distribution Overhead Construction Standards (DOH), section CC 190, page 1 of 11, vibration dampers are required when installing covered conductor. Poles numbered 4628153E, 710834E, 862693E, 4155191E, 4724215E, 1902077E, 4393705E, 4393713E, 4308815E, 862696E, 4308816E, 4308817E, and 4789750E 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.
4. Violation 4: Per SCE's DOH, when transitioning from covered conductor to bare wire, "if conductor is exposed, install bolted wedge connector cover." Per SCE's DDS, Section 10, 5.7.C.1.f, "Covered conductor systems shall be an all-covered system. This means that wildlife covers shall be installed on dead-ends, terminations, connectors, equipment bushings, and any partially covered exposed conductor." Pole number 4628153E did not have bolted wedge connector covers installed when transitioning from bare to covered conductor. Energy Safety considers this violation for failure of adhering to protocol to be in the Minor risk category.
5. Violation 5: At poles OH-7017637 and OH-7017636, the pole identification number did not match the identification number provided by SCE in its QDR. 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), May 20, 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[1] and the associated file name(s) must begin with the NOV identification number provided above.

[1] https://efiling.energysafety.ca.gov/EFiling/DocketInformation.aspx?docketnumber=2021-NOV

April 20, 2022 NOV_SCE_ATJ_ 20211202-01_Revised

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 – May 20, 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.

Sincerely,

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

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

April 20, 2022 NOV_SCE_ATJ_ 20211202-01_Revised

Jonathan Chacon, SCE

Energy Safety Inspection Report

CALIFORNIA
OFFICE OF ENERGY
INFRASTRUCTURE
SAFETY

Table of Contents

Report Name: ATJ_SCE_20221202-01_Revised
Inspection Date(s): December 2, 2021
Inspector: Anthony Trujillo
Utility: Southern California Edison
Attention: Erik Takayesu, Vice President Asset 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 2, 2021, I performed a walking inspection of Southern California Edison (SCE) covered conductor installations, 2021 WMP initiative number 7.3.3.3.1, along Ridge Route Road and North Gate Road near the city of Castaic, 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	45377945E	Tier 3	7.3.3.3.1	Data Accuracy	Minor	Wrong pole ID provided. Provided pole ID is 45377945E. Actual pole ID is 4537945E
2	45377945E	Tier 3	7.3.3.3.1	Data Accuracy	Moderate	Covered conductor reported as completed, and has not started
3	45377945E	Tier 3	7.3.3.3.1	Completeness	Moderate	Failure to install covered conductor
4	4628153E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers
5	4628153E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install bolted wedge connector covers when transitioning from covered to bare conductor
6	710834E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers
7	862693E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers
8	4155191E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers
9	4724215E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers
10	1902077E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers
11	4393705E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers
12	4393713E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers
13	4308815E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers
14	862696E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers

Item	Structure ID	HFTD	Initiative Number	Violation Type	Severity	Violation Description
15	4308816E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers
16	4308817E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers
17	4789750E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers
18	4568486E	Tier 3	7.3.3.3.1	Data Accuracy	Moderate	Covered conductor reported as completed, and has not started
19	4568486E	Tier 3	7.3.3.3.1	Completeness	Moderate	Failure to install covered conductor
20	OH-7017637	Tier 3	7.3.3.3.1	Data Accuracy	Moderate	Covered conductor reported as completed, and has not started
21	OH-7017637	Tier 3	7.3.3.3.1	Completeness	Moderate	Failure to install covered conductor
22	OH-7017637	Tier 3	7.3.3.3.1	Data Accuracy	Minor	Wrong pole ID provided. Provided pole ID is OH-7017637. Actual pole ID is 676268E
23	OH-7017636	Tier 3	7.3.3.3.1	Data Accuracy	Moderate	Covered conductor reported as completed, and has not started
24	OH-7017636	Tier 3	7.3.3.3.1	Completeness	Moderate	Failure to install covered conductor
25	OH-7017636	Tier 3	7.3.3.3.1	Data Accuracy	Minor	Wrong pole ID provided. Provided pole ID is OH-7017636. Structure ID is 676269E

Table 3. General Wildfire Safety Inspections

Item	Structure ID	HFTD	Defect Type	Severity	Defect Description
1	4568486E	Tier 3	Conductor evidence of bird caging	Minor	Conductor shows evidence of bird caging

III. DISCUSSION

In its 2021-Q2 quarterly data report (QDR) submission on August 1, 2021, SCE provided initiative data indicating that covered conductor installation projects (2021 WMP initiative number 7.3.3.3.1) in Castaic were completed. This QDR submission represented the reporting periods of April through June (i.e., Q2) of 2021. Based on this information received from SCE, Energy Safety planned an inspection of select structures in this area 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 locations, Energy Safety observed that covered conductor was not installed at every location where SCE's QDR indicated covered conductor work had a status of "Complete." These structures are noted in Table 2 above.

Per SCE's DDS and DOH, when installing covered conductor, vibration dampers must also be installed.[1] Energy Safety staff found that vibration dampers were not installed at multiple structures where covered conductor installation was completed. 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.

Per SCE's DOH, Section CC 180, Sheet 1 of 1, when transitioning from covered conductor to bare wire, "dead-end clamps" and "if conductor is exposed, install bolted wedge connector cover" are required. Also, DDS, Section 10, 5.7.C.1.f., "Covered conductor systems shall be an all-covered system. This means that wildlife covers shall be installed on dead-ends, terminations, connectors, equipment bushings, and any partially covered exposed conductor. Further covering other equipment with wildlife protection covers will increase the covered conductor system's overall effectiveness at preventing contact-with-object faults." Energy Safety observed a structure that did not have bolted wedge connector covers when transitioning from bare to covered conductor. The structure is noted in Table 2 above.

During inspections, Energy Safety found three structures where the structure ID provided by SCE did not match the structure ID observed in the field. Structures where Energy Safety observed this data accuracy violation are noted in Table 2 above.

[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**

In addition to the violations discovered during WMP inspections of SCE's covered conductor installations, Energy Safety discovered one conductor that showed evidence of bird caging. Energy Safety considers bird caging as a condition that increases an electrical corporation's ignition risk because bird caging is a potential indicator of degradation in a conductor and compromises its structural integrity. Bird caging on a supply conductor can weaken its strength and lead to a wire down event and ignition, thus increasing the risk of conductor failure and potential ignition. The span where bird caging was observed is 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

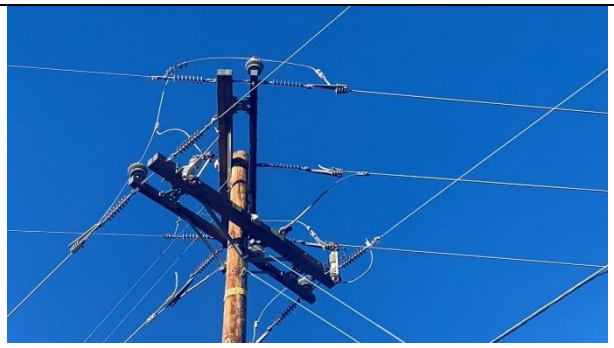
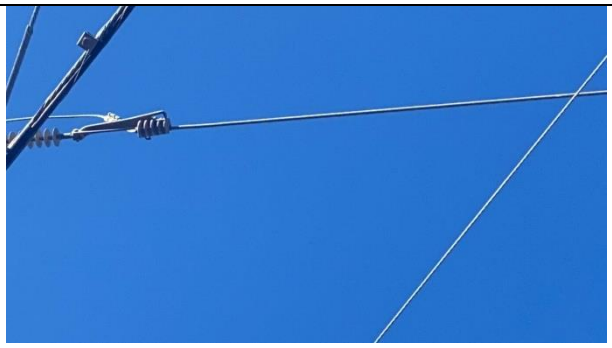
APPENDIX A: Photo Log

Structure ID: 45377945E

Initiative Activity #1 Photo

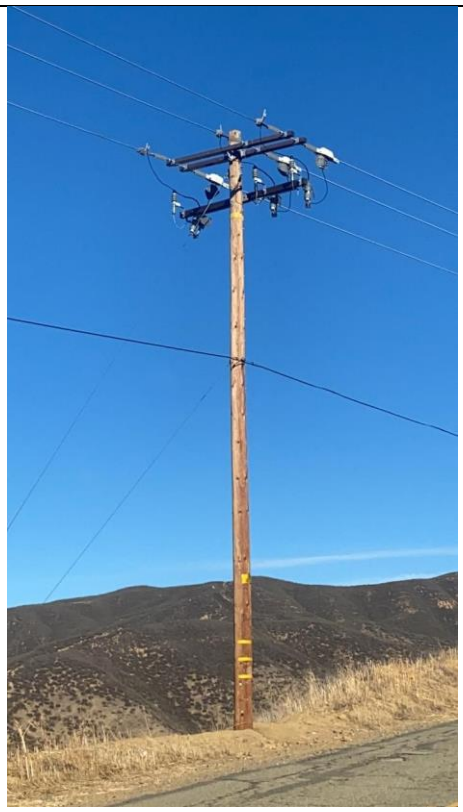
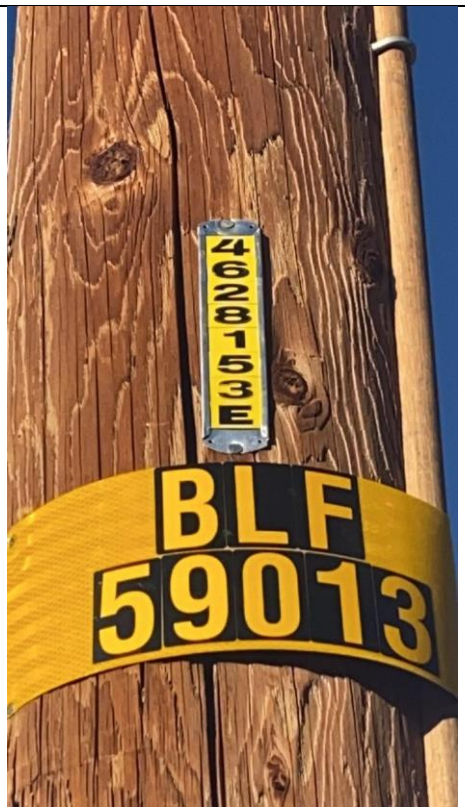
Item1IA1Img1: Pole ID

Initiative Activity #2 Photo

	
Item1IA2Img1: Overall pole phases	**Item1IA2Img3**: Bare conductors

Structure ID: 4628153E

General Photo

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

Initiative Activity #1 Photo

Item2IA1Img1: No vibration dampers

Initiative Activity #3 Photo

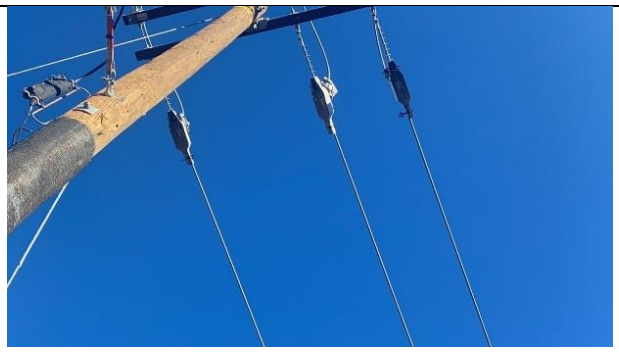
Item2IA3Img1: No bolted wedge connector covers when transitioning from bare to covered conductor

Structure ID: 710834E

General Photo

Item3GImg2: Pole ID

Initiative Activity #1 Photo



Item3IA1Img1: No vibration dampers

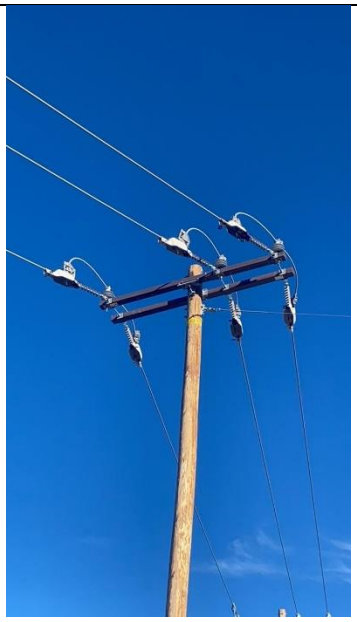
Structure ID: 862693E

General Photo

Item4GImg1: Overall pole

Item4GImg2: Pole ID

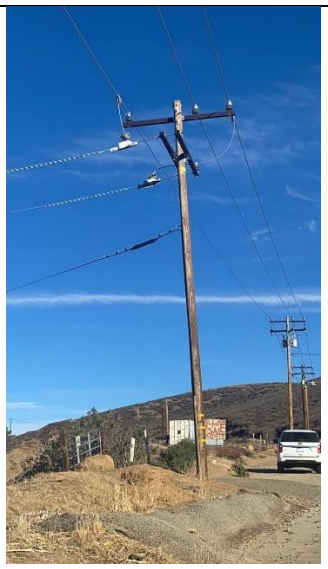
Initiative Activity #1 Photo



Item4IA1Img1: No vibration dampers

Structure ID: 4155191E

General Photo

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

Initiative Activity #1 Photo

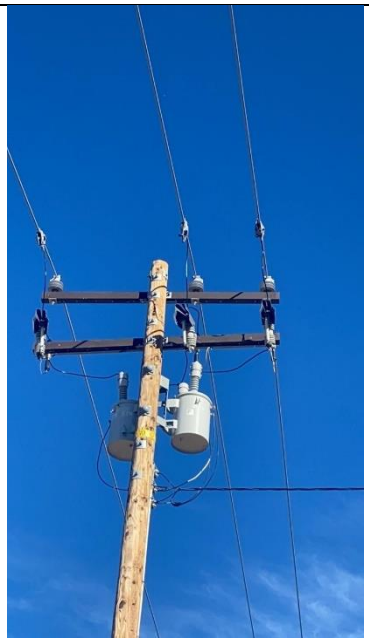

Item5IA1Img1: No vibration dampers

Structure ID: 4724215E

General Photo

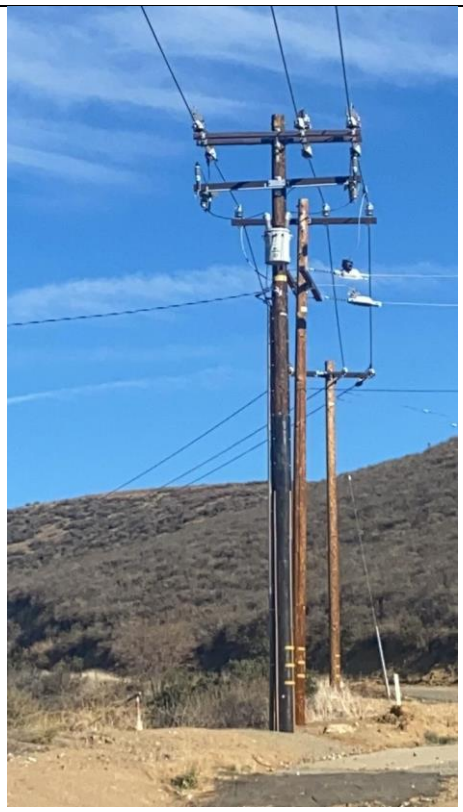
	
Item6GImg1: Overall pole	**Item6GImg2**: Pole ID

Initiative Activity #1 Photo


Item6IA1Img1: No vibration dampers

Structure ID: 1902077E

General Photo



Item7GImg1: Overall pole

Initiative Activity #1 Photo

Item7IA1Img1: No vibration dampers

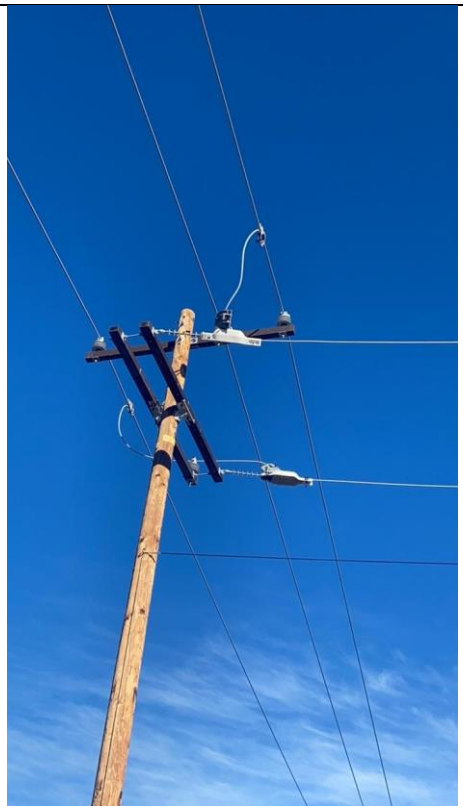
Structure ID: 4393705E

General Photo

Item8GImg1: Overall pole

Item8GImg2: Pole ID

Initiative Activity #1 Photo



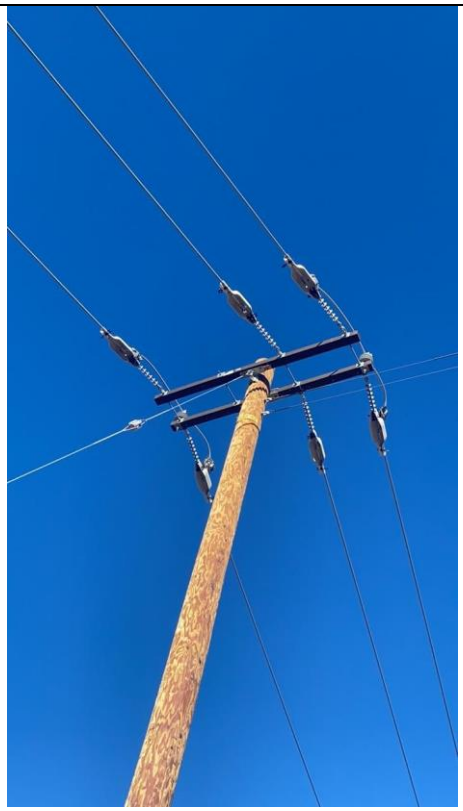
Item8IA1Img1: No vibration dampers

Structure ID: 4393713E

General Photo

Item9GImg1: Overall pole

Initiative Activity #1 Photo



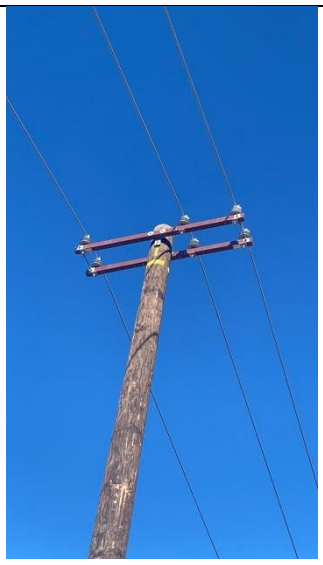
Item9IA1Img1: No vibration dampers

Structure ID: 4308815E

General Photo

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

Initiative Activity #1 Photo


Item10IA1Img1: No vibration dampers

Structure ID: 862696E

General Photo

Item11GImg1: Overall pole

Item11GImg2: Pole ID

Initiative Activity #1 Photo

Item11IA1Img1: No vibration dampers

Structure ID: 4308816E

General Photo

	
Item12GImg1: Overall pole	**Item12GImg2**: Pole ID

Initiative Activity #1 Photo


Item12IA1Img1: No vibration dampers

Structure ID: 4308817E

General Photo

Item13GImg1: Overall pole

Item13GImg2: Pole ID

Initiative Activity #1 Photo

Item13IA1Img1: No vibration dampers

Structure ID: 4789750E

General Photo

Item14GImg2: Pole ID

Initiative Activity #1 Photo

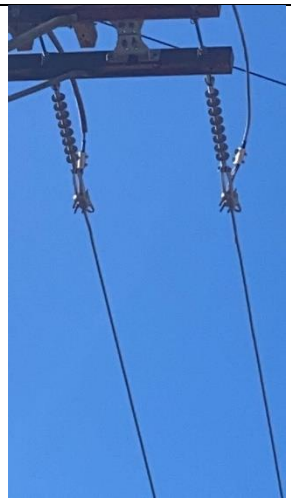
Item14IA1Img1: No vibration dampers

Structure ID: 4568486E

General Photo

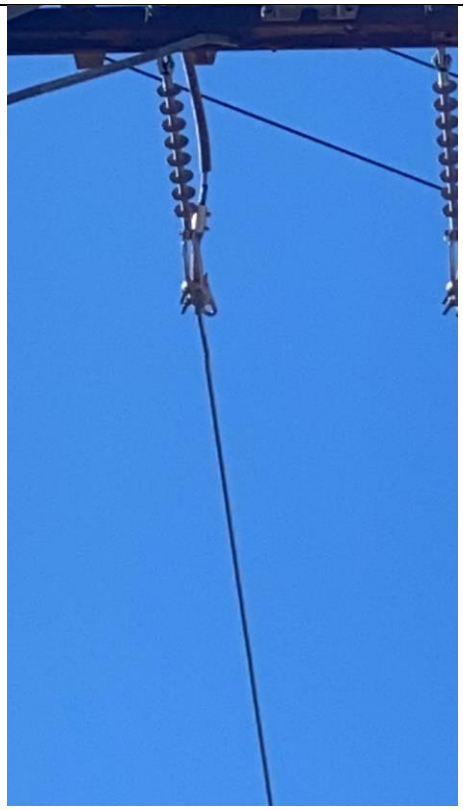
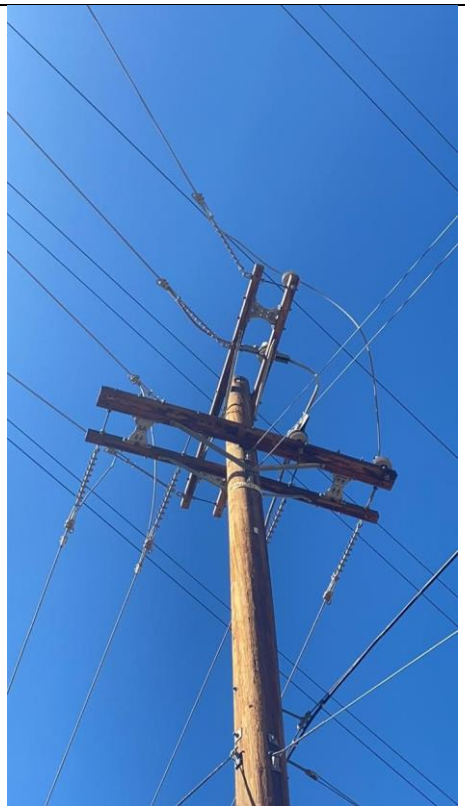
Item15GImg1: Overall pole

Item15GImg2: Pole ID

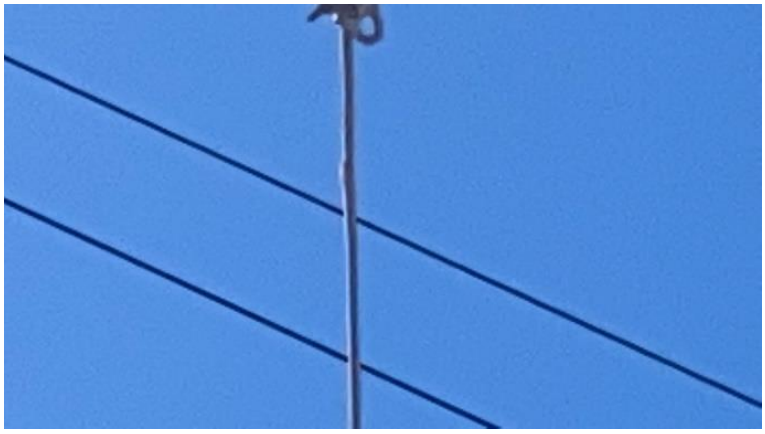
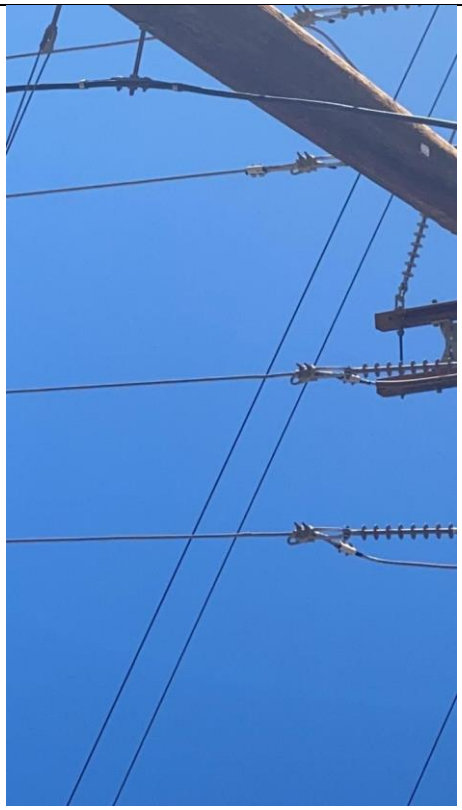


Item15GImg3: Bare wire on all phases closeup

Initiative Activity #1 Photo

	
Item15IA1Img1: Bare conductor	**Item15IA1Img2**: Overall pole

Conductor Question #5 Photo

	
Item15CD5Img1: Close up of phase bird caging	**Item15CD5Img2**: Overall view, bird caging on bottom phase

Structure ID: OH-7017637

General Photo

	
Item16GImg1: Overall structure	**Item16GImg2**: Structure ID

Initiative Activity #1 Photo

	
Item16IA1Img1: Bare conductor	**Item16IA1Img2**: Overall view of bare conductor

Initiative Activity #2 Photo

	
Item16IA2Img1: Correct structure ID	**Item16IA2Img2**: Other structure ID

Structure ID: OH-7017636

General Photo

	
Item17GImg1: Overall structure	**Item17GImg2**: Structure ID

Item17GImg3: Other structure ID

Initiative Activity #1 Photo

Item17IA1Img1: Bare phases

Initiative Activity #2 Photo

Item17IA2Img1: Structure ID

APPENDIX B: Other Documentation

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:

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Appendix A- Damper Shortage Report

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