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

March 23, 2022

Erik Takayesu
Vice President Asset Strategy and Planning
Southern California Edison
2244 Walnut Grove
Rosemead, CA 91770

NOV_SCE_ATJ_ 20211201-01

NOTICE OF VIOLATION

Dear 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 1, 2021, and discovered the following violation(s):

1. Violation 1: 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." Also, SCE's Distribution Overhead Construction Standards (DOH), section CC 190, page 1 of 11, indicates that vibration dampers are required when installing covered conductor. Poles numbered 1121374E, 1219492E, 1219493E, 2093435E, 4622656E, 1309679E, 2058723E, 4191310E, 447040E, 2139296E, 4278547E, 4278546E, 4278545E, 676783E, 4373743E, 4373744E, and 4373745E 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.
2. Violation 2: Per SCE's DOH, section CC 180, sheet 1 of 1, 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." Poles numbered 4147040E and 4487750E did not have bolted wedge connector covers installed when transitioning from bare to covered conductor or at a double dead end. Energy Safety considers this a violation for failure of adhering to protocol and in the Minor risk category.

3. Violation 3: 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 676783E had a bolted wedge connector cover that was loosely attached to a conductor. Energy Safety considers this a violation for failure of adhering to protocol and 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), April 22, 2021, 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.

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 – April 22,

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

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2021. 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:
Gary Chen, SCE
Elizabeth Leano, SCE
Diana Gallegos, SCE
Johnny Parker, SCE
Jonathan Chacon, 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_20211201-01
Date(s): December 1, 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 1, 2021, I performed a walking inspection of Southern California Edison (SCE) covered conductor installations, 2021 WMP initiative number 7.3.3.3.1, in the cities of Acton and Lincoln Crest, 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	1121374E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
2	1219492E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
3	1219493E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
4	2093435E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
5	4622656E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
6	1309679E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
7	2058723E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
8	4191310E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
9	4147040E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
10	4147040E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install bolted wedge connector cover
11	2139296E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
12	4278547E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
13	4278546E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
14	4278545E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span

Item	Structure ID	HFTD	Initiative Number	Violation Type	Severity	Violation Description
15	4487750E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install bolted wedge connector cover
16	676783E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
17	676783E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Loose bolted wedge cover connector
18	4373743E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
19	4373744E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span
20	4373745E	Tier 3	7.3.3.3.1	Adherence to Protocol	Minor	Failure to install vibration dampers on a span

III. DISCUSSION

In its 2021-Q1 and 2021-Q2 quarterly data report (QDR) submission on May 1, 2021, and August 1, 2021, respectively, SCE provided initiative data indicating that covered conductor installation projects (2021 WMP initiative number 7.3.3.3.1) in Acton and Lincoln Crest 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.

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 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" (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 150, page 3 of 5, in circumstances of 4-wire covered conductor double dead-end construction, if conductor is exposed, bolted wedge connector covers must be installed. Also, DDS, Section 10, 5.7.C.1.f. states, "Covered conductor systems shall be an all-covered system." Per SCE's DOH, Section CC 150.4, page 5 of 5, "All overhead equipment shall utilize appropriate wildlife covers. This means that wildlife covers shall be installed on dead-ends, terminations, connectors, equipment bushings, and any partially covered exposed conductor." Energy Safety observed structure numbered 4487750E that did not have bolted wedge connector cover installed when transitioning from bare to covered conductor. Similarly, structure numbered 4147040E did not have bolted wedge connector cover installed at a double dead end transition point. Energy Safety also observed that structure numbered 676783E had a loose bolted wedge connector cover. These structures are noted in Table 2 above.

[1] **DOH CC section 190, DDS section DDS-10, page 10-82**

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: 1121374E

General Photo

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

Structure ID: 1219492E

General Photo

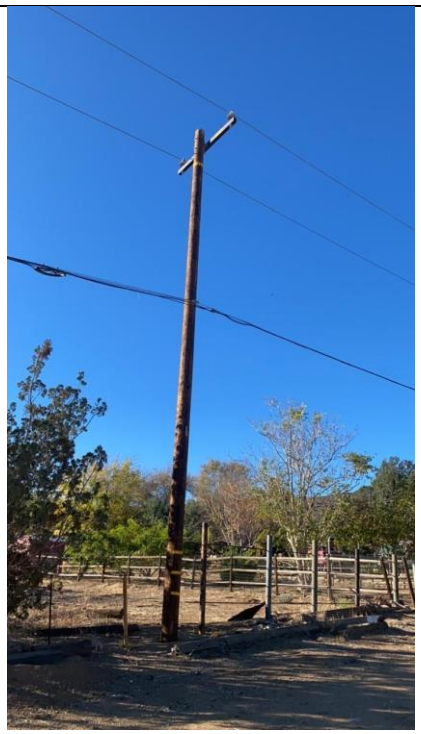
	
Item2GImg1: Overall pole	**Item2GImg2**: Pole ID

Initiative Activity #1 Photo

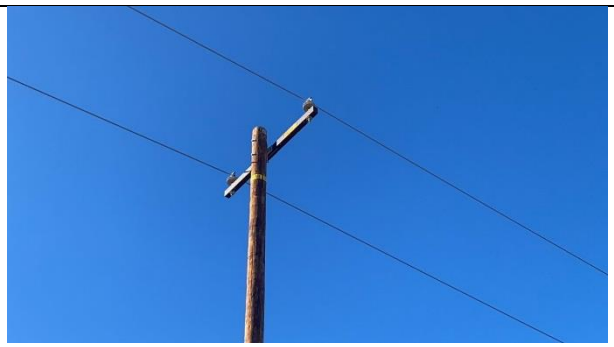

Item2IA1Img1: No vibration dampers

Structure ID: 1219493E

General Photo

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

Initiative Activity #1 Photo

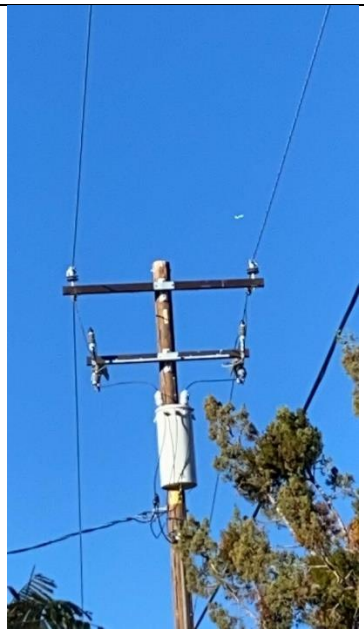

Item3IA1Img1: No vibration dampers

Structure ID: 2093435E

General Photo

Item4GImg1: Overall pole

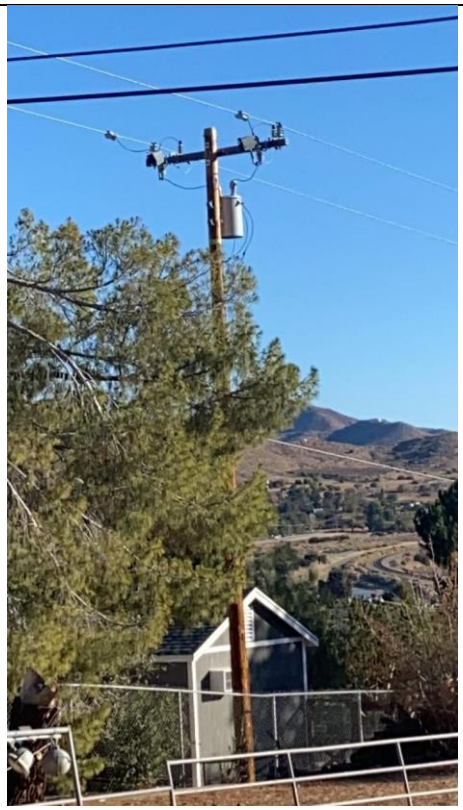
Initiative Activity #1 Photo



Item4IA1Img1: Vibration dampers not installed

Structure ID: 4622656E

General Photo



Item5GImg1: Overall pole

Initiative Activity #1 Photo

Item5IA1Img1: No vibration dampers

Structure ID: 1309679E

General Photo

Item6GImg1: Overall pole

Item6GImg2: Pole ID

Initiative Activity #1 Photo

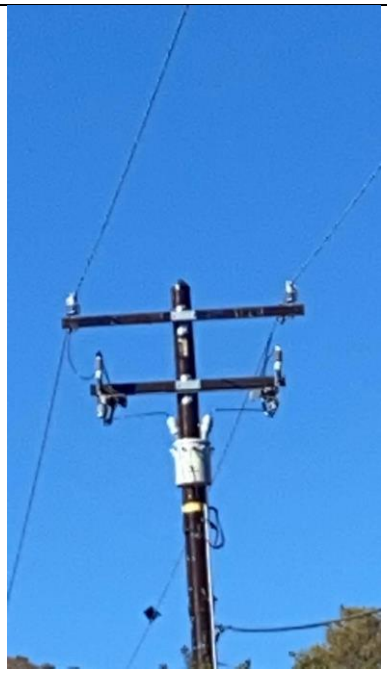
Item6IA1Img1: No vibration dampers

Structure ID: 2058723E

General Photo

Item7GImg1: Overall pole

Initiative Activity #1 Photo



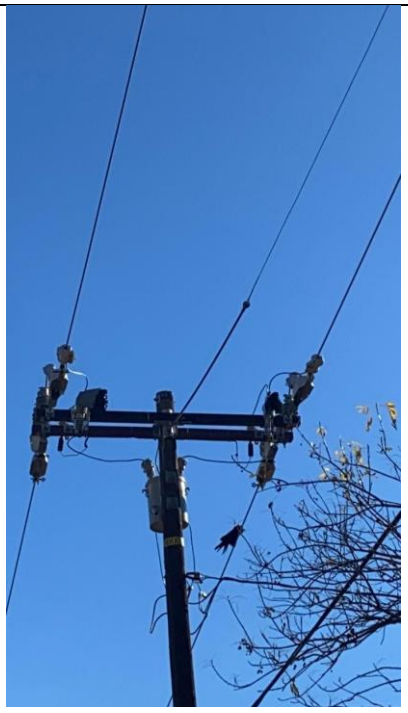
Item7IA1Img1: No vibration dampers

Structure ID: 4191310E

General Photo

	
Item8GImg1: Overall pole	**Item8GImg2**: Pole ID (confirmed with binoculars)

Initiative Activity #1 Photo


Item8IA1Img1: No vibration dampers

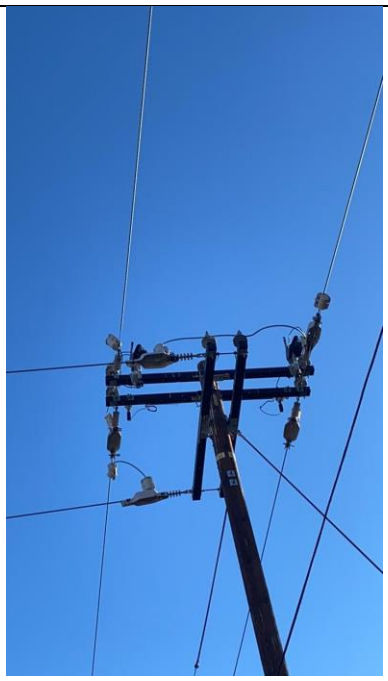
Structure ID: 4147040E

General Photo

Item9GImg1: Overall pole

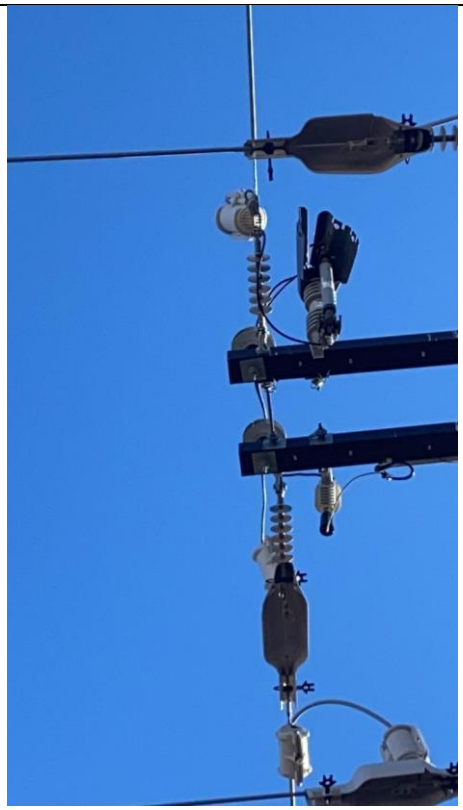
Item9GImg2: Pole ID

Initiative Activity #1 Photo



Item9IA1Img1: No vibration dampers

Initiative Activity #2 Photo



Item9IA2Img1: No bolted wedge connector cover at double dead end

Structure ID: 2139296E

General Photo

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

Initiative Activity #1 Photo


Item10IA1Img1: No vibration dampers

Structure ID: 4278547E

General Photo

Item11GImg1: Overall pole

Item11GImg2: Pole ID

Initiative Activity #1 Photo

Item11IA1Img1: No vibration dampers

Structure ID: 4278546E

General Photo

Item12GImg1: Overall pole

Item12GImg2: Pole ID

Initiative Activity #1 Photo

Item12IA1Img1: No vibration dampers

Structure ID: 4278545E

General Photo

Item13GImg1: Overall pole

Item13GImg2: Pole ID

Initiative Activity #1 Photo

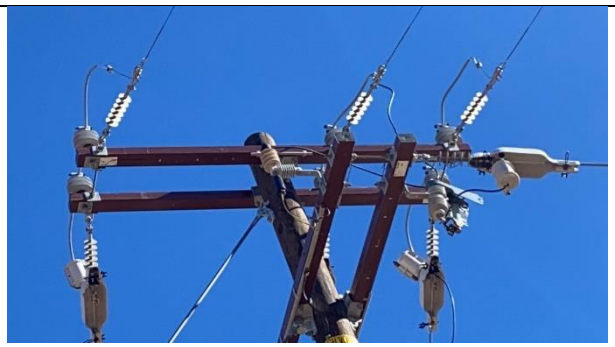
Item13IA1Img1: No vibration dampers

Structure ID: 4487750E

General Photo

	
Item15GImg1: Overall pole	**Item15GImg2**: Pole ID

Initiative Activity #2 Photo


Item15IA2Img2: Bare to dead end with no bolted wedge connector covers

Structure ID: 676783E

General Photo

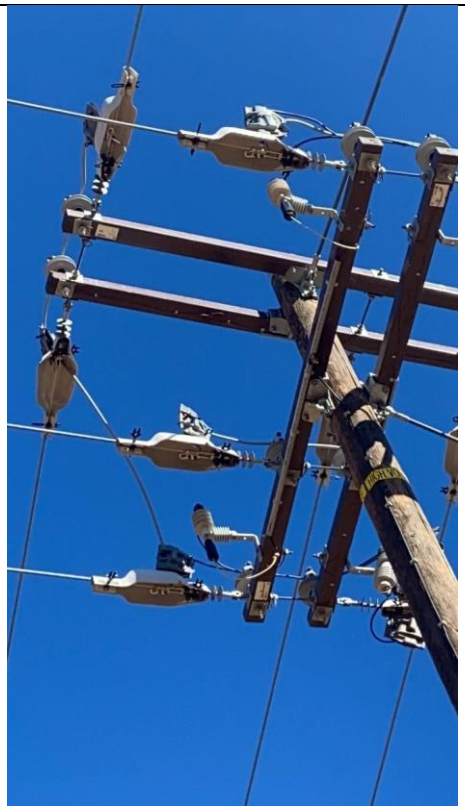
Item16GImg1: Overall pole

Item16GImg2: Pole ID

Initiative Activity #1 Photo

Item16IA1Img1: No vibration dampers

Initiative Activity #2 Photo

	
Item16IA2Img1: Loose center phase bolted wedge connector	**Item16IA2Img2**: Overall loose center phase bolted wedge connector

Structure ID: 4373743E

General Photo

	
Item17GImg1: Overall pole	**Item17GImg2**: Pole ID

Initiative Activity #1 Photo

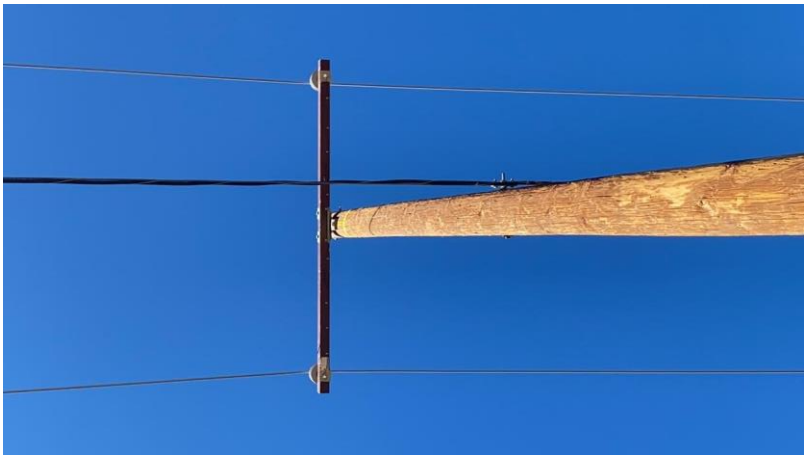
Item17IA1Img1: No vibration dampers

Structure ID: 4373744E

General Photo

Item18GImg1: Overall pole

Initiative Activity #1 Photo



Item18IA1Img1: No vibration dampers

Structure ID: 4373745E

General Photo

	
Item19GImg1: Overall pole	**Item19GImg2**: Pole ID

Initiative Activity #1 Photo


Item19IA1Img1: No vibration dampers

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		