
# GENERAL ORDER 165

# CORRECTIVE MAINTENANCE PROGRAM

# REPORT FOR 2020

This report contains the results of San Diego Gas & Electric Company's (SDG&E) General Order (GO) 165 compliance program for inspection and maintenance of electric distribution facilities, which covers the period from January 1, 2020 through December 31, 2020.

SDG&E's GO 165 compliance program is called the Corrective Maintenance Program (CMP) and is managed by SDG&E's Program Management Group. Through coordination with the Construction & Operations (C&O) Centers' Electric Supervisors, Inspectors, Linemen, and other personnel, the inspections required by GO 165 are performed along with any corrective work.

**Verification of Counts**

In 2020, SDG&E continued to utilize the automated interface in place between GIS (SDG&E's system of record for facilities) and SAP-PM (SDG&E's system of record for inspection and maintenance records). This interface evaluates every SDG&E facility to verify that an appropriate inspection plan is assigned to it. In addition to the interface, automated reports are published weekly showing the year-to-date status of all CMP Detailed Inspections and Patrols scheduled for the year.

For intrusive inspections, an annual analysis was performed in the end of the third quarter to determine if additional intrusive inspections were required. Any "Special Intrusive Inspections" were issued and completed by December 31, 2020. In addition, periodic reviews are conducted throughout the year to ensure all intrusive inspections scheduled for 2020 were completed within the calendar year.

**Summary of the 2020 Year-end Report**

**Inspections:**

**SDG&E General Order 165 Maintenance 2020 Inspections Report**

| **Type of Inspection by Facility** | **Facilities Due[1]** | **Facilities Outstanding** |
|---|---|---|
| Overhead Detailed | 46,946 | 0 |
| Underground Detailed | 24,901 | 0 |
| | | |
| Wood Pole Intrusive | 16,881 | 0 |
| **Type of Inspection by Grid** | **Grids Due** | **Grids Outstanding** |
| Patrols | 26,911 | 0 |

In 2020, SDG&E did not have any late inspections or patrols per the GO 165 guidelines. As stated before, SDG&E continues to utilize our asset integrity interface to ensure that each facility is assigned to an appropriate inspection plan. We also utilize automated reports throughout the year to monitor and track the progress of inspections and patrols to ensure they are completed by the appropriate interval timeframe.

[1] This column represents SDG&E's determination about the number of facilities due for inspection in 2020.

**Division of Inspections**

The quantity of facilities is dynamic because of additions and removals of equipment due to maintenance, demolition, new customers, new technology, reliability, and conversion of overhead lines to underground lines, and other changes to the electric distribution system. When new equipment is added, it is regarded as inspected as of the date of installation. The new piece of equipment is then scheduled for inspection during the next inspection cycle for the respective equipment type. All equipment in the current inventory is scheduled for inspection at the required interval.

All equipment on a given structure is inspected at the same time and the inspection record is documented in the structure record. The CMP goals for the year historically have been determined by the system-wide counts of facilities in each inspection type, divided by the number of years in the cycle length. This practice created inspection cycles setting the CMP goals for the year. The goals for the year are determined by the last inspection date. SDG&E's CMP cycles are designed to adhere to or exceed GO 165 requirements. The following section describes SDG&E's CMP cycles by equipment type.

**Description of Major SDG&E CMP Cycles**

OVERHEAD VISUAL

- OHVI (Overhead Visual, Five-year)

  This cycle consists of a detailed, walk-around inspection of all distribution poles, pole-mounted facilities with primary and secondary conductors, and distribution equipment on transmission poles. These inspections identify conditions that are out of compliance with GO 95. This is a five-year cycle.

ABOVE GROUND 5 (INTERNAL AND EXTERNAL INSPECTIONS)

This cycle consists of Above Ground Dead-front (AGDF) and Above Ground Live-front (AGLF) detailed external and internal inspections of dead-front and live-front pad-mounted facilities to identify conditions that are out of compliance with GO 128.

- AGDF (Above Ground Dead-front, Five-year)

  This cycle consists of a detailed external and internal inspection of dead-front pad-mounted facilities to identify conditions out of compliance with GO 128. Originally, the AGDF cycle only required an external inspection; however, changes in 1999 modified this requirement to include an internal inspection. The cycle is still named AGDF to separate the dead-front equipment data from live-front equipment data. This is a five-year inspection cycle.

- AGLF (Above Ground Live-front, Five-year)

  This cycle consists of a detailed external and internal inspection of live-front pad-mounted facilities to identify conditions out of compliance with GO 128. This is a five-year inspection cycle.

SUBSURFACE, WITH EQUIPMENT

- SS3 (Subsurface, Three-year)

  This cycle consists of a detailed inspection of subsurface structures (manholes, vaults, primary hand-holes and subsurface enclosures) containing distribution equipment. Thus, structures with only cable taps, splices or pass-throughs are excluded as they are not required by GO 165. The SS3 cycle consists of a detailed inspection of these facilities to identify conditions out of compliance with GO 128. This is a three-year inspection cycle.

SWITCH

- SW3 (Oil or Gas Switch, Three-year)

  This consists of a specialized inspection of all subsurface and pad-mounted oil and gas switches. Oil samples and gas pressure readings are obtained and recorded in SAP. The laboratory performs analysis of oil samples for low dielectric strength and high-water content. These results and the inspection records are stored in SAP. The status of "Do Not Operate Energized" (DOE) switches for prioritizing replacements are also tracked in SAP and GIS mapping system. Other conditions out of compliance with GO 128 are also identified. This is a three-year inspection cycle

WOOD POLE INTEGRITY

- Pole (10/20 year)

  Each pole is inspected visually, and if conditions warrant, intrusively. Any pole 15 years of age or older is inspected intrusively. The form of the intrusive inspection is normally an excavation about the pole base and/or a sound and bore of the pole at ground line. Currently, treatment is applied in the form of ground line pastes and/or internal pastes. These inspections are performed on a 10-year cycle. The 10-year cycle fulfills the

requirements of GO 165, which are: (1) all poles over 15 years of age are intrusively inspected within ten years; and (2) all poles which previously passed intrusive inspection are to be inspected intrusively again on a 20-year cycle.

The wood pole integrity inspections are currently performed by an SDG&E contractor who also applies wood preservative treatments and installs mechanical reinforcements (Steel Reinforcement). The type of treatment is dependent upon the age of the pole, the individual inspection history, and the overall condition of the structure. SDG&E's Vegetation Management group administers the wood pole intrusive inspection and treatment program.

During the course of the wood pole integrity inspections, SDG&E's contractor for wood pole integrity inspections will bore into the pole to determine if it needs reinforcement or replacement based on the remaining shell thickness. The choice to restore a pole rather than replace the pole is based on the strength of the pole (measured by remaining shell thickness). SDG&E's Transmission Engineering and Electric Distribution Standards Specification for Inspection, Treatment and Reinforcement of In-Service Wood Poles (Specification NO. TE-0108 and Specification NO. 337) specifies the criteria for the rejection of a pole. It also addresses a pole's suitability for steel reinforcement based on the remaining shell thickness for various lengths of pole. If a pole does not have sufficient shell thickness for steel reinforcement, it is rejected and replaced.

PATROL, URBAN

- Patrol 1 (urban patrol, one year)

  The purpose of the urban patrol is to identify obvious structural problems and hazards. This cycle consists of a simple visual inspection of every applicable overhead, underground and streetlight facility in rural areas. Under agreement of interpretation with Commission Staff, "urban" is defined as incorporated areas (GO 165 defined "urban" as those areas with 1000 persons or more per square mile). GO 165 defines a "patrol" as a "simple visual inspection, of applicable utility equipment and structures that is designed to identify obvious structural problems and hazards." When Patrols have been completed, any identified structural problems and hazards are recorded in SAP.

PATROL, RURAL

- Patrol 2 (rural patrol, two year)

  The purpose of the rural patrol is to identify obvious structural problems and hazards. This cycle consists of a simple visual inspection of every applicable overhead, underground and streetlight facility in rural areas. Under agreement of interpretation with the CPUC, "rural" is defined as unincorporated areas (GO 165 defined "rural" as those areas with less than 1000 persons per square mile). GO 165 defines a "patrol" as a "simple visual inspection, of applicable utility equipment and structures that is designed to identify obvious structural problems and hazards."

  Consistent with D. 09-08-029, SDG&E has conducted annual patrol inspections in rural areas which are included in SDG&E's designated Tier 2 & Tier 3 areas of the High Fire-Threat District as per D. 17-12-024 in R. 15-05-2006. When Patrols have been completed, any identified structural problems and hazards are recorded in SAP.

# SDG&E CMP INSPECTION CYCLES

## SDG&E System Inspection Cycles
## (Maximum intervals in years)

| | PATROL | | DETAILED | | INTRUSIVE | |
|---|---|---|---|---|---|---|
| | Urban | Rural | Urban | Rural | Urban | Rural |
| Transformers | | | | | | |
| Overhead | Patrol1 | Patrol2* | OHVI 5 | OHVI 5 | | |
| Underground (Subsurface) | Patrol1 | Patrol2* | SS 3 | SS 3 | | |
| Pad Mounted (live front) | Patrol1 | Patrol2* | AGLF 5 | AGLF 5 | | |
| Pad Mounted (dead front) | Patrol1 | Patrol2* | AGDF 5 | AGDF 5 | | |
| Switching/Protective Devices | | | | | | |
| Overhead | Patrol1 | Patrol2* | OHVI 5 | OHVI 5 | | |
| Underground (Subsurface) | Patrol1 | Patrol2* | SS 3 | SS 3 | | |
| Pad Mounted (live front) | Patrol1 | Patrol2* | AGLF 5 | AGLF 5 | | |
| Pad Mounted (dead front) | Patrol1 | Patrol2* | AGDF 5 | AGDF 5 | | |
| Oil & Gas switches (above or below surface) | Patrol1 | Patrol2* | SW 3 | SW 3 | | |
| Regulators/Capacitors | | | | | | |
| Overhead | Patrol1 | Patrol2* | OHVI 5 | OHVI 5 | | |
| Underground (Subsurface) | Patrol1 | Patrol2* | SS 3 | SS 3 | | |
| Pad Mounted (live front) | Patrol1 | Patrol2* | AGLF 5 | AGLF 5 | | |
| Pad Mounted (dead front) | Patrol1 | Patrol2* | AGDF 5 | AGDF 5 | | |
| Overhead Conductors and Cables | Patrol1 | Patrol2* | OHVI 5 | OHVI 5 | | |
| Street Lighting | Patrol1 | Patrol2* | x | x | | |
| Wood Poles under 15 years | Patrol1 | Patrol2* | x | x | x | x |
| Wood Poles over 15 years which have not been subject to intrusive inspection | Patrol1 | Patrol2* | x | x | Wood Pole Intrusive 10 | Wood Pole Intrusive 10 |
| Wood Poles which passed intrusive inspection | | | | | Wood Pole Intrusive 20 | Wood Pole Intrusive 20 |

*Patrol inspections conducted once per year within Tier 2 & Tier 3 of the High Fire-Threat District as per D.17-12-024 in R. 15-15-006

## OFFICER VERIFICATION

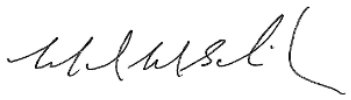
I, Michael Schneider, declare the following:

I am an Officer of San Diego Gas & Electric and am authorized to make this verification on its behalf.

I am informed and believe that the matters stated in the foregoing 2020 General Order 165 Report are true to my own knowledge, except as to matters which are therein stated on information and belief, and as to those matters, I believe them to be true.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct based on my information and belief.

Executed this 29th day of June 2021, in San Diego, California.



Michael Schneider
Vice President – Risk Management & Chief Compliance Officer
SDG&E