

PUBLIC UTILITIES COMMISSION

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SUBJECT: Audit of AT&T South Valley Region

On behalf of the Utilities Safety and Reliability Branch of the California Public Utilities Commission (CPUC), Kan-Wai Tong and I conducted an audit of AT&T's South Valley Region on February 16-20, 2009. The audit included a review of AT&T's design, construction, inspection and maintenance programs, and field inspections of your overhead and underground facilities for compliance with General Orders (GOs) 95 and 128.

GO 95, Rule 31.1, Design, Construction and Maintenance, states:

"Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service."

GO 95, Rule 31.2, Inspection of Lines, states:

"Lines shall be inspected frequently and thoroughly for the purpose of insuring that they are in good condition so as to conform with these rules."

GO 128, Rule 12.2, Maintenance, states:

"Systems shall be maintained in such condition as to secure safety to workmen and the public in general. Systems and portions thereof constructed, reconstructed, or replaced on or after the effective date of these rules shall be kept in conformity with the requirement of these rules."

GO 128, Rule 17.2, Inspection, states:

"Systems shall be inspected by the operator frequently and thoroughly for the purpose of insuring that they are in good condition and in conformance with all applicable requirements of these rules."

During the audit, we discovered that AT&T does not maintain records for inspections of its facilities. The lack of records prevented us from determining the frequency and thoroughness of AT&T's inspection program.

AT&T indicated that GOs 95 and 128 infractions were identified and reported by external sources or its technicians while conducting repairs. Customers are not familiar with the requirements of the GOs. In addition, waiting for a non-compliance or safe condition to occur in order to make necessary repairs is not a maintenance program that complies with GOs 95 and 128.

During the field portion of our audit, we identified violations of GOs 95 and 128. The violations are described Part 1 of our enclosed Inspection Report. We also reviewed pole-loading calculations conducted by AT&T. Part 2 of our Inspection Report describes the projects in which AT&T used wind pressure and strength (safety) factors incorrectly in its pole loading calculations. We request that AT&T recalculate the pole-loading for these projects using the proper variables and submit a report identifying other facilities in which AT&T used the wind pressure and strength (safety) factors incorrectly. The report should include a list of all the affected facilities, a description of each facility, their current safety factors and recalculated safety factors.

Please advise us, within 30 days, on the process AT&T will develop to ensure that its pole-loading calculations are done properly, as well as the corrective measures taken by AT&T regarding the field violations.

If you have any questions, please contact me at (213) 576-6850.

Sincerely,



Derek Fong
Utilities Engineer
Utilities Safety and Reliability Branch
Consumer Protection and Safety Division

Enclosure: Inspection Report

Inspection Report

Part 1: Audit of AT&T's Facilities in the Field

The following is a list of General Order 95 and 128 violations that were observed during the audit and were not documented by your company.

- 1.1 **General Order 95, Rule 54.7A(3): Allowable Climbing Space Obstructions**
This rule lists the allowable climbing space obstructions. Plastic risers/conduits are not allowed.
- Pole located at the intersection of Ashlan Ave. & Wilson Ave. in Fresno had a plastic riser/conduit installed in the climbing space.
- 1.2 **General Order 95, Rule 51.7: Stepping (supporting supply lines)**
"The lowest step on any stepped pole, tower or structure shall be not less than 7 feet 6 inches from the ground line and above this point the spacing between steps on the same side of pole, tower, or structure shall not exceed 36 inches".
- Pole located at "4210 Wilson Ave., Fresno" has its lowest step at 7 feet 2 inches from the ground.
 - Pole located at "5246 McKinley Ave., Fresno" with risers and supply lines was not stepped.
- 1.3 **General Order 95, Rule 35: Tree Trimming**
"...any circuit energized at 750 volts or less shows strain or evidences abrasion from tree contact, the condition shall be corrected by slacking or rearranging the line, trimming the tree or placing mechanical protection on the conductor(s)..."
- Service drop at "4313 Wilson Ave., Fresno" was found touching a tree limb, and showed signs of abrasion from contact with a tree limb.
- 1.4 **General Order 95, Rule 38: Minimum Clearances of Wires from other Wires**
Table 2, Case 8: This case, under the category "*vertical separation between conductors and/or cables, on separate crossarms or other supports at different levels on the same pole and in adjoining midspans*" shows that the distance between "*communication conductors and service drops*" and "*communication conductors (including open wire, cables, and service drops)*" must be at least 12 inches.
- Service drop at "4352 Wilson Ave., Fresno" was found touching a Comcast cable line.

- 1.5 **General Order 95, Rule 31.1: Design, Construction and Maintenance**
“Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service”.
- Cable at “4242 Wilson, Fresno” has a hanging “squirrel guard”.
- 1.6 **General Order 95, Rule 84.8C(1): Communication lines over Public Thoroughfare**
“Vertical clearance shall not be less than 18 feet. EXCEPTION: Not more than 12 feet horizontally from the curb line, the 18 foot clearance may be gradually reduced to not less than 16 feet at the curb line. In no case shall the clearance at the center line be less than 18 feet. Where there are no curbs, the foregoing provisions shall apply using the outer limits of normal longitudinal vehicular movement in lieu of a curb line”.
- At “4411 Wilson Ave., Fresno” we found the vertical clearance of the telephone service drop from the center line of the thoroughfare to be 14 feet 5 inches, below the minimum of 18 feet. In addition, we found the vertical clearance of the telephone service drop from the curb line to be 12 feet 5 inches, below the minimum of 16 feet.
- 1.7 **General Order 95, Rule 84.8C(2)(b): Communication lines over Vehicle-accessible Areas**
“Over residential driveways, lanes or over property accessible to vehicles, service drops shall not be less than 12 feet. EXCEPTION: If the building served does not permit an attachment which will provide this 12 foot clearance without the installation of a structure on the building, the clearance shall be as great as possible, but in no case less than 10 feet”.
- At “4411 Wilson Ave., Fresno” we found that the vertical clearance of the telephone service drop over the driveway to be 9 feet 8 inches, below the minimum of 12 feet.
- 1.8 **General Order 128, Rule 42.7: Covers**
“Manholes and handholes, while not being worked in shall be securely closed by covers of sufficient strength to sustain such loads as may reasonably be imposed upon them, and arrangement shall be such that a tool or appliance shall be required for their opening and cover removal”.
- At the intersection of Ashlan Ave. & Wilson Ave. in Fresno, we found a handhole that was not bolted down, and that had a cover that could be removed without the use of tools or appliances.

Part 2: Audit of AT&T's Pole Loading Calculations

ERROR IN POLE LOADING CONSIDERATION

2.1 **General Order 95, Rule 43.2A: Light Loading - Wind**

"A horizontal wind pressure of 8 pounds per square foot of projected area on cylindrical surfaces, and 13 pounds per square foot on flat surfaces shall be assumed".

- For Job Numbers 6244404 and 6616609, AT&T's pole loading calculations used a horizontal wind pressure of 1.6 pounds per square foot. This is a violation of the General Order 95 Rule 43.2A, which requires calculations to consider a wind pressure of 8.0 pounds per square foot.

2.2 **General Order 95, Rule 44.1: Installation and Reconstruction**

"Lines and elements of lines upon installation or reconstruction, shall provide as a minimum the safety factors specified in Table 4 for vertical loads and loads transverse to lines and for loads longitudinal to lines except where longitudinal loads are balanced or where there are changes in grade of construction".

- Job Number 6616609 showed a communication-supply joint pole with a strength factor of 0.65, which corresponds to a safety factor of 1.538; this is a violation of the GO 95 Rule 44.1, which requires this new pole to be designed with a safety factor of 4.0.