



## Preliminary Ignition Investigation Report

<b>Ignition Database Index:</b>	20240909N
<b>Electric Incident Investigation (EII) Number:</b>	N/A
<b>Incident Name:</b>	Springs
<b>PG&amp;E Facility Ignition?</b>	Yes
<b>CPUC Reportable Ignition?</b>	Yes
<b>Date &amp; Time of Incident:</b>	July 09, 2024 @1844 hours
<b>Street Address:</b>	approximately 0.4 mile south of 3900 Deerwood Dr
<b>City:</b>	Ukiah
<b>County:</b>	Mendocino
<b>Latitude/Longitude:</b>	39.18382, -123.15567
<b>State Responsibility Area (SRA) / Local Responsibility Area (LRA) / Federal Responsibility Area (FRA)</b>	State Responsibility Area
<b>PG&amp;E Division:</b>	Humboldt
<b>High Fire Threat District (HFTD):</b>	Tier 2
<b>High Fire Risk Area (HFRA):</b>	Yes
<b>EPSS Buffer:</b>	No
<b>Fire Index Area (FIA):</b>	154
<b>Fire Potential Index (FPI) Rating: FIA</b>	R4
<b>Fire Potential Index (FPI) Rating: Circuit</b>	R4
<b>Was there a PSPS event at the time of ignition?</b>	No
<b>Suspected Initiating Event:</b>	Contact from Object
<b>Failure Driver:</b>	Contact from Object
<b>Failure Sub-driver:</b>	Contact – Animal - Bird
<b>Circuit:</b>	Mendocino-Philo JCT-Hopland 60kV
<b>Circuit Protection Zone:</b>	N/A
<b>Nominal Voltage:</b>	60kV
<b>Pole SAP Equipment ID:</b>	40820915
<b>Subject to PRC 4292 Veg Pole Clearance:</b>	No
<b>PG&amp;E Equipment associated with ignition:</b>	Jumper/ Steel Crossarm
<b>EPSS enabled at time of ignition?</b>	No
<b>Fault Type:</b>	Line to Ground
<b>Wire Down (Primary)?</b>	No
<b>Lead Agency/Agency Having Jurisdiction:</b>	CAL FIRE
<b>Fire Size:</b>	Approximately two acres
<b>FAS Field Remarks:</b>	N/A

<b>HAWC Summary<sup>1</sup>:</b>	Resources responded to a vegetation fire at 3200 Block of Vichy Springs Rd, Ukiah in a Tier 2 area. The fire was contained at 2 acres. There was not an outage in the immediate area. This was an EPSS enabled circuit Ukiah115 in the immediate area. Per TransSub email Mendocino-Philo JCT-Hopland 60kV line (HFRA) (trouble) Bird strike at 5/1, followed by a 2-acre fire. Fire suppressed no damage to assets. Notifications: HAWC Ops, PSS, GCC
<b>Injuries / Fatalities / Property Damage / Media Attention:</b>	0 / 0 / 0 / 0 /
<b>Weather Conditions<sup>2</sup>:</b>	At 1850 hours near the Incident Location: Temperature: 93.3° Relative Humidity: 71.1% Wind Speed: 6.5 mph Wind Gust: 9.6 mph out of the west-northwest
<b>Red Flag Warning (RFW) / High Wind Warning (HWW):</b>	N/A
<b>911 Standby Relief Time:</b>	N/A
<b>OIS #:</b>	N/A
<b>ILIS #:</b>	N/A
<b>FAS #:</b>	N/A
<b>TOTL #:</b>	T24-012304
<b>Assigned Attorney:</b>	N/A
<b>Ignition Investigator &amp; Phone:</b>	<div></div> <div></div>

■ Copied verbatim from HAWC report.

<sup>2</sup> Weather Observation Site; PG896 (Elevation 818 ft. Approx. 1.0 mile north-northwest of the Incident Location): Mesowest

## Executive Summary

On July 09, 2024, at 1842 hours, PG&E became aware that the Mendocino-Philo JCT-Hopland 60kV transmission line relayed. A PG&E troubleshooter was dispatched to patrol, arriving to an overhead (OH) segment of the Mendocino-Philo JCT-Hopland 60kV Transmission Circuit at a rural location approximately three miles northeast of Ukiah. The troubleshooter observed a deceased raven in the burn scar, near the base of SAP Tower ID: 40820915/Structure ID: 005/006 ("Incident Location" – "Tower #1"). The troubleshooter hypothesized a raven struck a jumper/steel crossarm and was electrocuted, causing an arc flash, igniting the light, flashy fuel at the base of the Tower #1. The ensuing fire was approximately two acres and suppressed by CAL FIRE. This incident occurred within a Tier 2 HFTD during R4 conditions. Due to the R4 conditions observed, the GCC did not attempt to re-energize and deemed that a circuit patrol would be needed first. Enhanced Powerline Safety Settings (EPSS) were not enabled for the Mendocino-Philo JCT at the time of the incident. There was no damage to PG&E equipment warranting repair.

An electric program manager and PG&E's avian subject matter expert (SME) analyzed the incident. They concurred that the raven made contact with the jumper directly above the middle crossarm while either landing or taking flight from the middle crossarm (See Figure 4, 6, and 7). The arc flash marks (See Figure 7) observed are indicative of where the bird was landing or taking off from. A Bird Incident Report<sup>3</sup> was created on July 18, 2024, for the incident. The Mendocino-Philo JCT-Hopland 60kV transmission line is currently under construction<sup>4</sup>. It is being redesigned with new support structures, line orientation, and all new hardware. Bird mitigation protection is being considered in the new design package. It was a hot and dry day on July 9, 2024, near the Incident Location. The high temperature for the day was 100.3°F at 1550 hours and the low temperature was 56.2°F at 0620 hours. The relative humidity was as high as 78% at 0640 hours and as low as 25% at 1410 hours. The strongest wind speed was 11.5 miles per hour (mph) out of the northwest at 1820 hours. The National Weather Service issued an Excessive Heat Warning that was in effect for the location at the time of the incident.

## System Protection Analysis

The Mendocino-Philo JCT-Hopland 60kV transmission line is a networked transmission line that is not enabled with EPSS. The Incident Location was protected by Circuit Breaker (CB) 32 at the Hopland substation, CB 62 at the Philo JCT and CB 12 at the Mendocino substation.

## Ignition Impact

The ignition was isolated to the vegetation around the base of Tower #1, resulting in a fire approximately the size of two acres. There was no report of injuries, fatalities, property damage or media attention. The incident happened on a 60kV transmission line with zero customer impact.

## Sequence of Events

**June 9, 2024**

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<sup>3</sup> Bird Incident Reporting (PG&E's internal intranet interface for avian contact record keeping) - Incident Number: ETR0709241855

<sup>4</sup> PM# 74046298

- 1842 Hours - Mendocino-Philo JCT-Hopland (HFRA), 60 KV, Line, Opened-Relayed-Did Not Test-Wildfire Mitigation. No customer interruption. Weather clear. Line currently resides in R4.
- 1846 Hours - Troubleshooter notified of trouble.
- 1921 Hours – GCC notified of fire near Vichy Springs Rd, Ukiah
- 2001 Hours - Troubleshooter reports bird strike at Structure 005/006, followed by a two-acre fire. Fire suppressed, no damage to assets.

#### June 10, 2024

- 0945 Hours – Per Operation Supervisor strategy, “OK will be given to restore when patrol is complete.”
- 0946 Hours – Confirms Patrol complete, all workers, grounds, and equipment in the clear, and resumed switching to restore.
- 0951 Hours – Equipment returned to service/path restored.
- 0956 Hours – Return switching complete.

#### Corrective Notification Associated with Ignition

- LC Priority “A” Tag (#129193990) was created and completed on July 9, 2024, in response to a bird contact that caused a two-acre grass fire. There was no work performed as a result of this tag; the tag was only for patrol purposes.
- LC Priority “A” Tag (#129204469) was created and completed on July 10, 2024, to perform a non-routine helicopter patrol of the entire circuit due to a bird strike at Structure 005/006.

#### 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

<b>Incident Structure</b>	SAP Tower ID: 40820915/Structure ID: 005/006	
<b>Info / Inspection</b>	<b>Most Recent Date</b>	<b>Findings</b>
Install Date:	Unknown	<i>Could not verify pole installation date.</i>
Inspection:	June 22, 2022	Structure is damaged, broken, rotten, cracked outside what would be considered normal, leaning beyond 10%, or presenting any other compelling abnormal structure conditions. Abnormal crossarm, insulator, or cutout conditions. Compelling abnormal conductor conditions.
Patrol:	N/A	



Corrective History:	May 19, 2022	Per completed LC Tag (#123679604); unearthed tower footings and verified it is direct buried. Applied mastic buried footings to original state upon arrival to address issues to steel structure foundation issue. Completed on April 11, 2023.
	May 19, 2022	Per completed LC Tag (#123679601); replaced bent member as required to fix issues with steel structure. Completed on April 12, 2023.
Aerial Inspection Records:	May 6, 2022	Sherlock <sup>5</sup> 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 Pole ID: 40820915/Structure ID: 005/006

#### Hazard Barrier Analysis:

Hazard	Animal Contact	Sub-Hazard	Avian Contact (transmission)
Target	Avian Contact in Tier 2 HFTD leading to two-acre fire.		
Barrier	Expected vs. Observed Performance	Why did the barrier not prevent the ignition event? (See <a href="#">ICF Codes</a> )	Opportunity
Barriers that Positively Affected Ignition			
Wildfire and Smoke Detection Cameras	Expected Performance: Enable faster response through detection of wildfires and smoke via standard and AI-enabled cameras; Observed Performance: Barrier performed as expected		AI cameras detected smoke and CAL FIRE was dispatched to the ignition.
Barriers that were Assessed as Opportunities			
Bird Protection Retrofit Program	Expected Performance: Prevent birds from creating electrical faults between energized components with physical barriers, including on adjacent poles.; Observed Performance: Barrier did not exist	A4B2C5D2 - Strategy: Program Strategies; Avian-Related; Location not prioritized for program.	This line is being removed and re-designed.

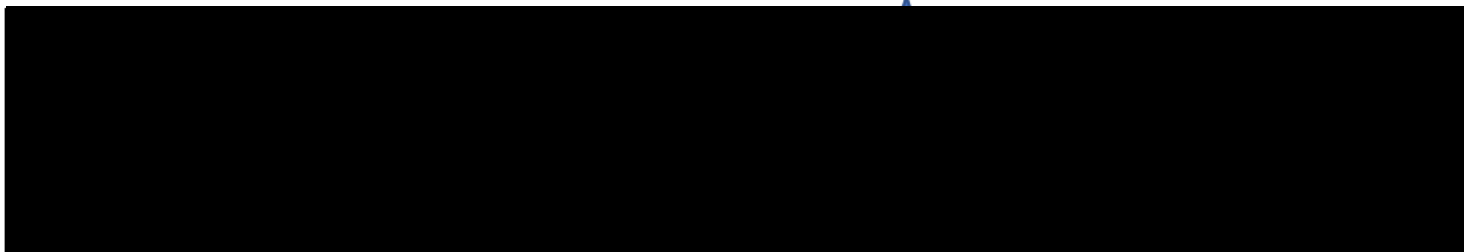
<sup>5</sup> Sherlock is a third-party aerial drone services provider, specializing in exterior inspections, supplements, and creatives.

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 - Strategy: Program Strategies; Pole-Clearing-Related ; Only applies to poles with non-exempt equipment ]	Transmission tower in rural location with no non-exempt equipment.
Raptor Protection Hardware	Expected Performance: Prevent birds from creating electrical faults between energized components with physical barriers (insulating hardware), such as equipment guards/covers, shields, perch deterrents, conductor spacers, nest platforms, bird flight diverters; Observed Performance: Barrier did not exist	A4B2C5D2 - Strategy: Program Strategies; Avian-Related; Location not prioritized for program.	This line is being removed and redesigned. Custom Raptor Protection Hardware is not necessary.


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


- The Mendocino-Philo JCT-Hopland 60kV transmission line is currently under construction. It is being redesigned with new support structures, line orientation, and all new hardware. Bird mitigation protection is being considered in the new design.


#### Single Line Diagram




LEGEND

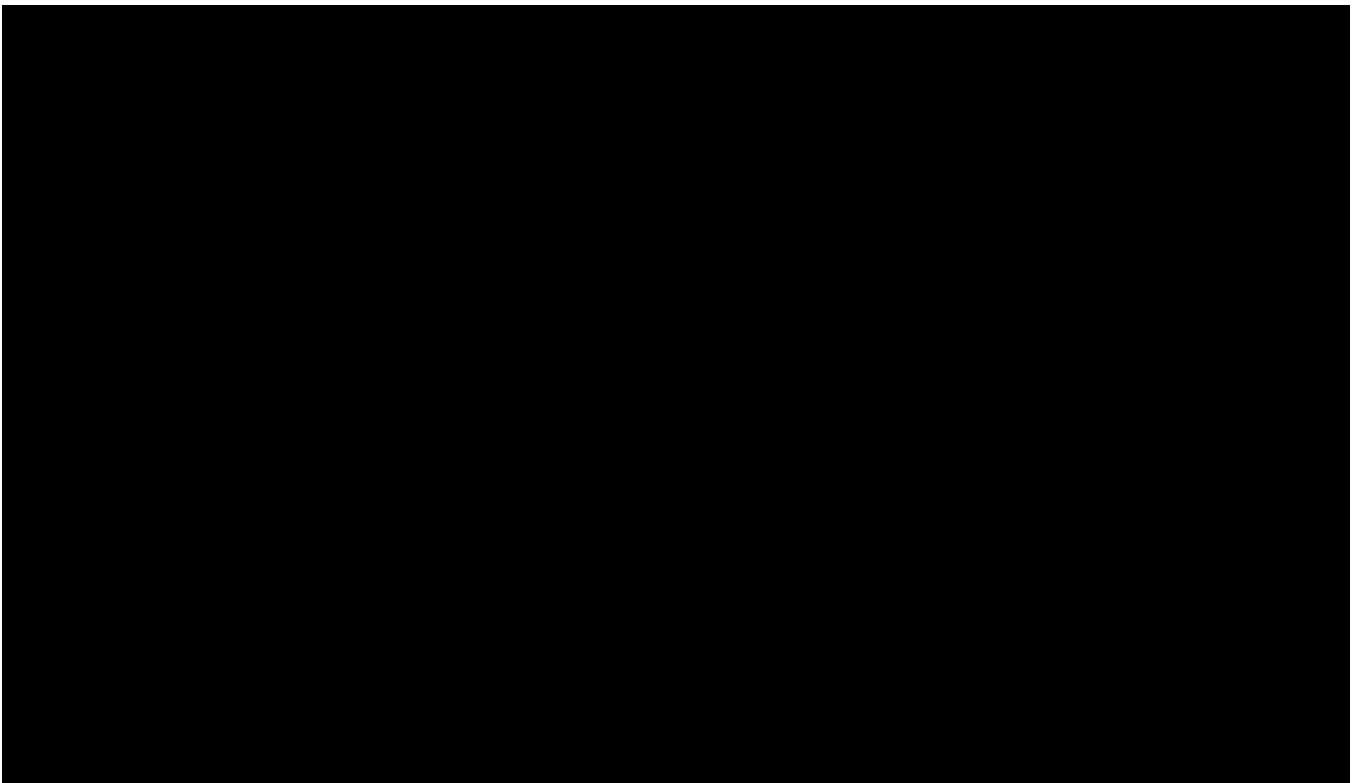
 Substation

 Fuse

 Line Recloser

 Area of Interest

Photos and Diagrams of Events



*Figure 1 Google Earth Pro map of Incident Location.*



*Figure 2 Photo of burn scar with raven in center of photo, the base of Tower #1 to the right. Photo taken by troubleshooter on July 9, 2024.*





*Figure 3 Aerial/drone photo of burn scar (facing west) taken by Ignition Investigator on July 17, 2024. Tower #1 pictured in center.*



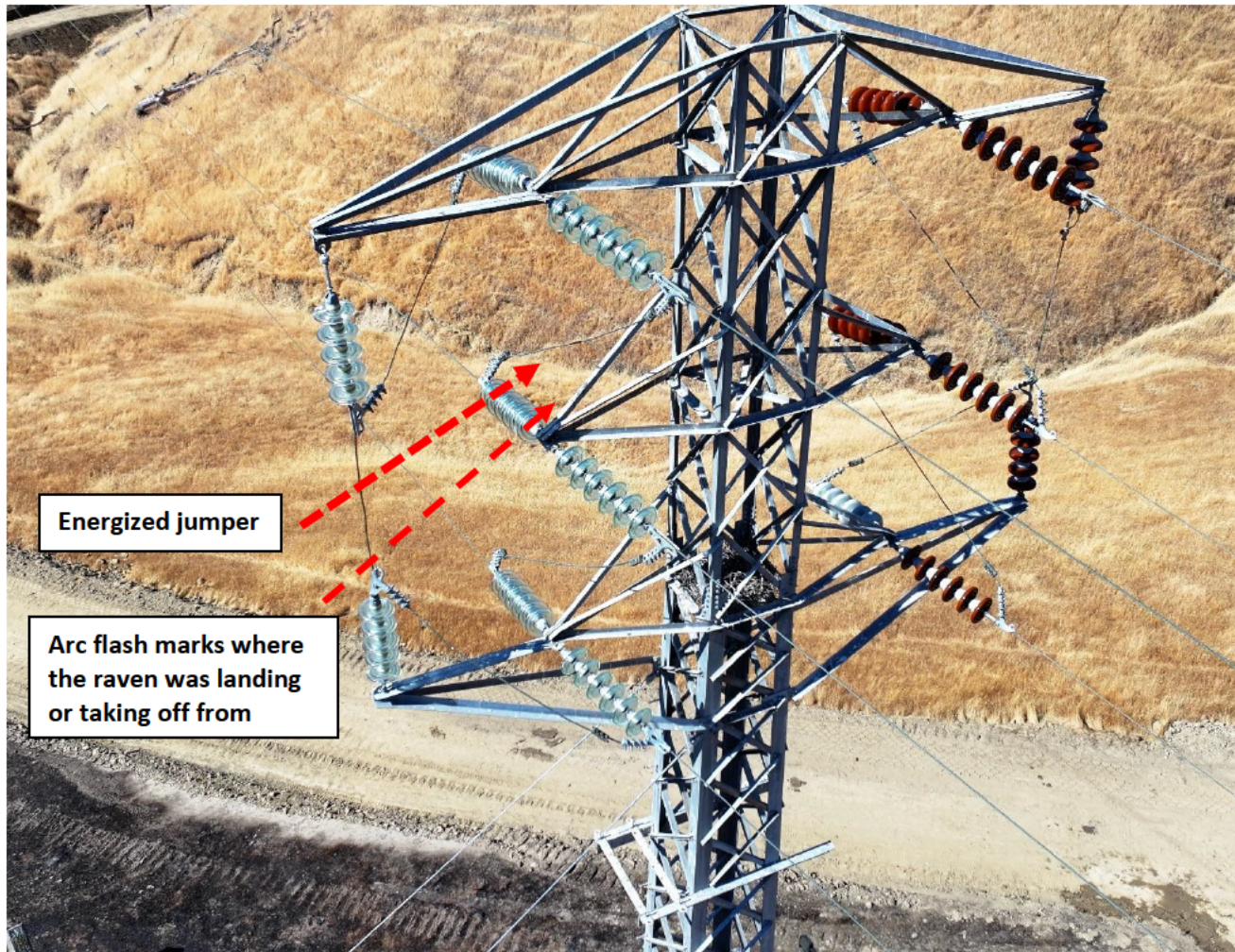


*Figure 4 Aerial/drone photo of burn scar (facing north) taken by Ignition Investigator on July 17, 2024.*



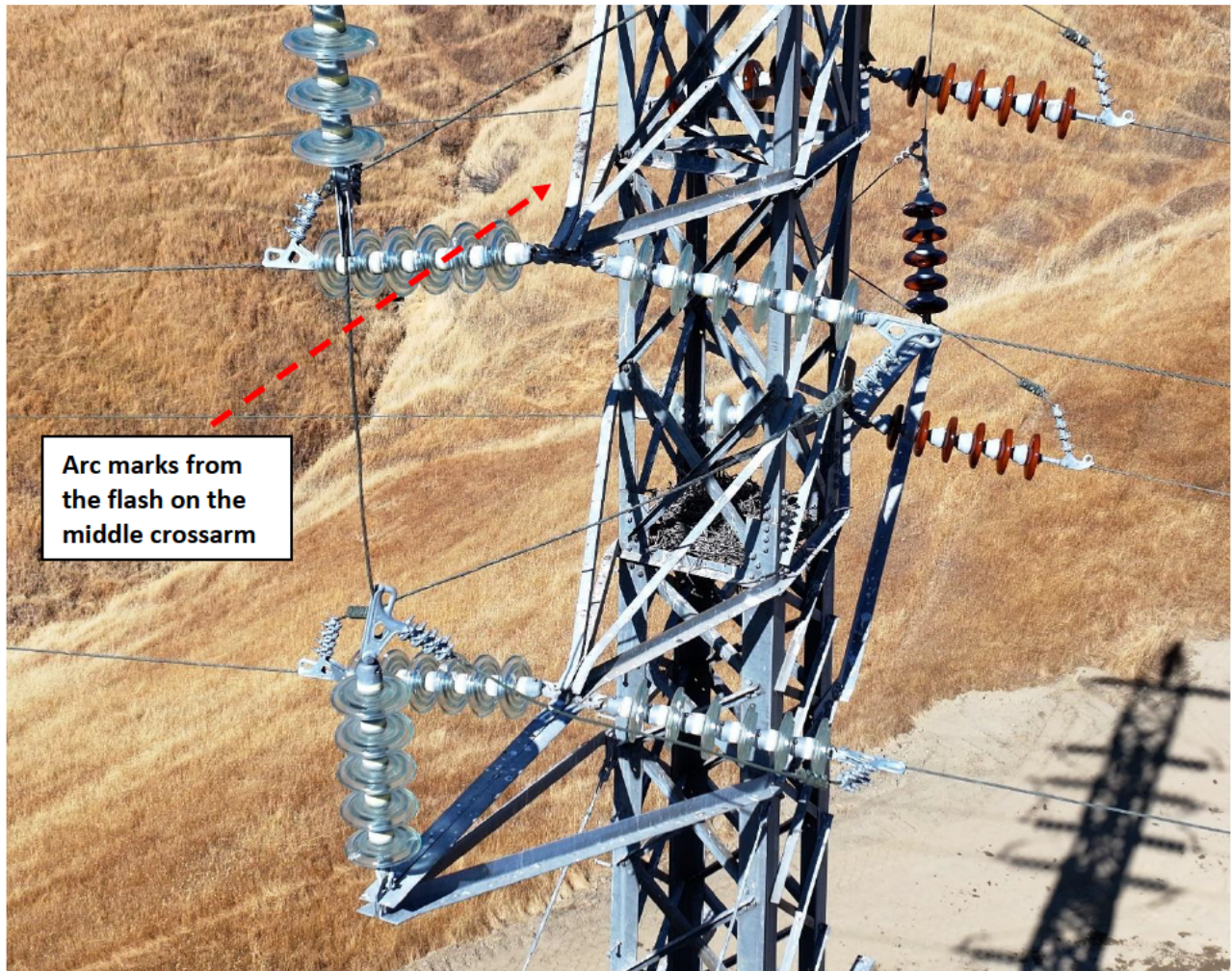
*Figure 5 SAP ID 40820915 – Tower 005/006 with bird nest next to middle, steel crossarm. Photo taken by troubleshooter on July 9, 2024.*





*Figure 6 Aerial/drone photo of SAP ID 40820915 - Tower 005/006 showing arc marks from bird contact. The middle crossarm is where the raven was landing or taking off from when they made contact with the energized jumper above. Photo taken by Ignition Investigator on July 17, 2024.*





*Figure 7 Aerial/drone photo of SAP ID 40820915 - Tower 005/006, closer view of arc marks from the flash on the middle crossarm. Photo taken by Ignition Investigator on July 17, 2024.*





*Figure 8 Photo of flashed raven found at the base of SAP ID 40820915 - Structure 005/006. Photo taken by troubleshooter on July 9, 2024.*

## Attachments

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



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