



Preliminary Ignition Investigation Report

Ignition Database Index:	20240590N
Electric Incident Investigation (EII) Number:	N/A
Incident Name:	Purisima
PG&E Facility Ignition?	Yes
CPUC Reportable Ignition?	Yes
Date & Time of Incident:	May 28, 2024, at 1205 hours
Street Address:	Camino Purisima and Via Buena Ventura
City:	Arroyo Grande
County:	San Luis Obispo
Latitude/Longitude:	35.16358, -120.5113
State Responsibility Area (SRA) / Local Responsibility Area (LRA) / Federal Responsibility Area (FRA)	SRA
PG&E Division:	Los Padres
High Fire Threat District (HFTD):	Tier 2
High Fire Risk Area (HFRA):	Yes
EPSS Buffer:	No
Fire Index Area (FIA):	510
Fire Potential Index (FPI) Rating: FIA	R1
Fire Potential Index (FPI) Rating: Circuit	N/A
Was there a PSPS event at the time of ignition?	No
Suspected Initiating Event:	Unknown
Failure Driver:	Unknown
Failure Sub-driver:	Unknown
Circuit:	San Luis Obispo-Santa Maria 115kV
Circuit Protection Zone:	N/A
Nominal Voltage:	115kV
Pole SAP Equipment ID:	40751326
Subject to PRC 4292 Veg Pole Clearance:	No
PG&E Equipment associated with ignition:	Unknown
EPSS enabled at time of ignition?	No
Fault Type:	Line to Ground
Wire Down (Primary)?	No
Lead Agency/Agency Having Jurisdiction:	CAL FIRE
Fire Size:	0.26-9.99 acres
FAS Field Remarks:	Per interruption report, "Please notify T-line to get t-man out immediately. Fire is between the SLO-Santa Maria 115kV line and the Diablo-Midway #2

	and #3 500kV lines.”
HAWC Summary:	Per IC - reporting half acre in grass under high tension power lines. First responders are on scene and the IC is reporting “0.5 acre in the grass under some high tension power lines, continue resources. “ Fuel type is light and flashy Fire is bordered by Camino Purisima Road to the southeast. No Outages reported in OMT
Injuries / Fatalities / Property Damage / Media Attention:	0/0/0/0
Weather Conditions:	Weather conditions at 1200 hours near Incident Location: Temperature: 63.4° Relative Humidity: 70% Wind Speed: 7.3 mph from the south Wind Gust: 12.1 mph
Red Flag Warning (RFW) / High Wind Warning (HWW):	No Red Flag Warning or High Wind Warning Issued
911 Standby Relief Time:	N/A
OIS #:	N/A
ILIS #:	N/A
FAS #:	N/A
TOTL #:	T24-010471, INT-18375
Assigned Attorney:	N/A
Ignition Investigator & Phone:	

Executive Summary

On May 28, 2024, at 1205 hours, PG&E became aware that the San Luis Obispo-Santa Maria 115kV Transmission Circuit relayed and the line tested no good.

The San Luis Obispo-Santa Maria 115kV Transmission Circuit is located in the hillside of San Luis Obispo County. This location is in a Tier 2 High Fire Threat District (HFTD) and a High Fire Risk Area (HFRA).

A line near SAP Tower ID 40751326/Structure ID 009/044 (Incident Location-Tower #1) relayed and tested no good. As a result of this relay, PG&E sent a troubleshooter to investigate why the line did not test. At 1244 hours, PG&E received information that there was an ignition between the San Luis Obispo-Santa Maria-115kV and Diablo-Midway #2 and #3 500kV transmission lines. The PG&E troubleshooter arrived onsite at Camino Purisima near Via Diego in Arroyo Grande at 1352 hours to investigate San Luis Obispo-Santa Maria 115kV Transmission Circuit. There was no area wide outage or customer impact associated with this incident.

Upon arrival to Tower #1, the troubleshooter met with CAL FIRE who were onsite mopping up a vegetation fire. The troubleshooter patrolled the area and located damage to a bird guard with indications of an arc (See Figures 7 and 8). The conductor also appeared to have an anomaly on it.

A priority 'A' LC notification (#128900417) was created to take the San Luis Obispo-Santa Maria-115kV line out of service to replace a bird guard along with removing insulators to maintain proper clearance on two separate phases. The transmission line was taken out of service to complete repairs at 1513 hours. The troubleshooter replaced the damaged bird guard and removed one bell from the top and middle phase of the line to maintain clearance. The San Luis Obispo-Santa Maria 115kV Transmission Circuit was put back into service on of May 28, 2024, at 2014 hours.

The fire was named Purisima and burned 0.47 acres. The fire was fully contained by CAL FIRE at 1407 hours. The fire report was requested from CAL FIRE and the cause was undetermined. The CAL FIRE investigation report lists both "Vehicle" and "Power Generation/Transmission/Distribution" as possible causes of the fire. After further investigation, to date, PG&E is unable to determine when the arc on the bird guard occurred. The cause of this ignition has been deemed undetermined.

It was a mild day on May 28, 2024, near the Incident Location. The high temperature for the day was 65.0° at 1650 hours and the low temperature was 50.0° at 0620 hours. The relative humidity was as high as 99% between 0430 and 0740 hours and was as low as 67% at 1650 hours. The strongest wind gust was 17.0 miles-per-hour (MPH) at 1450 hours from the south. This data was taken from a MesoWest station approximately 1.25 miles northwest of the Incident Location, with an elevation of 360 feet.

Due to not being able to determine the cause of this ignition, on June 12, 2024, a meeting was held with key stakeholders to assist in identifying a potential failure point that would have contributed to the ignition in an effort to prevent a similar ignition occurring again. The supervisor of maintenance for transmission attempted, but was not able, to confirm if the marking on the conductor occurred from a flashing incident, or other type of incident. The supervisor of engineering services reviewed the drawings on file of Tower #1 and was able to confirm the tower was within standard.

As a result of the meeting and from discussion amongst all stakeholders, on August 21, 2024, the supervisors for both transmission maintenance and engineering services produced PM #35574155 (Insulator) and 46289500 (Tower Steel) outlining work to be completed on three structures to prevent a similar ignition. Below is the outline of the work to be completed:

STRUCTURE NO.	NOTIFICATION NO.	SCOPE
009/043	129380674	JO# 35574155 <ul style="list-style-type: none"> Install new insulators (9 bells total) 8 fog type and 1 standard, all three phases on CKT#2. Install 1 4R type damper per phase on the San Luis Obispo – Santa Maria circuit (Ckt #2). Damper shall be placed on the ahead side of the suspension clamp toward 009/044 per drawing 015073.
009/044	129380144	JO# 46289500 <ul style="list-style-type: none"> Replace the existing middle and bottom crossarms on the San Luis Obispo – Santa Maria circuit (Ckt #2) with dipped crossarms per drawing 17352. JO# 35574155 <ul style="list-style-type: none"> Install new insulators (9 bells total) 8 fog type and 1 standard, all three phases Install Bird Covers on middle and bottom arm (4 units per arm) Install 1 4R type damper per phase. Damper shall be placed on the ahead side of the suspension clamp toward 010/045 per drawing 015073. Install a quantity of 2 100' zinc weights per phase. 200lbs total per phase.
010/045	129380480	JO# 35574155 <ul style="list-style-type: none"> Replace dead-end insulators on the San Luis Obispo – Santa Maria circuit (Ckt #2) back span toward 009/044. Install jumper string insulators (Ckt #2) (10 bells total) 9 fog type and 1 standard, all three phases. Install a quantity of 2 4R type dampers per phase circuit #2 back span toward 009/044 per drawing 015073.

System Protection Analysis

The San Luis Obispo-Santa Maria 115kV transmission circuit was not enabled with Enhanced Powerline Safety Settings (EPSS) at the time of incident. The San Luis Obispo-Santa Maria 115kV transmission circuit had not been identified to be in scope for EPSS enablement at the time of the incident.

Ignition Impact

The Purisima fire was isolated to the vegetation around the steel lattice structure and finalized at 0.47 acres. CAL FIRE reported the incident to be fully contained on May 28, 2024, at 1407 hours. There were no reports of injuries, fatalities, property damages or media attention. The incident occurred on a 115kV transmission line with no customer impact.

Sequence of Events

May 28, 2024

- 1205 hours – San Luis Obispo-Santa Maria 115kV line relayed and did not test as directed. No customer outage associated with incident
- 1210 hours – Go ahead to manually test San Luis Obispo-Santa Maria 115kV
- 1212 hours – Supervisory Control and Data Acquisition (SCADA) operations performed
- 1244 hours – Notified of a fire between SLO-Santa Maria-115kV and Diablo-Midway #2 and #3 500kV lines, requested troubleshooters onsite
- 1352 hours – Troubleshooter onsite, fire is out and assessing transmission assets
- 1411 hours – Located damaged bird guard at tower 09/44 will need to be cleared to make repairs
- 1436 hours – Request force out to San Luis Obispo-Santa Maria 115kV to repair damaged bird guard

- 1513 hours - San Luis Obispo-Santa Maria 115kV clearance started to begin repairs
- 1526 hours – Confirmed to CAISO San Luis Obispo-Santa Maria 115kV is offline
- 1536 hours - Switching complete – clearance established
- 1601 hours – Repairs begin on no good bird guard
- 1744 hours – Repairs complete, okay to restore San Luis Obispo-Santa Maria 115kV
- 2010 hours – Equipment returned to service
- 2012 hours – Switching complete
- 2014 hours – Record return time of San Luis Obispo-Santa Maria 115kV to CAISO
- 2016 hours - San Luis Obispo-Santa Maria 115kV returned to service

Corrective Notification Associated with Ignition

A priority 'A' LC notification (#128900417) was created post ignition to change out a bird guard that had flash markings. The tag also included removing one bell from the top and middle phases to maintain clearance. The San Luis Obispo-Santa Maria 115kV transmission circuit took clearance on May 28, 2024, to complete repairs. The repairs were completed same day by a PG&E crew and the San Luis Obispo-Santa Maria 115kV transmission circuit was placed back in service at 2016 hours.

Pending Work

Type	Number	Description	Priority	Date Identified	Due Date
EC Notification	N/A				
COE Notification	N/A				
LC Notification	129304328	Replace middle and bottom arm	E	07/29/2024	07/29/2025
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

Incident Structure		
Info / Inspection	Most Recent Date	Findings
Install Date:	1952	Electric Transmission Steel Lattice Tower
Inspection:	06/03/2024	Climbing Inspection, no abnormalities identified
	04/06/2022	Ground Inspection, No Issues to report
Patrol:		
Corrective History:	07/15/2019	Legs A and D bent
Aerial Inspection Records:	02/09/2023	Identified bent secondary on middle phase, primary member leg (D) out of conformance
	03/31/2022	Chipped foundation, mastic worn
VM Inspection:	N/A	
EVM Inspection:	N/A	

Equipment Test:	N/A	
Pole Intrusive Test:	N/A	
WSIP Inspection:	04/22/2019	No items to address

*Incident Location: SAP ID: 40751326/Structure ID 009/044

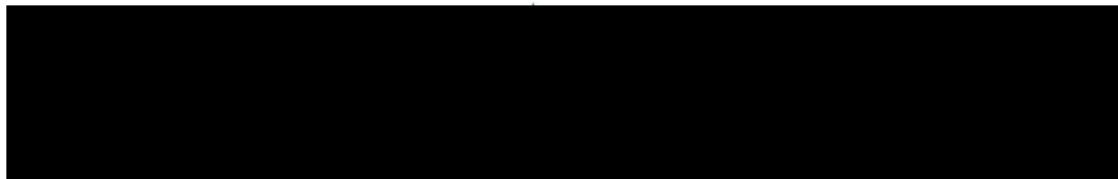
Hazard Barrier Analysis:

As the root cause of this ignition has been undetermined, there are no barrier components to review and or recommend for this incident. If additional information is developed regarding this ignition, a revision to the PIIR will be done and an HBA will be provided at that time.

Potential Next Steps / Associated CAP Items:

- A construction package has been submitted with the following modifications to the tower to be completed (PM #'s 46289500 and 35574155)
 - Replace the existing middle and bottom crossarms on the San Luis Obispo – Santa Maria Circuit (circuit #2) with dipped crossarms.
 - Install new insulators, nine bells total including eight fog type and one standard on all three phases.
 - Install bird guard covers on middle and bottom arm (four units per arm).
 - Install one 4R type damper per phase.
 - Install two, one-hundred-pound zinc weights per phase for a total of two hundred pounds total per phase.

Single Line Diagram



LEGEND



Substation



Fuse



Line
Recloser



Area of
Interest

Photos and Diagrams of Events

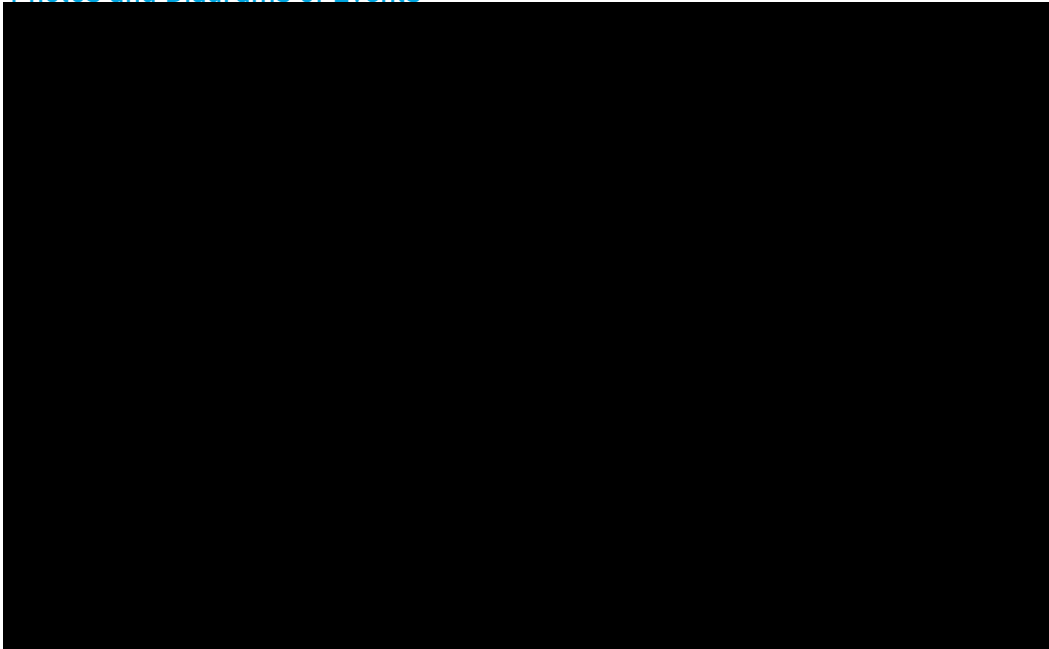


Figure 1 – Photo of impacted structure from ET GIS.

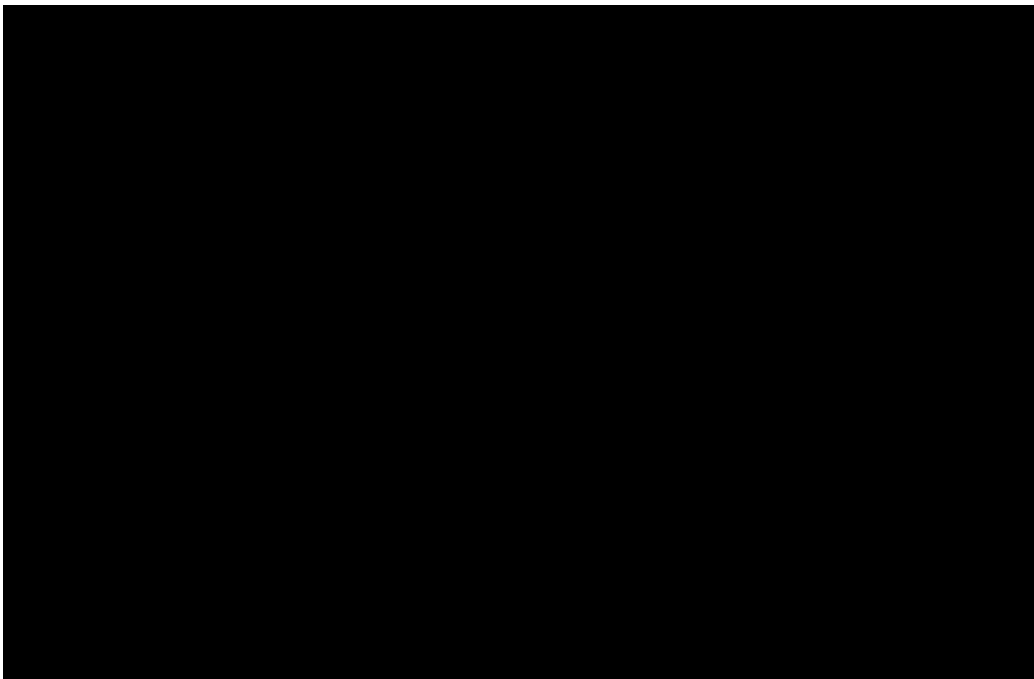


Figure 2 – Photo of area from Google Earth.



Figure 3 – Photo of tower from 04/22/2019 WSIP inspection.



Figure 4 – Photo of top portion of the tower from 04/06/2022 inspection.



Figure 5 – Photo of tower and fire footprint from troubleshooter.

This report is preliminary and based on available information as of **September 9, 2024**; event data is subject to change based upon subsequently discovered information.

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Internal



Figure 6 – Photo of fire footprint from troubleshooter.



Figure 7 – Photo of burn on bird guard from troubleshooter.



Figure 8 – Photo of arc on bird guard and structure.

[Attachments](#)

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

[REDACTED]

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