De-Energized Operation of Inertia SCADA MSO

SUMMARY

Due to a recent review of the 2019 Applied Technology Services (ATS) Test Report which identified specific findings that have not been mitigated in the field, the Inertia SCADA motorized switch operator (MSO) can only be operated on a de-energized line. MSOs in the field must be operated on a de-energized line by a qualified electrical worker (QEW), onsite during OPEN and CLOSE operations.

This bulletin supersedes previously released Utility Bulletin TD-076253-B004, “Limited Use of Inertia SCADA MSO.”

Level of Use: Informational Use

AFFECTED DOCUMENT

- Numbered Document 076253, “PG&E Overhead SCADA Installation”
- Numbered Document 066195, “25 kV Underarm Side-Break Switch”
- TD-2908P-01-JA208, “MOAS/MSO – Inertia MSOR Series – Set Up Clearance Limit”
- TD-2908P-01-JA214, “MOAS/MSO – Inertia MSOR/MDR Series – Manual Operation”
- TD-2908P-01-JA500, “MSO - Inertia MDR Series – Set Up Clearance Limit”
- TD-076253-B004, “Limited Use of Inertia SCADA MSO” (superseded)

TARGET AUDIENCE

This bulletin applies to the following personnel: electric distribution, engineering (capacity, reliability, and operations), electric estimating, service planning, electric maintenance and construction (M&C), electric restoration and operations, distribution line technicians, telecom technicians, and SCADA specialists.

WHAT YOU NEED TO KNOW

1 Background

1.1 A suspect Inertia SCADA MSO was removed from service in Ukiah after field personnel reported sparking during closing operation following an outage restoration (9/07/2019, Capella 1102). Outage investigation showed that the MSO closed into a single-phase fault. The unit was subsequently tested at the ATS to replicate the reported field conditions. In the course of testing, the MSO exhibited an arc flash during its opening operation.

1.2 On 10/26/2019 a different MSO, on Clayton 2215, was reported to exhibit an arc flash on opening operation. The switch was removed for further root cause analysis (RCA) through the material problem report (MPR) process. The RCA revealed that misalignment of the MSO was a possible cause of failure.

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1.3 Due to a recent review of the 2019 ATS Test Report, which identified specific findings that have not been mitigated in the field, and the company's goal to mitigate wildfire risk, the Inertia SCADA MSO can only be operated on a de-energized line.

1. MSOs in the field must only be operated on a de-energized line by a qualified electrical worker (QEW), onsite during OPEN and CLOSE operations.

2 Required Actions

2.1 Before operating any MSO device in the field, DE-ENERGIZE the line by operating a source-side device.

2.2 A QEW must VERIFY that the line is de-energized by using an approved voltage detector.

2.3 After confirming that the line is de-energized, a QEW must OPERATE the MSO from the local control panel. DO NOT OPERATE the MSO remotely.

3 Next Steps (3 to 12 Months)

3.1 An Independent 3rd Party Review of the 2019 and 2020 ATS Testing will be performed to identify additional corrective actions necessary to retrofit MSOs that cannot be replaced with newer SCADA technology.

3.2 Existing inventory of MSO switches in locations that still require remote SCADA operation will be replaced by one of the following devices:

- SCADA G&W Viper Line Recloser
- SCADA FuseSaver (SEE Numbered Document 092813, "Installing the Siemens FuseSaver")
- SCADA SubSurface Switch (SEE Numbered Document 061650, "SCADA Subsurface 600 Amp Switches")

DOCUMENT APPROVER

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INCLUSION PLAN

The information contained in this bulletin will be incorporated into following documents:

- Numbered Document 076253, “PG&E Overhead SCADA Installation”
- Numbered Document 066195, “25 kV Underarm Side-Break Switch”
- TD-2908P-01-JA208, “MOAS/MSO – Inertia MSOR Series – Set Up Clearance Limit”
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