

STATE OF NEW YORK DEPARTMENT OF PUBLIC SERVICE

THREE EMPIRE STATE PLAZA, ALBANY, NY 12223-1350

Internet Address: <http://www.dps.state.ny.us>

PUBLIC SERVICE COMMISSION

GARRY A. BROWN

Chairman

PATRICIA L. ACAMPORA

MAUREEN F. HARRIS

ROBERT E. CURRY JR.

JAMES L. LARocca

Commissioners



PETER McGOWAN

General Counsel

JACLYN A. BRILLING

Secretary

April 27, 2009

Joseph A. Post
Assistant General Counsel
Verizon New York Inc.
140 West Street
27th Floor
New York, NY 10007-21 09

Re: Case 08-V-0835 – In the Matter of Verizon New York Inc.’s Network Review Plan.

Dear Mr. Post:

My letter of March 6, 2009 to Richard Bozsik, provided pursuant to the Commission’s Order Concerning the Grounding of FiOS Installations, issued January 14, 2009 (the “Grounding Order”) in the above mentioned proceeding, detailed a tracking program required by the order and our authority under Public Service Law. The company provided feedback and response by a letter dated April 1, 2009 from you (Verizon Response). This letter reflects the final tracking program. Please acknowledge by May 1, 2009 the company’s intent to implement the program in full as described here. If the company objects to particular aspects of the program, it may file its appeal to the Commission no later than May 4, 2009.

The March 6, 2009 letter, inclusive of the changes below reflects the final tracking program. The first tracking report is now due on June 10, 2009, and on the 10th of each month thereafter until reporting ends as discussed below.

Let me reiterate the context and objectives of the tracking directed by the Commission:

[U]nder the Verizon plan, the ONT is being utilized as a potential grounding path for the coaxial cables. If the ONT is not a suitable platform for such grounding, the question arises as to how it can be relied upon for this task. (Grounding Order, p 22)

We analyzed the testing provided by Verizon to ascertain whether the ONT, in spite of Verizon’s concerns, may actually be appropriate for use as a

ground and bond conductor for equipment, such as coaxial cables, which might be attached to it. The tests, we find, are not conclusive. (ibid, p. 27)

We determine that given the testing that has been performed on Verizon's equipment there is an insufficient basis on which to conclude that the ONT is an appropriate path to ground. (ibid, p. 28)

The company was then invited to either submit the ONTs for additional testing to prove their suitability, or to begin implementing a "grounding block" solution in the coaxial cable going forward. Verizon choose the latter and further resolved to install such grounding blocks in the coaxial cable at all new FiOS installations and upon any future premises visits for in-place FiOS installations.

The Commission also simultaneously instituted a separate tracking program for in-place ONTs and FiOS installations to ensure they are monitored for failures which may yet require additional remedial action at a more aggressive pace. The program has two components; 1) tracking of ONTs and their installations, and 2) testing of ONTs. The Commission described the program as follows:

Further, the company shall report monthly to the Director of the Office of Telecommunications, any instances of damage or other reported problems associated with any of its ONT installations, and test the grounding path for continuity in existing ONTs when conducting routine maintenance or inspections at a premises. (ibid, p. 29-30)

Verizon New York Inc. shall report to and as specified by the Director of the Office of Telecommunications, any incidents of property damage resulting from an ONT, as well [as] returns to any manufacturer, each listed by manufacturer and model and any shock incidents reported by customers or Verizon employees. (ibid, p. 30)

Verizon's response contains six sections (A-F). These follow below along with a summary of Verizon's position and my determination:

A. Types of Incidents That Should Trigger the Reporting Requirements

Verizon believes reporting should be limited to instances where both "(a) an ONT is removed from service, and (b) the customer claims (or the Verizon technician reports) that property damage, electrical shock, or other personal injury was caused by the FiOS service."

The purpose of the tracking is to ensure the installed base of ONTs used to provide FiOS service, and as yet unremediated by a grounding block, are safe given they are being used for a purpose (i.e., grounding the FiOS service) for which they were not tested or may not be appropriate. As Verizon agrees in its response, it is simply not possible to ascertain in real-time the reason a particular device failed and was removed from service. While I appreciate the

company's concern that this means it would need to track all ONT and FiOS installations and all devices at those installations removed from service, that is essentially what is necessary to identify patterns of failures which may suggest a problem with a given ONT or ONT installation.¹

That said, Verizon recently agreed to begin placing a ground block in the coaxial cable at all installations upon a premises visit. Installation of a grounding block for the coaxial cable at FiOS installations mitigates safety concerns as much as is possible under current New York practice, and brings the FiOS service into parity with conventional cable television installations. Thus, I believe tracking is now only required for installations where a ground block was not present at the time the equipment was removed from service or tested for continuity. Once a ground block is installed, further tracking is unnecessary for that installation going forward.

Verizon argues "Staff's letter also goes beyond the requirements of the Grounding Order in seeking to require Verizon to report on incidents concerning "ONTs and related devices (i.e., batteries/battery packs, power supply units, and grounding modules)." Verizon claims "(n)either power supplies nor battery packs have anything to do with the grounding concerns that are the subject of the order."

The order relates to ONT installations and requires "tracking *any* incident of property damage." A FiOS installation which appears to function normally, but where the ONT is not providing an adequate grounding path, will most likely present this inadequacy as failures to related devices and equipment. In actual investigations of property damage claims related to FiOS installations, customers have claimed they were subjected to static charges/shocks/heard crackling sounds in attached devices or experienced overheating of coaxial cables. Our electronics experts believe a likely symptom of FiOS grounding problems may present as repeated failures of battery packs, power supplies, attached devices, coaxial cables, or the like. The purpose of the tracking is to identify problems early enough so they might be fixed proactively. Given the incidents discussed above, tracking will not exclude batteries and power supplies, and will extend to all related devices (batteries, power supplies, routers, converters, coaxial cable, and the like) wherever a ground block is not or was not present.²

¹ For FiOS installations prior to January 14, 2009, Verizon should provide all available information requested on the "Staff Reporting Form", but must at a minimum provide items 1-6 and 15-17.

² A hypothetical example might be as follows. An electrical storm passes through a community. Verizon customers call to complain their FiOS routers are no longer working. The devices are removed from service, tracked in the program described here, and returned to the vendor for analysis. The vendor reports that testing indicates they may have been exposed to a power surge. Analysis of the tracking system indicates the preponderance of the failures is associated with, say, the "Acme" ONT. Armed with information provided by the tracking program, the company or staff may now be able to identify a pattern and risk associated with the Acme ONT. This may suggest a special remediation effort focused on in-place Acme ONTs may be prudent in other communities.

B. Retroactivity

Verizon believes it inappropriate to require tracking of events back to June 2005. It is not clear to me when Verizon would propose to begin to provide tracking information.

The tracking program's objectives cannot be met fully only on a going forward basis and tracking is required from June 2005 forward. Tracking, however, will be limited to FiOS installations which were not or have not yet been remediated as required by the Commission's orders, specifically those that do not presently have a grounding block installed.

C. Testing by Verizon

Verizon says it performs no testing of ONTs independent of its vendors. However, the Grounding Order now requires a test to determine whether existing ONTs have grounding continuity:

Further, the company shall . . . test the grounding path for continuity in existing ONTs when conducting routine maintenance or inspections at a premises. (ibid, pp. 29-30)

If Verizon encounters any ONT which does not have a ground block present in the coaxial cable, it must perform continuity testing.³ Should an ONT thus tested no longer have grounding continuity or meet the appropriate limits, it must be recorded in the tracking system.

Given Verizon's representation, it should not be asked to conduct any additional independent tests of ONT and related devices other than continuity testing.

D. Reporting to Electric Utilities

Verizon says its employees only report shock incidents to electric utilities should there be "concerns about stray voltage caused by the power-supply lines outside of the customer's home" and should voltage "be detected inside the customer's premises" it need not be reported as "Verizon's normal practice would be to advise the customer to call an electrician".

New York's electric utilities already actively monitor stray voltage situations and have the ability to best identify the true source of voltage. They already maintain a reporting structure for stray voltage incidents. The purpose in emphasizing an expectation that stray voltage (shocks) would be reported to the electric utility is, in part, to relieve Verizon of the burden of developing a redundant reporting mechanism for shock reports.

³ See the enclosure for the "ONT Ground Continuity Testing Protocol" recommended. If the company wishes to propose a different test, it should discuss it directly with Joseph Baniak of my staff, and if he is in agreement with the proposal, it may be substituted for the test proposed here.

Further, company's employees are already instructed to report shocks to their supervisor and, once confirmed by qualified personnel, to the electric utility under Bell System practices and existing work rules.⁴ We understand these requirements are routinely re-emphasized at employee safety meetings. As my expectation for shock incident reporting is already company-policy, and would relieve the company of a redundant requirement, it is clearly reasonable.

Verizon employees who detect stray voltage inside a customer's home are to inform both the customer and a Verizon supervisor, and if the presence of stray voltage is confirmed, the electric utility as well.

The Commission's order also requires reporting of "any instances of damage *or other reported problems*". Overheating of coaxial cables could result in a fire. Verizon employees when confronted with a fire of any nature on the customer's premises are expected to report such a fire immediately to fire officials and no utility work should take place until the premise is judged safe by a fire official.

E. Staff's Reporting Form

Verizon argues Item 15 ("Verizon Internal Testing") should be eliminated. I disagree (see C above).

References to "other devices" should be removed. I disagree (see A above).

Item 13 ("Electrical Problems Noted"); Verizon says its installers "should not be asked to investigate potential problems in the customer's household electrical system. . . (t)heir investigation should be limited to a review of Verizon's facilities."

Under current company installation practices⁵, employees are already instructed to check the outlets to which they are connecting devices to ensure the outlet is functioning properly and grounded. Verizon personnel have commonly conducted such investigations of the household electrical systems in past incidents. However, I do not expect Verizon installers to be obligated to conduct a more rigorous investigation of electrical problems as we believe those should ultimately be reported to the electric utility which is fully prepared and capable of determining the true source of the problem.

⁴ See, for example: Bell System Practices, Section 081-705-101, 10. Foreign Voltage Reporting Procedures; NESC, Section 42. General Rules for Employees, C. 2. b & c. We also note it is also appropriate under NEC, NESC, and NFPA 70E for the Department, as the authority having jurisdiction, to establish such a reporting expectation and that those standards contemplate reporting to authorities.

⁵ See, for example, Verizon Doc. No. 2006-00837-MDP Issue E, Volt-Ohm Resistance Testing Methods

F. Implementation

Verizon's proposal to begin reporting in June 2009 is accepted. Verizon proposes only to report incidents where its installer was shocked or the customer reported property damage. I disagree (see A. above).

In conclusion, Verizon shall:

- Using Staff's reporting form, track ONT and FiOS related incidents and events (particularly shock, property damage, or fires associated with ONT installations) where a ground block was not present at the time the equipment was removed from the FiOS service or tested for grounding continuity. For ONT and FiOS related incidents and events from June 2005 to date, Verizon shall identify and track as much information identified in the Staff reporting form as is possible.
- Once a ground block is installed, further tracking is unnecessary for that installation going forward, and once all installations have a ground block, the tracking program itself may end.
- Tracking extends to all to Verizon ONT and FiOS related devices or any property (including batteries, power supplies, routers, converters, coaxial cable and the like) wherever a ground block was not present.
- If Verizon encounters any ONT which does not have a ground block present in the coaxial cable, it must perform the continuity testing described here.
- Should an ONT thus tested no longer have grounding continuity or fail to meet the continuity test limits, it must be recorded in the tracking system.
- Verizon employees who detect stray voltage inside a customer's home are expected to inform both the customer and a Verizon supervisor, and if the presence of stray voltage is confirmed, the electric utility as well.
- Fires should be promptly reported to fire officials.

Monthly information should be reported by the 10th business day of each following month using the enclosed reporting form which has been modified to reflect the above. The first report, expected June 10, 2009 should include all pertinent information from June 2005 to date. Should you have questions regarding this request, please contact Michael Rowley at (212) 417-2175 or michael_rowley@dps.state.ny.us. Thank you for your prompt attention to this matter.

Sincerely,

/Original Signed by/

Chad G. Hume
Director, Office of Telecommunications

Enclosures: Staff Reporting Form
ONT Ground Continuity Testing Protocol

Staff Reporting Form

Case 08-V-0835 ONT Tracking Program																
ONT and Related Device ⁶ Information						Information Related to Service Calls or Installations								Return/Testing process		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Location	Make	Model	Serial #	Date Installed	Date Removed/Date Failed Grounding Continuity Test	Reason for Service Call	Customer or Technician Shocked	Repeat Service Call or Device Replacement at Location	Grounding Arrangement Observed	Visible Equipment/Premise Damage	Visible Device (e.g., ONT, Battery Unit, PSU, module, router, or converter) and Coaxial Cable Damage	Electrical Problem Noticed	Reason for Device (e.g., ONT, Battery Unit, PSU, module, router, or converter) and Coaxial Cable Removal	Result of Verizon ONT ground continuity testing and return process.	Date of Return to Manufacturer/Vendor	Result of Manufacturer/Vendor Analysis
Customer address	Device Make	Device Model and Model #	Device Serial #	Date	Date	Describe reason for service visit, services affected, customer reported equipment damage, hazards reported, and the like.	Y/N - Identify reported shock incident at a premises with FIOS installed or in the process of being installed.	Y/N, describe previous service visits, dates of service at location, whether devices or coaxial cables had been replaced previously at location	Describe grounding arrangement observed by technician prior to servicing ONT or related devices.	Y/N - Describe equipment/premise damage observed by technician.	Y/N - Describe condition of devices and related coaxial cables and any damage observed by technician.	Y/N - Describe any electrical problems observed (blown fuse, voltage on cable, outlet polarity, and the like), identify whether electric utility notified by supervisor/technician and whether and what customer was advised to do by technician.	Describe reason for device removal.	Describe result/determination of ONT ground continuity testing, and/or disposition of returned device (when/where ONT sent for further testing, if ONT returned to service, inventoried, or the like).	Date of Return to Manufacturer or Vendor	Describe entity that handled device testing (if not the manufacturer), result of testing/analysis (indicate if "failure analysis report available), and disposition of device.

⁶ Related devices include all batteries, battery packs, power supply units, grounding modules, routers, and converters at the installation.

ONT Ground Continuity Testing Protocol

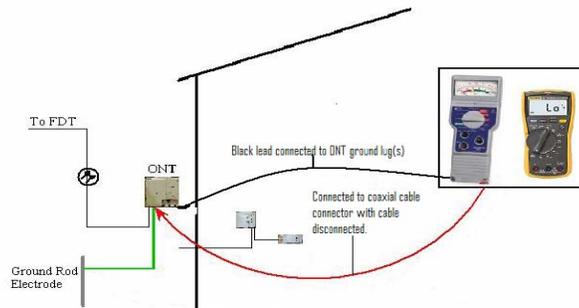
It is a requirement that on every premise visit that the continuity of ONT's ground path be verified whenever a grounding block is not present in the coaxial cable. This can be done through the following method:

- Sidekick or Volt-Ohm Meter resistance reading between the ONT coaxial cable connector (with coaxial cable disconnected) and the ground lugs on the ONT.

The ground path must pass is tests to ensure the ground continuity across the ONT. In cases where the grounding path does not pass, technicians must document as required.

Volt-Ohm Resistance Test Method to verify ONT Ground Path Continuity

This is the method for verifying ground path continuity ONTs and must be used in every case where the technician has immediate access to the ONT. This test may be preformed with either a Sidekick or Volt-Ohm meter.



Procedure

1. With the ONT Technician door open, connect the Red Lead to one of the ONT coaxial connector with the coaxial cable disconnected.
2. Connect the Black Lead to the ONT ground lug(s)
3. Turn the resistance test function
 - Sidekick Meter: Turn the dial to the “R x 1” position
 - Volt-Ohm Meter: Turn the dial to the Ohm (Ω) position
4. Check the Resistance (Ω) reading
 - $\leq 0.5\Omega$ verifies the continuity of the ground path through the ONT
 - $>0.5\Omega$ indicates a problem with the ground path within the ONT

Note: If the ONT does not pass the ground path continuity, the ONT must be documented as required.