

PUBLIC UTILITIES COMMISSION

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December 1, 2016

CA2016-010

Asia M. Powell
State Government Affairs
Frontier Communications
2535 W. Hillcrest Drive
Newbury, CA 91320

Subject: Audit of Frontier Communications' San Fernando Engineering Office

Ms. Powell:

On behalf of the Electric Safety and Reliability Branch of the California Public Utilities Commission (CPUC), Koko Tomassian of my staff conducted a Communications Infrastructure Provider (CIP) audit of Frontier Communications' (FTR) San Fernando Engineering Office from June 13, 2016 to June 17, 2016. The audit included a review of FTR's records and field inspections of FTR's facilities.

During the audit, my staff identified violations of one or more General Orders (GOs). A copy of the audit findings itemizing the violations is enclosed. Please advise me no later than January 2, 2017, by electronic or hard copy, of all corrective measures taken by FTR to remedy and prevent such violations.

If you have any questions concerning this audit, you can contact Koko Tomassian at (213) 576-7099 or koko.tomassian@cpuc.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Fadi Daye".

Fadi Daye, P.E.
Program and Project Supervisor
Electric Safety and Reliability Branch
Safety and Enforcement Division
California Public Utilities Commission

Enclosures: CPUC Audit Findings

Cc: Elizaveta Malashenko, Director, Safety and Enforcement Division, CPUC
Lee Palmer, Deputy Director, Office of Utility Safety, SED
Charlotte TerKeurst, Program Manager, Electric Safety and Reliability Branch, CPUC

AUDIT FINDINGS

I. Records Review

During the audit, my staff reviewed the following records:

- Overhead and underground inspections records.
- Completed and pending corrective action (i.e. work orders).
- Pole loading calculations.
- Safety hazard notifications.
- Frontier Communications' (FTR) documented inspection program.

II. Records Review – Violations List

My staff observed the following violations during the records review portion of the audit:

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

For all particulars not specified in these rules, design, construction, and maintenance should be done in accordance with accepted good practice for the given local conditions known at the time by those responsible for the design, construction, or maintenance of communication or supply lines and equipment.

FTR's records indicated that from 2012 to 2016, three work orders were completed past the scheduled due date for corrective action.

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

Lines shall be inspected frequently and thoroughly for the purpose of ensuring that they are in good condition so as to conform with these rules. Lines temporarily out of service shall be inspected and maintained in such condition as not to create a hazard.

GO 95, Rule 80.1-A2, Statewide Inspection Requirements, states in part:

Each company shall prepare, follow, and modify as necessary, procedures for conducting patrol or detailed inspections for all of its Communication Lines throughout the State. Consistent with Rule 31.2, the type, frequency and thoroughness of inspections shall be based upon the following factors:

- *Fire threat*
- *Proximity to overhead power line facilities*
- *Terrain*
- *Accessibility*

- *Location*

... Each company's procedures shall describe (i) the methodology used to ensure that all Communication Lines are subject to the required inspections, and (ii) the procedures used for specifying what problems should be identified by the inspections. The procedures used for specifying what problems should be identified by the inspections shall include a checklist for patrol inspections.

FTR's documented inspection program did not describe the methodology used to ensure that all Communication Lines are subject to the required inspections. Additionally, FTR's procedures do not describe how the type, frequency, and thoroughness of inspections vary to account for the factors listed above (e.g. fire threat, terrain, proximity to overhead power lines, etc.).

GO 128, Rule 17.2, Inspection, states:

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

During the audit, FTR was unable to produce documentation detailing the frequency or thoroughness of its underground inspections. Therefore, FTR does not inspect its underground facilities frequently and thoroughly as required by GO 128.

Field Inspections

My staff inspected the following facilities during the field inspection:

NO	Structure ID	Type of Structure	Location
1	GT76559	Pole	Sunland
2	GT76558	Pole	Sunland
3	GT58703	Pole	Sunland
4	3908842M	Pole	Sunland
5	GT257431	Pole	Sunland
6	9695	Pole	Sunland
7	GT20074	Pole	Sunland
8	4627030E	Pole	Pacoima
9	4556606E	Pole	Pacoima
10	4627031E	Pole	Pacoima
11	GT200881	Pole	Pacoima
12	4179197E	Pole	Pacoima
13	1297662E	Pole	Pacoima
14	1297661E	Pole	Pacoima
15	GT201292	Pole	Pacoima
16	4041109E	Pole	Pacoima
17	GT200853	Pole	Pacoima
18	1337756E	Pole	Pacoima
19	1337757E	Pole	Pacoima
20	1337758E	Pole	Pacoima
21	355241E	Pole	Pacoima
22	105949E	Pole	Pacoima
23	355242M	Pole	Pacoima
24	1297749E	Pole	Pacoima
25	2023670E	Pole	Pacoima
26	355243E	Pole	Pacoima
27	355244E	Pole	Pacoima
28	109068E	Pole	Pacoima
29	1090770E	Pole	Pacoima
30	4537271E	Pole	Pacoima
31	4379826E	Pole	San Fernando
32	1216606E	Pole	San Fernando
33	1059360E	Pole	San Fernando
34	1436167E	Pole	San Fernando
35	4136166E	Pole	San Fernando
36	1059361E	Pole	San Fernando
37	4257632E	Pole	San Fernando
38	1029595E	Pole	San Fernando
39	1029596E	Pole	San Fernando
40	1059363E	Pole	San Fernando
41	2367851E	Pole	San Fernando

NO	Structure ID	Type of Structure	Location
42	2366834E	Pole	San Fernando
43	GT140346	Pole	San Fernando
44	2367852E	Pole	San Fernando
45	1362943E	Pole	San Fernando
46	493549E	Pole	San Fernando
47	493550E	Pole	San Fernando
48	503407E	Pole	San Fernando
49	2088149E	Pole	San Fernando
50	2088148E	Pole	San Fernando
51	82559E	Pole	San Fernando
52	82560E	Pole	San Fernando
53	South East Corner of Hunnwell and Terra Bella	Pull box	Pacoima
54	11335 Hunnwell	Handhole	Pacoima
55	19216 Singing Hills (HH889)	Handhole	Granada Hills
56	(HH886) Corner of Singing Hills and Porter Valley	Handhole	Granada Hills
57	(MH 829) Corner of Singing Hills and Porter Valley	Handhole	Granada Hills
58	MH 790 1/2	Handhole	Granada Hills
59	(MH 790) Corner of Porter Valley and Rinaldi	Handhole	Granada Hills

III. Field Inspection – Violations List

My staff observed the following violations during the field inspection.

GO 95, Rule 18.B, Notification of Safety Hazard, states in part:

If a company, while performing inspections of its facilities, discovers a safety hazard(s) on or near a communications facility or electric facility involving another company, the inspecting company shall notify the other company and/or facility owner of such safety hazard(s) no later than 10 business days after the discovery. To the extent the inspecting company cannot determine the facility owner/operator; it shall contact the pole owner(s), who shall be responsible for promptly notifying the company owning/operating the facility with the safety hazard(s), normally not to exceed five business days after being notified of the safety hazard. The notification shall be documented and such documentation must be preserved by all parties for at least ten years.

GO 95, Rule 84.6-B, Ground Wires, states in part:

Ground wires, other than lightning protection wires not attached to equipment or ground wires on grounded structures, shall be covered by metal pipe or suitable covering of wood or metal, or of plastic conduit material as specified in Rule 22.8-A, for a distance above ground sufficient to protect against mechanical injury, but in no case shall such distance be less than 7 feet.

The wood molding covering a third party ground wire on poles numbered GT200881 and 1297661E were broken.

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

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.

The FTR ground wire on pole number GT58703 was cut and severed.

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

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.

An FTR communications conductor supported on pole number 2023670E was floating on the through-bolt and not securely attached to the pole.

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

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.

The FTR terminal box on pole number 2367852E was not attached to the pole.

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

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.

The FTR riser casing on pole number GT140346 was damaged.

GO 95, Rule 38, Minimum Clearances of Wires from Other Wires, states in part:

The minimum vertical, horizontal or radial clearances of wires from other wires shall not be less than the values given in Table 2...

GO 95, Table 2, Case 8, Column C requires the minimum vertical separation of communication conductors from other communication conductors – supported at different levels on the same pole – to be 12 inches.

An FTR cable and a communication conductor of a different company on the following poles did not have at least a 12 inch vertical separation:

- GT201292
- 4136166E
- 1029595E
- 493550E
- 2088149E
- 82560E

- 1436167E
- 1059361E
- 493549E
- 503407E
- 82559E

GO 95, Table 2, Case 16, Column C requires the minimum radial clearance between communication conductors of different circuits on the same crossarm, pole, or structure to be 3 inches.

The incidental wiring of a FTR facility and the incidental wiring of a different company on the following poles were in contact:

- 1216606E
- 4257632E
- 2367852E
- 493549E
- 503407E
- GT200853
- 1059360E
- 1059363E
- 1362943E
- 493550E
- 2088149E

GO 95, Table 2, Case 16, Column C requires the minimum radial clearance between communication conductors of different circuits on the same crossarm, pole, or structure to be 3 inches.

An FTR service drop and a communication service drop of a different company on pole number 82560E were in contact.

GO 95, Rule 31.6, Abandoned Lines, states:

Lines or portions of lines permanently abandoned shall be removed by their owners so that such lines shall not become a public nuisance or a hazard to life or property. For the purposes of this rule, lines that are permanently abandoned shall be defined as those lines that are determined by their owner to have no foreseeable future use.

FTR service drops supported on the following poles were abandoned:

- 493550E
- 82559E
- 2367851E
- 2088148E
- 82560E

GO 95, Rule 35, Vegetation Management, states in part:

When a supply or communication company has actual knowledge, obtained either through normal operating practices or notification to the company, that its circuit energized at 750 volts or less shows strain or evidences abrasion from vegetation contact, the condition shall be corrected by reducing conductor tension, rearranging or replacing the conductor, pruning the vegetation, or placing mechanical protection on the conductor(s). Strain on a conductor is present when vegetation contact significantly compromises the structural integrity of supply or communication facilities.

The FTR service drop supported on pole number 4041109E was strained by vegetation.

GO 95, Rule 34, Foreign Attachments, states:

Nothing in these rules shall be construed as permitting the unauthorized attachment, to supply, street light or communication poles or structures, of antennas, signs, posters, banners, decorations, wires, lighting fixtures, guys, ropes and any other such equipment foreign to the purposes of overhead electric line construction.

Nothing herein contained shall be construed as requiring utilities to grant permission for such use of their overhead facilities; or permitting any use of joint poles or facilities for such permanent or temporary construction without the consent of all parties having any ownership whatever in the poles or structures to which attachments may be made; or granting authority for the use of any poles, structures or facilities without the owner's or owners' consent.

All permanent attachments must be approved by the Commission (see Rule 15.1) and the owner(s) involved.

All temporary attachments shall be restricted to installations where the period is estimated to be one year or less.

The utilities, or other governmental entities may require construction standards which are more restrictive than the requirements of this Rule 34 .

The following rules shall apply to approved temporary foreign attachments installed on climbable poles and structures and shall be maintained as required by Rule 12.2

A 'No Trespassing' sign was attached to pole number 4537271E.

GO 95, Rule 91.5, Marking, states in part:

Each communication cable and conductor as defined by Rules 20.4, 20.6(A), 20.9, 84.1, 87.4(C), and 89.1 that is attached to a joint-use pole shall be marked as to ownership. The marker shall (1) identify the owner of the cable and/or conductor; (2) provide a 24 hour contact number for emergencies or information; (3) be made of weather and corrosion resistant material; and (4) be clearly visible to workers who climb the pole or ascend by mechanical means. This marking requirement applies only to (A) new construction, (B) reconstruction of facilities, and (C) existing aerial communication cables and conductors that a technician works on when the technician ascends the joint-use pole for regular maintenance.

FTR cables supported on poles numbered 4257632E and 1059360E, which were constructed following the adoption of this rule, were not marked as to ownership.

FTR cables supported on the following poles were not marked as to ownership. These poles were constructed prior to the adoption of this rule; however, FTR could not confirm whether or not an FTR technician worked on the cable when ascending the pole for regular maintenance (following the adoption of this rule), thus triggering the above-referenced marking requirement.

- GT6559
- 9695
- GT20074
- 4627030E
- 4556606E
- 4627031E
- GT200881
- 4179197E
- 1297662E
- 1297661
- GT201292
- GT6558
- 4041109E
- GT200853
- 1337756E
- 1337757E
- 1337758E
- 355241E
- 105949E
- 355242M
- 1297749E
- 355244E
- 3908842M
- 109068E
- 1090770E
- 4537271E
- 4379826E
- 1436167E
- 4136166E
- 1059361E
- 1029595E
- 1059363E
- GT257431
- 2367852E
- 1362943E
- 493549E
- 493550E
- 503407E
- 2088149E
- 2088148E
- 82559E
- 82560E

FTR cables supported on the following poles were marked; however the cable marking did not identify FTR as the owner:

- 1216606E
- GT58703
- 1337756E
- 355243E

GO 128, Rule 32.3, Materials and Strength, states:

The materials, design and construction of manholes, handholes, subsurface equipment enclosures, and other underground boxes shall be such as to provide sufficient strength to sustain, with a suitable margin of safety, the loads which may reasonably be imposed on them.

Handhole HH886, located at the corner of Singing Hill and Porter Valley in Granada Hills, CA, was deteriorating at the base of the protecting enclosure.

GO 128, Rule 17.1, 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.

For all particulars not specified in these rules, design, construction, and maintenance should be done in accordance with accepted good practice for the given local conditions known at the time by those responsible for the design, construction, or maintenance of [the] communication or supply lines and equipment.

All work performed on public streets and highways shall be done in such a manner that the operations of other utilities and the convenience of the public will be interfered with as little as possible and no conditions unusually dangerous to workmen, pedestrians or others shall be established at any time.

Handhole HH889, located at 19216 Singing Hills in Granada Hills, CA, contained abandoned FTR facilities, including an abandoned cable that was not pulled.

Handhole MH829, located at the corner of Singing Hills and Porter Valley in Granada Hills, CA, contained FTR cables which were not racked.

Handhole MH790 ½, located in Granada Hills, CA, contained FTR facilities that were submerged in water.

GO 128, Rule 17.1, Design, Construction and Maintenance, states:

Manholes, handholes, subsurface and self-contained surface-mounted equipment enclosures shall be marked as to ownership to facilitate identification by persons authorized to work therein and by other persons performing work in their vicinity.

The following FTR enclosures were marked indicating Verizon ownership:

- Pull box located at the south east corner of Hunnwell and Terra Bella in Pacoima, CA
- Handhole located at 11335 Hunnwell in Pacoima, CA

FTR Handhole MH790 ½ located in Granada Hills, CA was marked indicating GTE ownership.