



Preliminary Ignition Investigation Report

Ignition Database Index:	20240655
Electric Incident Investigation (EII) Number:	N/A
Incident Name:	Bald
PG&E Facility Ignition?	Yes
CPUC Reportable Ignition?	Yes
Date & Time of Incident:	June 15, 2024 at approximately 2111 hours
Street Address:	Near [REDACTED]
City:	Auburn
County:	Placer
Latitude/Longitude:	[REDACTED]
State Responsibility Area (SRA) / Local Responsibility Area (LRA) / Federal Responsibility Area (FRA)	SRA
PG&E Division:	North Valley
High Fire Threat District (HFTD):	Tier 2
High Fire Risk Area (HFRA):	Yes
EPSS Buffer:	No
Fire Index Area (FIA):	300
Fire Potential Index (FPI) Rating: FIA	R3
Fire Potential Index (FPI) Rating: Circuit	R4
Was there a PSPS event at the time of ignition?	No
Suspected Initiating Event:	Equipment – PG&E
Failure Driver:	All Types of Equipment/Facility Failure
Failure Sub-driver:	Splice/Clamp/Connector
Circuit:	Wise 1102, 15227-1102
Circuit Protection Zone:	Wise 1102 LR 2054
Nominal Voltage:	Primary – 12kV Secondary – 240V
Pole SAP Equipment ID:	100050131
Subject to PRC 4292 Veg Pole Clearance:	No
PG&E Equipment associated with ignition:	Connector
EPSS enabled at time of ignition?	Circuit was EPSS enabled. However, ignition event occurred on secondary.
Fault Type:	N/A – No ILIS
Wire Down (Primary)?	No
Lead Agency/Agency Having Jurisdiction:	CAL FIRE
Fire Size:	20 x 20-foot per CAL FIRE

FAS Field Remarks:	Secondary connector that was aqua sealed and taped created an arc to the neutral conductor on Aluminum Weatherproof Aerial Cable (AWAC), re-taped for temp repair.
HAWC Summary:	Units responded to an incident at Bald Hill Road and Wise Road. Fire is being reported as contained by locals with a current size of 0.1 acre. At the time of closing the incident there was not an outage, one surfaced after. OMT showing 1 outage (OIS# 2486799) impacting 1 customer on the WISE 1102 EPSS enabled Tier 1. Troubleshooter states in ODT notes, secondary connector that was aqua sealed and taped created an arc to the neutral conductor on AWAC, re-taped for temporary repair. SIPT did not respond. IRWIN time 2033 hours. Notifications have been made to: HAWC Expert. Closing incident barring any significant change in the situation.
Injuries / Fatalities / Property Damage / Media Attention:	No Injuries/Fatalities/Property Damages/Media Attention
Weather Conditions:	Fair and dry at 69.0°F. Wind speed up to 2.0 Miles Per Hour (MPH).
Red Flag Warning (RFW) / High Wind Warning (HWW):	RFW – No HWW – No
911 Standby Relief Time:	28 minutes
OIS #:	2486799
ILIS #:	N/A
FAS #:	T006420969
TOTL #:	N/A
Assigned Attorney:	N/A
Ignition Investigator & Phone:	

Executive Summary

On June 15, 2024 at approximately 2109 hours, PG&E received a 911 standby call from CAL FIRE with a request for an estimated time of arrival of a PG&E first responder. Shortly after, a PG&E troubleshooter was dispatched to the single-phase secondary segment on the Wise 1102 12kV distribution circuit near Bald Hill Road and Wise Road in the City of Auburn (See Figure 1). At approximately 2136 hours, the troubleshooter arrived onsite to an already extinguished fire measuring 20 x 20-feet in size¹ near the base of Pole SAP ID 100050131 (Incident Pole) (See Figure 2). The troubleshooter observed the potential cause of the ignition as that of a zip-tie that held the insulated connector/secondary together with the bare neutral. Per the troubleshooter, it is possible the bare neutral heated and wore out the insulation of the secondary. The resulting exposed wire-to-wire contact then created an arcing event that sparked an ignition to the growing vegetation near the base of the pole.² The troubleshooter safely removed the zip-tie and separated the secondary from the neutral (See Figure 3) No customers lost service during the ignition event.

As a result of this ignition event, a priority “X” EC tag (#129081331) was created to have the secondary conductor reworked/repared. The troubleshooter also included a request to have a replacement for a new like-for-like 15kVa transformer.³ The completion of this tag only addressed the transformer replacement. Per Maintenance and Construction (M&C), the secondary was in good condition to remain in service.⁴ However, it is worth noting that the neutral does exhibit damage and arcing marks. Additionally, the white grey AWAC had a connector/splice that appears to have been installed back on January 10, 2023 under EC tag (#125326726) after a tree fell into the service. Per PG&E’s Document #022487: *Splicing of Grey N–SD service drops and Grey Secondary Aerial cable is prohibited. Replace the service and secondary Aerial cable, do not repair* (See CAP #000129295785 for further details).

This ignition event occurred within a Tier 2 High Fire Threat District (HFTD) and High Fire Risk Area. Although the Wise 1102 distribution circuit was enabled with PG&E’s Enhanced Powerline Safety Settings (EPSS) given expected R4 FPI conditions, the Incident Location occurred on a secondary which is not within scope for EPSS.

PG&E Meteorology data pulled from the MesoWest observation site approximately 1.9 miles northwest of the Incident Location indicates a fair and dry day with temperatures measuring approximately 69.0°F with relative humidity at 30%. Winds registered up to 2.0 Miles Per Hour (MPH) with gusts up to 2.5 MPH from the east-southeast. The strongest recorded wind gust was up to 19.1 MPH out of the west-northwest at 1740 hours. There were no Red Flag or High Wind Warnings issued nor did this ignition occur during a Public Safety Power Shutoff (PSPS) event.

¹ Fire extinguished by the customer per CAL FIRE.

² CAL FIRE report 24CANEU0016885 indicates that it is probable the fire was caused by a malfunction of the power pole based on their investigation and statement from the customer.

³ The troubleshooter confirmed that the damaged transformer was the result of the previous winter storm that bent the bracket; potentially from when a tree or branch fell into the service line.

⁴ Per PG&E’s Standards and Work Methods Specialist, there is no established guidance/procedure for service repairs and proper repairs is up to the skills and knowledge of the troubleshooter or construction crew.

System Protection Analysis

EPSS was enabled for the Wise 1102 distribution circuit given R4 FPI conditions, the expected wind speeds, relative humidity and fuel moisture threshold for the area. However, this ignition event involved a secondary, which is not under EPSS protection.

Ignition Impact

This ignition on June 15, 2024 was a result of the bare neutral directly contacting an insulated but worn secondary at the connector, that sparked a small vegetation fire. The fire measured approximately 20 x 20-feet in size. No customers lost service prior to the event.⁵ Additionally, there were no reported injuries, fatalities, property damages or significant media attention associated to this event.

Sequence of Events

June 15, 2024

- 2109 Hours: 911 Standby request call received.
- 2111 Hours: Troubleshooter dispatched.
- 2136 Hours: Troubleshooter arrived onsite. Fire is already extinguished.

June 16, 2024

- 1033 Hours: Crew onsite to begin repairs.
- 1328 Hours: Crew completed repairs.

Corrective Notification Associated with Ignition

A priority “X” EC tag (#129081331) was created to replace the damaged transformer and to rework the secondary conductor. The transformer was replaced along with new fuses on June 16, 2024. However, M&C advised that the secondary was still in good condition and so it was not replaced.

Pending Work

Type	Number	Description	Priority	Date Identified	Due Date
EC Notification	129208196	Replace pole. Failed Pole Test and Treat (PT&T) intrusive testing.	E	July 9, 2024	July 9, 2025
COE Notification	N/A				
LC Notification	N/A				
Veg Work Order	N/A				

Please note this may not include pending major program or project work at the incident location.

⁵ ILIS 24-0077466 was created with the responding PG&E crew prior to repairs. Information regarding tree branch on log is unrelated to the incident on June 15, 2024.

This report is preliminary and based on available information as of **August 2, 2024**; event data is subject to change based upon subsequently discovered information.

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Internal

Asset Info & Most Recent Inspections and Tests

Source Side Structure	Pole SAP ID 103854098	
Info / Inspection	Most Recent Date	Findings
Install Date:	December 14, 2017	45-foot, Class 2, Wood
Inspection:	August 15, 2023	No vegetation issues or compelling abnormal conditions to report.
	May 28, 2020	No vegetation issues or compelling abnormal conditions to report. Noted three total splices with two splices on the same phase.
Patrol:	N/A	
Corrective History:	March 29, 2019	Third Party Notification (#116867047) requesting third party utility be transferred to new pole and removed from old pole.
Aerial Inspection Records:	October 4, 2019	Aerial images of asset in Sharper Shape.
	September 9, 2023	iHawk flyover completed near area but no photos of particular asset.
VM Inspection:	N/A	
EVM Inspection:	N/A	
Equipment Test:	N/A	
Pole Intrusive Test:	N/A	
WSIP Inspection:	March 29, 2019	See "Corrective History" section above.

Load Side Structure	Pole SAP ID 100050131 (Incident Pole)	
Info / Inspection	Most Recent Date	Findings
Install Date:	January 1, 1973	40-foot, Class 4, Douglas Fir
Inspection:	August 16, 2023	No vegetation issues or compelling abnormal conditions to report.
	May 28, 2020	No vegetation issues or compelling abnormal conditions to report.
Patrol:	N/A	
Corrective History:	January 10, 2023	EC tag (#125326726) was created to repair broken neutral and re-sag service after tree fell into wire.
	March 29, 2019	EC tag (#116862999) was created to clear/trim vegetation and to repair conductor. However, the conductor ended up fully replaced and the owner of

		the property hired a private tree company to clear vegetation.
Aerial Inspection Records:	October 4, 2019	Aerial images of asset in Sharper Shape.
	September 9, 2023	iHawk flyover completed near area but no photos of particular asset.
VM Inspection:	N/A	
EVM Inspection:	N/A	
Equipment Test:	N/A	
Pole Intrusive Test:	June 20, 2024	Post-incident Pole Test and Treat indicates pole needs to be replaced due to reinforcement issues. See "Pending Work" section above.
	September 1, 2016	Pre-incident report shows passing results with the following conditions: Fair pole top and pole bottom. Strength test at 100%.
WSIP Inspection:	May 29, 2019	Inspection noted Non-Exempt equipment on pole and tree branches growing into conductors. See "Corrective History" section above regarding EC tag (#116862999).

*Incident Location: Near Pole SAP ID 100050131

Hazard Barrier Analysis:

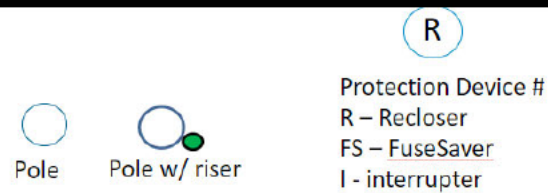
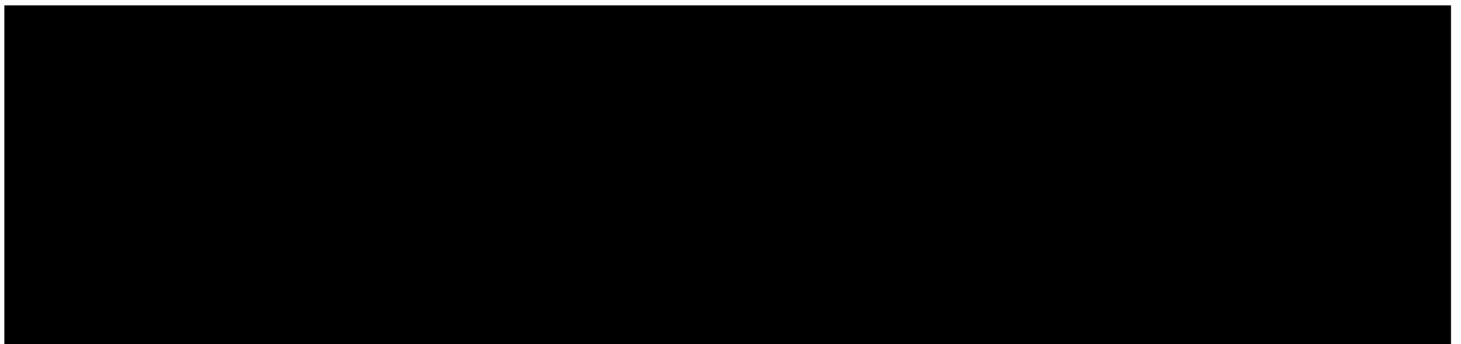
Hazard	Equipment Failure	Sub-Hazard	Connector Failure (Secondary Distribution)
Target	Grey AWAC Secondary Failure Resulting in 20 x 20-foot Ignition in Tier 2 HFTD		
Barrier	Expected vs. Observed Performance	Why did the barrier not prevent the ignition event? (See ICF Codes)	Opportunity
Barriers that Negatively Affected Ignition			
Distribution Detailed Inspection	Expected Performance: Thorough examination of individual components, structures, and equipment through visual inspection and routine diagnostic test. For connectors, identify burnt, corroded, incorrectly installed, equipment or deteriorated insulation.; Observed Performance: Barrier did not perform as expected	A1B3C1D2 - Ineffective identification of non-conforming equipment	The connector with abrasions to the insulation and the damaged neutral were most likely not visible on the 08/16/23 GO165 enhanced inspection, as the zip-tie prevented adequate visual inspection of the two in connection.

Barriers that were Assessed as Opportunities			
Aerial Inspections Program	Expected Performance: Eliminate ignition risk from PG&E structures through pole top drone inspections. For connectors, identify burnt, broken, damaged, corroded, or improperly installed equipment; Observed Performance: Barrier did not exist	A4B2C1D2 - Strategy: Program Strategies; Line Equipment-Related; Program limited to certain conductor	If utilized, an Aerial Inspection imagery may possibly have allowed visual imagery of the exposed spot on the connector and the neutral in contact. The zip-tie pressing secondary conductor and the neutral together might have been visual as well.
Connector Resistance Testing	Expected Performance: (Opportunistic barrier) Test to assess splice integrity across a connector. Resistance across a connector should be less than line resistance. Could be applied by operator (OhmStik) or using a drone (LineBird); Observed Performance: Barrier did not exist		Using the Ohmstik device to measure resistance of connectors on open wire conductors and the current (amps) on insulated conductors, to provide an indication of a malfunctioning component on both primary and secondary circuits.
Infrared Inspections	Expected Performance: Inspections to reduce potential for component failures and facility damage. Identify abnormal conditions such as connector temperatures greater than conductor temperatures and count number of splices.; Observed Performance: Barrier did not exist		An IR inspection may have identified the connector damage due to thermal irregularities
Secondary Service Testing	Expected Performance: Measures the resistance of the entire service drop. Higher than usual resistance is an indicator of a bad connection or damaged conductor. ; Observed Performance: Barrier did not exist		A Bierer ST800 Series® Service Tester Assessment might have identified the connector damage prior to the incident and prevented it.

Potential Next Steps / Associated CAP Items:

- Asset Failure Analysis (AFA) is aware of inconsistencies regarding Pole Test and Treat along with pole loading calculations. AFA is working on closing gaps to improve the pole replacement process.
- CAP #000129295785: Replacement of grey AWAC and neutral on pole SAP ID 100050131 when executing the pole replacement work under EC tag (#129208196).

Single Line Diagram



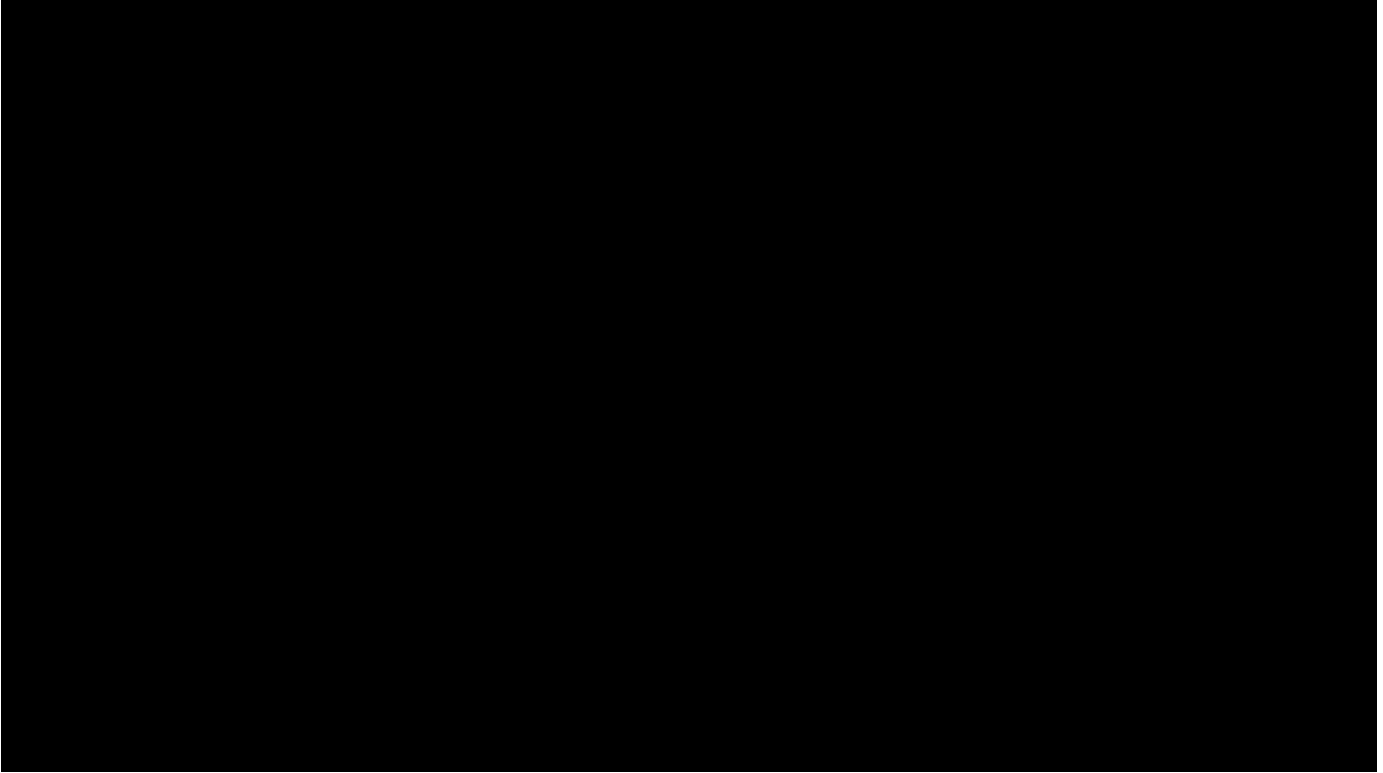


Figure 1 – Google Earth view of Incident Pole. Fire occurred near base of pole.



Figure 2 – Incident Pole (left) and fire footprint near base of pole (right) on June 15, 2024. Photos taken by the troubleshooter.

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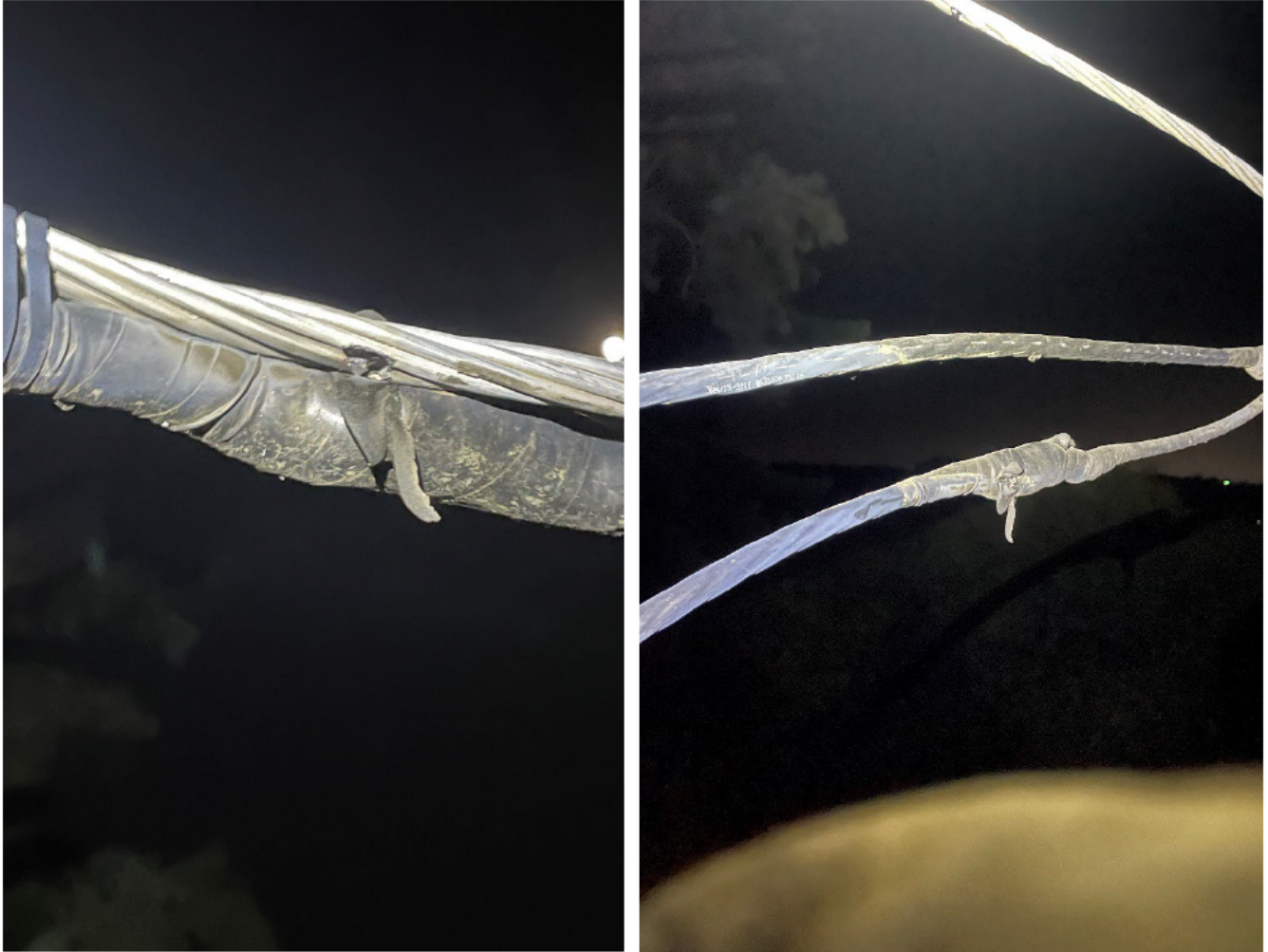
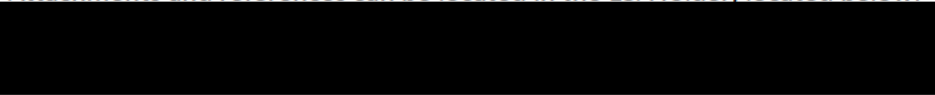


Figure 3 – Zip-tie holding insulated secondary connector with bare neutral (left) and another view after of secondary after zip-tie was removed (right) on June 15, 2024. Photos taken by the troubleshooter.

Attachments

Attachments and references can be located in the ESA folder, located below:



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