



## Preliminary Ignition Investigation Report

Ignition Database Index:	20241371N
Electric Incident Investigation (EII) Number:	N/A
HAWC Incident Name:	Vegetation in Mariposa
PG&E Facility Ignition?	Yes
CPUC Reportable Ignition?	Yes
Date & Time of Incident:	September 18, 2024, at 1300 hours
Street Address:	7531 Hunter Valley Road
City:	Mariposa
County:	Mariposa
Latitude/Longitude:	37.602596, -120.192546
State Responsibility Area (SRA) / Local Responsibility Area (LRA) / Federal Responsibility Area (FRA)	State Responsibility Area
PG&E Division:	Yosemite
High Fire Threat District (HFTD):	Tier 2
High Fire Risk Area (HFRA):	Yes
EPSS Buffer:	No
Fire Index Area (FIA):	420
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:	Utility work/Operation
Failure Driver:	Utility work/Operation
Failure Sub-driver:	Utility work/Operation
Circuit:	Bear Valley 2101
Circuit Protection Zone:	LR10000
Nominal Voltage:	12kV
Pole SAP Equipment ID:	104233163
Subject to PRC 4292 Veg Pole Clearance:	No
PG&E Equipment associated with ignition:	4cu Conductor
EPSS enabled at time of ignition?	Yes
Fault Type:	Line to Ground
Wire Down (Primary)?	Yes
Lead Agency/Agency Having Jurisdiction:	N/A
Fire Size:	Four-foot x Four-foot
FAS Field Remarks:	Planned outages, Crew on the site.

<b>HAWC Summary:</b>	HAWC Line on 09/19/2024 @ 0816 hours to report an ignition by a PG&E contractor-Mariposa County, in a Tier 2 area. Ignition date and time was 09/18/2024 at 1300 hours. The 3 small fires are being reported by [REDACTED] as contained at totaling less than 1 acre. OIS #2571723 impacting 73 customers on the EPSS enabled circuit Bear Valley 2101 was the circuit involving the incident. The contractor suppressed the fires prior to first responders arriving as 911 was called. Per ILIS 24-0112553 report [REDACTED] reports at 1413 hours all repair complete. The location of the wire down was on NE of CGC 100000019375. When crew was crimping together their jumpers the load side phase fell and hit the ground. It started a few small fires which the crew put out. Crew believes the fire was started from wire being hot on the back-feed. FUCO 4594 did not blow and LR 10000 never was a target. SIPT did not respond. Everbridge was not sent, no Incident Report or Preliminary Fire Report sent. Notifications were made to HAWC OPS, PSS only as the fire was reported the day after. An Active Open/Close with EII checked. Closing the incident barring any significant changes to the situation.
<b>Injuries / Fatalities / Property Damage / Media Attention:</b>	No/No/No/No
<b>Weather Conditions:</b>	At 13:00 hours near the Incident Location: Temperature: 64.7°F Relative Humidity: 60% Wind Speed: 5.4 MPH Wind Gust: 9.3 MPH out of the west-southwest
<b>Red Flag Warning (RFW) / High Wind Warning (HWW):</b>	No high wind or red flag warning issued.
<b>911 Standby Relief Time:</b>	N/A
<b>OIS #:</b>	2571723
<b>ILIS #:</b>	24-0112553
<b>FAS #:</b>	24-0112553
<b>TOTL #:</b>	N/A
<b>Assigned Attorney:</b>	N/A
<b>Ignition Investigator &amp; Phone:</b>	[REDACTED]

## Executive Summary

On September 18, 2024, at approximately 1301 hours, a contractor company crew was replacing pole SAP# 101078089 with a new pole SAP# 104233163 on the Bear Valley 2101 12kV circuit two-phase primary overhead distribution circuit. This incident occurred in a Tier 2 High Fire Threat District (HFTD) and High Fire Risk Area (HFRA) during R3 conditions near 7964 Hunter Valley Rd in the city of Mariposa, within PG&E's Yosemite division.

Following the successful pole replacement and conductor transfer, the crew initiated the re-energization process of the primary conductor at the top of the new pole. Unexpectedly, a conductor failure occurred, causing the conductor to fall to the ground.

The conductor failure occurred as the crew utilized a make-and-break tool to secure permanent connections with a hydraulic press, the load side of a 4-cu conductor broke and fell to the ground. Despite the conductor failure, the line remained energized, igniting three small grass fires. Two fires measured approximately two feet by three feet, while the third was approximately four feet by four feet. These ignitions resulted from the energized conductor contacting the ground. The contractor crew successfully extinguished the three small grass fires before the arrival of first responders. A 911 call was placed to report the incident.

Following an investigation of the incident by Summit Construction Company's Safety Manager, it was determined that two distinct types of copper connectors are commonly used for 2-4AR conductors, each requiring a specific type of hydraulic press. In this case, the contractor mistakenly used a BG die, which is not compatible with a small hydraulic press. A KK die would have been the appropriate choice for the Blackburn CF22-1 connector. The excessive pressure exerted by the hydraulic press using the BG die was identified as the root cause of the conductor failure, which subsequently initiated the ignition. This ignition affected 73 customers, resulting in total of 6,380 customer minutes of outage. Power was fully restored to all customers by 1425 hours on September 18, 2024.

The Bear Valley 2101 circuit was protected by Enhanced Power Safety Setting (EPSS). At approximately 1300 hours, LR10000 detected elevated ground current readings of 1A, when the conductor made ground contact. However, the trip setting was configured for 10A/10S high-impedance event through the service transformer. As the conductor fell on the load side, back-feed through the transformer energized the down conductor. This fault is high-impedance and hard to detect even with Down Conductor Detection (DCD) or Sensitive Ground Fault (SGF). As a result, the DCD failed to operate.

It was an unseasonably cool and mostly dry day on August 23, 2024, near the Incident Location as a low-pressure system moved into northern portions of the territory. No rain was reported at the incident time. The high temperature for the day was 73.5°F at 1410 hours and the low temperature was 57.4°F at 0640 hours. The relative humidity was as high as 79% at 0700 hours and as low as 37% at 1440 hours. The strongest wind speed was 19.1 miles per hour (mph) out of the south-southeast at 0220 hours.

## System Protection Analysis

The BEAR VALLEY 2101 circuit was enabled with the Enhanced Powerline Safety System (EPSS) on September 18, 2024. The LR 10000 was set to a Mode 3 with both Down Conductor Detection (DCD) and Sensitive Ground Fault

(SGF) capabilities. The SGF was configured for a 10A/10S impedance high-impedance event through the service transformer. This device was unable to identify the event, as the ground current reading was 1 A, which is below the threshold required for detection.

Ignition Impact

The ignition event on September 18, 2024, resulted in a small grass fire that measured approximately four feet by four feet. The associated outage affected seventy-three customers for a total of 6380 minutes. There were no reported injuries, fatalities, property damages, or significant media attention associated with this event.

Sequence of Events

September 18, 2024

- 1300 Hours: First SmartMeter™ activity detected.
- 1301 Hours: Wire down NE of CGC 100000019375 Open.
- 1321 Hours: Fuse 4594 open.
- 1410 Hours: Wire down NE of CGC 100000019375 Close.
- 1321 Hours: Fuse 4594 Close.

Corrective Notification Associated with Ignition

There are no corrective notifications associated with this incident.

Pending Work

Type	Number	Description	Priority	Date Identified	Due Date
EC Notification	N/A				
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		
Info / Inspection	Most Recent Date	Findings
Install Date:	2024	
Inspection:	N/A	
Patrol:	N/A	
Corrective History:	N/A	
Aerial Inspection Records:	N/A	
VM Inspection:	N/A	
EVM Inspection:	N/A	

Equipment Test:	N/A	
Pole Intrusive Test:	N/A	Pole was installed on September 18, 2024, with no intrusive records.
WSIP Inspection:	N/A	Pole was installed on September 18, 2024, with no WSIP records.

\*Incident Location: SAP Pole ID: 104233163.

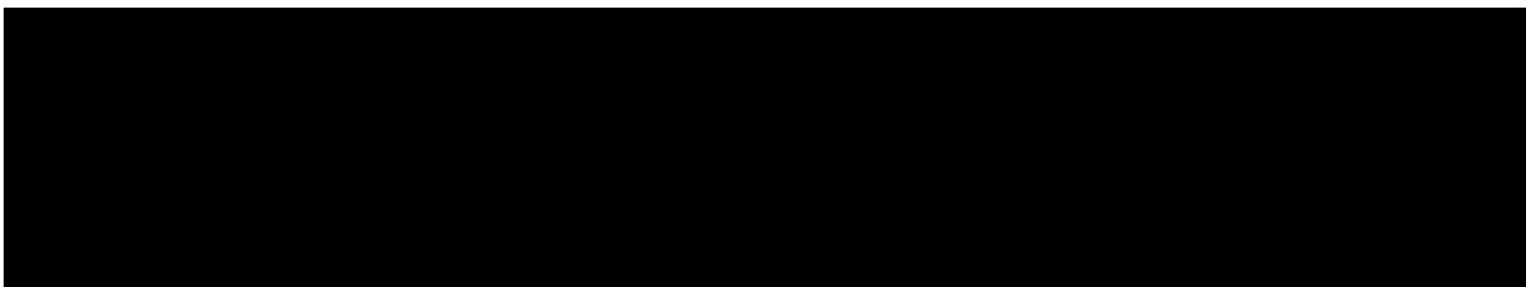
#### Hazard Barrier Analysis:

Hazard	Operational Error	Sub-Hazard	Construction Error
Target	Equipment Work Management.		
Barrier	Expected vs. Observed Performance	Why did the barrier not prevent the ignition event? (See <a href="#">ICF Codes</a> )	Opportunity
Barriers that Negatively Affected Ignition			
Preventing and Mitigating Wildfires While Performing PG&E Work	Expected Performance: Conducting a pre-work meeting to discuss the day's tasks and inspecting equipment to ensure functionality and accuracy.; Observed Performance: Barrier did not perform as expected		Conducting a pre-work meeting to discuss the day's tasks and inspecting equipment to ensure functionality and accuracy.
Proper Construction and Installation	Expected Performance: Conducting a pre-work meeting to discuss the day's tasks and inspecting equipment to ensure functionality and accuracy.; Observed Performance: Barrier did not perform as expected		Adding a step to the process that involves checking the necessary tools and validating the setup before proceeding with construction.

#### Potential Next Steps / Associated CAP Items:

- None.

## Single Line Diagram



### LEGEND



Substation



Fuse

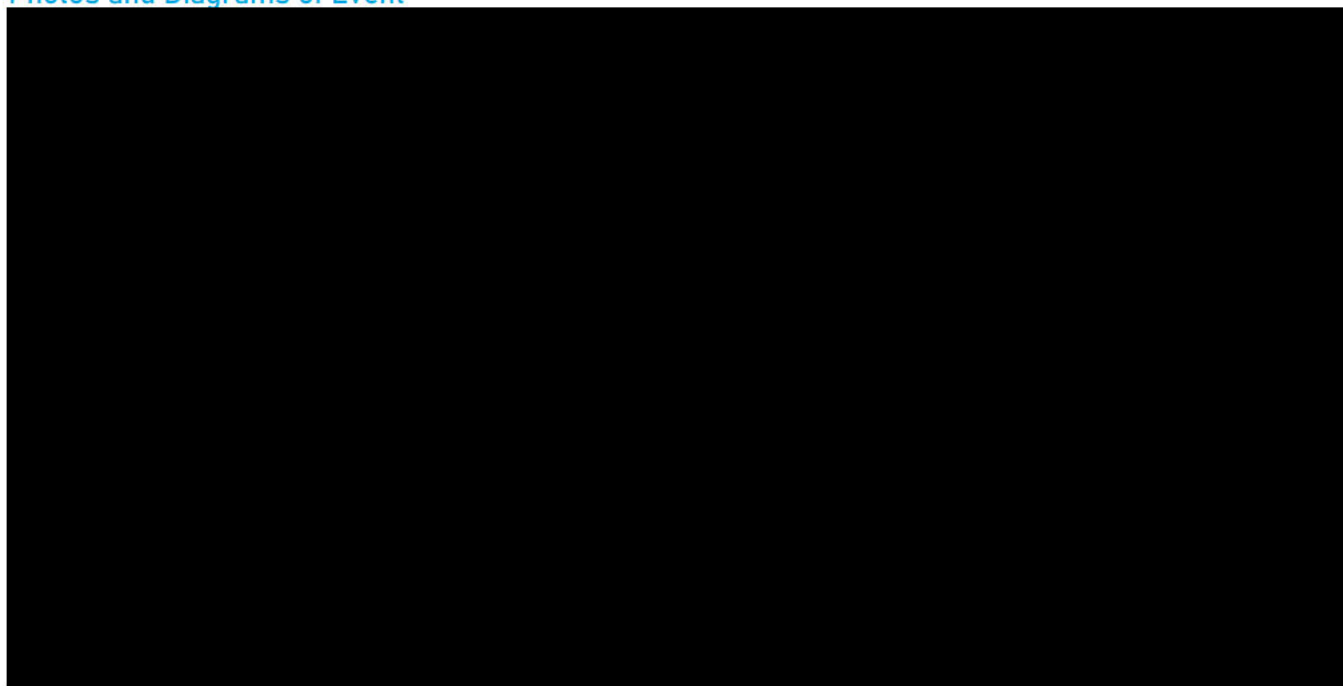


Line  
Recloser

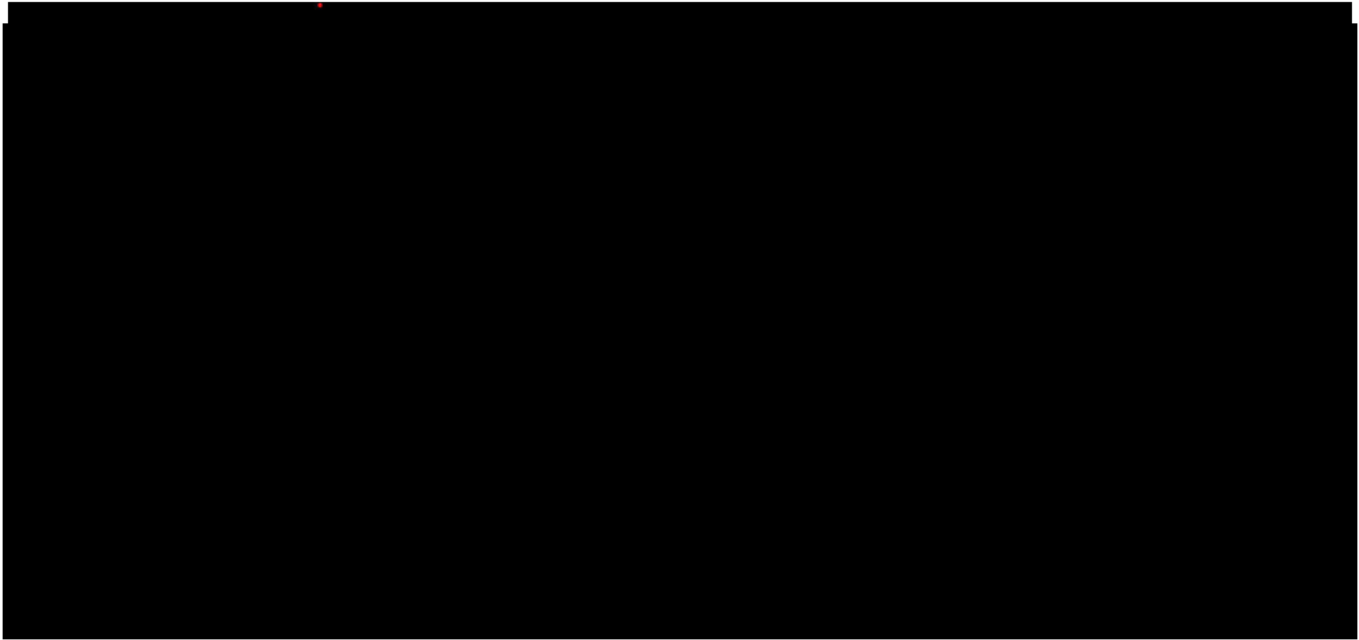


Area of  
Interest

## Photos and Diagrams of Event



*Photo 1: Google Earth of Incident Location.*



*Photo 2: EDGIS of Incident Location.*





*Photo 3: Photo of one of the three impact sites taken by the contractor crew on the date of the ignition.*





*Photo 4: Photo of additional impact site taken by the contractor crew on the date of the ignition.*



*Photo 5: photo of the third area affected by the conductor failure taken by the contractor crew on the date of the ignition.*

## Attachments

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

[REDACTED]  
[REDACTED]

-----END of REPORT-----