



## EEA Maintenance Master Plan - Substation Inspections

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### SUMMARY

Empire requires monthly substation inspections on all of EEA's substations. These inspections are performed to assist EEA to recognize conditions which might cause equipment damage, service interruptions or hazards to employees or the general public.

### OBJECTIVE

Typical inspections include but are not limited to the following:

1. Check conditions and operations of devices needed for voltage control and reliable operation.
2. Record load currents and other data required for engineering and operations.
3. Records are kept for effective maintenance and performance of the substation equipment.
  - A) Oil filled circuit breakers: Ready monthly, inspect internally at 3 years or 70 operations, whichever comes first.
  - B) Voltage Regulators: Check monthly, oil dielectric test every 5 years, and inspection of contacts at 250,000 operations or every 5 years, whichever comes first.
  - C) Transformer: Check monthly, oil test taken annually, oil screen, and dissolved gas analysis performed annually.
  - D) Air break switches: Visual inspection monthly, infrared inspect annually and manually test when possible.
  - E) Appearance and general condition of fences and yards.

Records will be maintained using the sample forms attached either in handwritten or digital format. Quarterly downloads from individual voltage regulators are to be stored on EEA secured Operations servers. Results of the overall program are to be reported to the Line Superintendent of Maintenance for data entry into maintenance database.