



Preliminary Ignition Investigation Report

Ignition Database Index:	20241539
Electric Incident Investigation (EII) Number:	N/A
Incident Name:	N/A
PG&E Facility Ignition?	Yes
CPUC Reportable Ignition?	Yes
Date & Time of Incident:	October 23, 2024 at approximately 1532 hours
Street Address:	Near intersection of Meadow Way and San Geronimo Valley Drive
City:	San Geronimo
County:	Marin
Latitude/Longitude:	38.012561, -122.662975
State Responsibility Area (SRA) / Local Responsibility Area (LRA) / Federal Responsibility Area (FRA)	SRA
PG&E Division:	North Bay
High Fire Threat District (HFTD):	Tier 3
High Fire Risk Area (HFRA):	Yes
EPSS Buffer:	No
Fire Index Area (FIA):	190
Fire Potential Index (FPI) Rating: FIA	R3
Fire Potential Index (FPI) Rating: Circuit	R3
Was there a PSPS event at the time of ignition?	No
Suspected Initiating Event:	Vegetation
Failure Driver:	Contact from Object
Failure Sub-driver:	Contact – Vegetation
Circuit:	Woodacre 1101, 04302-1101
Circuit Protection Zone:	Woodacre CB 1101/2
Nominal Voltage:	12kV
Pole SAP Equipment ID:	102257882
Subject to PRC 4292 Veg Pole Clearance:	Mid-span ignition, however, adjacent Pole SAP ID 102257887 is subject to PRC 4292.
PG&E Equipment associated with ignition:	4 Aluminum Conductor Steel Reinforced (ACSR)
EPSS enabled at time of ignition?	Yes
Fault Type:	Line-to-Ground
Wire Down (Primary)?	Yes
Lead Agency/Agency Having Jurisdiction:	Marin County Fire Department
Fire Size:	3 x 10-foot per Vegetation Management (VM)
FAS Field Remarks:	Two tags made for crew. Unrelated tag, one dig in repair underground service. One tag to repair

	primary wire down. Small fire started on side of road, all grass.
	Found tree on the line near the sub.
HAWC Summary:	N/A
Injuries / Fatalities / Property Damage / Media Attention:	No Injuries/Fatalities/Property Damage/Media Attention
Weather Conditions:	Fair, dry and seasonably warm at 76.7°F with winds up to 4.7 Miles Per Hour (MPH)
Red Flag Warning (RFW) / High Wind Warning (HWW):	RFW – No HWW – No
911 Standby Relief Time:	33 minutes
OIS #:	2602418
ILIS #:	24-0127056
FAS #:	T006533632 T006533696 T006533683 – Cancelled
TOTL #:	N/A
Assigned Attorney:	N/A
Ignition Investigator & Phone:	

Executive Summary

On October 23, 2024 at approximately 1532 hours, PG&E dispatched a troubleshooter to the intersection area of Meadow Way and San Geronimo Valley Drive within the City of San Geronimo in response to a SmartMeter™ auto-generated tag (data shows first SmartMeter™ Last Gasp at approximately 1458 hours). The responding troubleshooter was initially at a dig-in location (deemed unrelated)¹ when he received details of a tree into lines on the two-phase primary overhead segment of the EPSS enabled Woodacre 1101 12kV distribution circuit (see Figure 1). The troubleshooter arrived onsite at 1641 hours and confirmed by phone with the Distribution Operator (DO) that a tree broke and fell mid-span into lines between Pole SAP ID 102257882 (load side) and 102257887 (source side) (Incident Location) (see Figure 2). One span of both phases were brought down and ignited a small vegetation/brush fire measuring approximately 3 x 10-foot in size (see Figure 3) before being fully extinguished by the Marin County Fire Department. The troubleshooter cut open jumpers (one span) source side of Fuse 3299 and additional jumpers (two spans) source side of transformer (CGC #313772955770) to make the line safe for crew repairs.

As a result of this ignition event, two priority “A” Electric Corrective (EC) tags were created in association to OIS (#2602418). EC tag (#129723072) was created to replace the two broken phases of 4 ACSR from the tree into lines.

PG&E Meteorology data pulled from the MesoWest observation site that was approximately 1.3 miles east southeast of the Incident Location indicates a fair, dry and seasonably warm day at 76.7°F with relative humidity at 15%. Winds registered up to 1.2 Miles Per Hour (MPH) with gusts up to 4.7 MPH from the east southeast. The strongest recorded wind was up to 8.6 MPH at 1440 hours. There were no Red Flag or High Wind Warnings issued nor did this ignition occur during a Public Safety Power Shutoff (PSPS) event.

The Vegetation Management (VM) team conducted a post-incident investigation on October 24, 2024. A large 12-inch diameter branch/limb from a Monterey Cypress broke and fell into and through the primary lines (see Figure 4) starting a 3 x 10-foot vegetation fire 30-feet from the base of the tree. The 70-foot tall Monterey Cypress with a diameter at breast height (DBH) of 63-inches located 35-feet from the conductors exhibited evidence of recent branch breaks. Although the incident branch was live, green and showed no signs of foliage discoloration, there were visible damage and severe decay from termites.

The incident Monterey Cypress has an existing prescription in OneVM² under work request #00188765 (RX-02805546). The tree is listed for a major dismantle to remove all dead branches that can potentially cross phase(s). However, the tree work had not been completed prior to the incident date (due date of November 11, 2024). The prescription has since been updated to remove the entire tree.

¹Unrelated dig-in event, a backhoe dug into an underground service 0.5 miles east of tree incident.

² One VM is a vegetation management software that consolidates all 18 VM work management systems into one and will provide map-based work execution, monitoring and validation application.

Although the Monterey Cypress (Tree Number VP-09278588) is not within scope for PG&E Enhanced Vegetation Management (EVM)³ work, the tree is listed on both a Routine and Tree Mortality Inspection Record:

Routine Inspection Record

- The tree was last inspected on August 12, 2024.
- Next planned Routine Pre-Inspection Patrol: June 18, 2025 to July 18, 2025.
- Next planned Routine Tree Work: July 30, 2025 to October 3, 2025.

Tree Mortality Inspection Record

- The tree was last inspected on May 10, 2024.
- Next planned Tree Mortality Pre-Inspection Patrol: December 18, 2024 to January 26, 2025.
- Next planned Tree Mortality Tree Work: January 30, 2025 to April 3, 2025.

An Extent of Condition was also completed by the VM team on October 24, 2024 but the patrol did not identify any Priority 1 (P1) or Priority 2 (P2)⁴ trees or trees with similar conditions as the incident Montrey Cypress. It is noted that many of the trees on the patrol are scheduled and/or actively being worked.

This information is preliminary and subject to change based on new data.

System Protection Analysis

The Woodacre 1101 is located within a Tier 3 High Fire Threat District (HFTD) and High Fire Risk Area (HFRA). PG&E's Distribution Asset Planning team confirmed that Enhanced Powerline Safety Settings (EPSS) were enabled for the Woodacre 1101 distribution circuit and its protective devices. Although no partial voltage alarms were received, oscillograph and Sequence of Events (SOE) data from Circuit Breaker (CB) 1101/2 (Group 3 active protection profile) registered a high impedance line-to-ground fault. The ground current did increase (up to 553 amps) above the ground minimum to trip but the current did not remain at the 0.1 second threshold to trip on ground instantaneous overcurrent. Eventually, the circuit breaker relay tripped on Sensitive Ground Fault (SGF) after an estimated 21 seconds to clear the fault. Based on the settings and the outcome, the protection worked as designed.

³ Closest Monterey Cypress trees within the EVM work plan is located approximately 21+ meters away from the Incident Location.

⁴ P1 trees presents an immediate safety and/or reliability risk with high probability for significant impact. P2 trees are non-immediate high to low safety and/or reliability risk.

Ignition Impact

The ignition event on October 23, 2024 resulted in a fire measuring 3 x 10-foot in size. The resulting outage during PG&E's patrol and repair work lasted a total of 580 minutes affecting a total of 1130 customers. There were no reported injuries, fatalities, property damages or significant media attention associated to this vegetation-caused wire down event.

Sequence of Events

October 23, 2024

- 1458 Hours: First SmartMeter™ Last Gasp.
- 1532 Hours: PG&E dispatched Troubleshooter #1.
- 1630 Hours: CB 1101/2 opens, First No Light (FNL). No PV alarms.
- 1637 Hours: 911 Standby call requesting assistance.
- 1641 Hours: Troubleshooter #1 arrives onsite.
- 1716 Hours: Troubleshooter #1 confirms tree into line.
- 1740 Hours: Troubleshooters #1 opens jumper one span source side of Fuse 3299 and jumpers two spans source side of transformer (CGC #313772955770).
- 1749 Hours: Patrol found no issues, CB 1101/2 closed.
- 2146 Hours: PG&E crew dispatched.

October 24, 2024

- 0127 Hours: CB 1101/2 manually opens for repairs.
- 0131 Hours: LR 96844 manually opens for switching.
- 0150 Hours: Jumpers one span source side of Fuse 3299 closed.
- 0208 Hours: Jumpers two spans source side of transformer (CGC #313772955770) closed.
- 0210 Hours: CB 1101/2 closed to re-energize all customers to close out repairs.

Corrective Notification Associated with Ignition

Two EC tags were created in association to OIS (#260241):

- Priority "A" EC tag (#129723072) created to replace broken conductor.
- Unrelated priority "A" EC tag (#129723025) created to repair underground conductor due to a dig-in incident not contributory to this ignition incident.

Pending Work

Type	Number	Description	Priority	Date Identified	Due Date
EC Notification	123914643	Install/replace missing high voltage sign on adjacent pole.	F	June 24, 2022	June 24, 2027
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.

Asset Info & Most Recent Inspections and Tests

Source Side Structure	102257887	
Info / Inspection	Most Recent Date	Findings
Install Date:	January 1, 1964	50-foot, Douglas Fir, Class 3
Inspection:	June 24, 2022	GO165 Inspection identified missing high sign voltage and noted non-exempt equipment with no vegetation issues. See EC tag (#123914643) in Corrective History section below for details.
	April 10, 2021	GO165 Inspection identified no vegetation issues or compelling abnormal conditions to the pole, its equipment or associated spans.
Patrol:	N/A	
Corrective History:	June 24, 2022	Priority "F" EC tag (#123914643) created to install/replace missing high voltage sign. Tag is still pending/open.
	November 4, 2021	Priority "G" Electric Reliability (ER) tag (#122316630) created to replace OH26 cutouts with 10-E63 fuses.
Aerial Inspection Records:	October 7, 2019	Aerial photography of asset found in Sharper Shape. No aerial photography within iHawk as of yet.
VM Inspection:		
EVM Inspection:	N/A	
Equipment Test:	N/A	
Pole Intrusive Test:	November 30, 2021	Following results: Fair pole top condition with pole bottom listed as "non-serviceable." Test indicates passing result with wood strength testing at 100%.
WSIP Inspection:	April 25, 2019	WSIP Inspection identified vegetation around base of pole. Pole has non-exempt equipment (universal fuse) and pole would need to be cleared. EC tag (#117510699)

		created for 10-foot ground clearance around pole. Pole was cleared
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Load Side Structure	102257882 (Incident Pole)	
Info / Inspection	Most Recent Date	Findings
Install Date:	January 1, 1981	45-foot, Douglas Fir, Class 5
Inspection:	June 24, 2022	GO165 Inspection identified no vegetation issues or compelling abnormal conditions to the pole, its equipment or associated spans. Inspection did note transformer is suspected of having PCB. Referred to existing EC tag (#120786271). See Corrective History section below for details.
	April 10, 2021	GO165 Inspection identified woodpecker damages. EC tag (#120786271) created. See Corrective History section below for details.
Patrol:	N/A	
Corrective History:	April 10, 2021	Priority "E" EC tag (#120786271) created to assess pole for woodpecker damage.
Aerial Inspection Records:	October 7, 2019	Aerial photography of Incident Pole found in Sharper Shape.
		No aerial photography within iHawk as of yet.
VM Inspection:		
EVM Inspection:	N/A	
Equipment Test:	N/A	
Pole Intrusive Test:	June 22, 2020	Passing results with the following: Fair pole top and pole bottom condition. Wood strength testing at 100%.
WSIP Inspection:	April 25, 2019	WSIP Inspection identified no vegetation issues or compelling abnormal conditions to the Incident Pole, its equipment or associated spans.

*Incident Location: Between Pole SAP ID 102257882 and 102257887

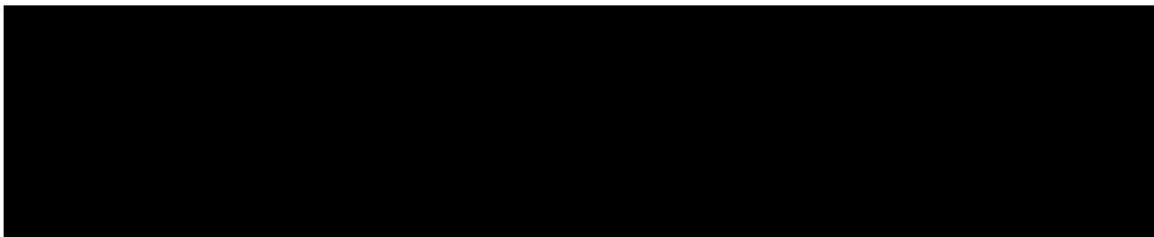
Hazard Barrier Analysis:

Hazard	Vegetation Contact	Sub-Hazard	Fallen Branch
Target	To Reduce Vegetation Contact Caused Ignitions		
Barrier	Expected vs. Observed Performance	Why did the barrier not prevent the ignition event? (See ICF Codes)	Opportunity
Barriers that Positively Affected Ignition			
Enhanced Powerline Safety Settings - Sensitive Ground Fault Settings	<p>Expected Performance: Automatically turn off power when a high impedance fault condition is detected.</p> <p>Observed Performance: Barrier performed as expected</p>	N/A	Operated in 21 seconds. Could lower trip time to 7 seconds.
Barriers that were Assessed as Opportunities			
Covered Conductor on Primary Conductors	<p>Expected Performance: Covered conductor should lower the risk of a wildfire.</p> <p>Observed Performance: Barrier did not exist</p>	A4B2C1D2 – Program limited to certain conductors	Insulated conductors may have reduced ignition impact.
Gridscope	<p>Expected Performance: Enable detection of acoustic disturbances on the system, including line break, vegetation contact, conductor contact, or pole tilt.</p> <p>Observed Performance: Barrier did not exist</p>	N/A	Gridscope did not exist for incident span but could have added further detection capabilities.
Lower Default Sensitive Ground Fault Thresholds	Automatically turn off power when a hazard is detected to trip on high-impedance faults. Lower setting on top 50% of risk.	N/A	Could lower trip time to 7 seconds.

Potential Next Steps / Associated CAP Items:

- None at this time.

Single Line Diagram



LEGEND



Substation



Fuse



Line
Recloser



Area of
Interest

Photos and Diagrams of Events

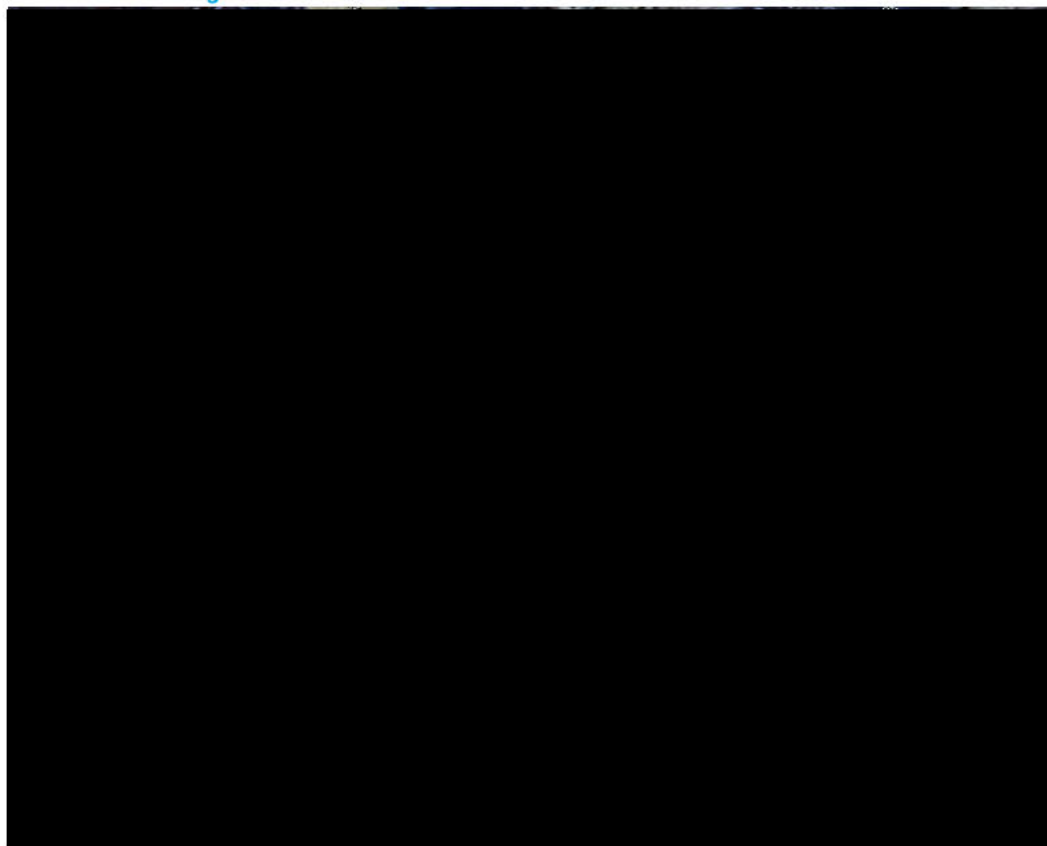


Figure 1 – Google Earth view of Incident Location on the Woodacre 1102. Approximate location of the incident tree into line is marked with a white 'x' with the fire location designated by a red box.



Figure 2 – View of Pole SAP ID 102257882 (left) and 102257887 (right) on October 23, 2024. Photos taken by troubleshooter.



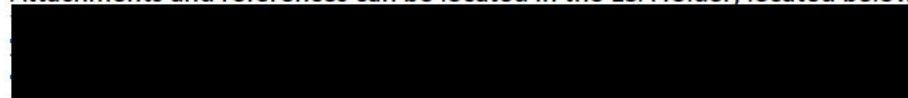
Figure 3 – Fire footprint on October 23, 2024, Photos taken by troubleshooter.



Figure 4 – Incident tree (left) and fracture point (right) on October 24, 2024. Photos taken by the VM team.

Attachments

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



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