



Preliminary Ignition Investigation Report

Ignition Database Index:	20221840
Electric Incident Investigation (EII) Number:	N/A
HAWC Incident Name:	Airport
PG&E Facility Ignition?	Y
CPUC Reportable Ignition?	Y
Date & Time of Incident:	October 19, 2022 @ 2209 hours
Street Address:	[REDACTED]
City:	Moss Beach
County:	San Mateo
Latitude/Longitude:	[REDACTED]
PG&E Division:	Peninsula
High Fire Threat District (HFTD):	Non-HFTD
High Fire Risk Area (HFRA):	N
EPSS Buffer Zone:	N
Fire Index Area (FIA):	500
Fire Potential Index (FPI) Rating: FIA	R1
Fire Potential Index (FPI) Rating: Circuit	R1
Was there a PSPS event at the time of ignition?	N
Failure Driver:	All types of equipment / facility failure
Failure Sub-driver:	Conductor failure-all
Circuit:	Half Moon Bay 1101
Circuit Protection Zone:	Half Moon Bay 11016369
Nominal Voltage:	12kV
PG&E Equipment associated with ignition:	Conductor - Primary
EPSS enabled at time of ignition?	Y
Fault Type:	Line to Ground
Wire Down (Primary)?	Y
Lead Agency/Agency Having Jurisdiction:	CAL FIRE
Fire Size:	<0.25 acres
FAS Field Remarks:	Crew to repair wire down OFC Remarks: wires down/poles in middle of field; grass fire., pwr-y Hazard Info: With end bldg. on shed at water tank
HAWC Summary:	Per FAS Comments crew to repair wire down. 1 CONDUCTOR OH: #6 SOL CU: BROKEN/DAMAGED / REPAIR. Closing incident
Injuries / Fatalities / Property Damage / Media Attention:	N/A

Weather Conditions:	Misty, light fog weather with calm wind conditions @ 2300 hours
Red Flag Warning (RFW) / High Wind Warning (HWW):	(RFW) – No (HWW) – No
911 Standby Relief Time:	56 Minutes
OIS #:	1841057
ILIS #:	22-0123085
FAS #:	T005767133 - Assessment T005767136 - Standby T005767145 - T-Man
Assigned Attorney:	N/A
EII Ignition Investigator & Phone:	

Executive Summary

On October 19, 2022 at approximately 2209 hours, PG&E was notified of an outage, a 911 Standby call of a fire, in addition to multiple SmartMeter™ auto-generated outage reports located near [REDACTED] in the City of Moss Beach, CA. The ignition occurred on the three-phase primary overhead segment of the Half Moon Bay 1101 12kV distribution circuit (see Figure 1) in a Non-High Fire Threat District (Non-HFTD). PG&E's Enhanced Powerline Safety Settings (EPSS) were enabled for this circuit at the time of the incident.

Meteorology data pulled from the MesoWest weather observation site that was approximately 2455 feet northeast of the incident location indicates a warm day at 86.1F with a relative humidity of 99%. Winds registered 2.7 Miles Per Hour (MPH) with gusts up to 4.8 MPH at the approximate time of the incident. Relative humidity was as high as 100% at 2310 hours and as low as 25% at 1440 hours.

Multiple PG&E employees were dispatched in response to the 911 standby request to the incident location at different times which included one meter technician (First Responder), one Gas safety representative (Second Responder) and one troubleman (Third Responder). The troubleman arrived at the incident location at approximately 0157 hours on October 20, 2022 and observed visible damage to the downed conductor Source Side (SD) at SAP pole ID# 100315975. Upon further inspection, the troubleman indicated that a primary overhead conductor splice connector failure fault occurred load side (LS) of fuse 5137 and caused an ignition. CAL FIRE was on site and extinguished the less than one quarter acre fire.

As a result of this incident, a priority "A" EC tag (#124745431) was created to repair the wire down by splicing in 150 feet of #6 solid copper conductor. The incident pole - SAP pole ID# 100315975 also had three dead-ends replaced. All repair work was completed by the PG&E Crew on October 20, 2022. The equipment involved in this incident was not retained for further analysis.

During the course of this investigation, it has been discovered that SAP pole ID# 100315975 (Incident pole) is a Dead-End (DE) pole and serves zero customers. A Corrective Action Program (CAP) issue # 125605318 has been created for SAP pole ID# 100315975 equipment to be removed as it will lessen the overhead exposure and lessen the risk of future ignitions. Also, a google earth picture provides evidence that a GIS mapping issue exists within EDGIS and Maps+ diagram for SAP pole ID# 100315976. The pole is not in the location where the maps shows it to be, it's actually located on the west side of transformer pole SAP pole ID# 100264710 close to the

water pump service drop location, (See figures 2 & 3). A mapping correction has been completed and requested for SAP pole ID 100315976 within Maps+ on March 8, 2023, (See figure 4).

There is no corrective history associated with SAP pole ID# 100315975 during the past inspection cycle. The most recent electric compliance inspection (GO165 Compliance) on October 16, 2022, found no compelling abnormal conditions for this pole, equipment, and its associated spans during the inspection (see Figure 5).

EPSS Analysis

EPSS was enabled on this circuit at the time of the incident on October 20, 2022. The Circuit Breaker (CB) was EPSS capable and was enabled at the time of incident. Line Recloser (LR) 8940 and LR 125326 were also EPSS capable but were not enabled at the time of the incident. No device automatically tripped, Fuse 5137 was forced open because the abnormal ground current did not meet the Sensitive Ground Fault (SGF) threshold of 15 Amps on the upstream LRs or 20 Amps on the CB. This was a high impedance fault with a wire down and one primary phase conductor found on the ground, no AMI partial voltage alarms were received, and the device did not trip on Downed Conductor Detection (DCD). Two upstream EPSS capable LRs were in normal profile and the CB was in Group 3 (EPSS) during the time of ignition. There were 607 EPSS enabled circuits throughout PG&E's service territory on October 22, 2022 at the time of incident.

Ignition Impact

This ignition on October 20, 2022, resulted in a primary overhead conductor splice connector failure causing a less than one quarter acre fire. The associated outage affected one customer for 396 minutes. PG&E is not aware of any injuries, fatalities, property damage or media attention associated with this event.

Sequence of Events

October 19, 2023

- 2209 hours: First No Light (FNL), one customer affected by outage
- 2338 hours: PG&E Safety assessment representative (First Responder) is dispatched
- 2345 hours: PG&E Standby representative (Second Responder) is dispatched
- 2350 hours: PG&E First Responder arrives onsite

October 20, 2023

- 0111 hours: PG&E troubleman (Third Responder) is dispatched
- 0153 hours: PG&E Second Responder arrives onsite
- 0157 hours: PG&E troubleman arrives onsite
- 0222 hours: PG&E troubleman reports one phase of primary wire down, load side of 5137
- 0229 hours: PG&E trouble reports fuse 5137 opened, tagged Middle Of Line (MOL) and awaiting crew
- 0429 hours: PG&E Three-man repair crew arrives onsite
- 0445 hours: PG&E repair crew report fuse 5137 closed, one customer's power is now restore
- 0452 hours: PG&E repair crew reports all repairs made and power check ok

Corrective Notification Associated with Ignition

One priority “A” EC tag (#124745431) was created to repair the wire down by splicing in 150 feet of #6 solid copper conductor. The incident pole - SAP pole ID# 100315975 also had three dead-ends replaced. All repair work was completed by the PG&E Crew on October 20, 2022. The equipment involved in this incident was not retained for further analysis.

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

Info / Inspection	Most Recent Date	Findings
Install Date:	January 1, 1980	40-foot, Douglas Fir, Class 5
Inspection:	October 6, 2022	No equipment damage, compelling abnormal conditions, or vegetation issues.
	N/A	
Patrol:	N/A	
	N/A	
Corrective History:	October 20, 2022	One priority “A” EC tag (#124745431) was created to repair the wire down by splicing in 150 feet of #6 solid copper conductor. The incident pole - SAP pole ID# 100315975 also had three dead-ends replaced. All repair work was completed by the PG&E Crew on October 20, 2022.
Aerial Inspection Records:	N/A	No aerial inspection records available within Sharper Shape for SAP pole ID# 100315975
VM Inspection:	N/A	
EVM Inspection:	N/A	
Equipment Test:	N/A	
Pole Intrusive Test:	August 31, 2016	Pole detail report indicates passing results with the following: Fair pole top and pole bottom condition with wood strength at 100% and pole load at 0%. Report for Pole Number:100315975 (pge.com)
WSIP Inspection:	N/A	Non-HFTD

*Incident Location: SAP pole ID# 100315975

This report is preliminary and based on available information as of **March 7, 2023**; event data is subject to change based upon subsequently discovered information.

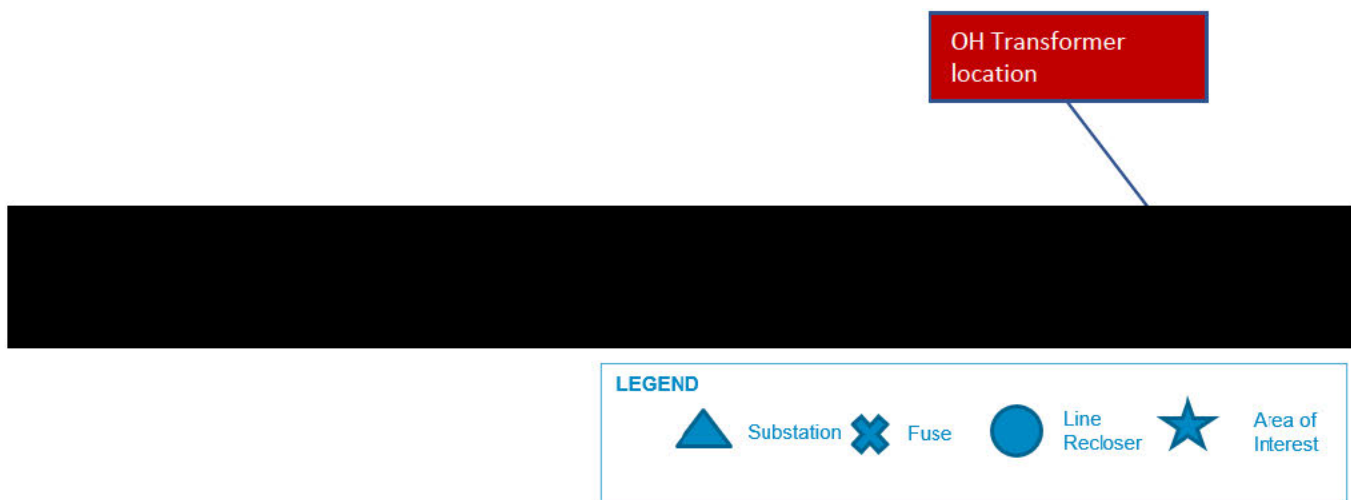
Hazard Barrier Analysis:

Hazard	Conductor Failure				
Target	PG&E Equipment Asset Failure				
Barrier	Objective	Expected Performance	Did Barrier Perform as Expected	Did Barrier Contribute to Incident	Defect
Patrol & Inspection (P&I) Records	Identify any nonconformances with poles or lines.	Inspection or patrol would identify any issues with PG&E equipment.	Yes. No equipment damage, compelling abnormal conditions, or vegetation issues found during this inspection on October 16, 2022.	No	None
Wildfire Safety Inspection Program (WSIP) Inspections in high fire threat districts (HFTD)	Identify any nonconformances with structures in HFTD	Inspection would identify any issue with PG&E equipment.	N/A Non-HFTD		
Enhanced Powerline Safety Settings (EPSS)	De-energize sections of the distribution grid when a fault is experienced to make the line safe.	De-energize sections of the distribution grid until restored after visual inspection.	The device did not trip, Fuse 5137 was forced open because the abnormal ground current did not meet the Sensitive Ground Fault (SGF) threshold of 15 Amps on the upstream LR's or 20 Amps on the CB.	No	Device did not automatically operate
Downed Conductor Detection	Detect down conductors and deenergize at the LR	De-energize wire down mitigating ignition risk	DCD was not capable at this location.	Yes	DCD was not capable at this location.
Partial Voltage Alarm TD-2700-26-B001	SmartMeters reporting a PV outage at fuse level or above	De-energizing must take place once the operator is aware of the PV condition	AMI Partial Voltage Alarms were Not Applicable	No	None

Potential Next Steps / Associated CAP Items:

- CAP issue # 125605318 has been created for SAP pole ID# 100315975 equipment to be removed as it will lessen the overhead exposure and lessen the risk of future ignitions. Also, a google earth picture provides evidence that a GIS mapping issue exists within EDGIS and Maps+ diagram for SAP pole ID# 100315976. It's not in the location were EDGIS and Map+ shows it to be, it's actually located on the west side of transformer pole SAP pole ID# 100264710. A mapping correction has been completed and requested for SAP pole ID 100315976 within Maps+ on March 8, 2023.

Single Line Diagram



Device ID	Brand	Type
1101/2	GE/SEL	IPAC
8940	OIL - WE	Form 6 – Rev 30
125326	Viper	Beck – Rev 7.2
6369	S&C	Tripsaver - 40K
481279	S&C	Fuse - 25E
5137	S&C	Fuse - 10E

Photos and Diagrams of Events

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Doc. R9 – Jan 2023

Internal

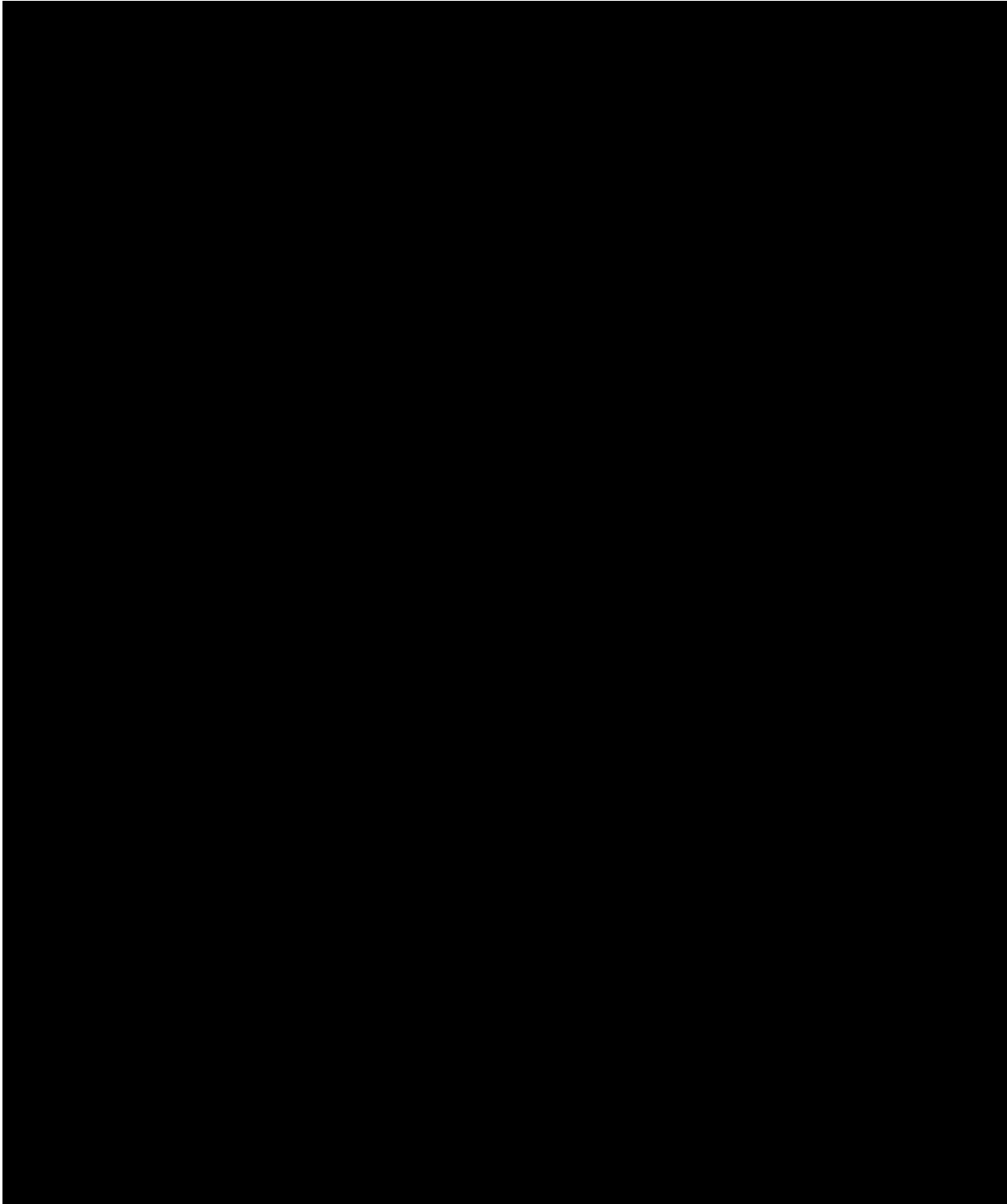


Figure 1 - EDGIS diagram of the Half Moon Bay 12kV distribution circuit, incident pole and fire size details.

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Doc. R9 – Jan 2023

Internal

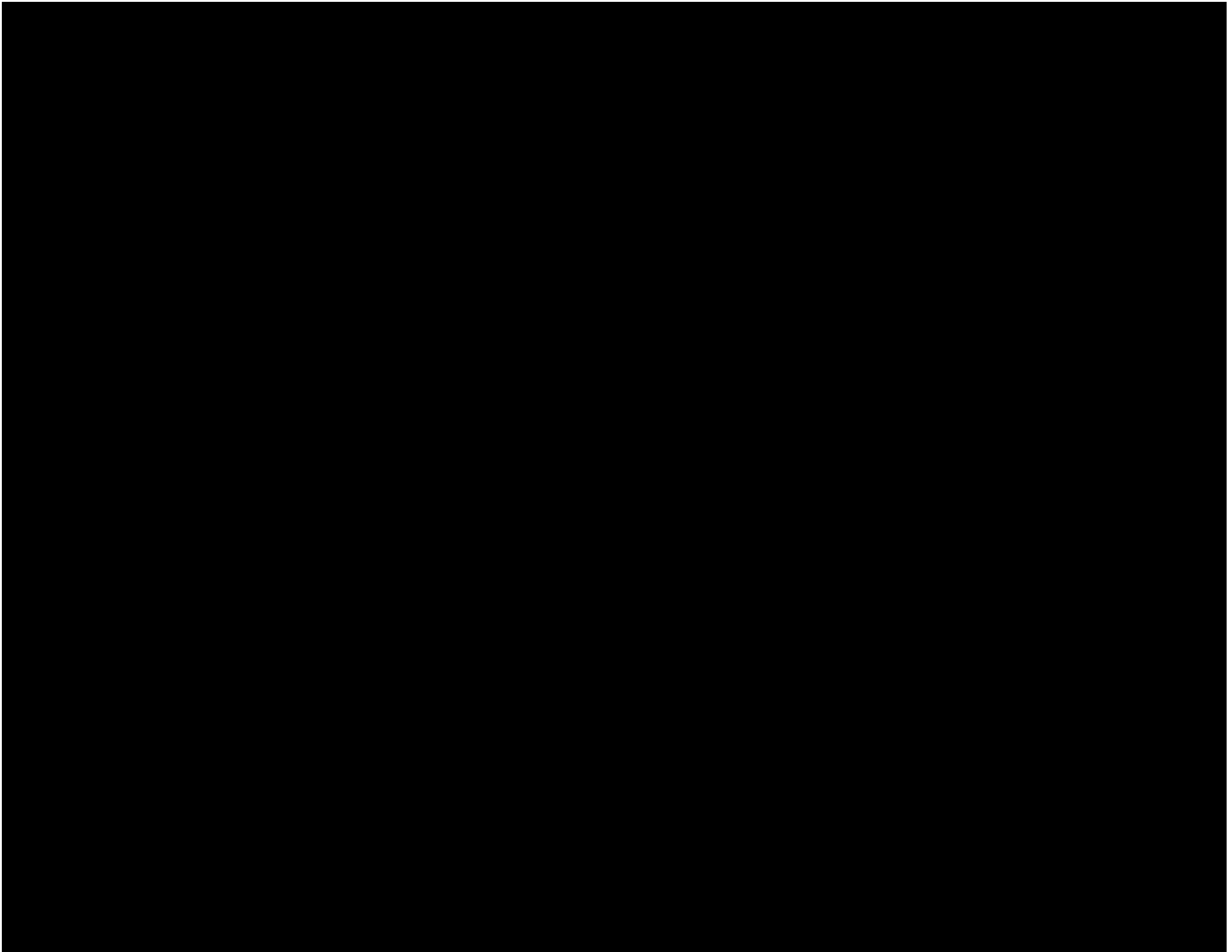


Figure 2 - Google Earth diagram of the Half Moon Bay 12kV distribution circuit and incident pole. A CAP issue # has been created for SAP pole ID# 100315975 equipment to be removed as it serves zero customers and will lessen the OH exposure and lessen the risk of future ignitions. Also, a mapping correction within Maps+ has been completed and requested for SAP pole ID 100315976 on March 8, 2023.

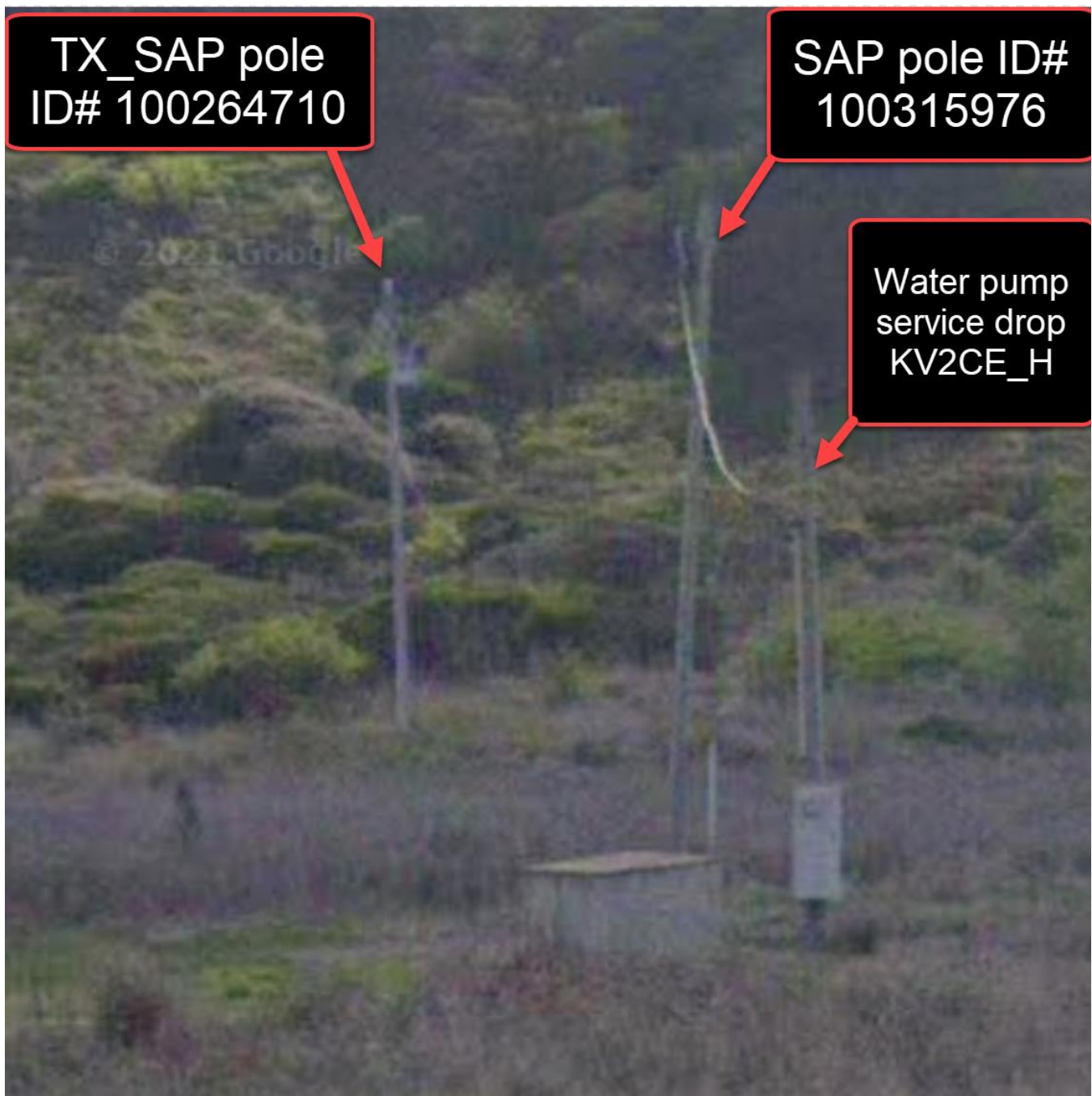


Figure 3 – Google earth picture provides evidence that a GIS mapping issue exists. It shows that SAP pole ID # 100315976 is not in the location where the EDGIS and Maps+ diagram shows it to be, it's actually located on the west side of the Transformer pole SAP pole ID # 100264710 close to the water pump service drop location.

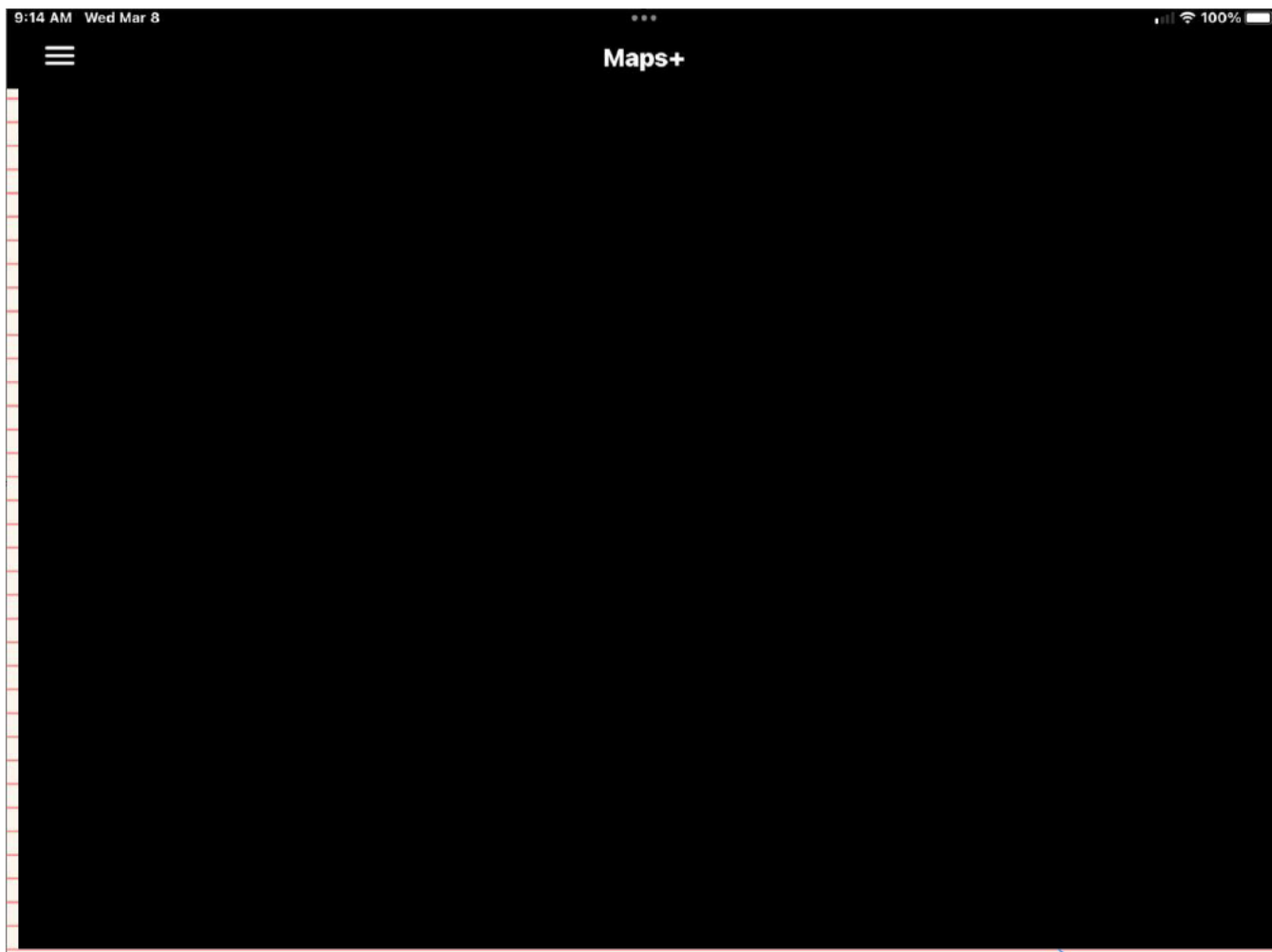


Figure 4 - Mapping correction within Maps+ has been completed and requested for SAP pole ID 100315976 on March 8, 2023.



Figure 5 - SAP pole ID# 100315975. Picture taken during GO165 Inspection on October 16, 2022.

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Doc. R9 – Jan 2023

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Attachments

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

[REDACTED]
[REDACTED]

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