



Preliminary Ignition Investigation Report

Ignition Database Index:	20241118N
Electric Incident Investigation (EII) Number:	NR240809A
Incident Name:	Blue
PG&E Facility Ignition?	Yes
CPUC Reportable Ignition?	Yes
Date & Time of Incident:	August 9, 2024 @approximately 1411 hours
Street Address:	Near Blue Mountain Drive & Lyon Road
City:	Fairfield (north, rural area)
County:	Solano
Latitude/Longitude:	38.307036, -122.052407
State Responsibility Area (SRA) / Local Responsibility Area (LRA) / Federal Responsibility Area (FRA)	State Responsibility Area
PG&E Division:	Sacramento
High Fire Threat District (HFTD):	Tier 2
High Fire Risk Area (HFRA):	Yes
EPSS Buffer:	No
Fire Index Area (FIA):	177
Fire Potential Index (FPI) Rating: FIA	R4
Fire Potential Index (FPI) Rating: Circuit	N/A
Was there a PSPS event at the time of ignition?	No
Suspected Initiating Event:	Contact – Animal – Bird
Failure Driver:	Contact from object
Failure Sub-driver:	Contact – Animal – Bird
Circuit:	Vaca Suisun Jameson 115kV
Circuit Protection Zone:	Circuit Breaker (CB) 1332, CB 1322, and CB 122
Nominal Voltage:	115kV
Pole SAP Equipment ID:	40865461 Structure 010/078
Subject to PRC 4292 Veg Pole Clearance:	No
PG&E Equipment associated with ignition:	Jumper & Crossarm
EPSS enabled at time of ignition?	No
Fault Type:	Line to Line
Wire Down (Primary)?	No
Lead Agency/Agency Having Jurisdiction:	CAL FIRE
Fire Size:	60 acres

FAS Field Remarks:	N/A
HAWC Summary¹:	Resources responded to a vegetation fire, the Blue Incident. It was located at Blue Mountain Dr and Lyon Rd. in Solano County. This is a Tier 2 area. The fire was listed as forward progress stopped. The fire size was last listed as 60 acres. There was not an outage associated with this incident. The closest circuit was the Vacaville 1104, it was an EPSS circuit. There was no damage to assets. An Everbridge message was not sent. A SIPT Engine responded to this incident and performed the following activities: damage assessment. A(n) Incident Report(s) was not sent. A Preliminary Fire Report was sent. Per email- Patrol found bird contact at structure 10/78. Notifications were made to: HAWC Sup Powers, PSS , DCC, GCC, ENOC, GAS, HYDRO, REMOTE GRID
Injuries / Fatalities / Property Damage / Media Attention:	No/No/No/No
Weather Conditions²:	At 1410 hours nearest the Incident Location: Temperature: 92.1°F Relative Humidity: 18% Wind Speed: 7.1 mph from the south-southeast Wind Gust: 11.6 mph
Red Flag Warning (RFW) / High Wind Warning (HWW):	No/No
911 Standby Relief Time:	N/A
OIS #:	N/A
ILIS #:	N/A
FAS #:	N/A
TOTL #:	T24-013877
Assigned Attorney:	N/A
Ignition Investigator & Phone:	

¹ HAWC summary entered verbatim.

² Weather Observation Site: 006PG (Elevation 661 feet approximately 1.6 miles northeast of the Incident Location): Mesowest

Executive Summary

On August 9, 2024, at 1411 hours, PG&E became aware that the Vaca-Suisun-Jameson 115kV transmission line relayed and did not test as directed by operations. A PG&E troubleshooter was dispatched to do a full patrol due to R4 Fire Potential Index (FPI) conditions. Initially the troubleshooter was going to patrol via helicopter, however, due to in-flight firefighting aircraft responding to the ignition, the troubleshooter conducted a ground patrol. The troubleshooter arrived at SAP Tower ID: 40865461/Structure 010/078 ("Incident Location" – "Tower #1"), observing suppression efforts in the area, a deceased bird near the base of the tower and a small amount of evidence of arcing on the crossarm and jumper of Tower #1. The troubleshooter hypothesized the bird came into contact with the crossarm and the jumper while either landing or taking flight, causing an arc flash event, then igniting the flashy, dry fuel at the base of Tower #1. The ensuing fire was approximately 60 acres in size and was suppressed by CAL FIRE. This incident occurred within a Tier 2 HFTD zone during R4 conditions. There were damages to PG&E equipment warranting repair.

An electric program manager and PG&E's avian subject matter expert (SME) analyzed the incident. They concurred with the hypothesis that the turkey vulture made contact with the jumper directly above the steel crossarm while either landing or taking flight from the crossarm. The arc flash marks (See Figures 2 & 3) observed are indicative of where the bird was landing or taking flight from. It was observed that the jumper has a natural curve (See Figure 4) that closes the clearance space between the jumper and the steel crossarm below it. Due to this curvature, there was a proposal that removing the jumpers from this tower entirely could create the larger clearance needed to mitigate bird contact. The decided mitigation for this location is to install bird guards on the steel crossarms to create a buffer between the energized components and steel crossarm [LC Priority 'E' Tag (#129436259)]. A Bird Incident Report³ was created on August 13, 2024, for the incident.

It was a hot and dry day on August 7, 2024 near the Incident Location. The high temperature for the day was 95.0°F at 1510 hours and the low temperature was 69.3°F at 0000 hours. The relative humidity was as high as 52% at 0010 hours and was as low as 12% at 0150 hours. The strongest wind gust was 24.9 miles per hour (mph) at 2020 hours from the west.

System Protection Analysis

The Vaca-Suisun-Jameson 115kV transmission line is a networked line that is not part of the Transmission Enhanced Powerline Safety Settings (EPSS) program. The Incident Location was protected by Vaca-Dixon Substation circuit breakers (CB's) 1332 and 1322 and Suisun Substation CB 122. The composite protection system operated as designed.

Ignition Impact

The ignition was isolated to the dry, grassy vegetation on the ground surrounding Tower #1, resulting in an 80 acre burn scar. There were no reports of injuries, fatalities, property damage, or media attention. There was one commercial customer impacted for 328 minutes.

³ Bird Incident Reporting (PG&E's Internal Intranet interface for avian contact record keeping) – Incident Number: ETR0809241411

Sequence of Events

August 9, 2024

- 1412 hours – Vaca-Suisun-Jameson 115kV line relays and did not test as directed by operations.
- 1420 hours – T-Line Supervisor notified by general control center (GCC) & requested to do a full patrol of line due to R4 conditions.
- 1428 hours – Troubleshooter reports they will arrange for helicopter to conduct full air patrol.
- 1638 hours -- Troubleshooter reports they are unable to do full air patrol due to firefighting aircraft in the area (temporary flight restrictions in place).
- 1713 hours – Per TRANS-SUB update email ‘Patrol found bird contact at structure 10/78.’
- 1746 hours – Troubleshooter confirms bird contact at 10/78 and small amount of arc damage on the crossarm but no damage requiring repairs.
- 1933 hours – Line patrol reported completed, no trouble found – shift supervisor approved restoration plan and report.
- 1939 hours – Equipment returned to service/path restored.

Corrective Notification Associated with Ignition

There were no damages warranting repairs as a result of this incident.

Pending Work

Type	Number	Description	Priority	Date Identified	Due Date
EC Notification	N/A				
COE Notification	N/A				
LC Notification	129436259	Install bird guard per engineering.	E	August 26, 2024	November 26, 2024
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/Location	SAP Tower ID: 40865461 – Structure 010/078	
Info / Inspection	Most Recent Date	Findings
Install Date:	1922	Lattice steel double circuit, concrete foundation, 83.7 feet tall.
Inspection ⁴ :	March 26, 2024	Conductor Issues – Armor rod damaged, missing, or in poor condition. Bottom and middle phase on the guest circuit have damaged armor rod.

⁴ Steel/Lattice or LDSP Ground Detailed Inspection

This report is preliminary and based on available information as of **August 12, 2024**; event data is subject to change based upon subsequently discovered information.

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		3 – Moderate Damage – E-Tag (As of 9/3/24, no E-Tag found for this condition)
Patrol:	N/A	
Corrective History:	N/A	
Aerial Inspection Records:	June 13, 2022	Sherlock ⁵ photos in shared folder.
VM Inspection:	N/A	
EVM Inspection:	N/A	
Equipment Test:	N/A	
Pole Intrusive Test:	N/A	
WSIP Inspection:	N/A	

*Incident Location: SAP Tower ID: 40865461/Structure 010/078

Hazard Barrier Analysis:

Hazard	Animal Contact	Sub-Hazard	Avian Contact (Transmission)
Target	Avian contact on transmission tower in Tier 2 HFTD causing 60-acre fire.		
Barrier	Expected vs. Observed Performance	Why did the barrier not prevent the ignition event? (See ICF Codes)	Opportunity
Barriers that were Assessed as Opportunities			
Bird Protection Retrofit Program	<p>Expected Performance: Prevent birds from creating electrical faults between energized components with physical barriers, including on adjacent poles.</p> <p>Observed Performance: Barrier did not exist</p>	A4B2C2D1 – Location not prioritized for program	This location is ideal for jumper removal, creating a larger clearance between energized components.
Raptor Protection Hardware	<p>Expected Performance: Prevent birds from creating electrical faults between energized components with physical barriers.</p> <p>Observed Performance: Barrier did not exist</p>	A4B2C5D2 – Location not prioritized for program	This location is ideal for jumper removal, creating a greater clearance space between energized components.

⁵ Sherlock is a third-party aerial drone services provider, specializing in exterior inspections, supplements, and creatives.


Pole Clearing Program	Expected Performance: Limit fire spread potential near poles for a PG&E equipment involved ignition event within State Responsibility Areas, poles with non-exempt equipment, and selected poles outside of the regulations of PRC 4292. Clear 10-ft radius around subject poles from 0-8 feet above ground level.; Observed Performance: Barrier did not exist	A4B2C3D1 – Only applies to poles with non-exempt equipment	Transmission towers/not slated for pole clearing.
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Potential Next Steps / Associated CAP Items:


- LC Priority 'E' Tag (#129436259) was created on August 26, 2024, to install bird guards on crossarms (frog leg crossarm). Due date is November 26, 2024.


Single Line Diagram

LEGEND

 Substation

 Fuse

 Line Recloser

 Area of Interest



Junction

Photos and Diagrams of Events

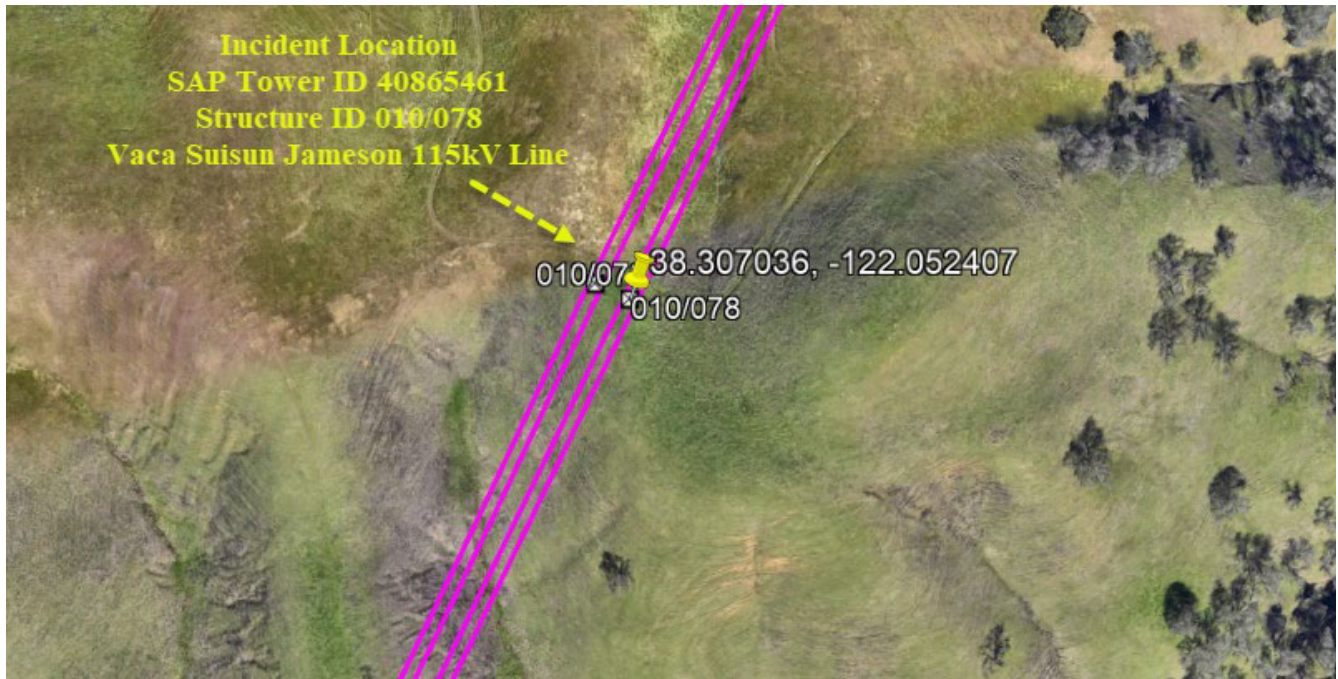


Figure 1 Google Earth Pro map of Incident Location.

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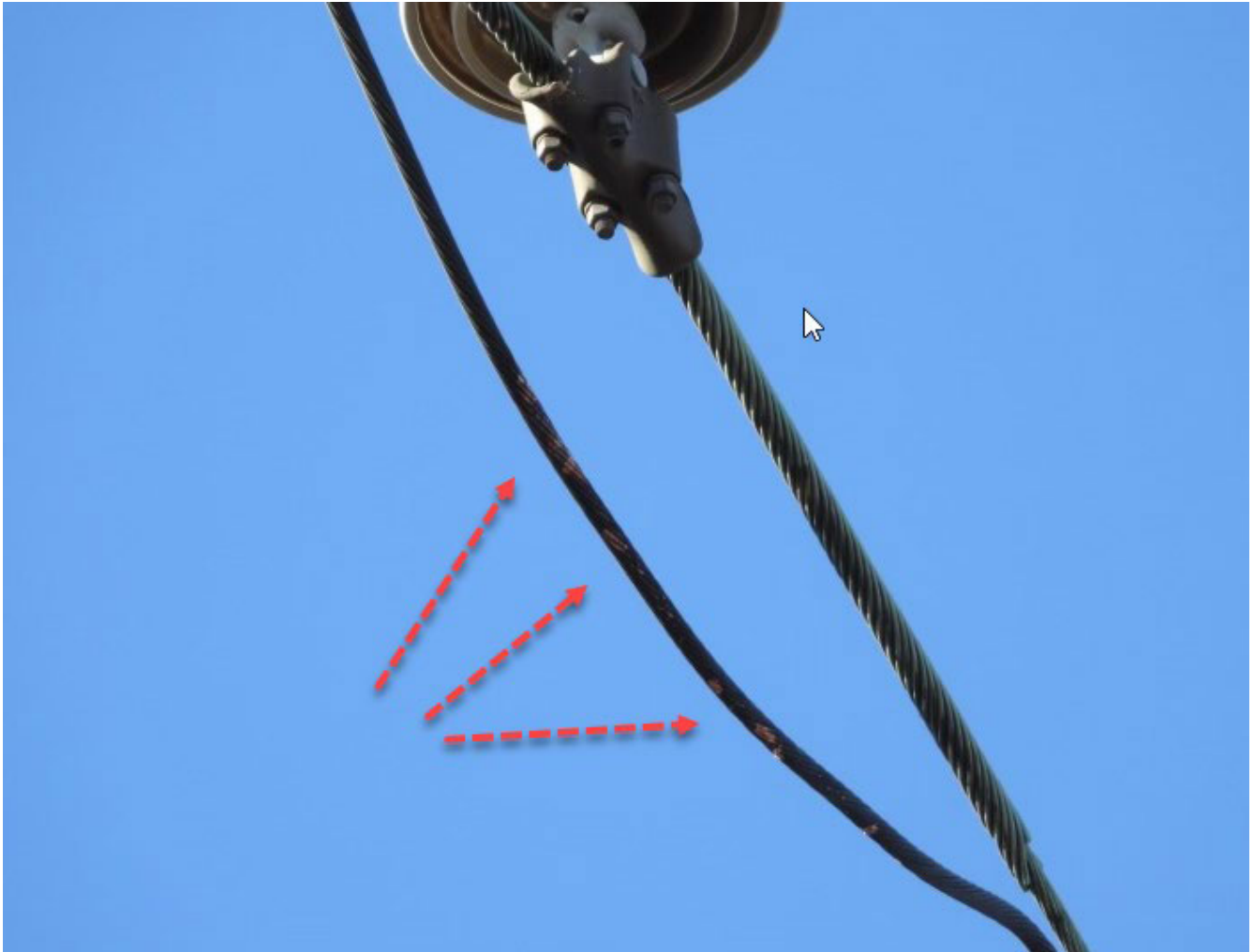


Figure 2 Jumper on Tower #1 with arc marks pointed out in the photo. Photo taken by troubleshooter on August 9, 2024.



Figure 3 Jumper with arc marks pointed out in the photo. Photo taken by troubleshooter on August 9, 2024.



Figure 4 SAP Tower ID 40865461 – Structure 010/078, photo taken by troubleshooter on August 9, 2024.



Figure 5 Burn scar with SAP Tower ID 40865461/Structure 010/078 pictured center.



Figure 6 Deceased turkey vulture found at the base of Tower #1. Photo taken by troubleshooter on August 9, 2024.

Attachments

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



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