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October 14, 2010

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Re: Comments on Final Audit Report

Gentlemen:

Attached please find the comments of Verizon New York Inc. on the Final Report of the
Network Review Plan Compliance Audit.

Respectfully submitted,

A handwritten signature in black ink that reads "Joseph A. Post". The signature is written in a cursive, slightly stylized script.

Joseph A. Post

cc: Mr. Michael Corso
Mr. Chad Hume
Mr. Joseph Baniak
Mr. John France

**COMMENTS OF VERIZON NEW YORK INC. ON THE FINAL REPORT
OF THE NETWORK REVIEW PLAN COMPLIANCE AUDIT**

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October 14, 2010

COMMENTS OF VERIZON NEW YORK INC. ON THE FINAL REPORT OF THE NETWORK REVIEW PLAN COMPLIANCE AUDIT

The Liberty Consulting Group has issued the final report of its audit of Verizon New York Inc.'s Network Review Plan ("NRP") — an extensive, multi-million dollar effort¹ designed to ensure that the company's FiOS installations comply with applicable electrical grounding requirements. In what was surely one of the most searching examinations of grounding conditions ever conducted, Liberty reviewed a statistically validated sample of FiOS installations in New York State based on stringent compliance criteria. On the basis of that review, Liberty concluded that the NRP had been "very successful."² In ten of the sixteen regions of the State, the confidence intervals on Liberty's compliance estimates bracket full-compliance levels of 95% or better. On a statewide basis, Liberty estimates that 89.5% of FiOS installations are fully compliant with the grounding standards adopted by Liberty (with a confidence interval of 87.7% to 91.3%). The statewide compliance level for ground block installation was found to be 95%.

Nevertheless, the Final Report does find that some locations are not fully compliant with applicable grounding requirements, and concludes that "there is still some room for Verizon to improve its performance."³ As Staff and Liberty are aware, Verizon believes that the compliance standards that were applied at many locations were overly stringent, and did not take proper account of Verizon's showings that actual working grounds were present. Moreover, it is

¹ Implementation of the NRP has cost Verizon over \$30 million to date.

² Final Report at 41.

³ Final Report at 41.

important to remember that as the Commission recognized in the *Grounding Methods Order*,⁴ the optical fiber over which FiOS services are delivered to the customer's home *does not conduct electricity*; therefore, the FiOS presents far less inherent risk of property damage or personal injury due to stray voltage than conventional cable television installations.⁵

Although Verizon disagrees with a number of the audit's individual compliance findings,⁶ it does not intend to challenge those findings before the Commission, and it is fully committed to implementing the recommendations of the Final Report. Accordingly, Verizon has already remediated those installations that Liberty identified as non-compliant, and it is also proposing to implement supplemental remedial measures that are discussed in detail in the Appendix to these comments.

Notwithstanding Verizon's commitment to full implementation of the audit's recommendations, a preliminary discussion of the basis of some of Liberty's non-compliance findings is warranted in order to put those findings into proper perspective.⁷ It is important to recognize, for example, that many of the findings, even if arguably justifiable under a strict technical reading of the applicable rules, relate to minor deviations that should not be a cause for

⁴ Case 08-V-0835 "Order Concerning the Grounding of FiOS Installations" (issued and effective January 14, 2009).

⁵ *Grounding Methods Order* at 6, 10. It is also worth clarifying that no claim has been made that stray currents that could cause property damage or personal injury originate in Verizon's Optical Network Terminals or their power supplies. Rather, the issue raised by the Commission's orders is whether FiOS equipment adequately mitigates risks from such external sources as lightning, home wiring defects, and faulty appliances.

⁶ In detailed comments that it submitted on a draft version of the audit report, Verizon challenged Liberty's findings for 49 installations. If the objections had been accepted by Liberty (they were not), the statewide compliance percentage would have been 93.4%, with a confidence interval of 91.9% to 94.9%.

⁷ We only discuss here an illustrative sample of the 49 non-compliance findings that Verizon objected to.

concern either to Verizon's customers or to the Commission. Other findings reflect bona fide disagreements between Verizon and Liberty as to what rules are applicable in particular cases or as to how those rules should be applied.

In making these points, and in noting its disagreement with many of the Final Report's findings, Verizon is not asserting that Liberty failed to comply in any respect with the Agreement and Work Plan that governed the conduct of the audit. Rather, we believe that examination of Liberty's compliance criteria and classification rules will provide a clearer picture of the true nature and significance of the audit findings. Specifically, we hope that such an examination will make it harder for Verizon's competitors or other third parties to distort those findings — as the grounding issue has been distorted in the past — to suggest that significant safety problems exist at FiOS installations, or that Verizon is flouting the Commission's requirements.

1. *Materiality: Painted surfaces and loose connections.* The NRP — as approved by the Commission — makes it clear that the test for the adequacy of a grounding arrangement is whether an installation deviates “in any *material* respect” from applicable grounding requirements.⁸ A “material deviation under the NRP is “any deviation other than one that is purely technical in nature and that has no significant impact on the overall safety and reliability of a FiOS installation.”⁹ Despite the inclusion of this specific language in the NRP, Liberty's analysis gave short shrift to the materiality issue. Indeed, it appears that this was a carefully considered aspect of the Liberty's approach to the audit. Thus, the Final Report states that Liberty avoided

⁸ Emphasis supplied.

⁹ NRP Introduction, ¶ B n.1.

making materiality determinations either because they were beyond the scope of the audit, or because they could be deemed “subjective” or “arbitrary.”¹⁰

Liberty’s approach to materiality is illustrated by its compliance determinations for a number of locations at which it found that a ground connection had been made to a painted surface (such as a grounding clamp attached to a painted length of metallic conduit supporting an electrical meter).¹¹ Liberty scored such installations as non-compliant, although it noted that “[i]t is possible that the ground contact in these cases was made because there was a small patch of paint that had been scraped away but was not visible.”¹² On the other hand, the Verizon inspectors who accompanied the Liberty team tested the electrical continuity across connections to painted surfaces using an Aines Manufacturing Tone Test Set, and documented the test results in photographs which clearly identify the installation, show the manner in which the test was conducted, and display the results. In a number of instances, Verizon submitted test results that demonstrated that there was electrical continuity — *i.e.*, that current could flow freely — across connections that Liberty had scored as non-compliant. These test results would provide support for Liberty’s acknowledgment that an area of paint could have been scraped away before the clamp was installed, but at a minimum they establish that any non-compliance at these locations was immaterial.

¹⁰ Final Report at 27 n. 57, 41 n.75. To the extent that the Final Report seems to argue that *any* violation of grounding requirements is *ipso facto* material, since NEC rules are “specifically written to address safety concerns,” Verizon respectfully disagrees. If this premise were correct, there would be no reason for including a materiality rule in the NRP.

¹¹ Connection of a ground wire to a meter conduit using a clamp is a common and well-established means of establishing a connection to ground.

¹² Final Report at 15 (footnote omitted).

Liberty has acknowledged that it did not perform continuity tests, and that its findings as to the adequacy of ground connections were based solely on its visual observations, combined, in some cases, with a “gentle tug” on the ground wire.¹³ Nevertheless, it declined to score the installations in question as compliant — or even as “immaterially non-compliant” — essentially on the grounds that continuity testing was not within the scope of the audit and that the audit findings could not be based on the results of tests performed by Verizon, no matter how objective, probative, and well-documented the results were.¹⁴ Even if Liberty’s scoring of these installations as non-compliant were justified under the strict terms of its audit, the results of Verizon’s continuity tests are critically important in assessing the nature and significance of the non-compliance findings for these installations.¹⁵

To avoid any misunderstanding, Verizon is *not* seeking to avoid its obligation to train its employees to utilize best practices (such as paint-scraping) strictly “by the book.” Indeed, the supplemental remedial measures discussed in the Appendix to these comments are designed to achieve strict compliance with applicable grounding standards, *as those standards were*

¹³ See, e.g., Final Report at 8, 15, 20, 26, 42. At page 8 of the Final Report, Liberty states that its failure to perform continuity tests was “[a]s requested by Staff.” In view of this statement, we should clarify that Verizon does *not* regard Liberty’s failure to conduct continuity test as inconsistent with the terms of the Audit Agreement, with Staff’s instructions, or with the Work Plan that governed the Audit. We simply believe that the results of Verizon’s tests provide additional relevant information that could have been considered by Liberty along with the results of its own visual observations — and that in any event should be considered by third parties in assessing the significance of the audit findings.

¹⁴ See, e.g., Final Report at 15: “Liberty did not observe Verizon’s conduct of the continuity tests; as a result, although Verizon provided photographs of the test meters, Liberty is unable to independently verify the test results. Liberty’s review was intended to include independent inspections of the sampled installations and not to rely on other test results, whether by Verizon, Staff, or anyone else.” See also *id.* at 21 n. 41.

¹⁵ Very similar issues were raised by installations that were scored as non-compliant on the grounds of “loose connections,” notwithstanding test results submitted by Verizon demonstrating good electrical continuity across the connections.

interpreted and applied in the audit. Nevertheless, the issue of determining whether an installation is compliant under the NRP's materiality standard — and *a fortiori* the issue of assessing the significance of any claimed non-compliance — are separate and distinct from the issue of implementing best practices on a going-forward basis.

2. TII-442: Red and green lights. Materiality issues are also raised by Liberty's review of installations that were grounded through the use of a TII-442 grounding module. The TII-442 is a small, box-shaped device that plugs into a three-slot electrical outlet, and that is connected by a length of grounding wire to a Verizon Optical Network Terminal ("ONT"). In its January 2009 *Grounding Methods Order*, the Commission authorized the use of the TII-442 as a grounding means for "inside" FiOS installations in specific situations.

The TII-442 has two small lights on its front surface, one red and one green. For a properly wired outlet, a red light indicates that no ground is present (and thus the outlet may not be used for grounding an ONT), and a green light indicates that the outlet is properly grounded. In the cases at issue here, Liberty found that both lights were lit. As Verizon demonstrated through bench-test results that it submitted to Liberty, this condition occurs when a specific wiring error — the reversal of the "load" and "neutral" connections — is made by an electrician in installing the outlet. This error does not affect the adequacy of the outlet as a ground source, and the use of a TII-442 in such cases is not inconsistent with any provision of the National Electrical Code ("NEC") or any Commission order.

Although Liberty acknowledged that the double light condition “probably indicates” that a ground exists,¹⁶ it scored those cases as non-compliant. Its rationale was that the TII-442 “is designed to be used only when a green light appears,” and that use of the device when both lights are lit is inconsistent with Verizon’s M&Ps.¹⁷ Verizon submits that in focusing on the question of consistency with the M&Ps, Liberty paid inadequate attention to materiality considerations (or indeed, even to the basic question of whether such a situation should be regarded as non-compliant with the NEC or with Commission orders at all).

3. ***Grounding conductor length.*** The NEC generally requires that “the primary protector grounding conductor” not exceed 6.0 meters (20 feet) in length. At a number of locations that Liberty scored as non-compliant, outside grounding conductors were between 20 and 24 feet long.¹⁸ Verizon does not dispute that these installations exceeded the NEC length standard. Nevertheless, Liberty might readily have concluded that the minor excess length was immaterial under that standard. Indeed, such a conclusion would be supported by the fact that the NEC itself states that the 20-foot standard “provides guidance” for apartment and commercial buildings, but that “a specific length is not specified in the Code [in such cases] because such a limitation may not be practical in some installations.” Although the situations at issue here did not involve apartment or commercial buildings, the fact that the drafters of the NEC believed that the 20-foot standard could be applied flexibly where strict application “may not be practical” certainly

¹⁶ Final Report at 20.

¹⁷ Final Report at 20.

¹⁸ In an ideal world with standardized building layouts, it would be fairly easy to specify an equally standardized route for the grounding conductor that would always conform to the 20-foot standard. Unfortunately, we do not live in such a world.

supports the position that minor deviations from the standard — even where not strictly Code-compliant — are fully consistent with customer safety.¹⁹

4. ***Conditions not caused by Verizon.*** The Final Report recognizes the general principle that grounding defects caused by homeowners, contractors, or Acts of God after Verizon's installation work is complete should not be counted as instances of non-compliance.²⁰ Moreover, the report concludes that such situations existed at some of the locations that Liberty examined. Nevertheless, the report rejects similar claims for other locations. Without going into the details of individual situations, the general issue here is one of burden of proof. In some cases there was clear evidence that (for example) a ground source was replaced or modified after Verizon connected its ground wire to that source. In other cases, however, despite clear evidence that some disruption (such as storm damage, or third-party electrical work) had occurred at the customer's premises, it was not possible to prove beyond a reasonable doubt that the disruption occurred after the FiOS installation, and that it had affected Verizon's ground connection. On the other hand, it would be equally impossible to prove the opposite (although Liberty did make its judgments based on which scenario it regarded as most plausible).

Verizon submits that where there is clear evidence of some damage or activity that could have disrupted the ground connection, but no dispositive evidence as to whether the particular

¹⁹ Liberty argues at page 17 n.30 of its Final Report that excess length is necessarily material since the length limitation serves the important function of limiting grounding-conductor impedance and thus limiting the occurrence of significant potential differences between points connected by the conductor. However, recognizing the importance of the length standard as a general matter is not inconsistent with asserting that minor deviations from that standard are not material.

²⁰ See Final Report at 12, 13.

situation observed by Liberty had been caused by that activity, then the most reasonable and even-handed approach to take would have been to exclude the installation from Liberty's sample.

5. ***Bona fide disputes.*** In some cases, reasonable parties can reach opposite conclusions about how grounding requirements should be applied in particular cases.²¹ One example is provided by a service architecture that Verizon commonly uses in newly built ("greenfield") developments. In such cases, Verizon specifications require that the developer install a particular type of *listed*, wall-mounted metal cabinet, and that the cabinet include a NEC-compliant grounding point. (The developer's electrician, not Verizon, is responsible for ensuring that the cabinet is connected to an approved ground source.) Verizon then installs the ONT in the cabinet and connects its ground wire to the cabinet's manufacturer-installed grounding screw. Liberty concluded that the arrangement was non-compliant because the screw used by the manufacturer was what Liberty described as a "sheet metal screw." Verizon's position is that the arrangement is permissible under NEC § 250.8(7), which permits "[g]rounding conductors . . . [to be] connected by . . . [c]onnections that are part of a listed assembly." Whether or not there was some colorable basis for Liberty's position, Verizon clearly had substantial reason to believe that its greenfield architecture was NEC-compliant.

²¹ Indeed, the question of precisely what grounding rules are applicable to fiber-to-the-premises serving arrangements — and in particular to "inside" FiOS installations — emerged early in the Commission's grounding inquiry, and was not even partially resolved until the Commission issued its *Grounding Methods Order* in January 2009. It is our understanding that the 2011 version of the NEC will address many of these issues more specifically than they are addressed in the current (2008) version of the Code.

Another issue in this category — and a far more significant one in terms of its impact on the audit results²² — related to installations in which the ONT was grounded simply through a three-pronged plug inserted into a compatible outlet, without using a TII-442 grounding module. Connecting to a building’s Equipment Grounding Conductor in this manner is the standard, long-accepted, and NEC-compliant means for grounding electrically-powered equipment that has exposed conductive surfaces and that is installed inside a building, such as washer/dryers and refrigerators, as well as televisions, VCRs, cable set-top boxes, personal computers, fax machines, printers, and stereos or other consumer electronics. Nothing in the *Grounding Methods Order* is inconsistent with that conclusion. The order did not find the use of three-prong plugs for grounding to be unsafe or inadequate — rather, it indicated its preference for what it deemed to be the more “robust” grounding arrangements provided by “direct” grounding or the TII 442 solution. Verizon does not dispute that on a going-forward basis the *Grounding Methods Order* precluded the use of a three-prong plug, without a TII-442, as a grounding arrangement for inside FiOS installations. Verizon’s position is rather that ONTs that had been installed in this manner prior to the NRP’s August 2008 dividing line between “past” and “new” installations — aside from being safe and NEC-compliant — complied with all Verizon M&Ps and Commission

²² Liberty’s decision to treat this arrangement as non-complaint applied to 14 installations in Liberty’s sample. It significantly affected not only the initial compliance percentages calculated by Liberty, but also Liberty’s downward adjustment of those percentages to account for supposed “no-access bias” (*i.e.*, the fact that Liberty’s inspectors were able to obtain access to “inside” ONT installations less frequently than they were able to obtain access to “outside” installations). The no-access adjustment was premised on the conclusion that there was a significant difference in compliance percentages between “inside” and “outside” installations, which in turn was affected by the classification of the “three-pronged plug” installations (all of which were inside installations). If Liberty had accepted Verizon’s objections to its draft findings, there would have been no statistically significant difference between the compliance rates for inside and outside installations, and therefore no basis for a downward adjustment. Verizon demonstrated this fact in a statistical analysis that it submitted to Liberty.

requirements *that were in effect at the time the ONTs were installed*. Accordingly, Verizon's view is that the NRP does not require "remediation" of such installations, and that they therefore should be scored as compliant. Liberty ultimately rejected that position, but that does not mean that Verizon's interpretation was not based on a reasonable view of the NRP's compliance criteria.

6. Classification issues. Finally, Verizon believes that Liberty inappropriately classified a number of installations as "ungrounded" or as having "uncertain grounds" (as opposed to including them in the remaining non-compliance category — "technically non-compliant"). Since the Commission's orders view ungrounded installations as a more significant concern than installations that are merely technically non-compliant, proper classification is an important factor in assessing the significance of the audit results. Verizon raised a number of these classification issues in its comments on the draft version of the Final Report, and we will merely mention two of them here. For example, a number of the installations in the "uncertain ground" category were found to have loose connections or to involve ground wires clamped to painted surfaces. To the extent that Verizon demonstrated through documented tests that there was electrical continuity across the connection, there is no basis for stating that the ground connection is "uncertain."

Another example is Liberty's classification of the "three-prong plug" installations as ungrounded. Such installations are connected, through the plug, to the building's Equipment Grounding Conductor, which is, as noted previously, a standard grounding arrangement for household electrical equipment. The Commission's objection to the arrangement in the

Grounding Methods Order related to what it regarded as the superior features of the TII-442, not to any conclusion that a connection through a three-prong plug is in any sense “ungrounded.”²³

* * *

As already noted, the above discussion is addressed to the *significance* of the audit findings, and to the issue of how those findings should be viewed by the Commission. Keeping a proper perspective on the findings is important because FiOS technology competes in the market with conventional cable technology that delivers services to the customer’s home over electrically-conductive metallic cables — frequently aerial — that create risks of stray voltage due to lightning exposure and contact with power lines. In contrast, as the Commission recognized in the *Grounding Methods Order*, the optical fiber over which FiOS services are delivered to the customer’s home does not conduct electricity, and the FiOS serving arrangement therefore presents far less inherent risk of property damage or personal injury due to stray voltage than conventional cable television installations.²⁴ Moreover, a variety of evidence indicates that conventional cable plant has a significant level of grounding defects.²⁵ Despite these facts, we are not aware of any compliance program undertaken by the cable incumbents that is even remotely comparable to the NRP in scope, rigor, or level of effort. Certainly none of the State’s traditional

²³ Liberty justifies its classification of the “three-prong-plug” installations as ungrounded by stating that “there is no ground wire leaving the ONT that directly connects it to any of the approved grounding sources” (Final Report at 18-19) *See also id.* at 24 n. 52. However, that statement ignores the fact that the grounding connection is made through the power cord, as it is made through that cord for a wide range of grounded household equipment.

²⁴ *Grounding Methods Order* at 6, 10.

²⁵ *See, e.g.,* discussion in Section I of Case 08-V-0835, “Response of Verizon New York Inc. to the Petition of Cablevision Systems Corporation” (filed December 3, 2008).

cable installations has ever been subjected to a comprehensive, statistically-validated, third-party grounding audit of the sort that Liberty has conducted here.

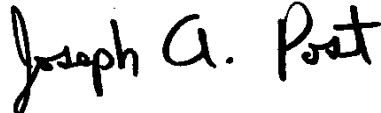
One of Verizon's competitors has already used this proceeding as the basis for a mass mailing suggesting that a "PSC report" had concluded that improperly grounded FiOS installations pose a fire or electrocution risk, and offering its own services "[a]s an alternative," implying that those services were safer than FiOS. We have also been informed that competing sales representatives have made absurd representations to Verizon customers, such as the claims that "[p]eople can get hurt as [FiOS equipment] can actually blow up," that the Commission had stopped all FiOS installations in New York City, and that the possibility of fire or electrocution could exist anywhere FiOS is installed. It would be unfortunate indeed if Liberty's report were to inadvertently contribute to this sort of anticompetitive conduct by creating the impression that grounding issues are unique to FiOS, or that Verizon services pose a safety risk to the company's customers. Unfortunately, the exclusive focus of the report (and of the underlying audit) on FiOS installations could create that impression. Verizon should not be subject to competitive harm precisely because it — and not its competitors — implemented the NRP and agreed to (and, in fact, *proposed*) a third-party audit.²⁶

When Verizon pointed out this issue in its comments on a preliminary draft of the audit report, Liberty responded by stating that its "review was designed to be only an examination of

²⁶ The Commission's November 3, 2008 "Order Approving FiOS Remediation Plan with Modifications" noted that Verizon had proposed an independent third-party review, but concluded that a "decision on commencing an independent review should be deferred." (Pages 21-22.) Nevertheless, when Staff subsequently requested that a third-party audit be initiated, Verizon agreed, thus foregoing its right to have the Commission determine the need for (and scope of) such an audit.

Verizon's compliance with the Commission's grounding and bonding requirements, as described in Liberty's Audit Work Plan"²⁷ That is undoubtedly true. Nevertheless, taking the competitive context into account — even if it is not part of the process of *developing* the audit findings — is certainly critical to assessing the significance of those findings.

Respectfully submitted,

A handwritten signature in black ink that reads "Joseph A. Post". The signature is written in a cursive, slightly stylized font.

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²⁷ Final Report at 9-10 n. 11.

APPENDIX

PROPOSED SUPPLEMENTAL REMEDIAL PLAN

As noted in Verizon's comments, Liberty's Final Report finds that Verizon's statewide average "full compliance" level (under Liberty's stringent compliance standards) is 89.5%. Six of the 16 "Relevant Areas" of the State that are identified in the NRP fall below this level. Verizon's proposed Supplemental Plan focuses on these six areas. Verizon proposes that the Supplemental Plan remain in place for a three-month period (subject to extension if the Commission concludes at the end of that period that the plan's objectives have not been achieved), and that it replace the NRP (which would be terminated by the Commission, having been implemented in the remaining 10 areas of the State with a reasonable degree of success).

Verizon has had in place for some time under the NRP a process which applies when the compliance levels for a sample of new installations in any of the 16 Relevant Areas falls below 95% in a given month (or when *any* no-grounds are observed in the sample). In such cases, Verizon must inspect 100% of the installations done in that area and month, *unless* the company can demonstrate, to the satisfaction of the Director of the Office of Telecommunications, a limited, easily-remediable "root cause" for the non-compliance (*i.e.*, a particular technician's misunderstanding of a particular grounding requirement). In such cases, correction of the root cause will suffice.¹ This "audit action plan" process provides a model for Verizon's implementation of the Final Report's recommendations.

¹ See NRP ¶ 8(b): "At the discretion of the Director of the Office of Telecommunications of the Department of Public Service (the "Director"), an inspection of all New Installations in a given month and Relevant Area pursuant to paragraph 8(a), above, will not be required if Verizon identifies a root cause factor for its failure to meet the requirements of paragraph 8(a) in such month and area, and puts forth a focused plan judged

(continued ...)

Verizon proposes to conduct root-cause analyses of any instances of grounding non-compliance that were identified by Liberty for the six Relevant Areas, as well as any other instances that were identified in those areas in the past by Verizon's Optical Network Quality Assurance Team ("ONQAT"). The root-cause analysis will assess such factors as what types of errors are most common, and whether disproportionate error levels are attributable to particular garages, wire centers, managers, or technicians. Interviews with technicians or managers will be conducted as necessary to shed light on the nature and cause of identified grounding errors. Particular attention will be paid to issues addressed in Liberty's four recommendations.²

To the extent that discrete root-cause factors are observed that meet the requirements of NRP ¶ 8(b), remedial measures will be devised that are targeted to those root causes. The measures might include supplemental training for particular individuals or groups, clarification of particular grounding requirements, increased oversight over certain types of installations, changes in systems or equipment, and employee incentives or discipline where warranted. As is currently the case, the identification of potential root causes and the selection of appropriate remedial measures for particular root causes will be carried out in consultation with the Director of the Office of Telecommunications.

If discrete root causes that meet the requirements of NRP ¶ 8(b) are *not* identified in the six areas, then a different approach will be followed.

(...continued)

appropriate by the Director for addressing this root cause factor. In order to qualify under this subparagraph 8(b), the root cause factor must be one which is isolated, can be readily tracked for re-inspection and remediation, and which upon remediation produces a passing grade relative to the requirements set forth in paragraph 8(a)."

² Final Report at 44-45.

First, while the Supplemental Plan is in effect, Verizon will continue to use the ONQAT to conduct monthly inspections of a sample of new installations in the six relevant areas, and will report the results of such inspections to Staff, utilizing the reporting templates currently in use under the NRP. Verizon will also continue to comply in those areas with the obligations related to new installations that are set forth in ¶¶ 6 through 9 of the NRP, including the payment of credits to customers under the standards set forth in ¶ 9.

Second, additional general compliance measures will be considered, including broadly-based supplemental training on particular types of grounding techniques, the implementation of new performance monitoring and employee incentive/discipline programs, and so forth. The particular measures adopted will depend upon data generated through the root-cause analysis, and will be subject to the approval of the Director.

Third, the ONQAT will be assigned to conduct monthly reviews of grounding conditions at a randomly-selected, 10% sample of premises in the six areas to which Verizon has made routine maintenance or repair dispatches. (“Grounding conditions,” for this purpose, will include the proper installation of a ground block.) This process will provide additional data that will be fed into the root-cause identification process. The results of these reviews will be reported to Staff.

Finally, as noted in Verizon’s comments, one category of non-compliance findings — those related to pre-September-2008 installations grounded through a three-pronged plug — had a very significant impact on the audit results. Accordingly, this issue will receive special attention. Verizon believes that it is very unlikely that such situations will occur in any *new* installations. However, where it is observed in existing installations as a result of the routine-repair review

process, a dispatch will be made to upgrade the ground to a direct connection to the primary grounding electrode or to a TII-442, as appropriate.