Final Report on the Review of Verizon's Performance Metrics and the Associated Performance Assurance Plans

Presented to:

The Staff of the Virginia State Corporation Commission

and

Verizon Virginia

By:

65 Main Street
Quentin, Pennsylvania 17083

(717) 270-4500 (voice)
(717) 270-0555 (facsimile)
Admin@LibertyConsultingGroup.com (e-mail)

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I. Introduction

A. Purpose of the Review

The Virginia State Corporation Commission (Commission) requires an annual review of the reliability and accuracy of Verizon Virginia's (Verizon's) wholesale performance report results and any associated incentive payments.[1] The commissions of the other Potomac jurisdictions (the District of Columbia Public Service Commission, the Maryland Public Service Commission, and the Public Service Commission of West Virginia) have similar requirements.[2] The Virginia Commission and these other Potomac jurisdiction commissions engaged The Liberty Consulting Group (Liberty) to conduct such reviews in the past ("previous audits"),[3] and the Commission and the other Potomac jurisdiction commissions selected Liberty again to conduct an updated review, with emphasis on changes made since the previous audits.

B. Overview of Verizon Performance Measures and Performance Assurance Plan

The document "Carrier-to-Carrier Guidelines Performance Standards and Reports" (Guidelines) provides the basic definition of Verizon's performance measures. In addition, the Guidelines describe Verizon's methods, indicate what records Verizon excludes from the calculations, and give the performance standards applicable to each measure. Since Liberty's previous audits, Verizon has consolidated its jurisdiction-specific Guidelines into a single set of Guidelines that cover the entire Verizon East footprint.[4] For the current audit, Liberty used the version labeled "VZEAST200502-NY200412Version 1.0," which was based on a December 16, 2004, New York Public Services Commission (New York Commission) order.[5] This version of the Guidelines was applicable to Virginia (and the other Potomac jurisdictions) during the September 2005 data month, which was the principal focus of the current audit.[6]

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[1] Response to Data Request #5.

[2] Responses to Data Requests #3, #4, and #6. This report refers to the District of Columbia, Maryland, Virginia, and West Virginia as the "Potomac jurisdictions."

[3] Final Report on the Review of the Performance Metrics and the Associated Performance Plan filed by Verizon Virginia (Virginia Final Report), issued April 2, 2004; Final Report on the Review of the Performance Metrics and the Associated Performance Plan filed by Verizon Maryland (Maryland Final Report), issued June 24, 2004; Final Report on the Review of the Performance Metrics and the Associated Performance Plan filed by Verizon District of Columbia (District of Columbia Final Report), issued July 9, 2004, and; Final Report on the Review of the Performance Metrics and the Associated Performance Plan filed by Verizon West Virginia (West Virginia Final Report), issued May 31, 2005.

[4] The Verizon East territory includes the Verizon serving areas in New England, New York, New Jersey, Pennsylvania, Delaware, Maryland, the District of Columbia, Virginia, and West Virginia.

[5] The four Potomac jurisdictions generally follow the orders of the New York Commission. As Verizon noted in response to Data Request #9, "[t]he Virginia SCC does not issue formal orders to implement Carrier-to-Carrier Guidelines... In the absence of reply comments, Guideline changes are considered approved 45 days from the filing date."

[6] Response to Data Request #1. Although Liberty based most of its analysis on the Guidelines applicable to the September 2005 data month, Liberty also used the Guidelines version "VZEAST200511-NY200504Version 1.0,"

Verizon organizes its performance measures using the following eight domains:

- Pre-Ordering (PO)
- Ordering (OR)
- Provisioning (PR)
- Maintenance and Repair (MR)
- Network Performance (NP)
- Billing (BI)
- Operator Services and Directory Assistance (OD)
- General and Miscellaneous Standards (GE).[7]

Within each domain there are between one and 11 performance measures. The Guidelines identify each measure by its domain as well as its specific measure number. For each performance measure, Verizon defines specific sub-measures. PO-1, for example, contains nine sub-measures, PO-1-01 through PO-1-09. For actual performance reporting, many of these sub-measures have additional granularity, usually for separately reporting different product groups or transaction types. In its performance reports, Verizon designates this detailed level of reporting using four-digit codes as a suffix combined with the text name of the measurement. For example, Verizon uses the suffix code "2100" to designate the reporting of a measure for the Resale Plain Old Telephone Service (POTS) product class.

The Guidelines list three basic types of performance standards: parity with retail, benchmark, and no standard. In cases where there is a comparable retail measurement, parity with retail is the preferred standard. In some cases, Verizon measures performance results against parity with retail plus some amount to account for inherent differences between wholesale and retail systems and operations. In cases where there is no reasonable comparable retail measurement, the Guidelines may specify a benchmark standard. In still other cases, there are no specific standards. Verizon makes the results of these performance measures available for diagnostic and informational purposes only.

Verizon reports the performance measures in monthly Carrier-to-Carrier ("C2C") Reports. Verizon reports all or some subset of these performance measure results for individual and aggregate CLECs; the aggregate CLEC results do not include Verizon affiliated CLECs. Verizon reports most results on a state-wide basis; however, Verizon reports some Pre-Ordering and Ordering measures on a regional basis.

To help ensure that Verizon provides quality wholesale services to CLECs, the Commission adopted Performance Assurance Plan (PAP) through which Verizon applies credits to the bills of CLECs in cases where a specified subset of the performance measures indicate sub-standard performance. The PAP divides the relevant performance measurements into three categories: i) Mode Of Entry (MOE), ii) Critical Measures, and iii) Special Measures. The PAP also identifies

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which was not effective in the Potomac jurisdictions until November 2005, for the sole purpose of assessing a few Guidelines changes that Verizon made to address findings from previous audits.

[7] Verizon does not use the GE domain for any of the Potomac jurisdictions.

additional measures that are part of the Change Control Assurance Plan (CCAP). The PAP defines calculations for bill credits in cases where performance does not meet the prescribed standard.

Verizon's Network Metrics Platform (NMP) provides a centralized information system for calculating and reporting its wholesale performance measures. NMP loads performance data and generates metric results and reports. While providing domain-specific warehousing and reporting of metrics data, some of the components and supporting processes in NMP are common to all the metric domains. The function of many of these components and processes is to ensure that NMP is operationally sound and capable of accurate and reliable performance reporting. NMP calculates the complete suite of metric results simultaneously, and each reported result is based on contributions from various NMP modules. NMP does not contain a single set of code with the full algorithm for calculating the results of a sub-measure. Nevertheless, for some internal purposes and for use by auditors, Verizon can produce a set of C2C Metric Algorithms (CMAs), which it derives through a separate process that uses input from NMP modules.[8]

Verizon has a Metric Change Control process, through which it administers, coordinates, tracks, and documents all changes to its wholesale measures and communicates changes to CLECs and the Commissions. Verizon provides this communication through Metric Change Control Notices (MCCNs). Liberty reviewed the Metric Change Control process extensively in its previous audits and found the process to be working well. In addition, Liberty did not issue any findings associated with the Metric Change Control process during these audits. Therefore, Liberty did not reexamine this process in the current audit.

C. Liberty's Review Methods

Because the operations support systems (OSSs), the performance measures, and the PAPs for the Potomac jurisdictions are very similar, Liberty was able to perform a joint audit for the four jurisdictions. However, Liberty examined data from each of the jurisdictions as part of its assessment. In addition, because it had completed audits in each of the jurisdictions within the last two years, Liberty focused its review on an examination of changes introduced since the time of those audits and on the status of Verizon's response to the findings and other remaining issues from the previous audits. One particular change since the previous audits that affects Virginia was the consolidation of the reporting of results from areas formerly served by GTE and those formerly served by Bell Atlantic before their merger to form Verizon.

During the course of this audit, Liberty:

- Requested and examined any changes or updates introduced since the previous audits to the documentation, processes, and methods used in the measures and in the wholesale operations reported in the measures.

[8] The CMAs do not represent the actual code used by Verizon to generate the results; they only provide a mapping of the combined calculation logic into a single isolated format. Furthermore, because the CMA generation process involves manual intervention, it can occasionally create algorithms that do not correctly represent the NMP calculation logic.

- Reviewed the Guidelines and NMP documentation and compared them with those provided during the previous audits.
- Reviewed in detail any new measures or modifications to measures that had been introduced since the time of the previous audits. This included reviewing the methods used for calculating these measures, verifying that Verizon uses the correct data in the calculations, and replicating Verizon's calculations for these measures for the September 2005 data month.
- Reviewed the status of Verizon's responses to all unresolved findings from the previous audits.[9]
- Examined through the MCCNs all change controls implemented since the previous audits, as well as any other changes identified by Verizon, to assess the purpose and effect of each change.
- Reviewed the CMAs and replicated for one data month a sample of sub-measures for which there were no reported changes in each domain as a cross check on the general accuracy of the Verizon calculations.[10]
- Replicated for one month a limited sample of PAP payments as a cross check on the general accuracy of the Verizon calculations.
- Conducted a targeted review of the consolidated reporting of former GTE[11] and former Bell Atlantic serving areas in Virginia.

Liberty documented any significant issues uncovered during this audit and its previous audits in a set of findings. These findings address issues with Verizon's process or documentation that may have a varying degree of effect on the accuracy and reporting of performance results. Liberty classified the resulting findings according to the following table.

Classification	Description
1	• Correction of this item could cause a change in Verizon's reported results or PAP payments. • Verizon's practice or method is clearly inconsistent with the Guidelines.
2	• Correction of this item may not change Verizon's reported results, or the magnitude of the change is unknown. • Verizon's methods may be in error or inconsistent with the Guidelines.
3	• Verizon should develop or improve its procedures or documentation. • Change in this area would lead to improvement in the reliability of reported

[9] Liberty issued five new findings during the previous West Virginia audit, all of which are applicable to Virginia, Therefore, Liberty's review for Virginia included findings identified during the previous West Virginia audit.

[10] The CMAs are an imperfect representation of the Verizon metric calculation algorithms. Therefore, when Liberty found an error in the CMAs during its review, it assessed, using both Verizon's responses to data requests and replication, whether the error was in the creation of the CMAs or in the actual algorithms Verizon used in the production of the metric results. Thus, Liberty used a combination of CMA review and replication to assess the accuracy of the reported results.

[11] Prior to its merger with Bell Atlantic to form Verizon, GTE had merged with Contel. Thus, the "GTE" serving areas in Virginia consist of those that had been separate GTE and Contel serving areas before that earlier merger. Since some of the Verizon source systems continue to use the earlier GTE and Contel labels, Liberty examined data from both the former GTE and Contel serving areas as part of this audit.

	results.
4	• The Guidelines should be revised to be consistent with Verizon’s current methods, which are either acceptable or Verizon said cannot be changed. • This finding is for informational purposes and does not have a specific recommendation.

Liberty acquired most of the information needed for this review from Verizon through a series of 365 document requests as well as interviews and meetings with Verizon personnel. Liberty conducted three interviews and a number of additional telephone conversations with Verizon’s metrics and domain experts.

D. Overall Conclusions

Overall, Liberty found that Verizon produced accurate performance results and penalty payments. Verizon resolved many of the issues that Liberty identified in its previous Potomac audits. Most of the remainder of these earlier findings can be addressed through changes to the Guidelines that Verizon has already proposed to the Joint Steering Committee (JSC) of the Carrier Working Group (CWG). Furthermore, the JSC has reached consensus on many of these changes, and discussions are in progress on most of the rest.

During this audit, Liberty identified 18 new findings. The following table contains Liberty’s new findings along with the classification and the report page number for each.

During the current audit, Liberty also reviewed the status of findings it issued during the previous audits. Because most of the findings Liberty issued during the previous Virginia audit were also applicable to West Virginia, Liberty reviewed the status of most of the previous Virginia audit findings during the previous West Virginia audit, which Liberty conducted several months after the conclusion of the previous Virginia audit, and found a number of the findings to be resolved. Liberty also issued five new findings from the previous West Virginia audit, all of which are applicable to Virginia. During the current audit, Liberty reviewed the remaining unclosed previous Virginia and West Virginia audit findings, and based on this new review, Liberty was able to close several more of the previous audit findings. The following table lists all the findings from the previous Virginia and West Virginia audits that are now resolved.

The following table lists findings from the previous Liberty Virginia and West Virginia audits that remain unresolved. Verizon has begun taking action on most of these findings, and Verizon plans to take, or has already taken, many of them to the JSC for resolution.

Appendix B summarizes the status of all the findings from the previous Virginia audit.

II. Performance Assurance Plan

A. Introduction

The goal of the PAP is to ensure that Verizon provides quality wholesale service to competitive carriers. The PAP specifies conditions under which CLECs receive bill credits for sub-standard service based on both individual CLEC and "aggregate" CLEC service quality.[12] The plan uses the performance measures detailed in the Guidelines in order to determine quality of service.

In its previous audit reports, Liberty described the PAP in detail, and did not repeat that information here. In those reports, Liberty summarized Verizon's methods for performance measure results calculation as well as the process by which Verizon determined bill credits owed to various CLECs.

B. General Analysis and Evaluation

As part of the current audit, Liberty reviewed the PAP version in effect during the audit period to identify any changes since the previous Virginia audit. Verizon stated that no changes had occurred in the Virginia PAP since July 2003.[13] Thus, Liberty relied upon the PAP in effect after July 2003 in the audit. This PAP contained no changes from the previous audit that related to the measures used for the PAP. In particular, the measures, processes, statistical analysis, and tests remained unchanged from the previous audits.

Liberty's current audit sought to ensure the continued reliability of the PAP and payment process. Liberty split its review into the following five components:[14]

- Verification that documentation accurately reflects the PAP implementation
- Replication of PAP statistical test results for each measure in the PAP
- Replication of reported payment amounts related to aggregate CLEC performance
- Replication of reported payment amounts related to individual CLEC performance
- Verification of payment accuracy.

[12] The individual CLEC comparisons evaluate the results for each CLEC separately. Verizon calculates bill credits owed based on these comparisons. For the "aggregate" CLEC comparisons, Verizon combines data from all CLECs and calculates the bill credits owed under the PAP by comparing these figures to either parity or a fixed standard, as specified by the PAP.
[13] Response to Data Request #9.
[14] Liberty covers verification of C2C performance and failure determinations for the C2C measures in the domain specific sections. This section focuses instead on the statistical tests and analyses that are specific to the PAP, and the bulleted items refer to Liberty's PAP-specific analyses.

1. Verification that documentation accurately reflects the PAP implementation

Liberty first compared the PAP documents for each of the jurisdictions in the Potomac region and found no differences among them, except for the dollar amount of bill credits. As such, Liberty's conclusions about documentation apply to all four jurisdictions in the Potomac region. Liberty found the PAPs to be generally complete and accurate except for a few minor documentation issues that Liberty addresses in Finding 1.

2. Replication of PAP statistical test results for each measure in the PAP

In order to calculate PAP payments, Liberty needed the C2C results for each measure as well as the results of the statistical tests that determined whether Verizon met the required standard for that measure. Verizon reports the measure-specific statistical tests on the C2C reports. Verizon then performs further calculations in order to determine whether there is a PAP failure, and, if so, the severity of that failure. The PAP plan specifies the calculation of a performance score of 0, -1, or -2 for each measure.[15] Verizon then uses that performance score to determine the required payment, if any.

To ensure that Verizon continues to perform the statistical analysis related to the PAP correctly, Liberty replicated the statistical tests related to the PAP, beginning with the information contained on the C2C reports, and using data from the September 2005 data month. Liberty re-calculated all statistical tests and matched these to Verizon's reported performance scores for all PAP failures for aggregate measures in September 2005. For permutation tests, which require additional raw data not contained on the C2C reports, Liberty calculated performance scores for a sample of measures and verified that the scores of the sample matched the scores as shown in the PAP reports.[16] Liberty drew its sample, for both individual and aggregate CLEC data, from September 2005 data.

For individual measures, Liberty re-calculated all statistical tests and matched results of all statistical test failures for the month of June 2005.[17] The individual replication included permutation tests related to counted measures, but did not include permutation tests related to

[15] Verizon gives performance for each MOE measure a grade of 0, -1, or -2 on the basis of its statistical analyses for parity measures and on a sliding scale for measures with an absolute standard. For parity measures, the magnitude of the Z-statistic for the month determines the performance grade. A grade of 0 indicates performance that meets the standards for the measure, while a -2 grade identifies sub-standard performance. A performance grade of -1 also indicates sub-standard performance for a single month, but is subject to change depending on Verizon's performance during the next two months; if Verizon receives a 0 for both subsequent months, it revises the –1 to 0. Appendix C of the PAPs specifies the performance grade computations for non-parity measures, while Appendix D specifies the performance grade computations for parity measures.

[16] Because the computation of permutation tests involves going back to the raw data on which the metric calculations are based, Liberty verified these results for a sample.

[17] Liberty used the June 2005 data months for its individual replications, because September 2005 PAP individual results were not yet available during the audit. The September 2005 Preliminary PAP report, used for the audit, contains aggregate results, but individual results do not appear until the Final PAP report.

averages. Liberty verified a sample of those tests using the September 2005 data. Liberty found no differences between Verizon's reported results and Liberty's calculated results in these individual and aggregate replications.

3. Replication of reported payment amounts related to aggregate CLEC performance

The PAP specifies that Verizon use the performance scores to determine payment amounts. In the case of MOE measures, Verizon should determine payments according to a weighted average of performance scores in each category. In the case of Critical, Special, and CCAP measures, any performance score of -1 or below requires a payment, and Verizon should distribute the payment to the CLECs according to a measure of CLEC failing volume. Liberty re-calculated these results and determined PAP payment amounts for the September 2005 data month. Liberty compared these re-calculated payment amounts to the amounts shown on the September 2005 Preliminary PAP report. In addition, Liberty verified that Verizon correctly carried the failures from the Preliminary PAP report to the Final PAP report, for the June 2005 data.[18] Liberty's replications included all measure categories (*i.e.,* MOE, Critical, Special, and CCAP) for the entire Potomac region.

Because scores of -1 in the Preliminary PAP report are subject to change, based on performance for the subsequent two months, Liberty verified that Verizon properly revised these provisional scores from the Preliminary PAP report to the Final PAP report using the June 2005 reports.[19] Liberty reviewed all scores of -1 related to Critical measures, to ensure that Verizon processed these scores correctly. Liberty found no differences between Verizon's reported payment amounts and Liberty's determination of payment amounts.

4. Replication of reported payment amounts related to individual CLEC performance

Using the June 2005 data month, Liberty determined that Verizon properly determined payment amounts for all failing performance scores. Individual payments only occur for Critical Measures, and only if the following three conditions hold:

- The performance score is -1 or -2 for the individual CLEC performance
- No aggregate payment was required for that measure
- The failure occurred for two consecutive months.

[18] Liberty used the June 2005 data month because the September 2005 Final PAP reports were not available during the audit.
[19] Liberty used the June report because the September 2005 final PAP report was not available at the time of the audit.

Liberty used these conditions and the May and June 2005 C2C reports to determine whether payments were required. Then for each failure, Liberty compared the amount to be paid against the amount reported on the June Final PAP reports.[20]

As in the previous Virginia audit, Liberty was able to match all reported payment amounts on measures for which Liberty had all the necessary CLEC reports.

5. Verification of payment accuracy

Liberty verified that the payment amounts that Verizon reported matched the payment amounts that Liberty calculated using steps 3 and 4 above. For the final step in the process, Liberty attempted to verify that Verizon transmitted the bill credits for the appropriate amounts and to the appropriate CLECs, as shown on the PAP reports. To verify payment accuracy, Liberty requested screen shots of all bill credits made in the September 2005 timeframe.[21] These payments related to the June 2005 Final PAP reports. Liberty then matched the final June 2005 PAP report required payments with these screen shots of bill credits. Liberty found that the calculated and actual payments matched in all cases in Virginia.

C. Status of Findings from Previous Audits

Liberty identified four PAP-related findings during the previous Virginia audit. Because the issues raised in these findings were also applicable to West Virginia, Liberty reviewed their status during the previous West Virginia audit. Liberty also issued a new PAP-related finding that was applicable to Virginia. As part of its analysis during the current audit, Liberty reviewed again the status of findings that remained open and other issues that were not completely resolved at the end of the previous West Virginia audit to determine whether the issues had been resolved and the findings could be closed. Liberty discusses the current status of all the PAP-related findings from the previous Virginia and West Virginia audits below.

1. Resolved Findings

Liberty issued four PAP-related findings during the previous Virginia audit, all of which were either resolved during the previous West Virginia audit or consolidated into Previous West Virginia Audit Finding 1, which is discussed in Section C.2 below.

[20] In order to complete its review, Liberty needed at least May and June C2C reports for each CLEC. Verizon does not produce reports for every CLEC in every month, so Liberty could not verify some failures. Liberty did, however, verify all failures for which it had CLEC reports. Also, in cases where insufficient CLEC activity occurred, Liberty reviewed the April C2C reports, as is specified in the PAP.
[21] Responses to Data Requests #85 through #88.

Previous Virginia Audit Finding 1: The PAP documentation does not provide adequate coding of C2C measures to PAP measures.[22] (Classification 3)

During the previous Virginia audit, Liberty noted that the measures listed in the PAP documentation did not have a one-to-one correspondence with the measures found in the C2C reports, making it difficult for a CLEC to determine its credits. During the previous West Virginia audit, Verizon indicated that it would pursue a change to the PAP language. Because this issue was associated with the more general matter of ambiguous and confusing documentation of the PAP, Liberty decided to combine the issue with others into Previous West Virginia Audit Finding 1, which addressed PAP documentation.

Previous Virginia Audit Finding 2: Verizon's documentation for the scoring of Critical Measures is not clear.[23] (Classification 3)

During the previous Virginia audit, Liberty noted that the PAP documentation did not clearly state how Verizon treated Critical Measure penalty scores of -1. During the previous West Virginia audit, Verizon indicated that it planned to propose adding clarifying language to the PAP documentation. Liberty decided to combine the issue with others into Previous West Virginia Audit Finding 1, which addressed PAP documentation.

Previous Virginia Audit Finding 3: The PAP does not accurately represent the availability of individual CLEC performance reports.[24] (Classification 3)

During the previous Virginia audit, Liberty noted a discrepancy in the PAP documentation regarding representation of individual CLEC performance reports. During the previous West Virginia audit, Liberty determined that because any CLEC can request and obtain its report from Verizon, the PAP documentation was adequate and the issue was resolved.

Previous Virginia Audit Finding 4: Verizon's method of calculating individual bill credit penalties is not consistent with the wording in the PAP.[25] (Classification 2)

During the previous Virginia audit, Liberty was unable to replicate individual bill credit penalties determined by Verizon because Verizon's method of calculating these penalties was inconsistent with Liberty's understanding of the PAP documentation wording. During the previous West Virginia audit, Verizon indicated it was pursing changes to clarify the language in the PAP. Liberty decided to combine the issue with others into Previous West Virginia Audit Finding 1, which addressed PAP documentation.

[22] Previous District of Columbia and Maryland Audit Findings 1.
[23] Previous District of Columbia and Maryland Audit Findings 2.
[24] Previous District of Columbia and Maryland Audit Findings 3.
[25] Previous District of Columbia and Maryland Audit Findings 4.

2. Unresolved Findings

Previous West Virginia Audit Finding 1: The documentation of several aspects of the PAP is ambiguous and confusing. (Classification 3)

This finding detailed issues related to the documentation of payment amounts and bill credits, as well as the identification of measures combined for the purposes of penalty calculation. In response to this finding, Verizon proposed wording changes to the New York Commission, which, according to Verizon, is considering but has not yet implemented them. Verizon noted:[26]

> *The clarifications to the Performance Assurance Plan relating to WV Finding #1 were filed with the Commission in NY in January 2005. These clarifications are still pending under the "annual review" of the Plan which is currently in progress. Once a decision is reached and ordered in NY, the corresponding clarifications the WV Plan will be filed in with the West Virginia Commission. A decision is expected in late 2005 or early 2006.*

During the current audit, Liberty reviewed the proposed changes to the language and believes that, when implemented, they will resolve this issue.

D. New Findings

Liberty has one new finding related to the PAP.

Finding 1: Liberty found some apparent documentation issues in the PAP documents and appendices. (Classification 4)

Liberty found the following anomalies in its review of the PAP Guidelines documentation for the Potomac region:

- Appendix Table A-1-2 in the PAP Guidelines lists measure OR-1-06-3143, but the September 2005 Preliminary PAP report identifies what appears to be the same measure as OR-1-06-3140. The C2C reports do not include the measure OR-1-06-3143.
- OR-4-11-1000 appears on the Unbundled Network Element-Platform (UNE-P) table in the September 2005 Preliminary PAP report, but not in the PAP Appendix. The PAP Appendix lists both OR-4-11-2000 and OR-4-11-3000 under Resale and UNE-Platform; however, the C2C reports for September 2005 only list OR-4-11-1000.
- The September 2005 Preliminary PAP report includes the measure MR-4-07-3340, which appears to be the same as the measure MR-4-07-3343 listed in the C2C reports. The C2C reports do not include a measure by the name of MR-4-07-3340.

[26] Response to Data Request #12.

These documentation errors do not appear to have any effect on results.

Verizon responded that they agreed with this Finding, and that "[a]n annual review of the PAP is currently in progress in NY. Verizon will ensure that these updates are included in NY and the corresponding changes filed in VA later this year."[27]

[27] Verizon's Responses to Liberty Draft Report Audit Findings, April 10, 2006.

III. Pre-Ordering Performance Measures

A. Introduction

The Pre-Ordering measures report on various aspects of Verizon's pre-ordering and client relations processes including timeliness of system responses, interface and contact center availability, timeliness of change management notifications, and timeliness of software problem resolution. The Guidelines list the following eight pre-ordering measures:

- PO-1: Response Time OSS Pre-Ordering Interface
- PO-2: OSS Interface Availability
- PO-3: Contact Center Availability
- PO-4: Timeliness of Change Management Notices
- PO-5: Average Notification of Interface Outage
- PO-6: Software Validation
- PO-7: Software Problem Resolution and Timeliness
- PO-8: Manual Loop Qualification.

The PO domain has 24 sub-measures.[28] The PAP focuses on the following six pre-ordering measures and ten sub-measures:

- PO-1-01, PO-1-03, and PO-1-06
- PO-2-02
- PO-4-01 and PO-4-03
- PO-6-01
- PO-7-04
- PO-8-01 and PO-8-02

The PAP lists PO-1-06 and PO-2-02 as Critical Measures.

Liberty discussed many aspects of the PO domain in detail in its previous audit reports, and did not repeat that information here. In those reports, Liberty summarized the Guidelines description for each sub-measure, including the metric formula, allowable exclusions, reporting dimensions, and applicable standard. Liberty provided an overview of Verizon's business processes and systems that generate the data used for these sub-measures. Liberty described the process by which Verizon extracts data from its legacy source systems and sends them to the NMP data warehouse, and then extracts data from the NMP warehouse to create the data tables that it uses to process results each month. Liberty described the NMP data tables that Verizon uses to calculate results, including key data fields, logic variables, or derived values specific to each measure. Liberty also described Verizon's approach to calculating each sub-measure and discussed whether its method of defining data fields and implementing exclusions was consistent with the Guidelines.

[28] Appendix A contains a complete list of the sub-measures.

B. General Analysis and Evaluation

As part of the current audit, Liberty reviewed the relevant version of the Guidelines to identify any changes made since the previous audits. Liberty also reviewed the MCCNs pertinent to the PO domain that Verizon issued in the interim, and inquired about any system or process changes not addressed in the notices. Liberty also reviewed Verizon's updated NMP documentation and Verizon's CMAs. In addition, Liberty conducted replication of a selection of CLEC aggregate and Verizon retail results.

1. Changes to the Guidelines

Liberty reviewed the Guidelines for PO in effect for the September 2005 data month and compared them to the Guidelines in effect during the previous audits and found that the differences conformed to the Guidelines changes approved by the December 12, 2004, New York Commission order.[29] Liberty found that most changes in the Guidelines constituted language changes designed to improve clarity but with no effect on the calculation of metric results.[30]

There was only one substantive change in the PO measures. In accordance with Metric change Control No. 11405, effective in May 2005, Verizon updated the *Definition* and *Products* sections of the PO-2 measure (OSS Interface Availability) to include the Wholesale Provisioning and Tracking System (WPTS) as a new disaggregation for PO-2-02 and PO-2-03.

2. Change Controls

Liberty reviewed the MCCNs that Verizon issued since the previous audits and found that three were specific to the Pre-Ordering domain that were more than administrative in nature.[31] In addition to the MCCN noted above in the list of Guidelines changes,

- Verizon issued Metric Change Control Nos. 11602 and 11603 for the February 2005 data month, updating a reference table used to calculate PO-8-01 results that contained a date limit of 1/1/2005, which prevented Verizon from capturing the actual response time for any record received after this date.[32] According to Verizon, it modified the table to make the new date limit 12/21/2020. However,

[29] Responses to Data Requests #8 and #9.
[30] For example, Verizon updated the *Definition* sections for the PO-3 measure to clarify exactly which calls made by the CLEC to its contacts within Verizon are measured for speed of answer and removed Verizon Retail as a reporting requirement from the *Report Dimensions* section of the PO-1 measure to make PO-1 consistent with the other PO measures.
[31] Verizon also introduced Metric Change Control No. 11235, which affects all domains. In response to the August 27, 2004, New York Commission order, Verizon now converts monthly C2C performance reports to an ascii format and combines CLEC ACNA reporting.
[32] Response to Data Request #121.

because Verizon implemented the changes for the February data month, there was some potential effect on the January 2005 results.[33]

- Verizon issued Metric Change Control Nos. 11747 and 11748 to correct a problem in which the NMP code did not properly reference the table used to exclude holidays from the calculation of the PO-8 results. Verizon implemented this change for the August 2005 data month.[34] This change of holiday tables did not affect the manner in which Verizon calculated PO-8; however, it did have a potential effect on the measure results prior to it implementation.[35]

3. Other Changes

Verizon introduced several manual processes into the calculation of the PO-2 metric.[36] After the introduction of a change to Verizon's Local Service Interface (LSI) in October 2004, Verizon's Sentinel (EnView) system[37] no longer monitors the Verizon ordering interfaces, creating the need for manual input of ordering interface availability into the PO-2 results reporting process.[38] For those interfaces that Sentinel does not monitor, Verizon reviews all system trouble reports referred to its Wholesale Customer Care Center (WCCC) to determine whether any of the trouble reports affected PO-2. Verizon then manually determines the OSS interface involved with the trouble as well as the outage minutes associated with each trouble report. The result of this analysis is a manual script that Verizon uses as an overlay to the data reported by the Sentinel system for the overall calculation of the PO-2 results. In addition, Verizon explained that it added one other step to the results calculation process that also required manual intervention. Verizon now manually removes scheduled system downtime from the denominator of the metric calculation.[39]

Verizon also began reporting combined pre-order results for the former Bell Atlantic and former GTE service areas in Virginia for the June 2004 data month.[40] Verizon accomplishes this by adding the results from records with a state code of VA (former Bell Atlantic territory) and a state code of VG (former GTE territory) to arrive at the combined state results, which it identifies with a state code of VN.

[33] Verizon stated in response to Data Request #259, "since the change did not go into affect [sic] until February 2005, there was potential impact to the January 2005 data month. The impact was as follows: MD – changed from 98.41 to 95.22; DC – no impact; VA – changed from 98.69 to 98.42; WV – changed from 97.48 to 96.64. In all cases, the metric standard of 95% was made both pre and post change. No penalties were impacted as a result of this change."
[34] Response to Data Request #121.
[35] In response to Data Request #361, Verizon provided an analysis of the impact on this change, indicating that it did not affect the reported Virginia results.
[36] Response to Data Request #72.
[37] Response to Data Request #199. Verizon's Sentinel system now provides automated interface monitoring only on i) the three pre-ordering interfaces (*i.e.,* CORBA, EDI and LSI), ii) the LSI maintenance interface, and iii) WPTS.
[38] Responses to Data Requests #72 and #201, as well as a Data Request #72 clarification call, December 7, 2005.
[39] Response to Data Request #179. Prior to this process change, Verizon removed downtime from the numerator only. Verizon implemented the change with Metric Change Control No.11420.
[40] Verizon implemented this change with Metric Change Control No. 10660.

4. Review of the Accuracy of Reported Results

Liberty reviewed Verizon's updated NMP documentation for the Pre-Ordering domain.[41] The changes that Verizon made to the documentation since the last audit primarily dealt with updates due to the implementation of MCCNs. During this review, Liberty found that Verizon's Pre-Ordering Metrics Design documentation incorrectly omits the Verizon South jurisdictions for the PR-9-03 measure.[42] Verizon indicated that it will make this correction in the next version of this documentation.[43] Liberty addresses this issue in Finding 2.

Liberty reviewed all the pre-ordering CMAs and, with one exception, found most of them to be accurate and complete.[44] Liberty observed that the CMA for the PO-2-03-6010 sub-measure, ,which measures WPTS interface availability during non-prime time, contained a value of 'Y' in the PRIME_FL field. A value of 'Y' in this field results in the inclusion of records received during prime time business hours, which is not what this sub-measure reports. Verizon stated that this was an error in the CMA it generated for this sub-measure rather than in the actual production code, and that the field should be populated with a value of 'N' and not a 'Y.'[45] Liberty confirmed through replication that this error was isolated to the CMA and that Verizon used the correct production code to calculate the PO-2-03-6010 sub-measure results.

Using its own algorithms, Liberty replicated selected sub-measures from for the September 2005 data month using the Virginia data that Verizon provided.[46] Liberty selected sub-measures for replication to ensure that it replicated a minimum of one sub-measure for each of the pre-ordering measures in Virginia. Liberty did not, however, replicate the PO-6 and PO-7 measures because Verizon did not install any CLEC-affecting software releases during the September 2005 data month; therefore, there were no PO-6 or PO-7 results to replicate.[47]

C. New Measures

There are no new pre-ordering measures.

D. Status of Findings and Other Issues from Previous Audits

Liberty identified 20 findings associated with the PO domain during the previous Virginia audit. Because the issues raised in these findings were also applicable to West Virginia, Liberty reviewed their status during the previous West Virginia audit and found that a number of the

[41] Response to Data Request #71.
[42] Response to Data Request #125. Verizon includes PR-9-03 in its pre-ordering NMP documentation because it measures data that is prior to the actual order creation.
[43] Response to Data Request #125.
[44] Response to Data Request #14.
[45] Response to Data Request #157.
[46] Responses to Data Requests #40 and #42.
[47] Response to Data Request #206.

issues had been resolved by that time. As part of its analysis during the current audit, Liberty again reviewed the status of findings that remained open and other issues that were not completely resolved at the end of the previous West Virginia audit to determine whether the issues were resolved and the findings could be closed. Liberty discusses the current status of all the PO-related findings from the previous Virginia audit below.

1. Resolved Findings

Previous Virginia Audit Finding 5: EnView does not adequately emulate the PO-1 sub-metrics.*[48] *(Classification 2)

During the previous Virginia audit, Liberty found that the EnView simulation processes were not representative of actual retail transaction results for some types of transactions. After further consideration of this issue during the previous West Virginia audit and in view of the technical limitations to improving the simulation, Liberty agreed that EnView provides an adequate although imperfect simulation of the retail transactions, thereby resolving the issue.

Previous Virginia Audit Finding 6: The Guidelines for PO-1 are inconsistent.*[49] *(Classification 4)

During the previous Virginia audit, Liberty found an inconsistency between the PO-1 section and Appendix C of the Guidelines regarding the calculation of response times. During the previous West Virginia audit, Liberty noted that the JSC reached consensus to resolve this issue through an update of the Guidelines. Liberty confirmed that the November 2005 version of the Guidelines contain revised language for Appendix C that resolves the inconsistency.[50]

Previous Virginia Audit Finding 7: EnView does not adequately simulate PO-1-07.*[51] *(Classification 2)

During the previous Virginia audit, Liberty found that Verizon was using an invalid CSR transaction to obtain PO-1-07 reject results using EnView. During the previous West Virginia audit, Verizon indicated that the CWG and the Maryland collaborative had concurred with Verizon's approach and had concurred that no additional changes were necessary. Liberty therefore considered the issue resolved.

[48] Previous District of Columbia and Maryland Audit Findings 5.
[49] Previous District of Columbia and Maryland Audit Findings 6.
[50] Response to Data Request #102.
[51] Previous District of Columbia and Maryland Audit Findings 7.

Previous Virginia Audit Finding 8: Verizon's PO-2 documentation is incomplete and contains an error.[52] (Classification 3)

During the previous Virginia audit, Liberty found that Verizon's PO-2 documentation was incomplete and contained an error. During the previous West Virginia audit, Liberty found that Verizon had resolved this issue with new, revised documentation.

Previous Virginia Audit Finding 9: The PO-2 Guidelines lack clarity.53 (Classification 4)

During the previous Virginia audit, Liberty determined that, for PO-2 metric reporting purposes, Verizon did not use EnView to measure the availability of its Electronic Bonding Interface; therefore, it only included CLEC-reported Electronic Bonding outages in the PO-2 results, a practice that the Guidelines did not make explicit. During the current audit, Verizon stated that the JSC reached a consensus to add the clarification from the former New Jersey Guidelines which indicates that EnView only monitors the Electronic Data Interchange (EDI), Common Object Request Broker Architecture (CORBA), and LSI (Web GUI) interfaces.[54] Liberty verified that this clarification has been added to the PO-2 Guidelines, closing out this issue.

Previous Virginia Audit Finding 11: Verizon's method of making PO-2 exclusions produces more favorable results compared to another reasonable method.[55] (Classification 4)

During the previous Virginia audit, Liberty noted that the Guidelines listed a PO-2 exclusion for "scheduled interface outages for major system releases where CLECs were provided with advanced notification of the downtime in compliance with VZ Change Management Guidelines." In these cases, Verizon excluded the outage and calculated the metric as if the outage and its advanced notification had not occurred. During the previous West Virginia audit, Verizon resolved the issue by implementing Metric Change Control No. 11420 in October 2004 to exclude the scheduled downtime.

Previous Virginia Audit Finding 12: Verizon is not in conformance with the Guidelines for PO-3.[56] (Classification 4)

During the previous Virginia audit, Liberty identified some issues with the *Report Dimensions* and *Exclusions* sections of the PO-3 Guidelines. During the previous West Virginia audit, Verizon noted that the Maryland collaborative agreed with Verizon that no Guidelines changes were necessary. Liberty concurred that these matters were minor Guideline clarifications and therefore considered the finding closed.

[52] Previous District of Columbia and Maryland Audit Findings 8.
[53] Previous District of Columbia and Maryland Audit Findings 9
[54] Response to Data Request #12
[55] Previous District of Columbia and Maryland Audit Findings 11.
[56] Previous District of Columbia and Maryland Audit Findings 12.

Previous Virginia Audit Finding 13: Verizon is making an unjustified exclusion when calculating PO-3 metric results.[57] ***(Classification 4)***

During the previous Virginia audit, Liberty found that the ordering center availability listed in the *Performance Standard* section of the PO-3 Guidelines did not conform to Verizon's exclusions of holidays. During the current audit, Liberty verified that Verizon had updated the November 2005 version of the Guidelines, consistent with the April 15, 2005, New York Commission order, to include clarifying language regarding the exclusion of the Verizon's holiday schedule.[58]

Previous Virginia Audit Finding 14: Verizon is not in conformance with the Guidelines for PO-4.[59] ***(Classification 2)***

During the previous Virginia audit, Liberty found that Verizon was making three exclusions to the PO-4 calculations that the Guidelines did not specify. Additionally, Liberty found that Verizon's process allowed for change management notices and change management confirmations for which Verizon and the CLECs agreed to a notification interval shorter than that in the performance standard, a practice that was not explicit in the Guidelines. During the current audit, Liberty verified that Verizon had updated the November 2005 version of the Guidelines, consistent with the April 15, 2005, New York Commission order, to contain clarifying language regarding the concerns identified by Liberty.[60]

Previous Virginia Audit Finding 15: The definition of the denominator of PO-5 gives Verizon considerable flexibility over the outages it includes in the measure.[61] ***(Classification 2)***

During the previous Virginia audit, Liberty found that Verizon only included in PO-5 those outages brought to the attention of the organization that issues outage notices (the Wholesale Customer Care Center or WCCC), although the Guidelines do not specifically allow for this practice. During the current audit, Liberty verified that Verizon had updated the November 2005 version of the Guidelines, consistent with the April 15, 2005, New York Commission order, to remove the phrase "for which notice was given" from the definition of the denominator of the metric calculation. The updated Guidelines also contained additional exclusions for "[t]roubles reported by a CLEC that were not reported to Verizon's designated trouble reporting center, which is the WCCC" and for outages exclusively identified at the month-end EnView reconciliation process.[62]

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[57] Previous District of Columbia and Maryland Audit Findings 13.
[58] Response to Data Request #12 (revised).
[59] Previous District of Columbia and Maryland Audit Findings 14.
[60] Response to Data Request #12 (revised).
[61] Previous District of Columbia and Maryland Audit Findings 15.
[62] Response to Data Request #12 (revised).

Previous Virginia Audit Finding 16: Verizon is making exclusions to PO-5 although the Guidelines list none.[63] ***(Classification 4)***

During the previous Virginia audit, Liberty found that Verizon excluded those outages that it planned ahead of time and for which it gave notice, although the Guidelines for PO-5 did not list this exclusion. In addition, Verizon did not send notices for short duration outages, and therefore did not include those in PO-5. During the current audit, Liberty verified that Verizon had updated the November 2005 version of the Guidelines, consistent with the April 15, 2005, New York Commission order. Liberty found that Verizon added the following language to the PO-5 *Definitions* section of the updated Guidelines:[64]

> *For the purpose of this measure, scheduled interface downtime where CLECs were provided with advanced notification (> 24 hours) of the downtime in compliance with Verizon Change Management Guidelines is not considered an outage.*

Although Verizon did not revise the Guidelines to address the exclusion for short duration outages, Liberty finds Verizon's practice reasonable because these types of outages do not allow time enough for Verizon to issue the outage notice.

Previous Virginia Audit Finding 17: Verizon's process for determining when an interface outage has begun is too subjective for PO-5.[65] ***(Classification 2)***

During the previous Virginia audit, Liberty identified an issue with Verizon's determination of the start of an interface outage. During the previous West Virginia audit, Verizon stated that it reviewed its procedure with the JSC, and that the JSC agreed that no change was needed in the start time for the measure. Therefore, Liberty considered the finding to be closed.

Previous Virginia Audit Finding 18: Verizon's PO-5 procedural document is incomplete.[66] ***(Classification 3)***

During the previous Virginia audit, Liberty found that Verizon's procedural document for PO-5 provided incomplete guidance on how to determine the PO-5 results. The issues raised corresponded to those raised in Previous Virginia Audit Findings 15, 16, and 17, all of which Liberty now considers closed. Liberty thus also considers this finding to be closed.

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[63] Previous District of Columbia and Maryland Audit Findings 16.
[64] Responses to Data Requests #12 and #12 (revised). The District of Columbia Commission approved this with Order 13639, issued July 14, 2005
[65] Previous District of Columbia and Maryland Audit Findings 17.
[66] Previous District of Columbia and Maryland Audit Findings 18.

Previous Virginia Audit Finding 19: Verizon is making exclusions to PO-6 that the Guidelines do not list.[67] ***(Classification 4)***

During the previous Virginia audit, Liberty found that although the PO-6 Guidelines did not list any exclusions, Verizon excluded emergency software releases and minor non-emergency CLEC-affecting software releases when calculating its PO-6 results. During the current audit, Liberty verified that Verizon had updated the November 2005 version of the Guidelines, consistent with the April 15, 2005, New York Commission order, to address the concerns identified in this finding.[68]

Previous Virginia Audit Finding 21: The Guidelines for PO-7 have a minor omission.[69] ***(Classification 4)***

During the previous Virginia audit, Liberty found that when a production referral had a workaround requirement, the Guidelines did not provide complete information about Verizon's procedure to provide the workaround. During the previous West Virginia audit, Verizon noted that it took this issue to the JSC, but the JSC had no alternative proposals to the current language, and Verizon therefore did not propose any change to the language currently in the Guidelines. Liberty concluded that this was a minor issue and considered the finding closed.

Previous Virginia Audit Finding 22: Verizon's PO-7 methods and procedures documentation is flawed and incomplete.[70] ***(Classification 3)***

During the previous Virginia audit, Liberty raised an issue regarding the subjectivity of Verizon's procedures for determining whether a failed transaction "matches" a test deck transaction. During the previous West Virginia audit, Liberty considered the matter further and concluded that it would be very difficult to reduce the subjectivity in this situation. Therefore, Liberty considered the finding closed.

Previous Virginia Audit Finding 23: The PO-8 Guidelines are incomplete.[71] ***(Classification 4)***

During the previous Virginia audit, Liberty found that the Guidelines for PO-8 were incomplete, because they did not contain a *Report Dimensions* section. During the previous West Virginia audit, Verizon resolved that issue with the issuance of new Guidelines.

[67] Previous District of Columbia and Maryland Audit Findings 19.
[68] Response to Data Request #12 (revised).
[69] Previous District of Columbia and Maryland Audit Findings 21.
[70] Previous District of Columbia and Maryland Audit Findings 22.
[71] Previous District of Columbia and Maryland Audit Findings 23.

Previous Virginia Audit Finding 24: Verizon is not following exactly the Definition section of the Guidelines for PO-8.72 (Classification 4)

During the previous Virginia audit, Liberty found that Verizon included in the PO-8 results every request for manual loop qualification it received from CLECs, regardless of whether the information was available in an electronic database, a practice not specified in the Guidelines. During the current audit, Liberty verified that Verizon had updated the November 2005 version of the Guidelines, consistent with the April 15, 2005, New York Commission order, to indicate that PO-8 measures the response time of loop qualifications "when such information is requested through an available interface."[73]

2. Unresolved Findings

Previous Virginia Audit Finding 10: Verizon is not in conformance with the Guidelines for PO-2.[74] (Classification 1)

During the previous Virginia audit, Liberty observed that the *Methodology* section of the Guidelines for the PO-2 measure stated that:

> *Availability is calculated by dividing the total number of six (6) minute measurement periods in a 24-hour day (excluding unmeasured six (6) minute measurement periods) into the number of periods with no successful transactions for the day and subtracting this from 1 and multiplying by 100.*

Liberty found, however, that Verizon did not in fact exclude the unmeasured six minute periods from its numerator, which inappropriately improved the reported PO-2 results. Verizon explained that even though a six-minute period may go unmeasured by EnView, CLECs could still call in a trouble report for that six-minute period. This reasoning by Verizon, which Liberty believed was not consistent with the intent of the Guidelines, would mean that there would never be an unmeasured six-minute period as long as Verizon had at least one CLEC customer. During the current audit, Verizon stated that this issue was discussed at the JSC in December 2004, but that the JSC has not yet reached a resolution.[75]

Previous Virginia Audit Finding 20: Verizon has an unusual interpretation of the Definition section of the Guidelines for PO-7.[76] (Classification 2)

During the previous Virginia audit, Liberty found that Verizon interpreted the language in the PO-7 *Definition* section of the Guidelines to mean that any production referral, whether from a

[72] Previous District of Columbia and Maryland Audit Findings 24.
[73] Response to Data Request #12 (revised).
[74] Previous District of Columbia and Maryland Audit Findings 10, and Previous West Virginia Audit Finding a.
[75] Response to Data Request #12.
[76] Previous District of Columbia and Maryland Audit Findings 20.

CLEC or Verizon, must be linked to one of the transaction types in the test deck. Based on Verizon's interpretation, the PO-7 results depend on the completeness of the test desk and Verizon's subjective decisions as to whether failed transactions are similar enough to a test deck transaction to qualify for PO-7. Additionally, although not noted explicitly anywhere in the Guidelines, Verizon did not include Web GUI (now called LSI) failed transaction referrals in PO-7. During the current audit, Verizon stated that this issue had been discussed at the JSC, but that it had reached no resolution.[77]

E. New Findings

There are no new findings specific to the pre-ordering domain. However, Liberty had one finding associated with documentation that affects pre-ordering and other domains.

Finding 2: Verizon's Network Metrics Platform documentation contains errors. (Classification 3)

Verizon uses the NMP to process the data for and calculate the results of the various measures listed in the Guidelines and used in the PAPs. Liberty reviewed the NMP documentation that Verizon provided and determined that it contains some errors.[78] For example:

- In the Pre-Ordering (PO) domain, the Metric Design documentation incorrectly omits the Verizon South states for the PR-9-03 measure.[79]
- In the Ordering (OR) domain, Verizon's documentation (such as fact table layouts) still refers to the VA state code and does not reflect the integration of the former GTE territory and the change to the VN state code.
- In the Provisioning (PR) domain,
    - Verizon's NMP documentation for Access Service Requests (ASR)-related and local number portability (LNP) orders, including its fact table layouts and design documents, still refers to the state code of VA and has not been updated to reflect the integration of the former GTE territory and change to the VN state code.
    - Verizon's NMP feed and metric design documentation does not contain information on PR-9-04, PR-3-12, and PR-3-13, all new measures.
    - Verizon has not updated its NMP documentation to reflect many of the recent changes to the metrics, such as the reporting of three hot cut product groups for PR-6-02 and PR-9-01, the elimination of the exclusion of service-affecting troubles in PR-9-08, and the change in reported product group for PR-3-08 and PR-6-01.
    - Verizon's descriptions of its derivation of certain key data fields relevant to PR-1-13 and PR-3 hot cut sub-measures are incorrect.

[77] Response to Data Request #16.
[78] Responses to Data Requests #71, #73, #75, #77, #79, #81, and #83.
[79] Response to Data Request #125. Verizon includes PR-9-03 in its pre-order NMP documentation because it measures data that is prior to the actual order creation.

- In the Maintenance and Repair (MR) domain, the MR-1 documentation does not reflect the current coding associated with the integration of transactions from the former GTE and former Bell Atlantic territories.[80]
- In the Billing (BI) domain, Verizon's fact table layouts still refer to the VA state code and do not reflect the integration of the former GTE territory and the change to the VN state code.
- In the Network Performance (NP) domain, the NMP Metric Design documentation references an exclusion for "third party disruptions" for the NP-1 measure. This is not a valid exclusion for this measure.[81]

In response, Verizon agreed that "the version of supporting documentation supplied to Liberty contains minor omissions." Verizon also noted that all but one of the issues that Liberty identified are NMP versioning issues that require no additional action because NMP has already updated the design documentation. Verizon described the remaining issue as a "minor omission [that] will be updated in the next monthly version of the documentation."[82]

[80] Response to Data Request #141.
[81] Response to Data Request #123.
[82] Verizon's Responses to Liberty Draft Report Audit Findings, April 10, 2006.

IV. Ordering Performance Measures

A. Introduction

The ordering measures report on various aspects of Verizon's ordering process, including timeliness, completeness, and accuracy. The Guidelines list the following eleven ordering measures:

- OR-1: Order Confirmation Timeliness
- OR-2: Order Reject Timeliness
- OR-3: Percent Rejects
- OR-4: Timeliness of Completion Notification
- OR-5: Percent Flow-Through
- OR-6: Order Accuracy
- OR-7: % Order Confirmation/Rejects Sent Within Three (3) Business Days
- OR-8: Order Acknowledgement Timeliness
- OR-9: Order Acknowledgement Completeness
- OR-10: PON Notifier Exception Resolution Timeliness
- OR-11: Timeliness of Loss of Line Report.

The OR domain has 30 sub-measures.[83] The PAP focuses on the following six ordering measures and 18 sub-measures:

- OR-1-02, OR-1-04, OR-1-06, OR-1-12, OR-1-13, and OR-1-19
- OR-2-02, OR-2-04, OR-2-06, and OR-2-12
- OR-4-11, OR-4-16, and OR-4-17
- OR-5-01 and OR-5-03
- OR-6-03
- OR-10-01 and OR-10-02.

Of these, the PAP identifies OR-1-02, OR-1-04, OR-1-06, OR-1-12, OR-1-13, OR-1-19, OR-2-04, OR-2-06, OR-4-16, OR-10-01, and OR-10-02 as Critical Measures.

Liberty discussed many aspects of the OR domain in detail in its previous audit reports, and did not repeat that information here. In those reports, Liberty summarized the Guidelines description for each sub-measure, including the metric formula, allowable exclusions, reporting dimensions, and applicable standard. Liberty provided an overview of Verizon's business processes and systems that generate the data used for these measures. Liberty described the process by which Verizon extracts data from its legacy ordering source systems and sends them to the NMP data warehouse, and then extracts data from the NMP warehouse to create the data tables that it uses to process results each month. Liberty described the NMP data tables that Verizon uses to

[83] Appendix A contains a complete list of the sub-measures.

calculate results, including key data fields, logic variables, or derived values specific to each measure. Liberty also described Verizon's approach to calculating each measure and discussed if its method of defining data fields and implementing exclusions was consistent with the Guidelines.

B. General Analysis and Evaluation

As part of the current audit, Liberty reviewed the relevant version of the Guidelines to identify any changes since the previous audits. Liberty reviewed the MCCNs pertinent to the OR domain that Verizon issued in the interim, and inquired about any system or process changes not addressed in the notices. Liberty also reviewed Verizon's updated NMP documentation and Verizon's CMAs. Liberty also replicated a selection of CLEC aggregate results.

1. Changes to the Guidelines

Liberty reviewed the Guidelines for OR in effect for the September 2005 data month and compared them to the Guidelines in effect during the previous audits and found that the differences conformed to the Guidelines changes set forth in the New York Commission orders issued since the previous audits.[84] In most cases, Verizon made language changes designed to improve clarity, which had no effect on the calculation of metric results.[85] Other changes, however, can affect reported results.

- The Guidelines for OR-5-01 and OR-5-03 now require separate reporting for UNE POTS Platform, UNE POTS Loop, and UNE POTS Other products, rather than only a UNE Total result. Verizon implemented these changes consistent with the December 16, 2004, New York Commission order.
- OR-1-02 and OR-2-02 measure the timeliness of confirmations and rejects, respectively, for flow-through Local Service Requests (LSRs). The Guidelines contain an exception to the exclusion for service order processor (SOP) downtime for OR-1 and OR-2 that was not in prior versions of the Guidelines: "[t]he 3rd Saturday of each month is a scheduled release. SOP will have a late start the following Sunday at 9:00 AM." Liberty discusses this issue in more detail in Finding 3.

2. Change Controls

Liberty reviewed the MCCNs that Verizon issued since the previous audits. Liberty found that some of these changes were of an administrative nature or implemented internal process improvements. However, Liberty identified a few changes that do, or could, affect the calculation of the measures:

[84] Responses to Data Requests #8 and #9.
[85] As an example, the Verizon updated references to a "PON Master File."

- The August 27, 2004, New York Commission order modified the Guidelines to include UNE Loop Sharing products in the UNE 2-Wire xDSL Loop product category.[86] This change affected the OR-1-04, OR-1-06, OR-2-04, and OR-2-06 sub-measures. Verizon completed Metric Change Control No. 11246 for the February 2005 reporting month to implement this update and indicated that it made this change so that it accomplishes product categorization and classification at the source system level.[87]
- The current Guidelines for OR-5-01 and OR-5-03 require separate reporting for UNE POTS Platform, UNE POTS Loop, and UNE POTS Other. Verizon made this change under Metric Change Control No. 11452 effective with the May 2005 reporting month. Liberty reviewed the technical design documentation for this change and verified that Verizon designed this modification correctly.[88] Liberty also reviewed Verizon's three UNE product CMAs for the measure and found that Verizon has introduced code to identify correctly each separate UNE product group.[89]
- Verizon issued Metric Change Control No. 11489 to modify the program it used to calculate the OR-11 measure effective with the February 2005 reporting month. Verizon's programming had previously used both date and time to select the records it used for a reporting month. However, the OR-11 measure is based on calendar days, and the logic to identify time of day is therefore unnecessary and can be removed. Liberty reviewed Verizon's CMA, which indicated that Verizon correctly removed the time of day portion of the logic.
- Verizon also issued Metric Change Control No. 11591 related to the OR-11 measure. Previously, NMP used the billing telephone number to derive the state code. Verizon added the state code field to the source system data sent to NMP, and could therefore remove the state code derivation. Verizon implemented this change effective with the June 2005 reporting month.
- In its previous audits, Liberty noted that Verizon's treatment of rejections on purchase order number (PON) versions associated with cancelled LSR and ASR orders was inconsistent and not in conformance with the Guidelines for OR-2.[90] Verizon issued Metric Change Control No. 11574 to correct its programming code to conform its treatment of ASRs to that of LSRs effective with the February 2005 reporting month.[91]

[86] In its Response to Data Request #150 (revised), Verizon explained that Loop Share was a product for which a CLEC purchases a DSL-qualified UNE Loop from Verizon and uses the loop to provide i) voice traffic from the CLEC's voice switch via a collocation arrangement and ii) data traffic from a CLEC's data switch via a collocation arrangement. Verizon noted that the ordering CLEC may offer voice and data service or use a partner to provide one of the services.
[87] Response to Data Request #134 (clarification).
[88] Response to Data Request #136.
[89] Verizon identifies the product group using the order type and request type fields.
[90] Previous Virginia Audit Finding 36 (also Previous District of Columbia and Maryland Audit Findings 36, and Previous West Virginia Audit Finding g).
[91] Response to Data Request #137. This change affected OR-2-04-3200, OR-2-06-3200, OR-2-08-3200, and OR-2-10-3200. Liberty reviewed Verizon's CMAs and substantiated that Verizon does not exclude rejects issued on ASR orders that are later cancelled.

3. Other Changes

Verizon began reporting combined ordering results for the former Bell Atlantic, Contel, and GTE service areas in Virginia for the June 2004 data month. NMP receives all Virginia ordering data with the state code of VA. When it creates the data marts used to calculate results, NMP changes the state code to VN and calculates results for Virginia using records with a VN state code.[92] Verizon indicated that it either uses a field from the source data or a lookup table to determine whether the record is associated with the former GTE or Bell Atlantic territory, although all ordering data marts do not contain a territory indicator field.[93] Verizon classifies Contel records as former GTE and includes them in the metrics.[94]

Liberty could not substantiate the GTE records for most of the data files that Verizon uses to calculate OR measures. Most of these files do not contain fields such as telephone number or switch identifier that allow one to easily identify the former territory. However, for those data files that do contain such fields, Liberty verified that they contained GTE records and that Verizon includes those records in reported results.

4. Review of the Accuracy of Reported Results

Liberty reviewed Verizon's updated NMP documentation for the OR domain.[95] Liberty found Verizon's documentation to be generally complete and accurate. However, Liberty found that some of the documentation still referred to the state code of VA rather than VN. For example, Liberty found that many of the data table layouts contained no reference to the state code of VN, only VA. Verizon indicated that these tables would be updated in the next version.[96]Liberty discusses this issue in Finding 2.

Liberty also reviewed the ordering CMAs and found them to be accurate. Using its own algorithms, Liberty replicated selected sub-measures for the September 2005 data month using the Virginia data that Verizon provided.[97] Liberty chose sub-measures for replication that allowed it to test the calculations for a variety of product disaggregations in each OR measure. Liberty also replicated sub-measures that changed since the previous audits. For each sub-measure, Liberty was able to replicate Verizon's reported result.

[92] Interview #2, January 17, 2006. For trunk and ASR data, Verizon retains the original VA records with duplicate VN records.
[93] Interview #2, January 17, 2006. The ASR, LSR, trunk, and flow-through data marts are the only ones that contain a territory indicator.
[94] Response to Data Request #303 (clarification).
[95] Response to Data Request #73 (original and supplemental).
[96] Response to Data Request #195.
[97] Responses to Data Requests #45 and #46.

C. New Measures

There are no new ordering measures.

D. Status of Findings from Previous Audits

Liberty identified 22 findings associated with the OR domain during the previous Virginia audit. Because the issues raised in these findings were also applicable to West Virginia, Liberty reviewed their status during the previous West Virginia audit and found that a number of the issues had been resolved by that time. Liberty also issued two new OR-related findings that are also applicable to Virginia. As part of its analysis during the current audit, Liberty again reviewed the status of findings that remained open and other issues that were not completely resolved at the end of the previous West Virginia audit to determine whether the issues were resolved and the findings could be closed. Liberty discusses the current status of all the OR-related findings from the previous Virginia and West Virginia audits below.

1. Resolved Findings

Previous Virginia Audit Finding 25: Verizon's documentation for the OR domain is not up to date and accurate in all cases.*[98] *(Classification 3)

During the previous Virginia audit, Liberty concluded that the OR documentation Verizon provided was out of date and did not cover all topics adequately. Verizon subsequently developed more complete documentation, and implemented a process by which it routinely updates the documentation with any changes. During the previous West Virginia audit, Liberty reviewed the revised documentation and found it thorough and up to date, thereby resolving the issue.

Previous Virginia Audit Finding 28: Appendix S of the Guidelines is unclear regarding the handling of special projects.*[99] *(Classification 4)

During the previous Virginia audit, Liberty found the description of the handling of special projects unclear in Appendix S of the Guidelines. During the previous West Virginia audit, Verizon noted that it had referred the issue to the JSC and that the JSC agreed that no further clarification was needed. Liberty therefore considered the issue resolved.

[98] Previous District of Columbia and Maryland Audit Findings 25.
[99] Previous District of Columbia and Maryland Audit Findings 28.

Previous Virginia Audit Finding 29: Verizon does not exclude ASR orders for which the CLEC requested no FOC from the OR-1-02 through OR-1-10 measures.[100] ***(Classification 2)***

During the previous Virginia audit, Liberty found Verizon's OR-1 algorithms for ASR orders were not consistent with the notes section of the Guidelines, which stated that Verizon should exclude from the OR-1 calculations orders for which the CLEC requested no confirmation. The impact of this inconsistency is small. During the previous West Virginia audit, Liberty found that Verizon had completed Metric Change Control No. 11055 to correct the algorithms. Verizon also noted that it had updated the Guidelines to move the language from the notes to the exclusion section of the Guidelines. Liberty believed this issue was resolved.

Previous Virginia Audit Finding 30: The Guidelines for OR-1 are unclear regarding the treatment of resent confirmations.[101] ***(Classification 4)***

During the previous Virginia audit, Liberty found that the notes section to the Guidelines was unclear and somewhat contradictory regarding the treatment of resent confirmations. During the previous West Virginia audit, Verizon stated it had referred the issue to the JSC and that the JSC had agreed to change the language in the Guidelines notes, which resolved the issue.[102]

Previous Virginia Audit Finding 31: Verizon does not report results for OR-1-08 consistent with the definition of the measure in the Guidelines.[103] ***(Classification 4)***

During the previous Virginia audit, Liberty found that Verizon did not report results for OR-1-08 in a manner consistent with the definition of the measure in the Guidelines, which indicated that Verizon should measure LSRs not ASRs. During the previous West Virginia audit, Liberty noted that Verizon had corrected the Guidelines language to indicate that Verizon measures ASRs, thereby resolving the issue.

Previous Virginia Audit Finding 34: The Guidelines do not document Verizon's treatment of TGSRs that it receives after 2:00 p.m. in OR-1-19.[104] ***(Classification 4)***

During the previous Virginia audit, Liberty found that Verizon's treatment of the timing for receipt of trunk group service requests (TGSRs) in OR-1-19 was not documented in the Guidelines. During the previous West Virginia audit, Liberty noted that Verizon had changed its business process for OR-1-19 to be consistent with the other ordering measures and the Guidelines, thereby resolving the issue.

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[100] Previous District of Columbia and Maryland Audit Findings 29.
[101] Previous District of Columbia and Maryland Audit Findings 30.
[102] The versions of the Guidelines that Liberty reviewed during the current audit do not yet reflect this change.
[103] Previous District of Columbia and Maryland Audit Findings 31.
[104] Previous District of Columbia and Maryland Audit Findings 34.

Previous Virginia Audit Finding 36: Verizon's treatment of rejections on PON versions associated with cancelled LSR and ASR orders is inconsistent and not in conformation with the Guidelines for OR-2.[105] ***(Classification 2)***

During the previous Virginia audit, Liberty noted that Verizon's treatment of rejections on PON versions associated with cancelled LSR and ASR orders was inconsistent and not in conformance with the Guidelines for OR-2. Liberty found that, for LSRs, Verizon counted all PON versions that it rejected, including those associated with orders that it originally rejected but that the CLEC later cancelled. For ASRs, Verizon excluded any rejection associated with a cancelled order. Verizon issued Metric Change Control No. 11574 to correct its programming code to conform its treatment of ASRs to that of LSRs effective with the February 2005 reporting month.[106] During the current audit, Liberty reviewed Verizon's CMAs and confirmed that Verizon no longer excludes rejects issued on ASR orders that are later cancelled.

On this same issue, in its comments on Liberty's previous West Virginia audit report, Verizon noted that it had reached a consensus at the JSC to update the Guidelines with the following note: "[f]or LSRs and non-trunk ASRs, all rejects are counted. For trunk ASRs, rejects are not counted for cancelled ASRs."[107] According to Verizon, this note is for clarification purposes and does not have any further impact on metric calculations.[108]

Previous Virginia Audit Finding 38: The Guidelines are unclear regarding Verizon's treatment of rejections for trunk orders.[109] ***(Classification 4)***

The OR-2 Guidelines indicated that Verizon should include only orders that Verizon rejected in the calendar month. Verizon instead included orders completed within a calendar month, even if the order had rejections in prior months. Unlike OR-1, the OR-2 Guidelines did not contain specific language regarding measuring completed, rather than rejected, service orders for trunks. During the current audit, Verizon stated that the JSC agreed that no language change was required, and that no further action was required.[110]

[105] Previous District of Columbia and Maryland Audit Findings 36, and Previous West Virginia Audit Finding g.
[106] Response to Data Request #137. This change affected OR-2-04-3200, OR-2-06-3200, OR-2-08-3200, and OR-2-10-3200.
[107] Verizon Official Response to Previous West Virginia Audit Findings dated August 22, 2005.
[108] Response to Data Request #138.
[109] Previous District of Columbia and Maryland Audit Findings 38, and Previous West Virginia Audit Finding i.
[110] Response to Data Request #12 (revised).

Previous Virginia Audit Finding 42: The Guidelines do not specify how Verizon should define the reporting month for the OR-5 metrics.[111] ***(Classification 4)***

During the previous Virginia audit, Liberty noted that Verizon used the confirmation date to select the orders included in the OR-5-01 measure for a given reporting month, although this was not documented in the Guidelines. During the previous West Virginia audit, Liberty noted that Verizon had updated the Guidelines to include clarifying language that resolved the issue.

Previous Virginia Audit Finding 43: The Guidelines for OR-5 are unclear.[112] ***(Classification 4)***

During the previous Virginia audit, Liberty noted that the Guidelines did not explicitly state that Verizon should exclude rejected orders from the OR-5 metrics. During the previous West Virginia audit, Liberty noted that Verizon had updated the Guidelines to include clarifying language that resolved the issue.

Previous Virginia Audit Finding 44: Appendix M to the Guidelines contains obsolete language regarding OR-6-03.[113] ***(Classification 4)***

During the previous Virginia audit, Liberty found that Appendix M contained obsolete language describing the approach for calculating OR-6-03. During the previous West Virginia audit, Liberty noted that Verizon updated the Guidelines to address the issue, thereby resolving the finding.

Previous Virginia Audit Finding 46: The Guidelines for OR-10 are unclear regarding Verizon's method of processing PON notifier exceptions.[114] ***(Classification 4)***

During the previous Virginia audit, Liberty noted that the Guidelines do not provide clear and complete information regarding Verizon's process for handling PON notifier exceptions for OR-10. During the previous West Virginia audit, Verizon stated that the Guidelines were adequate, and Liberty concluded that the matter was not directly relevant to the accuracy or reliability of the performance measure. Therefore, Liberty closed the finding.

[111] Previous District of Columbia and Maryland Audit Findings 42.
[112] Previous District of Columbia and Maryland Audit Findings 43.
[113] Previous District of Columbia and Maryland Audit Findings 44.
[114] Previous District of Columbia Audit Finding 47 and Previous Maryland Audit Finding 46.

Previous West Virginia Audit Finding 2: The Guidelines for OR-2 and OR-7 are unclear. (Classification 4)

During the previous West Virginia audit Liberty found that the language in the Guidelines for OR-2 and OR-7 relating to the Firm Order Confirmation (FOC) or reject date and time for each Related Purchase Order Number (RPON) was not consistent with the language that was approved by the October 29, 2003, New York Commission order. When Verizon released revised New York Guidelines, it introduced an error in the language. The West Virginia Guidelines followed directly from the New York Guidelines, and therefore contained the same error. During the previous West Virginia audit, Liberty concluded that Verizon's approach was consistent with the New York Commission order, but that the West Virginia Guidelines language was not. The unified Verizon East Guidelines applicable to the September 2005 reporting month continued to contain this error. The April 15, 2005, New York Commission order corrected the language effective in the November 2005 reporting month.[115]

2. Unresolved Findings

Previous Virginia Audit Finding 26: The Guidelines for the OR metrics are unclear.[116] (Classification 4)

This unresolved finding contained eight specific issues. Six of these issues remained unresolved at the end of the previous West Virginia audit:

- Verizon recorded the line quantity for an LSR as the greater of the number of lines in the submitted orders and in the confirmation, a convention the Guidelines did not reflect. Verizon stated that the JSC had reached consensus that no Guidelines change was needed.[117] Liberty believes this decision resolves this issue.
- The Guidelines for OR-4, OR-7, OR-8, and OR-9 did not reflect the convention Verizon uses when the CLEC system cannot receive an EDI notifier. Verizon stated that the JSC had reached a consensus to update the Guidelines language for OR-4 and OR-7.[118] The December 1, 2005, New York Commission order added language to the OR-4 and OR-7 Guidelines stating that if the notification is resent because the problem is at the CLEC end, the time stamp reflects the first time the notifier was sent, which is consistent with Verizon's practice. According to Verizon, the issue of OR-8 and OR-9 was still under discussion at the JSC.[119] This matter therefore remains unresolved for the period covered by this audit.
- Verizon treated a jeopardy report on a PON version as an order confirmation, a convention the Guidelines did not reflect. Verizon stated that the JSC had reached

[115] Response to Data Request #12 (revised).
[116] Previous District of Columbia and Maryland Audit Findings 26, and Previous West Virginia Audit Finding b.
[117] Verizon Official Response to Previous West Virginia Audit Findings dated August 22, 2005.
[118] Response to Data Request #12 (revised).
[119] Response to Data Request #12 (revised).

consensus that no Guidelines change was needed.[120] Liberty believes this decision resolves this issue.

- Verizon excluded PARTS orders from the metrics, a convention the Guidelines did not reflect. The JSC reached a consensus to update the Guidelines language, and the December 1, 2005, New York Commission order added a note in the *General Exclusions* section of the Guidelines that PARTS orders are excluded from the OR-1 through OR-7 measures. Liberty believes the change will resolve the issue, but it remains unresolved for the period covered by this audit.
- Verizon assigned a product category of "other" if it was unable to determine the product on an ASR order. The JSC reached a consensus to update the Guidelines language, and the December 1, 2005, New York Commission order added the following note to the OR-1 and OR-2 Guidelines: "[i]f the Specials product is not a DS0, DS1, or DS3, it is classified as Specials – Other and is reported under the product Specials (Non DS0, Non DS1 & Non DS3)." Liberty believes the change will resolve the issue. The issue remains unresolved, however, during the period covered by this audit.
- The Guidelines for OR-2, unlike those for OR-1, do not contain any language regarding facility checks for specials on ASR orders.[121] Further, Verizon does not require a facility check on ASR orders for specials if the order was for a disconnection, a convention not reflected in either the OR-1 or OR-2 Guidelines. The JSC reached a consensus to update the Guidelines language, and the December 1, 2005, New York Commission order added a sentence to the OR-1 Guidelines that Verizon does not require a facility check on ASR orders for specials if the order is for a disconnect. Liberty believes the change will resolve the issue for OR-1. The issue has, however, not yet been addressed for OR-2. Verizon stated that it would schedule the issue for further discussion at the JSC to the extent it affects OR-2.[122] The issue remains unresolved for the period covered by this audit.

The remaining two issues were resolved during the previous West Virginia audit:

- For the OR-1 through OR-9 measures, Verizon excluded internally-generated orders to disconnect the data portion of a Line Sharing service, because it considers such orders to be administrative. However, the Guidelines did not specify this exclusion. During the previous West Virginia audit, Verizon noted that it had revised the Guidelines to reflect the exclusion, thereby resolving the matter.
- The Guidelines contained an obsolete reference to the "PON Master File" in OR-1, OR-2, OR-3, and OR-7. During the previous West Virginia audit, Verizon noted that it revised the Guidelines to remove the reference, and thus resolved the issue.

[120] Verizon Official Response to Previous West Virginia Audit Findings dated August 22, 2005.
[121] The Guidelines for OR-1 indicate that Verizon required a facility check for certain ASR orders for specials.
[122] Response to Data Request #181.

Previous Virginia Audit Finding 27: In a limited number of cases, Verizon uses an incorrect flow-through indicator when calculating the OR-2 metric results.[123] (Classification 2)

During the previous Virginia audit, Liberty found that in a limited number of cases, Verizon used an incorrect flow-through indicator when calculating the OR-2 measure results. During the current audit, Verizon stated that the JSC had reached consensus for updated Guidelines language.[124] The December 1, 2005, New York Commission order added language to the OR-2 Guidelines: "[i]f a reject and a confirmation are sent on the exact same PON/Version, Verizon will not count the incorrect notifier." Liberty believes the change will resolve the issue; however, for the period covered by this audit, this issue remains unresolved.

Previous Virginia Audit Finding 32: The Guidelines for OR-1 are unclear regarding Verizon's treatment of confirmations for trunk orders.[125] (Classification 4)

For the OR-1-12 measure, Verizon did not include confirmations on all PON versions, but only included the confirmation on the last version of the PON, *i.e.,* the "clean ASR." The Guidelines did not specify this convention. The JSC reached a consensus to update the Guidelines language, and the December 1, 2005, New York Commission order added a footnote to OR-1-12: "[f]or OR-1-12, Verizon measures the confirmation on the last ASR PON version received." Liberty believes the change will resolve the issue, but it remains unresolved for the period covered by this audit.

Also as part of its finding, Liberty noted that there was an internal contradiction in the language of the Guidelines with regard to the inclusion of OR-1-12 trunk orders in the reporting month. During the current audit, Verizon stated that the JSC agreed that no language change in the Guidelines is required and that no further action is required.[126] This decision resolves the matter.

Previous Virginia Audit Finding 33: The Guidelines do not list Verizon's exclusion of trunk service orders with negative FOC intervals for OR-1.[127] (Classification 4)

During the previous Virginia audit Liberty found that Verizon excluded any service order from OR-1-12 that has a clerical error resulting in negative FOC intervals. However, the Guidelines did not reflect this exclusion. During the current audit, Verizon stated that the JSC discussed the issue, but that additional discussions were required.[128]

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[123] Previous District of Columbia and Maryland Audit Findings 27, and Previous West Virginia Audit Finding c.
[124] Response to Data Request #12 (revised).
[125] Previous District of Columbia and Maryland Audit Findings 32, and Previous West Virginia Audit Finding d.
[126] Response to Data Request #12 (revised).
[127] Previous District of Columbia and Maryland Audit Findings 33, and Previous West Virginia Audit Finding e.
[128] Response to Data Request #12 (revised).

Previous Virginia Audit Finding 35: Verizon's treatment of LSR orders and ASR orders for the OR-2 measure when Verizon sends both a rejection and confirmation on the same PON version is inconsistent and not addressed by the Guidelines.[129] ***(Classification 2)***

For ASR orders, Verizon did not count rejections on a given PON version that it sent after a confirmation. For LSR orders, Verizon counted the rejection regardless of whether the order also had an earlier confirmation. However, the Guidelines did not address situations in which Verizon both confirms and rejects the same PON version. During the current audit, Verizon stated that the JSC had reached a consensus for a Guidelines clarification.[130] The December 1, 2005, New York Commission order added the following language to the OR-2 Guidelines: "[i]f a reject and a confirmation are sent on the exact same PON/Version, Verizon will not count the incorrect notifier." Liberty believes the change will resolve the issue, but it remains unresolved during the period covered by this audit.

Previous Virginia Audit Finding 37: The Guidelines do not explicitly state Verizon's conventions for calculating OR-2-12.[131] ***(Classification 2)***

Verizon included only forecasted trunks in results, and did not exclude projects or requests for new trunks, which was a convention not explicit in the Guidelines. During the current audit, Verizon stated that the JSC agreed to disaggregate OR-2-12 into two product groups that match those in OR-1-12: i) less than or equal to 192 forecasted trunks and ii) greater than 192 or unforecasted trunks.[132] The December 1, 2005, New York Commission disaggregated the OR-2-12 measure. Liberty believes the change will resolve the issue, but it remains unresolved for the period covered by this audit.

Previous Virginia Audit Finding 39: The Guidelines do not clearly specify that edit-rejects are not included in the OR-3-01 measure, but are relevant to the OR-3-02 measure.[133] ***(Classification 4)***

The Guidelines stated that edit-rejects are not included in the metric calculation, which is not consistent with Verizon's practice for the OR-3-02 sub-measure. During the current audit, Verizon stated that the JSC reached consensus to update the Guidelines to reflect that the exclusion of edit-rejects applies only to OR-3-01.[134] The December 1, 2005, New York Commission order adopted this language clarification. Liberty believes the change will resolve the issue. The issue, however, remains unresolved for the period covered by this audit.

[129] Previous District of Columbia and Maryland Audit Findings 35, and Previous West Virginia Audit Finding f.
[130] Response to Data Request #12 (revised).
[131] Previous District of Columbia and Maryland Audit Findings 37, and Previous West Virginia Audit Finding h.
[132] Response to Data Request #12 (revised).
[133] Previous District of Columbia and Maryland Audit Findings 39, and Previous West Virginia Audit Finding j.
[134] Response to Data Request #12 (revised).

Previous Virginia Audit Finding 40: Verizon does not use the correct completion date to select the orders it reports in the OR-4-11, OR-4-16, and OR-4-17 measures.[135] ***(Classification 2)***

Verizon uses the provisioning completion notice (PCN) date to select the relevant orders to include in the OR-4 measures for the reporting month, a practice that is not unambiguously documented in the Guidelines. During the current audit, Verizon stated that the JSC discussed the issue, but that further discussions were required.[136] As such, the issue remains unresolved.

Previous Virginia Audit Finding 41: The Guidelines for OR-4 contain obsolete language.[137] ***(Classification 4)***

Liberty found that the Guidelines for OR-4 contained obsolete language, specifically its reference to the VAN EDI system, which Verizon no longer uses. During the current audit, Verizon stated that the JSC had reached a consensus to remove the reference.[138] The December 1, 2005, New York Commission order removed this reference to the VAN EDI system. Liberty believes the change will resolve the issue, but it remains unresolved for the period covered by this audit.

Previous Virginia Audit Finding 45: Verizon's method for calculating OR-9 is not consistent with the Guidelines.[139] ***(Classification 4)***

Liberty found Verizon's business practices for calculating OR-9 reasonable, but not consistent with the wording of the Guidelines. In particular, they did not specify that Verizon excludes EDI file acknowledgements associated with files that do not pass front-end edits, as well as those PON versions that it neither confirms nor rejects. The Guidelines also included the language stating that it does not send an acknowledgement on orders with invalid or incomplete data, although Verizon sends a negative acknowledgment in these circumstances. During the current audit, Verizon stated that the JSC discussed the issue, but that further discussions were required.[140] As such, the issue remains unresolved.

Previous West Virginia Audit Finding 3: Verizon's method for calculating the OR-11 metric either does not conform to the Guidelines or is not defined in the Guidelines. (Classification 4)

During the previous West Virginia audit, Liberty identified the following five issues related to the OR-11 measure:

[135] Previous District of Columbia and Maryland Audit Findings 40, and Previous West Virginia Audit Finding k.
[136] Response to Data Request #12 (revised).
[137] Previous District of Columbia and Maryland Audit Findings 41, and Previous West Virginia Audit Finding l.
[138] Response to Data Request #12 (revised).
[139] Previous District of Columbia Audit Finding 46, Previous Maryland Audit Finding 45, and Previous West Virginia Audit Finding m.
[140] Response to Data Request #12 (revised).

- The Guidelines listed the products in a way that implied that these products should be reported separately, and listed one of the products as "UNE" rather than UNE-P." The April 15, 2005, New York Commission order corrected the language and thus resolved the matter, as Liberty verified through review of the November 2005 version of the Guidelines.
- The description of the line loss process in the Guidelines did not accurately describe Verizon's procedures, because it refers to an incorrect specific start time for order collection and to certain specific order types, disconnect (D) and new connect (N), that do not comprise all the relevant orders. The December 1, 2005, New York Commission order changed the reference in the Guidelines from "D information" to "service orders with disconnect activity," and the reference from "N order" to "order with new connect activity." The New York Commission order also removed the reference to 6:00 p.m., stating that the process "starts with collection of the previous calendar day's competed service orders." Liberty believes these changes will resolve the issues; however, the issues were unresolved during the period covered by this audit.
- The Guidelines state that Verizon holds information on D orders for two to five days for a matching N order prior to including the order in a Loss of Line (LOL) report, which differs from Verizon's practice. Verizon stated that the issue is still pending at the JSC.[141] The issue remains unresolved during the period covered by this audit.
- Verizon's convention for recording the timestamp for Network Data Mover (NDM) and EDI records as Verizon's first attempt to send the report file to the CLEC is not explicit in the Guidelines. Verizon indicated that the CWG agreed to update the Guidelines language and that the change would be reflected in a future order.[142] The issue remains unresolved during the period covered by this audit.
- Verizon does not apply the Guidelines convention for missing notices that inaccurate and missing notices are considered late. Verizon stated that the issue is still pending at the JSC.[143] As such, the issue remains unresolved during the period covered by this audit.

E. New Findings

Liberty has one new finding related to the ordering domain.

Finding 3: The exclusion for service order processor (SOP) downtime listed in the OR-1 and OR-2 Guidelines is unclear. (Classification 4)

To determine results for the OR-1 (Order Confirmation Timeliness) measure, Verizon calculates an order confirmation response time, *i.e.,* the amount of elapsed time between receipt of a valid order and distribution of a service order confirmation. To determine results for the OR-2 (Reject

[141] Response to Data Request #12 (revised).
[142] Response to Data Request #12 (revised).
[143] Response to Data Request #12 (revised).

Timeliness) measure, Verizon calculates a reject response time, *i.e.*, the amount of elapsed time between receipt of an order request and distribution of a service order reject. The Guidelines in effect during the audit period for both measures list SOP scheduled downtime hours as a valid exclusion.[144]

The Guidelines contain an exception to the exclusion that was not in previous versions of the Guidelines: "[t]he 3rd Saturday of each month is a scheduled release. SOP will have a late start the following Sunday at 9:00 AM." Verizon stated that the exception language associated with the SOP scheduled downtime was specific to the New York and New England Guidelines "and was integrated into the Verizon East Guidelines."[145] Verizon further stated that the exception does not apply to the Potomac region.[146] Verizon therefore does not reflect it in its interval calculations for the Potomac jurisdictions.

However, the Guidelines do not state that the exception is jurisdiction-specific; in fact, there is no indication that the exception does not apply to the Potomac region. Verizon subsequently stated that it would propose an update to the Guidelines clarifying that the exclusion does not apply to the Potomac states.[147]

1. Other Issues

The Guidelines for the OR-1 and OR-2 measures refer to a standard for Specials with a facility check, which includes "UNE Specials DS0 EELs > 6 lines." Prior versions of the Guidelines referred to Enhanced Extended Loops (EELs) greater than or equal to six lines. Verizon stated that it omitted the equal sign due to a typographical error in the New York Guidelines that were the baseline for Guidelines in effect during the audit period, but that there was no effect on metric reporting.[148] The difference between the Guidelines and Verizon's actual practice could cause confusion.

When Liberty reviewed the CMAs, it found that Verizon has included specific logic hard-coded in certain OR-1, OR-2, and OR-3 CMAs to exclude one special project PON for a two-day period.[149] Liberty notes that hard-coding specialized one-time only exclusions may make future program debugging more difficult and that in other cases for special projects Verizon uses indicator fields, lookup tables, and specific logic.

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[144] The Guidelines list scheduled downtime hours for the Potomac region and for Pennsylvania and Delaware. The Guidelines list scheduled uptime hours for Verizon North (New York and New England) and New Jersey.
[145] Response to Data Request #25.
[146] Responses to Data Requests #25 and #95.
[147] Response to Preliminary Finding 1 (revised).
[148] Response to Data Request #24. The November 2005 Guidelines also contain this error.
[149] Response to Data Request #145.

V. Provisioning Performance Measures

A. Introduction

The provisioning measures report on various aspects of Verizon's provisioning process, including timeliness, quality, and completeness. The Guidelines list the following seven provisioning measures:

- PR-1: Average Interval Offered
- PR-3: Completed within Specified Number of Days
- PR-4: Missed Appointments
- PR-5: Facility Missed Orders
- PR-6: Installation Quality
- PR-8: Percent Open Orders in a Hold Status
- PR-9: Hot Cut Loops.

The PR domain has 43 sub-measures.[150] The PAP focuses on the following six provisioning measures and 16 sub-measures:

- PR-3-01, PR-3-03, and PR-3-10
- PR-4-01, PR-4-02, PR-4-04, PR-4-05, PR-4-07, PR-4-14, and PR-4-15
- PR-5-01 and PR-5-02
- PR-6-01 and PR-6-02
- PR-8-01
- PR-9-01.

The PAP identifies all of these PR sub-measures, except PR-3-03 and PR-3-10, as Critical Measures.

Liberty discussed many aspects of the PR domain in detail in its previous audit reports, and did not repeat that information here. In those reports, Liberty summarized the Guidelines description for each sub-measure, including the metric formula, allowable exclusions, reporting dimensions, and applicable standards. Liberty provided an overview of Verizon's business processes and systems that generate the data used for these measures. Liberty described the process by which Verizon extracts data from its legacy provisioning source systems and sends them to the NMP data warehouse, and then extracts data from the NMP warehouse to create the data tables that it uses to process results each month. Liberty described the NMP data tables that Verizon uses to calculate results, including key data fields, logic variables, or derived values specific to each measure. Liberty also described Verizon's approach to calculating each measure and discussed if its method of defining data fields and implementing exclusions was consistent with the Guidelines.

[150] Appendix A contains a complete list of the sub-measures.

B. General Analysis and Evaluation

As part of the current audit, Liberty reviewed the relevant version of the Guidelines to identify any changes since the previous audits. Liberty reviewed the MCCNs pertinent to the PR domain that Verizon issued in the interim, and inquired about any system or process changes not addressed in the notices. Liberty also reviewed Verizon's updated NMP documentation and Verizon's CMAs. In addition, Liberty replicated a selection of CLEC aggregate and Verizon retail results.

1. Changes to the Guidelines

Liberty reviewed the Guidelines for PR in effect for the September 2005 data month and compared them to the Guidelines in effect during the previous audits and found that the differences conformed to the Guidelines changes set forth in the New York Commission orders issued since the previous audits.[151] In some cases, Verizon had made language changes designed to improve clarity that had no effect on the calculation of metric results.[152] Other modifications, however, did have an effect on reported results.

- Consistent with the revised Guidelines, Verizon introduced six new sub-measures relevant to the audit period: PR-1-13, PR-3-11, PR-3-12, PR-3-12, PR-9-03, and PR-9-04. Liberty discusses these in more detail in a separate section below.
- The Guidelines no longer contain the exclusion for suspend for non-payment and associated restore orders, which affects the calculation of PR-1 through PR-5 and PR-8.[153]
- For the PR-3-08 measure, the reported product changed from "Hot Cut Loops" to "Basic Hot Cut Loops (1-10 lines)."[154]
- For the PR-6-01 sub-measure, the reported product changed from "UNE POTS – Loop – Total" to "UNE POTS – Loop – New."[155]
- For the PR-6-02 sub-measure, the reported product of "UNE POTS – Loop Hot Cut" changed to three new product categories: Basic Hot Cut Loop, Large Job Hot Cut Loop, and Batch Hot Cut Loop.[156]

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[151] Responses to Data Requests #8 and #9.

[152] For example, the Guidelines for PR-1 through PR-8 no longer contain a footnote regarding counting ASR orders that are provisioning completed. The Guidelines for PR-5 contain additional language, "[o]rders completed on the Due Date are considered to be completed on-time regardless of the time of day the order was actually completed." The PR-8 Guidelines no longer contain two sentences in the definition section that refer to open orders that have not been assigned a completion date due to Verizon reasons. A phrase in a note in the PR-6 Guidelines regarding disposition code 5 changed from "troubles closed" to "troubles automatically cleared." Liberty also noted that the definition for PR-3 now contains the word "POTS," although Verizon acknowledged in response to Data Request #27 that it does not consider some of the products it reports for PR-3, such as UNE 2-Wire products, POTS products.

[153] This change was adopted in the August 27, 2004, New York Commission order.

[154] This change was adopted in the December 16, 2004, New York Commission order.

[155] This change was adopted in the December 16, 2004, New York Commission order. The Guidelines also remove the reference to PR-6-01 in the definition section.

The latest Guidelines for PR-9 contain extensive changes to the definition section stemming from the change from one product group to three, including new language about the Large Job and Batch Hot Cut processes.[157] Verizon now reports three separate products for PR-9-01: Basic Hot Cut Loop, Large Job Hot Cut Loop, and Batch Hot Cut Loop. Verizon also updated the language in the Guidelines to define when it considers a Basic, Large Job, or Batch hot cut completed and when Verizon considers it missed. The Guidelines also contain additional notes clarifying the hot cut measures. The definition for coordinated hot cuts in the glossary of the Guidelines now reflects that Verizon includes CLEC-to CLEC migrations; *i.e*., UNE-P to UNE-Loop (UNE-L) and UNE-L to UNE-L migrations, in applicable hot cut sub-measures.

Verizon made other changes to the PR-9 Guidelines. The title of the PR-9-08 sub-measure changed from "Average Duration of Service Interruption" to "Average Duration of Hot Cut Installation Troubles" to reflect that the measure now includes service-affecting troubles. The performance standard section no longer lists cut-over windows for orders over 99 lines. The definition section now includes a statement that for the PR-9-08 sub-measure, Verizon counts troubles in the month that they are closed.[158]

The Guidelines also reflect the reintegration of Data Services Network Operations (DSNO) with Verizon retail. The retail analog table now shows "VADI[159]/DSNO and Retail Line Sharing." Verizon stated that there was no change to its calculation as a result.[160] However, Liberty found that Verizon added a new logic step to the calculations for this parity standard to include Verizon affiliate orders. Verizon stated that it made the change as the result of its efforts to consolidate the PR CMAs into a single code base and not due to the revisions to the wording in the Guidelines.[161]

2. Change Controls

Verizon issued and completed a considerable number of change controls since Liberty completed its previous audits of the Potomac region. During the previous audits, Verizon had a separate set of provisioning CMAs for each state. In some cases, the CMAs contained an error that applied only to a single jurisdiction. However, beginning with the February 2005 reporting month, Verizon consolidated its production code for all four Potomac jurisdictions.[162] Over recent

[156] This change was adopted in the December 16, 2004, New York Commission order.
[157] These changes were adopted in the December 16, 2004, New York Commission order.
[158] Liberty identified this issue in Previous Virginia Audit Finding 71 (also Previous District of Columbia Audit Finding 70 and Previous Maryland Audit Finding 69). These changes were adopted in the August 27, 2004, New York Commission order.
[159] Verizon Advanced Data Incorporated (VADI).
[160] Response to Data Request #23.
[161] Response to Data Request #321 (clarification).
[162] Response to Data Request #343. Verizon noted that while it completed the consolidation of its production code in February 2005, it had not generated a consolidated set of September 2005 CMAs until Liberty's request.

months, Verizon undertook an effort to consolidate the provisioning calculations for both North and South states into one code base.[163]

For this audit, Verizon provided Liberty with the September 2005 provisioning CMAs.[164] Many of the MCCNs that Verizon implemented since the previous audits involved changes to state-specific calculations. As Verizon has now consolidated its production code across jurisdictions, Liberty noted these changes in the September 2005 version of the CMAs. Verizon introduced several other MCCNs in response to findings from previous audits. Liberty discusses these in the Status of Findings from Previous Audits section below.

Liberty noted that Verizon's September 2005 CMAs reflected the corrections under the following MCCNs:[165]

- During the previous Potomac audits, Liberty found that Verizon's Virginia calculation for PR-5-04-3341 contained an error. Verizon selected orders with a CLEC-caused delay, rather than those without a CLEC-caused delay, in the numerator of the measure.[166] Verizon issued a correction that came into effect under Metric Change Control No. 10718 in April 2004.
- Verizon identified an error in the Virginia calculation for PR-3-06-2100 and PR-3-09-2100, whereby the exclusion of resale Line Sharing was missing from the denominators. Verizon issued a correction that came into effect under Metric Change Control No. 10690 in May 2004.
- During the previous Potomac audits, Liberty found that in six of the ten Virginia PR-4-01 calculations Verizon selected orders with a facility delay over 15 days in the numerator, rather than selecting orders completed late for Verizon reasons.[167] Verizon issued a correction that came into effect under Metric Change Control No. 10772 in December 2004.
- During the previous Potomac audits, Liberty found that Verizon had not fully implemented its change control designed to add the exclusion of federal orders from Virginia retail results for several PR-4 and PR-5 calculations.[168] Verizon issued a correction that came into effect under Metric Change Control No. 11003 in December 2004.

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[163] In response to Data Request #163, Verizon stated that it issued Metric Change Control No. 11435, covering the code consolidation, as an internal work request and that it did not distribute it externally.
[164] Response to Data Request #14 (revised).
[165] Liberty also found changes in the CMAs associated with other MCCNs that did not affect calculated results. Verizon removed unnecessary code that checked for loop qualification in certain PR-1 sub-measures under Metric Change Control No. 10854. Verizon removed unnecessary code in certain PR-4 retail calculations that checked for resale migrations under Metric Change Control No. 11375. Verizon removed an unnecessary step in its PR-1-12-2103 calculation that checked for resale xDSL orders, which Verizon does not offer, under Metric Change Control No. 10962. Verizon removed an extraneous logic step that checked for platform products in its PR-9-08 calculation under Metric Change Control No. 10755; this issue was the subject of Previous Virginia Audit Finding 71 (also Previous District of Columbia Audit Finding 70 and Previous Maryland Audit Finding 69).
[166] Previous Virginia Audit Finding 61.
[167] Previous Virginia Audit Finding 61.
[168] Previous Virginia Audit Finding 50. Verizon previously corrected some calculations under Metric Change Control No. 10670.

- Verizon corrected inconsistencies in its calculation methods that Liberty identified in the previous Potomac audits such as its methods for identifying facility-missed orders, identifying subscriber missed orders, and identifying residential and business orders.[169] Verizon issued corrections that came into effect under Metric Change Control Nos. 11394 and 11401 in December 2004.
- Verizon found that its logic for calculating the denominators of PR-3-06 and PR-3-09 in Virginia did not reflect then-current Guidelines (as reflected in the October 29, 2003, New York Commission order). Verizon issued a correction that came into effect under Metric Change Control No. 10906 in December 2004.
- Verizon found that it was using redundant code to identify feature changes on Integrated Services Digital Network Primary Rate Interface (ISDN PRI) (no dispatch) orders in its Virginia retail calculations for PR-1-07, PR-1-09, PR-4-01, PR-4-02, PR-8-01, and PR-8-02 UNE DS1 and EEL sub-measures. The code caused Verizon to exclude ISDN PRI orders that were not feature orders. Verizon issued a correction that came into effect under Metric Change Control No. 11271 in December 2004.
- Verizon identified an error affecting all Potomac jurisdictions in its calculations for PR-3-08-3520, whereby it used the appointment interval, rather than the completion interval, to check for orders with invalid intervals. Verizon implemented a change that came into effect under Metric Change Control No. 10776 in July 2004.
- Verizon found that it failed to implement the exclusion for orders that require a manual loop qualification for the denominator of the PR-3-10-3341 sub-measure (UNE 2-Wire Digital Loop product). The issue affected all four Potomac jurisdictions.[170] Verizon implemented a change that came into effect under Metric Change Control No. 11578 in February 2005.

Some of the MCCNs involved aspects of the logic within NMP that Liberty could not verify through examination of the CMAs:

- Verizon found that it failed to capture all relevant VADI orders for the retail parity result for Line Sharing and Line Splitting products in PR-1 through PR-8. This issue affected all four Potomac jurisdictions. Verizon implemented a change that came into effect under Metric Change Control No. 11299 in August 2004.
- Verizon found that it had an error in its calculation of delay days for the PR-4-02-5000 (trunks) measure. Verizon manually calculated the delay days for trunks for the July 2004 reporting month and sent a spreadsheet containing the data to NMP. Verizon stated that the issue was not isolated to July 2004 and that its personnel send a manual update to NMP when required. Verizon added that the issue has not yet affected any of the Potomac jurisdictions results.[171] Verizon implemented

[169] See for example Previous Virginia Audit Findings 49, 57, and 61. Liberty identified other examples of inconsistencies including Verizon's methods for checking appointment type codes, excluding affiliate orders, identifying the dispatch indicator for cancelled orders, and identifying and excluding disconnects from Line Sharing orders.
[170] Response to Data Request #228.
[171] Response to Data Request #281.

this change, which came into effect under Metric Change Control No. 11171 in July 2004.

- Verizon found it had been incorrectly identifying certain change orders as disconnect orders and then incorrectly excluding them from results. This change affected all four Potomac jurisdictions. Verizon implemented a correction that came into effect under Metric Change Control No. 11061 in August 2005.
- Verizon modified its calculation of appointment timeliness for billing-only CLEC-generated orders to convert special access to UNE (SPUNE) orders for all Potomac jurisdictions. This change related to ASR-related data for the PR-4-01 and PR-4-02 measures.[172] Verizon implemented a change that came into effect under Metric Change Control No. 11131 in July 2004. However, the change had the effect of causing all SPUNE orders to be considered "on time." Liberty addresses this issue in Finding 4.

Liberty reviewed a number of provisioning-related MCCNs during its previous West Virginia audit resolving issues in West Virginia that Liberty originally identified during the previous District of Columbia, Maryland, and Virginia audits or that addressed issues Verizon identified as part of it own internal analysis. In some of these cases, Verizon issued separate MCCNs to address the issue in the other Potomac jurisdictions.[173] Liberty noted that the corrections under these MCCNs were reflected in the CMAs Verizon generated based on its September 2005 calculations.[174]

Some of the MCCNs that Verizon issued implemented changes required by the new Guidelines resulting from the August 27, 2004, New York Commission order. Verizon made these changes effective February 2005. Liberty verified that Verizon made the correct changes to its CMAs or NMP logic:

- The order removed the exclusion for suspend for non-payment and associated restore orders from wholesale results for the PR-1 through PR-5 and PR-8 measures. This change, implemented under Metric Change Control No. 11198, rendered moot Liberty's finding in the previous Virginia audit that Verizon excluded snip-and-restore orders from retail results but not wholesale.[175]
- The order modified the Guidelines for the PR-9-08 measure to include service-affecting troubles. Under Metric Change Control No. 11225, Verizon removed the logic step that selected only out-of-service troubles.[176]
- The order modified the Guidelines such that UNE Loop Sharing products would be included in the UNE 2-Wire xDSL Loop product category.[177] Under Metric

[172] According to the notice, this change affected PR-4-01-3210, PR-4-01-3211, PR-4-01-3213, PR-4-01-3214, PR-4-01-3510, PR-4-01-3530, PR-4-02-3200, PR-4-02-3510, and PR-4-02-3530. In response to Data Request #302, Verizon clarified that it no longer used ASR data for PR-4-01-3210 and PR-4-01-3214.
[173] In response to Data Request #217, Verizon stated that it issued individual change controls at different times due to workload issues.
[174] These MCCNs were Metric Change Control No. 11401, which relates to Previous Virginia Audit Findings 56 and 61, and Metric Change Control No. 11394, which relates to Previous Virginia Audit Finding 49.
[175] Previous Virginia Audit Finding 52 (also Previous District of Columbia Audit Finding 52 and Previous Maryland Audit Finding 51).
[176] Response to Data Request #225.

Change Control No. 11246, Verizon modified the logic in NMP that identified UNE 2-Wire xDSL Loop orders to use the service-code-modifier field to identify UNE Loop Sharing arrangements to be included in the product group.[178]

Verizon issued additional MCCNs to implement changes required by the new Guidelines resulting from the December 16, 2004, New York Commission order. Verizon made these changes effective in the May 2005 reporting month:

- The order modified the Guidelines for the PR-6-01, PR-6-02, PR-9-01, and PR-9-08 measures by: i) changing the PR-6-01 reporting requirement from UNE POTS Loop Total to UNE POTS Loop – New, which eliminated hot cuts; ii) changing the reporting requirements for PR-6-02 and PR-9-01 from one hot cut group to three separate hot cut product groups; and iii) introducing the standard for PR-9-08 as parity with Verizon retail. Verizon implemented the changes under Metric Change Control No. 11453.
- The order modified the product for the PR-3-08 sub-measure from Hot Cut Loops to Basic Hot Cut Loops (1-10 lines). Verizon implemented the changes under Metric Change Control No. 11469.
- Verizon issued Metric Change Control No. 11469 to implement the new sub-measures PR-1-13, PR-3-11, PR-3-12, and PR-3-13. Verizon issued Metric Change No. 11485 to create the new PR-9-03 sub-measure and Metric Change Control No. 11454 to create the new PR-9-04 sub-measure. Liberty discusses these MCCNs in more detail in the New Measures section of this chapter.

Liberty reviewed the CMAs to assess whether Verizon correctly changed metric calculations for these sub-measures to implement the revised Guidelines. Liberty discusses these changes in more detail in the Other Changes section of this chapter.

3. Other Changes

Inclusion of GTE Transactions

Verizon began reporting combined provisioning results for the former Bell Atlantic, former Contel, and former GTE service areas in Virginia for the June 2004 data month. Verizon explained that it generally classifies Contel records as GTE and includes them in the measures.[179] The majority of the data records used in the provisioning measures have an indicator field that designates the former Virginia territory to which the service order relates. For LSR-related service order data, Verizon's source system assigns a legacy organization indicator based on the exchange code, and each record has a state code of VA. This is the only provisioning data mart that identifies Contel records separately from GTE. NMP does not change the state code when it

[177] This change affected the PR-1-01, PR-1-02, PR-3-10, PR-4-02, PR-4-03, PR-4-04, PR-4-08, PR-4-14, PR-5-01, PR-5-02, PR-5-04, PR-6-01, PR-8-01, and PR-8-02 sub-measures.
[178] Response to Data Request #134.
[179] Response to Data Request #303.

creates the data marts and Verizon calculates results for Virginia using records with a VA state code.[180]

For ASR-related service order and LNP data, Verizon derives a territory indicator in NMP based on a lookup table of exchange codes. When it creates the data marts, NMP creates duplicate records that have a state code designation of VN, and calculates results for Virginia using records with a VN state code.[181] Verizon creates two data marts using WPTS source data. For the Provisioning Hotcuts data mart (which Verizon uses to calculate PR-9 measures and PR-6-02), Verizon derives a territory indicator (GTE or Bell Atlantic) in NMP based on a lookup table of exchange codes. For the WPTS Hotcuts data mart (used to calculate certain PR-1 and PR-3 sub-measures), Verizon passes no territory indicator to NMP. NMP does not change the state code when it creates these two hot cut data marts and Verizon calculates results for Virginia using records with a VA state code.[182]

Liberty reviewed the data files that Verizon uses to calculate the PR measures and was able to verify that they contained Contel and GTE records and that the records are included in reported results.

Changes to PR-3-08

PR-3-08 now reports UNE Basic Hot Cut Loops (1-10 lines) rather than UNE Hot Cuts. To calculate PR-3-08, Verizon uses the WPTS Hotcuts data mart rather than the LSR-related service order data it used previously. Liberty discusses this data mart, as well as common exclusions, in the New Measures section under PR-1-13. Given these changes, the new calculation logic bears little resemblance to the old logic. Liberty reviewed the September 2005 CMA and verified that it appears to be correct.

The key data fields for the PR-3-08 metric are CLEC ID, hot cut type (*e.g.*, Basic, Batch), line count, order status, PON application interval, completion interval, delay or miss codes, hot cut facility indicator, and hot cut exclusion indicator. Liberty discusses the last two fields in more detail in the New Measures section under PR-1-13. Verizon calculates the PON application interval as the number of business days between the customer desired due date and the latter of the order receipt or application date.[183] Verizon calculates the completion interval as the number of business days between application or receipt date and completion date.[184] Liberty verified that Verizon calculated these fields correctly.

To calculate the denominator of the measure, Verizon's new calculation logic selects hot cut orders that WPTS identified as Basic, and that have one to ten lines. Verizon selects completed orders using the order status assigned by WPTS. Because PR-3-08 reports non-dispatch orders,

[180] Interview #2, January 17, 2006.
[181] Interview #2, January 17, 2006.
[182] Interview #2, January 17, 2006 and response to Data Request #305.
[183] Response to Data Request #332 (third clarification). In previous audits, Verizon indicated that the application date is the date recorded on the service order in the SOP, which in nearly all cases is the same as the receipt date, or the date that Verizon received the valid LSR.
[184] NMP Provisioning Feed Design documentation provided in response to Data Request #75.

Verizon's logic excludes orders with hot cut facility indicator values of 2 and 3, which indicate Integrated Digital Loop Carrier (IDLC) orders. Consistent with the exclusions listed in the Guidelines, Verizon uses the hot cut exclusion indicator to exclude special projects. Verizon selects records that do not have a customer-caused delay or order missed code associated with them. Verizon's logic also checks for and excludes invalid completion intervals. To implement the exclusion for orders for which the customer requested a due date beyond the standard, Verizon selects orders with PON appointment intervals of five days or less, which is the standard for this product group. To calculate the numerator for PR-3-08, Verizon selects the orders identified in the denominator that have completion intervals of five or fewer business days.

Changes to PR-6-01

Verizon now reports the UNE POTS Loop New (PR-6-01-3113) product group for the PR-6-01 measure instead of the UNE POTS Loop Total product group. Liberty reviewed the CMA for this measure and found that Verizon had correctly modified its wholesale logic to exclude hot cuts, and concluded that Verizon appears to calculate the revised sub-measure properly.

Verizon calculates Retail POTS Dispatched as the retail analog for UNE POTS Loop New product category, but the Retail Analog table in the Guidelines lists Retail POTS Total as the retail analog. Liberty addresses this issue in Finding 6.

Changes to PR-6-02, PR-9-01, and PR-9-08

Verizon now reports three separate types of hot cuts (Basic, Large Job, and Batch) rather than one consolidated category for the PR-6-02 and PR-9-01 measures. CLECs order all three types via LSR. Verizon creates the service orders for hot cuts in its SOP, which feeds information to WFA-C. WFA-C sends hot cut data to WPTS approximately every four hours.[185] Verizon stated that it determines the hot cut type in WPTS, and passes the value to NMP during its routine data transfers.[186]

Verizon negotiates with CLECs the intervals for all Large Job orders, as well as Basic orders for more than 20 lines. Verizon sets the interval for Batch orders, with a maximum interval of 26 business days. Basic Hot Cut orders up to ten lines have a standard interval of five business days, and orders with 11 to 20 lines have a standard interval of 20 business days. Verizon also records the sub-type of hot cut in WPTS: Verizon to UNE Loop, Resale to UNE Loop, UNE Platform to UNE Loop, and UNE Loop to UNE Loop.[187]

Liberty reviewed the CMAs for the revised PR-6-02 and PR-9-01 measures and verified that they appear to be correct. To calculate the PR-6-02 and PR-9-01 measures, Verizon uses a new data mart, Provisioning Hotcuts. Previously, Verizon used the WPTS Hotcuts data mart to calculate these measures. Liberty discusses the new data mart, and whether Verizon correctly implements

[185] Responses to Data Requests #96, #97, and #98.
[186] Response to Data Request #93.
[187] Responses to Data Requests #96, #97, and #98.

common exclusions specified by the Guidelines, in the New Measures section under PR-9-04. The Guidelines for PR-6 also list special projects as an exclusion. Verizon does not include information on special project hot cuts in the feed from WPTS, and therefore correctly excludes them from PR-6-02.[188]

The key data fields in the Provisioning Hotcuts data mart for the PR-6-02 sub-measures include CLEC ID, hot cut type (*e.g.*, Basic, Large Job), and line number. To calculate the denominator, Verizon selects completed orders of the appropriate hot cut type, and adds the total lines associated with those orders. Verizon calculates the numerator for the PR-6-02 measures using MR data in essentially the same way it did previously, except that it selects trouble reports associated with the appropriate hot cut type for each sub-measure.

The key data fields in the Provisioning Hotcuts data mart for the PR-9-01 sub-measures include CLEC ID, hot cut type, and met indicator. Verizon sets the met indicator to "N" only if there was a Verizon miss code associated with the order, otherwise it sets the indicator to "Y."[189] To calculate the PR-9-01 denominator, Verizon selects orders of the appropriate hot cut type. Verizon calculates the numerator for the PR-9-01 measures by selecting those orders in the denominator that had a met indicator of "Y."

Prior versions of the PR-9 Guidelines listed two conditions under which a hot cut should be considered complete for the purposes of PR-9-01, *i.e.*, when Verizon completes the work by the appointed frame due time, and when WPTS lists the order as complete. The previous version of the Guidelines listed two conditions under which a hot cut should be considered missed, i) when a premature disconnect is called into 1-877-Hotcuts, and ii) when the work was not done. The current version of the PR-9 Guidelines applicable to Basic and Large Job Hot Cuts, which involve similar physical and business processes, repeat these four conditions.[190] Liberty found Verizon's method for assigning the met indicator on Basic and Large Job Hot Cuts consistent with this language.

The Guidelines introduce some new language for Batch Hot Cuts that describes when Verizon should consider Batch Hot Cuts completed and when it should consider them missed for the purposes of PR-9-01. For a Batch Hot Cut to be considered complete, Verizon must complete cross wiring and send a port activation notice to the Number Portability Administration Center. If Verizon does not complete the cross-wire work by the due date due to its own action or if it fails to send the port activation notice, it should consider the order missed. Like the other types of hot cuts, Verizon should consider a Batch order missed when a CLEC calls a premature disconnect into 1-877-Hotcuts, and should consider one complete only when the order is complete in WPTS. The Guidelines also state that a Batch order is considered missed if the completion date is greater than 26 days, unless delayed for CLEC reasons. Verizon's described method for assigning the met indicator on Batch Hot Cuts is consistent with the Guidelines

[188] Response to Data Request #348.
[189] Response to Data Request #342.
[190] Large job hot cuts usually involve converting CLEC customers en masse from UNE-P to UNE-L or from Resale to UNE-L, or involve moving customers from one CLEC to another.

language.[191] The Guidelines contain new language applicable to all three types of hot cuts: "[o]rders missed for customer reasons, where there is no Verizon miss, will be counted as completed on-time once completed." Verizon stated that there was no change to its business practices or recordkeeping in WPTS as a result of this language.[192] The PR-9 *Exclusions* section notes that if a CLEC cancels an order before the start of the hot cut window and Verizon performs the cut, the error will result in a trouble report and need not be reflected.[193]

As discussed in the Change Controls section above, Liberty verified that the exclusion of service-affecting troubles no longer appears in the CMAs for the wholesale PR-9-08 sub-measure. The latest version of the Guidelines introduced a standard for PR-9-08 as parity with Verizon Retail, specifically the average duration of Retail POTS Installation Troubles.[194] Liberty reviewed Verizon's retail PR-9-08 CMA and found Verizon was calculating this result incorrectly. Liberty discusses this issue in Finding 11.

Additional Changes

Liberty asked Verizon whether it had made any other system or process changes related to the provisioning domain. Verizon stated that it retired one of its SOPs, the Service Order Administration Control System (SOACS), in December 2004.[195] Verizon now uses expressTRAK exclusively in the Potomac jurisdictions. This change did not affect measure calculations.

4. Review of the Accuracy of Reported Results

Liberty reviewed Verizon's NMP documentation for the provisioning domain and found Verizon's documentation to be relatively complete, but in some cases out of date.[196] Liberty found that the NMP documentation for ASR-related and LNP orders still referred to the state code of VA rather than VN. Liberty also found that the ASR and LNP data table layouts contained no reference to the state code of VN, only VA. In addition, Verizon has not reflected many of the recent changes to the measures, particularly those dealing with hot cuts, in its documentation, and Liberty noted that Verizon's descriptions of its derivations of certain key data fields relevant to the PR-1-13 and PR-3 hot cut sub-measures are incorrect.[197] Liberty discusses the issue of NMP documentation in more detail in Finding 2.

[191] Response to Data Request #355. Verizon stated that, although it has not yet handled any Batch Hot Cut orders, it would use the time it finished sending the port activation notice to determine whether it met the cut-over window, and would use missed function codes to recognize that any order with a completion date greater than 26 days, except if delayed by the CLEC, would be considered missed.
[192] Response to Data Request #353.
[193] The PR-9 Guidelines also specify that Verizon should exclude orders in the event that a CLEC cancels an order before the start of the hot cut window and Verizon performs the hot cut. As discussed in previous audit reports, the "Verizon performs the hot cut" portion describes an impossible scenario; because the cut is coordinated it would not have continued without approval of the CLEC.
[194] The Guidelines do not specify the product; it is cited in the December 16, 2004, New York Commission order.
[195] Responses to Data Requests #76 and #104.
[196] Response to Data Request #75.
[197] Response to Data Request #332.

Verizon provided Liberty with a set of provisioning CMAs relevant for all four Potomac jurisdictions. Verizon continues to have difficulty providing accurate CMAs. During this audit, Verizon initially provided a version of its CMAs that it later identified as being incorrect. In mid-January, Verizon provided the corrected CMAs; however, these CMAs also contained errors because Verizon's process for generating the CMAs continues to produce inaccurate versions of some CMAs.[198]

Despite Verizon's CMA issues, Liberty reviewed the provisioning CMAs and found them to be generally accurate, but Liberty did identify some errors in the calculations:

- Verizon failed to include affiliate orders in its retail analog calculations for PR-6-01-3343 and PR-6-01-3345. Liberty discusses this issue in more detail in Finding 7.
- Verizon had an error in its wholesale calculation for PR-3-01-3140. Liberty discusses this issue in more detail in Finding 8.
- Verizon failed to include the logic to exclude Verizon affiliate orders from the numerator of its wholesale calculation for PR-5-02-3342. Liberty discusses this issue in more detail in Finding 9.
- Verizon used an incorrect indicator to identify resale migration orders in its calculations for PR-4-01-2213, PR-8-02-2100, PR-8-02-2200, and PR-8-02-2341. Liberty discusses this issue in more detail in Finding 10.
- Verizon's calculation logic for PR-1-12-3200 does not contain a step to exclude administrative orders. Liberty discusses this issue in more detail in Finding 12.
- Verizon changed its logic for exclusion of administrative orders in PR-6 and applied the new logic only to some of the PR-6 sub-measures. Liberty discusses this issue in more detail in Finding 13.

Liberty replicated wholesale and retail results for selected sub-measures for the September 2005 data month using the data that Verizon provided.[199] For the six new sub-measures (*i.e.,* PR-1-13, PR-3-11, PR-3-12, PR-3-13, PR-9-03, and PR-9-04), Liberty replicated at least one product result. Liberty also replicated at least one product result for each of the measures that changed (*i.e.,* PR-3-08, PR-6-01, PR-6-02, PR-9-01, and PR-9-08).[200] For each sub-measure, Liberty was able to replicate Verizon's reported result.

For the September 2005 period, Verizon reported no results for Batch Hot Cut sub-measures, *i.e.,* PR-1-13-3525, PR-9-01-3525, and PR-9-04-3525. Liberty substantiated that there were no batch hot cut orders in the appropriate data marts.

[198] Responses to Data Requests #319 and #326.
[199] Responses to Data Requests #49 and #50.
[200] Liberty could not replicate Verizon's wholesale result for PR-9-08, because Verizon determines the hot cut indicator used in the calculation incorrectly. Liberty addresses this issue in the discussion of Previous Virginia Audit Finding 70.

C. New Measures

Since the previous audits, Verizon introduced six new provisioning sub-measures consistent with the December 16, 2004, New York Commission order: PR-1-13, PR-3-11, PR-3-12, PR-3-13, PR-9-03, and PR-9-04. Liberty reviewed Verizon's method for calculating these measures to determine whether it was producing results consistent with the language and exclusions set out in the Guidelines.

PR-1-13

The Guidelines provide the following formula for the PR-1-13 sub-measure:

PR-1-13: Average Interval Offered – Hot Cuts – No Dispatch

> *(Sum of committed due date minus the application date for product group)/(Number of orders for product group)*

Verizon reports two POTS Loop products, Basic Hot Cut (21 lines or greater) and Batch Hot Cut. The Guidelines list the same exclusions for PR-1-13 as for the other PR-1 measures. In addition to Verizon affiliate data, Verizon should exclude the following:

- Verizon test orders
- Orders for which the customer requested due date is beyond the standard available appointment interval
- Verizon administrative orders
- Orders with invalid intervals
- Special project PONs.[201]

The Guidelines also require the exclusion of disconnect orders. Like other PR-1 measures, Verizon reports PR-1-13 on a statewide basis for individual and aggregate CLECs. The Guidelines do not list a standard for PR-1-13.

Liberty reviewed Verizon's method for calculating PR-1-13 and verified that it appears to be correct. To calculate the PR-1-13 measure, Verizon uses the WPTS Hotcuts data mart that is similar to the one Verizon previously used to calculate PR-9 measures, with the addition of several extra data field including hot cut type (*e.g.,* Basic, Large Job) and hot cut exclusion indicator. Verizon sends information on pending, completed, and cancelled orders from WPTS to NMP.[202] Verizon excludes test orders, Verizon affiliate, and administrative orders as part of its

[201] The Guidelines also list an exclusion for orders that require a manual loop qualification that applies to only 2-Wire Digital products.

[202] Response to Data Request #350. In response to Data Request #278 (second clarification), Verizon stated that it selected records to include in the data mart for the reporting month based on the order due date.

daily query of WPTS, and does not send information on these to NMP.[203] Verizon stated that it excludes disconnect orders by selecting only those orders with positive line counts.[204]

The key data fields in the WPTS Hotcuts data table for the PR-1-13 reported results are CLEC ID, hot cut type, hot cut appointment interval, status, hot cut original appointment interval, hot cut completion interval, line count, hot cut facility indicator, and hot cut exclusion indicator, although Verizon does not use all fields to calculate both reported results.

Verizon calculates the hot cut appointment interval field as the number of business days between the date the order was originally due on the LSR and the later of the order receipt or application date.[205] Verizon also calculates within NMP a hot cut original appointment interval field as the number of business days between the original due date as reflected in WPTS and the later of the order receipt or application date.[206] Verizon calculates the hot cut completion interval as the number of business days between application or receipt date and completion date.[207] Liberty verified that Verizon calculated these fields as described.

Verizon calculates a hot cut exclusion indicator field in NMP. Verizon sets the indicator to "Y" if it meets any one of the following criteria: i) special project PON, ii) invalid service order or one with no receipt date, and iii) records with a CLLI code associated with the former GTE territory.[208] Verizon also records a reason code for the exclusion. Verizon excludes all orders that have a hot cut exclusion indicator of "Y," which correctly excludes special project PONs, consistent with the Guidelines. Although the Guidelines do not list an explicit exclusion for invalid service orders, Liberty finds the convention reasonable. Verizon clarified that it applies the exclusion for former GTE records in Pennsylvania only, and therefore it does not apply to the Potomac jurisdictions.[209]

Verizon calculates a hot cut facility indicator field in NMP. If the order contains either all or some IDLC facility, Verizon sets the facility indicator to 2 or 3, respectively, indicating that the order was dispatched.[210]

Verizon does not apply the Guidelines exclusion for orders on which the customer requests a due date beyond the standard interval for PR-1-13 Basic Hot Cuts with more than 21 lines, except for those that Verizon excludes as having IDLC facilities. Verizon also does not apply this exclusion for Batch Hot Cuts. Verizon stated that these orders have negotiated intervals and therefore no standard.[211]

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[203] Responses to Data Requests #329 and #338.
[204] Response to Data Request #362.
[205] Response to Data Request #332 (third clarification).
[206] Response to Data Request #332 (third clarification).
[207] Response to Data Request #75.
[208] Response to Data Request #328.
[209] Response to Data Request #356.
[210] Responses to Data Requests #275 and #276.
[211] Response to Data Request #330.

The Guidelines require that Verizon exclude orders with invalid intervals. In the PR-1-13 calculations, Verizon checks for invalid appointment and completion intervals.[212] For the appointment interval, Verizon checks if the hot cut appointment interval field is negative or greater than 200.[213]

Verizon calculates the denominator for the Basic Hot Cut (21 lines or greater) and Batch Hot Cut sub-measures differently. To calculate the denominator of the Basic Hot Cut sub-measure, Verizon's logic selects orders that WPTS has identified as Basic Hot Cuts and that have more than 21 lines. Verizon then excludes orders with facility indicator values of 2 and 3, which retains only non-dispatched orders. Verizon excludes any order that has a hot cut exclusion indicator of "Y." To calculate the denominator of the Batch Hot Cut measure, Verizon's calculation logic selects orders that WPTS identified as Batch Hot Cuts. Verizon excludes any order that has a hot cut exclusion indicator of "Y." Verizon does not apply a logic step in the Batch Hot Cut calculation to select only non-dispatched orders because there are no dispatched Batch Hot Cuts.[214] To calculate the numerator for both PR-1-13 sub-measures, Verizon sums the original hot cut appointment intervals associated with the orders identified in the denominator.

It is unclear why Verizon checks the hot cut appointment interval for invalid intervals but uses the hot cut original appointment interval in its numerator calculation. For other PR-1 measures, Verizon checks for validity the field that it uses to calculate the numerator.

PR-3-11, PR-3-12, and PR-3-13

PR-3-11, PR-3-12 and PR-3-13 are new measures. The Guidelines provide the following formulas:

PR-3-11: % Completed in 10 Business Days

> *(Number of Basic Hot Cut Loop (11 to 20 lines) orders where the completion date minus the application date is 10 or fewer business days)/(Number of Basic Hot Cut orders for 11 to 20 lines)*

PR-3-12: % Completed in 15 Business Days

> *(Number of Large Job Hot Cut Loop orders (by line size group) where the completion date minus the application date is 15 or fewer business days)/(Number of Large Job Hot Cut Loop orders (by line size group))*

PR-3-13: % Completed in 26 Business Days

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212 In other PR-1 metrics, Verizon checks for invalid appointment intervals only. Liberty finds the logic check for completion intervals unnecessary, but the likelihood that it would affect results is negligible.
213 Response to Data Request #277.
214 Response to Data Request #359.

(Number of Large Job Hot Cut Loop orders (by line size group) where the completion date minus the application date is 26 or fewer business days)/(Number of Large Job Hot Cut Loop orders (by line size group))

Verizon reports one product, Loop Basic Hot Cut with 11 to 20 lines, in PR-3-11. For PR-3-12 and PR-3-13, Verizon reports two Large Job Hot Cut results, one for orders with one to five lines and the other for orders with six or more lines.

The exclusions for the new PR-3 sub-measures are the same as those listed in the Guidelines for the other PR-3 measures. In addition to Verizon affiliate data, Verizon should exclude the following:

- Verizon test orders
- Disconnect orders
- Orders for which the customers request a due date beyond the standard available appointment interval (X Appointment Code)
- Verizon administrative orders
- Orders with invalid intervals
- Orders completed late due to any end-user or CLEC caused delay
- Coordinated cut-over Unbundled Network Elements such as loops or number portability orders (except PR-3-08)
- Special project PONs.[215]

Like other PR-3 sub-measures, Verizon reports the three new ones on a statewide basis for individual and aggregate CLECs. PR-3-11 has a standard of 95 percent and PR-3-13 has a standard of 98 percent; PR-3-12 does not have a standard. The Guidelines exclusion for coordinated cut-over UNEs does not specify PR-3-11, PR-3-12, and PR-3-13 as exceptions, as it does for PR-3-08. Liberty addresses this issue in Finding 5. To calculate the PR-3-11, PR-3-12, and PR-3-13 sub-measures, Verizon uses the WPTS Hotcuts data mart. Verizon implements the Guidelines exclusion for test orders, Verizon affiliate orders, and administrative orders by not including such orders in the feed from WPTS to NMP.[216]

Liberty reviewed Verizon's method for calculating the new PR-3 sub-measures and verified that it appears to be correct. The key data fields in the WPTS Hotcuts data mart for these sub-measures are CLEC ID, hot cut type, line count, order status, PON application interval, hot cut completion interval, hot cut exclusion indicator, and missed function codes, although Verizon does not use every field for each sub-measure. Verizon calculates the hot cut completion interval as the number of business days between application or receipt date and completion date.[217] . Verizon calculates the PON application interval and completion interval as described above under PR-3-08. The order status field indicates if the order was completed, cancelled, or pending

[215] The Guidelines also list exclusions for orders missed due to facility reasons and orders that require a manual loop qualification that apply to only four 2-Wire Digital products.
[216] Response to Data Request #339.
[217] Response to Data Request #75.

in WPTS. Verizon stated that it excludes disconnect orders by selecting only those orders with positive line counts.[218] Liberty covers the hot cut exclusion indicator field in the PR-1-13 section. Verizon uses this field in its calculations to exclude special project PONs.

The Guidelines require that Verizon exclude orders with invalid intervals. Verizon checks whether the hot cut completion interval field is negative or greater than 200 in its calculation logic. The Guidelines specify that Verizon exclude orders when the customer requests a due date beyond the standard. For PR-3-11, Verizon selects records with a PON application interval of ten business days or less, the standard interval for Basic Hot Cut orders with 11-20 lines. As such, Verizon correctly implements this Guidelines exclusion. For the PR-3-12 and PR-3-13 Large Job Hot Cuts, however, Verizon does not implement the exclusion; Large Job Hot Cuts do not have a standard interval, because all intervals are negotiated.[219]

To calculate the denominator of the PR-3-11 sub-measure, Verizon selects orders that WPTS has identified as Basic Hot Cuts and those with 11 to 20 lines.[220] Verizon selects records with a status code that reflects that the order is complete. Verizon selects records with a PON application interval of ten business days or less. The Guidelines also contain an exclusion for orders completed late due to customer delay. Verizon uses the missed function codes in its calculations to identify and exclude orders late due to customer reasons. To calculate the numerator for PR-3-11, Verizon selects the orders identified in the denominator that have hot cut completion intervals of ten or fewer business.

PR-3-12 and PR-3-13 measure Large Job Hot Cuts. To calculate the denominators for these measures, Verizon selects orders that WPTS had identified as Large Job Hot Cuts, and selects those with one to five lines or six or more lines depending upon the reported product group. Verizon selects records with a status code that reflects that the order is complete. Verizon uses the missed function codes to identify and exclude orders late due to customer reasons. To calculate the numerators, Verizon selects the orders identified in the denominator that have hot cut completion intervals of 15 or fewer business days for PR-3-12 and intervals of 26 or fewer business days for PR-3-13.

PR-9-03 and PR-9-04

The Guidelines provide the following formulas for the new PR-9-03 and PR-9-04 sub-measures:

PR-9-03: % Large Job Hot Cut Project Negotiations Completed

> *(Number of negotiations completed within four (4) business days from receipt of email request)/(Number of requests sent for negotiation request)*

PR-9-04: % On Time Batch Due Date

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[218] Response to Data Request #362.
[219] Response to Data Request #298.
[220] Verizon does not explicitly exclude IDLC orders from PR-3-11, because it includes both dispatched and non-dispatched orders.

(Number of WPTS Batch Hot Cut due date amendments updated within six (6) business days or more of due date)/(Number of WPTS Batch Hot Cuts)

The exclusions for the new PR-9 sub-measures are the same as those listed in the Guidelines for the other PR-9 sub-measures. In addition to Verizon affiliate data, Verizon should exclude the following:

- Verizon test orders
- Verizon administrative orders
- Orders that are not complete.[221]

Like other PR-9 measures, Verizon reports the two new sub-measures on a statewide basis for individual and aggregate CLECs. PR-9-03 has a standard of 98 percent and PR-9-04 has a standard of 95 percent.

Liberty reviewed Verizon's method for calculating PR-9-03 and verified that it appears to be correct. For the PR-9-03 measure, Verizon uses a data table it creates explicitly for this measure. Each day Verizon sends data on the current day CLEC-initiated activity events from WPTS to NMP. To create the data mart that it uses to calculate results, Verizon selects records that have a Verizon response date within the reporting month.[222] Verizon explained that it uses the Verizon response date rather than the request receipt date to select items for the denominator of the PR-9-03 measure because the approach is consistent with the policy to select data based on completed activity.[223] Verizon correctly implements the exclusion for test CLEC, Verizon affiliate, and administrative orders because the feed from WPTS does not contain such orders.[224] Verizon also correctly implements the exclusion for incomplete orders because the feed from WPTS contains only completed requests.[225]

The key data fields in the PR-9-03 data table are CLEC ID, calendar received date, business received date, Verizon response date, and on-time flag. Verizon translates the calendar received day to the appropriate business day. Then, to calculate the on-time flag, Verizon compares the business received date and a date four business days later; if Verizon's response date is less than or equal to the fourth business day, it sets the on-time flag to "Y," otherwise it sets it to "N."[226] Liberty verified that Verizon calculated the on-time flag correctly. To calculate the denominator of the measure, Verizon counts the number of records in the PR-9-03 data table. To calculate the numerator, Verizon counts the number of on-time flags associated with the records in the denominator.

Liberty reviewed Verizon's method for calculating PR-9-04 and verified that it appears to be correct. The PR-9-04 sub-measure reports on Batch Hot Cuts. In Verizon's batch hot cut process,

[221] The Guidelines also list as an exclusion orders canceled by a CLEC before the start of the hot cut, but this exclusion does not apply for PR-9-03 or PR-9-04.
[222] Response to Data Request #301.
[223] Response to Data Request #336.
[224] Response to Data Request #340.
[225] Response to Data Request #337.
[226] Response to Data Request #308.

Verizon holds hot cut order requests for a particular central office until the number reaches a critical mass, and then schedules all the orders for cutover on the "batch" date. The interval between the order request and batch date can be anywhere from six to 26 business days. According to the December 16, 2004, New York Commission order, Verizon, through WPTS, should provide a minimum of six days notice prior to the implementation of the batch. PR-9-04 measures Verizon's performance in providing a minimum of six days notice.

For the PR-9-04 measure, Verizon uses a new data mart, the Provisioning Hotcuts data table. To create this data mart, Verizon sends data from WPTS on a monthly and weekly basis. Verizon extracts data for the reporting month from NMP into the data mart on the basis of the completion date.[227] Verizon excludes test CLEC, Verizon affiliate, and administrative orders as part of its WPTS queries and does not send them to NMP.[228] Because the data mart contains only completed orders, Verizon also correctly implements the exclusion for incomplete orders.[229]

The key data fields in the Provisioning Hotcuts data table for the PR-9-04 are CLEC ID, hot cut type, and on-time flag. To calculate the on-time flag, Verizon compares the date on which it closes the batch to the batch date, which indicates the amount of notice to the CLEC. If the difference is six or more days, Verizon sets the flag to "Y," otherwise it sets the flag to "N."[230] Verizon had no Batch orders for the September 2005 reporting month and Liberty was unable to verify the on-time flag calculation. To calculate the measure result, Verizon counts the number of Batch orders in the Provisioning Hotcuts data mart. To calculate the numerator, Verizon counts the number of on-time flags for the records in the denominator.

D. Status of Findings from Previous Audits

Liberty identified 25 findings associated with the PR domain during the previous Virginia audit. Because the issues raised in these findings were also applicable to West Virginia, Liberty reviewed their status during the previous West Virginia audit and found that a number of the issues had been resolved by that time. Liberty also issued one new PR-related finding that is also applicable to Virginia. As part of its analysis during the current audit, Liberty again reviewed the status of findings that remained open and other issues that were not completely resolved at the end of the previous West Virginia audit to determine whether the issues were resolved and the findings could be closed. Liberty discusses the current status of all the PR-related findings from the previous Virginia and West Virginia audits below.

[227] Responses to Data Requests #271, #272 and #278 (second clarification).
[228] Response to Data Request #339.
[229] Response to Data Request #337.
[230] Response to Data Request #309 (clarification).

1. Resolved Findings

Previous Virginia Audit Finding 47: Verizon's documentation for the PR measures is not accurate and complete.[231] (Classification 3)

During the previous Virginia audit, Liberty found a number of problems with the CMAs for the provisioning measures. However, as indicated in Section I.C, Liberty now understands that Verizon's procedure for producing the CMAs provides an inherently imperfect representation of Verizon's algorithms. Liberty therefore considers this finding closed.

Previous Virginia Audit Finding 48: Verizon does not correctly distinguish between the former Bell Atlantic and GTE territories on orders and associated service orders. (Classification 2)

During the previous Virginia audit, Liberty found that Verizon's method for determining the territory to which a service order relates caused it to report some service orders in provisioning results that should not be, and vice versa. At that time, Verizon reported only Bell Atlantic orders and excluded GTE orders from reported results. The problem also affected results in the ordering domain. Verizon began reporting combined ordering and provisioning results for the former Bell Atlantic and GTE territories for the June 2004 data month. As such, Verizon no longer needs to separately identify GTE orders in order to exclude them, rendering this issue moot.

Previous Virginia Audit Finding 49: Verizon treats the majority of cancelled LSR-related service orders as non-dispatched orders for PR-1, regardless of whether the order would have involved a dispatch if completed.[232] (Classification 2)

During the previous Virginia audit, Liberty identified an issue with Verizon's treatment of cancelled LSR-related orders in PR-1. During the previous West Virginia audit, Verizon indicated that it had made a change to its logic for treating these service orders that Liberty concluded resolved the issue.

Previous Virginia Audit Finding 52: Verizon does not exclude snip-and-restore orders from its wholesale metric results for PR-1 through PR-5 and PR-8.[233] (Classification 2)

During the previous Virginia audit, Liberty noted that the Guidelines required Verizon to exclude suspend for non-payment and associated restore ("snip-and-restore") orders from PR-1 through PR-5 and PR-8; however, Liberty found that Verizon was not excluding snip-and-restore orders from its wholesale results from PR-1 through PR-5 and PR-8. During the previous West Virginia

[231] Previous District of Columbia Audit Finding 48 and Previous Maryland Audit Finding 47.
[232] Previous District of Columbia Audit Finding 49 and Previous Maryland Audit Finding 48.
[233] Previous District of Columbia Audit Finding 52 and Previous Maryland Audit Findings 51.

audit, Liberty found that the Guidelines had been updated to eliminate the snip-and-restore exclusion, thereby resolving the issue.

Previous Virginia Audit Finding 54: Verizon incorrectly defines many of the UNE POTS product groups for the PR metrics.[234] (Classification 2)

Verizon correctly excluded Verizon-to-CLEC hot cut orders but incorrectly excluded CLEC-to-CLEC migrations in some sub-measures.[235] The December 16, 2004, New York Commission order approved a new definition of hot cuts, which now includes CLEC-to-CLEC migrations, and Virginia incorporated these changes in revised Guidelines. Because the hot cut definition was revised to include CLEC-to-CLEC migrations, Verizon no longer incorrectly excluded them from the specific sub-measures.

Unless explicitly stated in the Guidelines (as it is for PR-3), Verizon should not exclude hot cuts from PR measures. However, Liberty noted that Verizon excludes hot cuts for the POTS Loop Total product group in PR-1 and PR-5. During the previous West Virginia audit, Verizon maintained that it properly excludes hot cuts, given the definition of "UNE POTS Total" in the glossary to the Guidelines. During the current audit, Verizon noted that UNE POTS Loop Total is a subset of UNE POTS Total and that the same exclusion applies to the subset as the whole.[236] Liberty finds Verizon's interpretation reasonable.

Previous Virginia Audit Finding 56: Verizon incorrectly excludes resale "as is" migrations from resale product group results in PR-4, PR-6, and PR-8.[237] (Classification 2)

During the previous Virginia audit, Liberty noted that Verizon's program logic excluded "as is" migrations from the resale product group in PR-4, PR-6, and PR-8.[238] During the previous West Virginia audit, Liberty found that Verizon had corrected the error, thereby resolving the finding.

Previous Virginia Audit Finding 57: Verizon's algorithm for PR-1-01-3345 contains an error, and does not exclude Verizon affiliate orders. (Classification 2)

During the previous Virginia audit, Liberty identified an issue unique to Virginia. Verizon incorrectly omitted the logic statement that excludes Verizon affiliate data from its PR-1-01-3345 algorithm. Verizon's September 2005 CMAs reflect the correction to this algorithm.

[234] Previous District of Columbia Audit Finding 54, Previous Maryland Audit Finding 53, and Previous West Virginia Audit Finding q.
[235] Liberty specifically mentioned PR-3-10-3342, as well as the UNE POTS Total product group for PR-4 and PR-8.
[236] Response to Data Request #245.
[237] Previous District of Columbia Audit Finding 56 and Previous Maryland Audit Finding 55.
[238] Response to Data Request #175.

Previous Virginia Audit Finding 58: Verizon's metric algorithms for PR-1 and PR-3 contain errors.[239] (Classification 1)

During the previous Virginia audit, Liberty identified several issues regarding the PR-1 and PR-3 measures.[240] Liberty addressed the resolution of some of these issues during its previous West Virginia audit. The one remaining issue in this finding concerned Verizon's definition of the UNE POTS platform product group in PR-3 to include both platform and "other" products. During the previous West Virginia audit, Verizon confirmed that this product group should contain only platform products, and confirmed that this error also affects PR-6-01 and PR-6-03. Verizon indicated that the error had no effect on reported results. Verizon issued Metric Change Control No. 10186, but, as of the end of the previous West Virginia audit, had not scheduled it for completion. During this audit, Verizon stated that it made the correction as part of an internal change rather than the specific MCCN.[241]

Previous Virginia Audit Finding 61: Verizon's metric algorithms for PR-4 and PR-5 contain errors.[242] (Classification 2)

During the previous Virginia audit, Liberty identified several issues with Verizon's algorithms for calculating PR-4 and PR-5. One of the issues was that the approach Verizon used to implement the exclusion of "orders missed or delayed due to customer reasons" for ASR-related service orders for specials for the PR-5-04-3200 sub-measure differed from its method for LSR-related service orders. During the previous West Virginia audit, Liberty concluded that this issue was better addressed in Previous Virginia Audit Finding 60, and Liberty includes it in the discussion of that finding below. Based on further explanations Verizon provided during the previous West Virginia audit and changes that Verizon had introduced, Liberty was satisfied that the other issues in this finding were resolved. Therefore, Liberty considered this finding closed at the conclusion of the previous West Virginia audit.

Previous Virginia Audit Finding 62: Verizon makes exclusions to the PR-6 metrics that the Guidelines do not list.[243] (Classification 4)

During the previous Virginia audit, Liberty found that Verizon applied exclusions to the PR-6 measures that were not explicit in the Guidelines. Based on additional explanations Verizon provided during the previous West Virginia audit, Liberty was satisfied that the finding could be closed.

[239] Previous District of Columbia Audit Finding 57, Previous Maryland Audit Finding 56, and Previous West Virginia Audit Finding s.
[240] These issues include errors in certain retail and wholesale PR-1-12 algorithms, an error in the PR-3-08-311 algorithm, and the incorrect exclusion of CLEC-to-CLEC migrations from PR-3-10.
[241] Response to Data Request #333.
[242] Previous District of Columbia Audit Finding 60 and Previous Maryland Audit Finding 59.
[243] Previous District of Columbia Audit Finding 61 and Previous Maryland Audit Finding 60.

Previous Virginia Audit Finding 65: Verizon incorrectly excludes some trouble tickets from the numerator of the PR-6-01 and PR-6-03 measures.*[244] *(Classification 2)

During the previous Virginia audit, Liberty found that Verizon incorrectly excluded some trouble tickets from the numerator of the measures because of incorrect programming logic to identify installation and repeat troubles. During the previous West Virginia audit, Liberty found that Verizon had corrected the error, thereby resolving the finding.

Previous Virginia Audit Finding 66: The exclusions in the Guidelines for PR-8 are unclear.*[245] *(Classification 4)

During the previous Virginia audit, Liberty found that certain exclusions in the Guidelines for PR-8 were unclear. During the previous West Virginia audit, Liberty found that, for all these cases, Verizon had either updated the Guidelines to correct the problem or the JSC had agreed that no change was necessary. Therefore, Liberty considered the matter resolved.

Previous Virginia Audit Finding 67: Verizon's PR-8 algorithms for the resale POTS product group for PR-8 are incorrect.*[246] *(Classification 2)

During the previous Virginia audit, Liberty found that Verizon did not have a necessary logic step in its algorithms for the resale POTS product group for PR-8-01 and PR-8-02, and therefore incorrectly included administrative orders in the numerator. During the previous West Virginia audit Liberty confirmed that Verizon had made changes to its algorithms to correct the problem, thereby resolving the finding.

Previous Virginia Audit Finding 68: Verizon's documentation related to the PR-9 metric is inadequate.*[247] *(Classification 3)

During the previous Virginia audit, Liberty raised concerns about the adequacy of Verizon's PR-9 business process documentation. Based on additional explanations Verizon provided during the previous West Virginia audit, Liberty concluded that the finding could be closed.

[244] Previous District of Columbia Audit Finding 64 and Previous Maryland Audit Finding 63.
[245] Previous District of Columbia Audit Finding 65 and Previous Maryland Audit Finding 64.
[246] Previous District of Columbia Audit Finding 66 and Previous Maryland Audit Finding 65.
[247] Previous District of Columbia Audit Finding 67 and Previous Maryland Audit Finding 66.

Previous Virginia Audit Finding 71: Portions of Verizon's method for calculating the PR-9-08 measure are either not consistent with or not addressed in the Guidelines.[248] (Classification 4)

During the previous Virginia audit, Liberty raised concerns about whether Verizon's conventions and exclusions related to its treatment of troubles in the calculation of PR-9-08 were adequately documented in the Guidelines. Based on additional explanations Verizon provided during the previous West Virginia audit, Liberty concluded that the finding could be closed.

Previous West Virginia Audit Finding 4: Some of Verizon's algorithms for the UNE Specials Total sub-metrics are incorrect. (Classification 2)

Liberty found that, unlike the calculations for the other UNE Specials Total product group sub-measures, Verizon's calculations for PR-1-12-3200, PR-5-01-3200, and PR-5-02-3200 contained an extra logic step that selected LSR-related service orders for EEL and Interoffice Facility (IOF) products. Verizon issued Metric Change Control No. 11387, effective with the August 2005 reporting month, to remove the code in its LSR modules that selected EELs and IOFs and replaced it with a code that selected specials that were not DS1 or DS3 (as Verizon reportedly receives orders for these via ASR). During the current audit, Liberty reviewed the provisioning CMAs and found that Verizon made the described changes.

2. Unresolved Findings

Previous Virginia Audit Finding 50: Verizon makes certain general exclusions to the PR metrics that the Guidelines do not reflect, and adopts conventions for other exclusions that are inconsistent with the Guidelines.[249] (Classification 4)

During the previous Virginia audit, Liberty identified several issues regarding general exclusions to the PR measures. Liberty addressed the resolution of most of these issues during its previous West Virginia audit, but one issue remained.[250] Verizon's ordering process automatically sends LSRs with an "R" in the loop qualification field through an automated loop qualification process. If the order passes through the automated process successfully, it will flow through to the SOP. If the order does not pass through the automated process successfully, Verizon's system routes the order to a representative in the NMC, who sends the order to Verizon engineering for loop qualification. Verizon excludes both those orders that require manual qualification and those that qualified during the automated process, although this procedure was not explicit in the Guidelines. Verizon agreed that the Guidelines could benefit from clarification. During the previous West Virginia audit, Verizon stated that it referred the issue to the JSC, but the JSC had

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[248] Previous District of Columbia Audit Finding 70 and Previous Maryland Audit Finding 69.
[249] Previous District of Columbia Audit Finding 50, Previous Maryland Audit Finding 49, and Previous West Virginia Audit Finding n.
[250] Resolved issues associated with this finding related to orders with negotiated intervals, additional segments on orders, orders types associated with a global exclusion indicator, and administrative orders (federal government and companion disconnect orders).

not yet scheduled it for discussion. During this audit, Verizon stated that the JSC had reached a consensus on a language update to the Guidelines and that the change would appear in a future order.[251]

Previous Virginia Audit Finding 51: Verizon has a significant number of ASR-related service orders with a missing original appointment code, which may cause Verizon to treat them incorrectly in the calculation of the PR metrics.*[252] *(Classification 2)

During its previous audits, Liberty found that Verizon did not assign an original appointment code to roughly 20 percent of the non-trunk, ASR-related service orders. Verizon explained that an order could have a blank appointment code in certain circumstances. The lack of an original appointment code means that Verizon's calculation logic may treat the orders incorrectly. Verizon stated that it was investigating an automated solution to include an original appointment code on ASR records where a code existed, and during the previous West Virginia audit stated that it had no expected date when it will finalize such a solution. Verizon has not yet implemented a solution.

Previous Virginia Audit Finding 53: The Guidelines need clarification regarding Verizon's definition for the CLEC trunk product group and the retail parity standard for this product group.*[253] *(Classification 4)

During the previous Virginia audit, Liberty found that Verizon did not define the CLEC trunk product group consistently across the PR measures. Verizon includes both CLEC trunks and reciprocal trunks in the CLEC trunk product group in PR-4, PR-6, and PR-8, although only the Guidelines for PR-4 explicitly state that Verizon should include reciprocal trunks. For PR-1 and PR-5, Verizon defines this product group to include only CLEC trunks, a procedure that the Guidelines do not entirely support. During the previous West Virginia audit, Verizon stated that the Guidelines could benefit from clarification, and that it referred the issue to the JSC, which had not yet scheduled it for discussion. In the current audit, Verizon indicated it would schedule the issue for future discussion.[254]

[251] Response to Data Request #12 (revised).
[252] Previous District of Columbia Audit Finding 51, Previous Maryland Audit Finding 50, and Previous West Virginia Audit Finding o.
[253] Previous District of Columbia Audit Finding 53, Previous Maryland Audit Finding 52, and Previous West Virginia Audit Finding p.
[254] Response to Data Request #12 (revised).

Previous Virginia Audit Finding 55: Appendix B to the Guidelines needs clarification.*[255] *(Classification 4)

During the previous Virginia audit, Liberty found that Verizon uses logic in some of its metric calculations that refer to a missed appointment code (MAC) of "EO," denoting "Engineering – Other," which is not documented in Appendix B of the Guidelines. During the current audit, Verizon indicated that it would schedule the issue for discussion at the JSC.[256]

Previous Virginia Audit Finding 59: The Guidelines do not specify some of the conventions that Verizon has adopted for calculating the PR-1 and PR-3 metrics.*[257] *(Classification 4)

During the previous Virginia audit, Liberty identified two issues with Verizon's method for calculating the PR-1-12 measure, Average Interval Offered - Disconnects. Verizon includes in the PR-1-12 measure LSR-related D and F service orders and ASR-related service orders with D activity. Verizon also includes LSR-related C orders that have a disconnect flag, *i.e.,* those that have outward activity but no inward activity. The Guidelines definition of this measure does not reflect Verizon's conventions for defining a disconnect order. Also, Verizon assigns an original appointment code of "K" to D and F disconnect orders, and therefore Verizon can not apply the exclusion specified by the Guidelines regarding orders for which the customer requested a later date than the offered interval for this sub-measure ("X" coded orders). Verizon can, however, check the original appointment code for disconnects on C orders. Although reasonable, Verizon's approach does not comply with the Guidelines.

Verizon disagreed with Liberty's finding, but during the previous West Virginia audit stated that it referred the issues to the JSC, which had not yet scheduled it for discussion. During the current audit, Verizon indicated that the JSC had not yet discussed the issues.[258]

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[255] Previous District of Columbia Audit Finding 55, Previous Maryland Audit Finding 54, and Previous West Virginia Audit Finding r.
[256] Response to Data Request #12 (revised).
[257] Previous District of Columbia Audit Finding 58, Previous Maryland Audit Finding 57, and Previous West Virginia Audit Finding t. In the previous Potomac region audits, Liberty had identified an issue with the PR-3 metrics that was subsequently resolved, and revised the wording of this finding at the end of the previous West Virginia audit to remove the reference to PR-3. Liberty also identified an issue with the programming logic for the PR-1-12 product groups that it resolved during the previous West Virginia audit.
[258] Response to Data Request #12 (revised).

Previous Virginia Audit Finding 60: Verizon has adopted conventions for calculating the PR-4 and PR-5 metrics that are either not included or inconsistent with the Guidelines.[259] ***(Classification 4)***

During the previous Virginia audit, Liberty identified three issues with the conventions that Verizon had adopted for calculating the PR-4 and PR-5 measures that remained unresolved at the end of the previous West Virginia audit:[260]

- The definition section for the PR-4 Guidelines stated that the PR-4-15 sub-measure "includes orders that were Customer Not Ready (CNR), and were completed in the report month." Verizon interpreted this language to mean that it should include completed orders with a customer-caused delay in the denominator and that it should count orders with a customer-caused delay as "on time" in the numerator. In the Potomac region audits, Liberty found Verizon's interpretation reasonable but not clearly supported by the Guidelines. Verizon agreed that the Guidelines could benefit from clarification, and during the previous West Virginia audit stated that it referred the issue to the JSC, but it had not yet scheduled the issue for discussion. During the current audit, Verizon indicated that the JSC had not yet discussed the issue.[261]
- The approach that Verizon used to implement the "orders missed or delayed due to customer reasons" exclusion for ASR-related service orders for specials for the PR-5-04-3200 sub-measure differs from its method for LSR-related service orders. The Guidelines do not reflect Verizon's differing interpretations for this exclusion.[262] During the previous West Virginia audit, Verizon stated that it referred the issue to the JSC, but it had not yet scheduled discussions. Verizon subsequently stated that the Guidelines could benefit from clarification.[263]
- Because the LNP-only orders reported in PR-4-07 involve disconnects, the Guidelines-specified exclusion for disconnect orders is contradictory.[264] During the previous West Virginia audit, Verizon stated that it referred the issue to the JSC, but it had not yet scheduled the issue for discussion. During the current audit, Verizon stated that the JSC had reached consensus to update the PR-4

[259] Previous District of Columbia Audit Finding 59, Previous Maryland Audit Finding 58, and Previous West Virginia Audit Finding u. In its responses to Data Requests #286, #287, and #289, Verizon stated that it plans to reiterate its position to the JSC on three issues in this finding that Liberty considers resolved: i) Verizon does not exclude orders from PR-4 and PR-5 unless there is one full day of company delay, ii) Verizon excludes from PR-4-07 orders that include both regular telephone and direct inward dialing (DID) trunks as LNP orders that do not have office equipment, and iii) Verizon interprets the PR-5-04 measure to reflect the percentage of orders cancelled due to facilities reasons.

[260] Liberty addressed the resolution of two other issues in this finding during its previous West Virginia audit, specifically i) Verizon does not exclude orders unless there is one full day of delay, and ii) Verizon excludes orders that include both regular telephone and direct inward dialing (DID) trunks from PR-4-07 as LNP orders that do not have office equipment.

[261] Response to Data Request #12 (revised).

[262] This issue was originally part of Previous Virginia Audit Finding 61, but Liberty moved it into this finding during the previous West Virginia audit.

[263] Verizon Official Response to Previous West Virginia Audit Findings dated August 22, 2005.

[264] The version of the Guidelines in effect during this audit no longer contains the exclusion for suspend and restore orders.

Guidelines regarding the disconnect exclusion, and that the change will appear in a future order.[265]

- The approach that Verizon used to implement the "orders missed or delayed due to customer reasons" exclusion for ASR-related service orders for specials for the PR-5-04-3200 sub-measure differs from its method for LSR-related service orders. The Guidelines do not reflect Verizon's differing interpretations for this exclusion. During the previous West Virginia audit, Verizon stated that it referred the issue to the JSC, but it had not yet scheduled discussions. Verizon subsequently stated that the Guidelines could benefit from clarification.[266]

In addition after further consideration and additional information provided by Verizon during the previous West Virginia audit, Liberty was satisfied that three other issues initially identified in this finding were resolved during that audit:

- For PR-4 and PR-5, Verizon did not consider an order missed for Verizon reasons unless there was at least one full day of company delay, although this convention was not explicit in the Guidelines.
- Verizon interpreted the PR-5-04 measure to reflect the percentage of orders cancelled due to facilities reasons.
- Verizon excludes from PR-4-07 orders that included both regular telephone and direct inward dialing (DID) trunks as LNP orders that did not have office equipment.

Verizon has stated that it plans to reiterate its position to the JSC regarding these three issues.[267]

Previous Virginia Audit Finding 63: Verizon does not define the product groups in the numerator and denominator of the PR-6 measures in the same way.[268] (Classification 2)

Verizon includes products in the residential and business classes of service in the denominator of most product groups, but includes residential, business, and public (coin) classes in the numerator for the same product groups. Verizon stated that the glossary to the Guidelines for POTS total indicates that Verizon should include the public class of service in maintenance (class of service 08, 09, and 19), but offered no explanation for other product groups. Verizon stated that there were no other differences in product group definitions. There is therefore a mismatch between the relevant population of orders in the denominator and those to which the trouble tickets relate in the numerator for most products. Verizon disagreed with this finding, but during the previous West Virginia audit stated that it referred the issue to the JSC and that discussions on the issue were in progress. The discussions are still in progress.[269]

[265] Response to Data Request #12 (second revision).
[266] Verizon Official Response to Previous West Virginia Audit Findings dated August 22, 2005.
[267] Responses to Data Requests #286, #287, and #288.
[268] Previous District of Columbia Audit Finding 62, Previous Maryland Audit Finding 61, and Previous West Virginia Audit Finding v.
[269] Verizon Official Response to Previous West Virginia Audit Findings dated August 22, 2005.

Previous Virginia Audit Finding 64: Verizon has adopted certain conventions for the PR-6 measures that the Guidelines do not support.[270] (Classification 4)

During the previous Virginia audit, Liberty found that Verizon adopted certain conventions to identify the trouble reports relevant to the PR-6 sub-measures. This finding consists of two issues. First, the Guidelines do not indicate how Verizon should define the reporting month for the numerator of the PR-6 measures. Secondly Verizon counts only reported troubles that it closes within the seven-day or 30-day window. However, a reader can interpret the Guidelines to mean that PR-6 should include troubles *reported* rather than *closed* within seven or 30 days. Verizon disagreed with Liberty's finding, but during the previous West Virginia audit stated that it referred these issues to the JSC and that discussions were in progress. The discussions are still in progress.[271]

Previous Virginia Audit Finding 69: The Guidelines description for PR-9-01 is inaccurate.[272] (Classification 4)

The PR-9-01 definition states that "orders cancelled during or after a defective cut due to Verizon reasons" should be considered not met. Verizon agreed that counting cancelled orders as misses is inconsistent with the denominator for PR-9-01 and inconsistent with the Guidelines-specified exclusion regarding orders that are not complete. Verizon stated that it would propose an administrative clarification and that it referred the issue to the JSC but discussion remains unscheduled.[273]

Previous Virginia Audit Finding 70: Verizon's method for basing the PR-9-08 metric on trouble reports closed within seven days of a hot cut is inconsistent with the Guidelines.[274] (Classification 2)

Verizon identifies trouble tickets relevant to the PR-9-08 metric on the basis of troubles that it closed within seven days, not troubles that the CLECs reported within seven days. Liberty believes that Verizon's approach is incorrect. The Guidelines for the PR-9-08 sub-measure define the denominator as the number of hot cut installation troubles "reported within seven (7) days." Verizon disagreed with Liberty's finding but stated that it referred the subject of this finding to the JSC. The issue is still in progress at the JSC.[275]

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[270] Previous District of Columbia Audit Finding 63, Previous Maryland Audit Finding 62, and Previous West Virginia Audit Finding w.
[271] Verizon Official Response to Previous West Virginia Audit Findings dated August 22, 2005.
[272] Previous District of Columbia Audit Finding 68, Previous Maryland Audit Finding 67, and Previous West Virginia Audit Finding x.
[273] Response to Data Request #12 (revised).
[274] Previous District of Columbia Audit Finding 69, Previous Maryland Audit Finding 68, and Previous West Virginia Audit Finding y.
[275] Verizon Official Response to Previous West Virginia Audit Findings dated August 22, 2005.

E. New Findings

There are ten new findings related to the provisioning domain.

Finding 4: Verizon treats CLEC requests to convert special access to UNE as on time for the purposes of calculating PR-4-01 and PR-4-02, regardless of when it completed the orders. (Classification 2)

The PR-4 measure only includes transactions that are complete in the billing system. Verizon explained that CLEC orders to convert special access to UNE have no associated provisioning work and that Verizon's legacy provisioning systems do not provide information on completion of these orders in the billing system.[276] Metric Change Control No. 11131 introduced a change in the processing of ASR provisioning data, effective with the July 2004 reporting month, that causes all CLEC orders to convert special access to UNE to be "on time" for the purposes of calculating certain PR-4-01 and PR-4-02 sub-measures. However, to have meaningful results, the PR-4 measures should only count orders for which Verizon's metrics systems can determine when Verizon completed the order and whether the completion was before or after the due date.

Verizon stated that the Guidelines contained no language that would allow it to exclude such orders, and maintained that it was calculating the measures correctly. Verizon noted that it would propose a Guidelines clarification to the JSC.[277] Liberty agrees that such a change can resolve the issue.

Finding 5: The Guidelines do not reflect that the exclusion for coordinated cutovers does not apply to PR-3-11, PR-3-12, and PR-3-13. (Classification 4)

The Guidelines for PR-3 list as an exclusion coordinated cut-over Unbundled Network Elements, such as loops or number portability orders, noting that the exclusion applies to all PR-3 sub-measures except PR-3-08 (UNE Basic Hot Cut Loops (1-10 lines)). Verizon also reports Basic Hot Cut Loop and POTS Loop Large Job Hot Cut product groups in PR-3-11, PR-3-12, and PR-3-13. As such, the exception to the coordinated cut-over exclusion should apply to these three sub-measures in addition to PR-3-08.

Verizon stated that the JSC reached consensus in February 2006 to update the exclusion language to include these three sub-measures, and that the change would appear in a future administrative order.[278] Liberty believes the change will resolve the issue, but it remains unresolved for the period covered by this audit.

[276] Responses to Data Requests #214 and #242.
[277] Response to Preliminary Finding 3 (revised).
[278] Response to Preliminary Finding 4 (revised).

Finding 6: The Retail Analog Compare Table in the Guidelines is unclear regarding the proper retail analog for PR-6-01-3113, UNE POTS Loop New. (Classification 4)

Consistent with the December 16, 2004, New York Commission order, Verizon ceased reporting for PR-6-01 the UNE POTS Loop Total (PR-6-01-3112) product group, and began reporting the UNE POTS Loop New (PR-6-01-3113) product group. Verizon reports Retail POTS Dispatch as the retail analog for UNE POTS Loop New. The exceptions section of the Retail Analog Compare Table in the Guidelines still refers to UNE POTS Loop Total for PR-6-01, and was not updated to reflect the change in reported product.[279]

Verizon stated that it was using the correct retail analog, and that it would update the Retail Analog Compare Table exceptions to reflect the UNE Loop New product instead of UNE POTS Loop Total in the next set of administrative changes to the Guidelines.[280]

Finding 7: Verizon failed to include affiliate orders in the retail analog for PR-6-01-3343 and PR-6-01-3345. (Classification 2)

The Retail Analog Compare Table in the Guidelines lists the retail analog for UNE 2-Wire xDSL Line Sharing and UNE 2-Wire xDSL Line Splitting as VADI/DSNO and Retail Line Sharing. In most of its retail parity calculations for these two products, Verizon includes a logic step that includes an order in results if it has either a VADI or a Verizon affiliate ID. For two sub-measures, PR-6-01-3343 and PR-6-01-3345, the retail parity calculation does not include the portion of the logic that selects Verizon affiliates. As such, it fails to include affiliate orders in reported results.

Verizon stated that the omission had a minor effect on reported results in Virginia for the September 2005 reporting month. Verizon indicated that there were 16 affiliate orders resulting in a .001 percent change in the reported results.[281] Verizon also noted that it needs to take no corrective action regarding this finding, because Line Splitting and Line Sharing sub-measures will be eliminated in the future as a result of the December 2005 New York Commission order.[282]

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[279] Liberty found that the Retail Analog Compare Table is unclear in other areas. For example, the retail analog for several wholesale products is listed as Retail POTS – Total, which is not literally accurate in all cases. For some sub-measures, Verizon reports Retail POTS dispatched or Retail POTS non-dispatched, not Retail POTS Total.

[280] Response to Data Request #357. Verizon believes that the correct reference for the retail analog is the exceptions section of the table, rather than the standard section.

[281] Response to Data Request #307 (revised). In its response to Preliminary Finding 13 (revised), Verizon indicated that there it had 16 affiliate orders resulting in a .001 percent change in the reported results for November 2005.

[282] Verizon's Responses to Liberty Draft Report Audit Findings, April 10, 2006.

Finding 8: Verizon has an error in the calculation logic for wholesale PR-3-01-3140. (Classification 2)

Verizon's CMA for the wholesale PR-3-01-3140 sub-measure contains a series of logic steps in the numerator that exclude "new" or "to" orders that have a primary class of service code (PCOS) of "RRM" or "RRMXX" and an appointment interval greater than one day.[283] The same series of logic steps should appear in the denominator; however, Liberty found that Verizon omitted the PCOS of "RRMXX" in one of the logic steps.

Verizon agreed that the denominator should contain the same logic steps as the numerator.[284] Verizon subsequently stated that correcting the error for Virginia would change its reported result from 95.97 percent to 97.66 percent for September 2005, and that there was no impact on PAP payments. Verizon added that the December 2005 New York Commission Order eliminated UNE-P metrics and therefore no further action will be required to correct this error.[285]

Finding 9: Verizon has an error in the calculation logic for wholesale PR-5-02-3342. (Classification 2)

Liberty reviewed Verizon's September 2005 CMAs and found that the logic step that excludes Verizon affiliate orders, a standard exclusion under the Guidelines, was missing from the numerator of PR-5-02-3342.[286] Verizon agreed that the numerator should contain the logic that excludes affiliates.[287] Verizon stated that there were no affiliate orders for this product, and the omission had no effect on reported results for PR-5-02-3342, which is not included in the PAP, for the September 2005 reporting month.[288]

Finding 10: Verizon has errors in the calculation logic for certain PR-4 and PR-8 wholesale sub-measures. (Classification 2)

Verizon includes resale migrations in its PR-1 through PR-6 and PR-8 results for certain resale sub-measures.[289] Verizon uses one indicator field to identify resale migration orders with an appointment interval of the same day, relevant for measures with an exclusion for non-standard intervals (*i.e.,* PR-1 and PR-3); Verizon uses a different indicator field to identify those resale

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[283] During the previous West Virginia audit, Verizon stated that it added this code to address the following situation: a CLEC requests a new connection of a residential line that has a cut-through in place, but the CLEC forces the system to give the order a SMARTS clock date rather than the normal 0 or 1 day interval. As a result, the order receives a W appointment code (*i.e.,* one designating a standard interval) because the CLEC used the SMARTS clock for the interval, but the CLEC actually receives a longer than standard interval for the product.
[284] Response to Data Request #344.
[285] Response to Preliminary Finding 14 (revised)
[286] Verizon provided updated CMAs on January 17, 2006.
[287] Response to Data Request #327.
[288] Response to Preliminary Finding 16 (revised). Verizon also noted that it had no affiliate orders for this product for November 2005; therefore, there was no impact on reported results.
[289] Verizon includes the logic in specific calculations for Resale POTS, Resale Specials Total, Retail Specials DS1, Resale Special DS3, Resale Specials Non DS0, DS1, DS3, and Resale 2-Wire Digital Service products. Resale migrations are not relevant for sub-measures that report only dispatched orders.

migration orders for which the standard need not be considered, relevant for measures that do not have the exclusion for non-standard intervals (*i.e.,* PR-4, PR-5, PR-6, and PR-8).

Liberty reviewed Verizon's September 2005 CMAs and found that Verizon used the incorrect indicator in the numerators of PR-4-01-2213, PR-8-02-2100, and PR-8-02-2200, and in both the numerator and denominator of PR-8-02-2341.[290]

Verizon agreed that the calculation logic is incorrect.[291] Verizon subsequently stated that the errors had no effect on reported results for September 2005, and had no impact on PAP payments.[292]

Finding 11: Verizon calculates the retail analog for PR-9-08 incorrectly. (Classification 2)

The December 16, 2004, New York Commission order instituted a standard for the PR-9-08 sub-measure, Average Duration of Hot Cut Installation Troubles. The Guidelines for PR-9-08 list the standard as parity with Verizon retail, and the Retail Analog Compare Table indicates that the product is Retail POTS (N&T Orders excluding feature troubles).

During the previous Virginia audit, Liberty found that Verizon incorrectly calculated the wholesale result for PR-9-08.[293] The Guidelines for the PR-9-08 sub-measure define the denominator as the number of hot cut installation troubles "reported within seven (7) days." In its wholesale calculation, Verizon selects trouble tickets identified by NMP as relevant to the wholesale PR-9-08 measure, *i.e.,* troubles that it closed within seven days, not troubles that the CLECs reported within seven days.

Verizon adopted the same incorrect approach in its calculation of the retail analog for PR-9-08. Verizon selects retail POTS troubles that are reported and closed to one of the specified disposition codes within seven days of installation.[294]

Additionally, Verizon's PR-9-08 calculation for Retail POTS (N&T Orders excluding feature troubles) uses a full disposition indicator field to exclude switch and translation troubles. This approach excludes more than features troubles. As a result, Verizon improperly excludes some troubles from the result.

Verizon stated that the issue regarding selection of closed trouble tickets versus closed troubles was related to a prior finding concerning the wholesale results, and that the issue had been referred to the JSC for resolution. On the second issue, Verizon agreed that it may have excluded troubles associated with some additional disposition codes in error. Verizon stated that correcting

[290] Verizon provided updated CMAs on January 17, 2006.
[291] Response to Data Request #345 (clarification).
[292] Response to Preliminary Finding 17 (revised). Verizon also stated that the error did not change reported results for October and November 2005.
[293] Previous Virginia Audit Finding 70 (also Previous District of Columbia Audit Finding 69, Previous Maryland Audit Finding 68, and Previous West Virginia Audit Finding y).
[294] Response to Data Request #363.

the disposition code issue would change its September 2005 reported retail result for PR-9-08, which is not a PAP metric, from 34.47 percent to 34.40 percent. Verizon stated that it would issue a change control to remedy the problem.[295]

Finding 12: Verizon's calculation logic for PR-1-12-3200 contains an error. (Classification 2)

Verizon's wholesale calculation for PR-1-12-3200 is missing a logic step that excludes administrative orders, an exclusion listed in the Guidelines. Verizon stated that it inadvertently removed the logic step as part of a change control.[296] Verizon subsequently stated that the error had no effect on its September 2005 reported results for PR-1-12-3200, which is not listed in the PAP.[297]

Finding 13: Verizon has changed its logic for exclusion of administrative orders in PR-6 and applied the new logic only to some of the PR-6 sub-measures. (Classification 2)

Liberty reviewed Verizon's September 2005 CMAs[298] and found that Verizon had changed the logic it uses to exclude administrative orders from the denominators of certain PR-6-01 and PR-6-03 wholesale and retail sub-measures since the previous audit.[299] Verizon uses a different method for excluding administrative orders in PR-6 from that used for other PR measures. In the previous Virginia audit, Verizon had stated that it needed to use different logic for PR-6 in order to avoid excluding a particular type of administrative order that can have a trouble associated with it, and which Verizon believes it should report in this measure only.[300]

However, in the September 2005 CMAs, Verizon changed the logic in some but not all of the PR-6-01 and PR-6-03 sub-measure calculations to now exclude this particular type of administrative order. Verizon explained that it has begun but not completed a project to introduce consistency in its calculations and that it was evaluating the effect of the differences in approach for the exclusion.[301] Thus, Verizon has apparently not only changed its logic for the inclusion of administrative orders in the PR-6 measure but also applied that changed logic inconsistently across the sub-measures.

[295] Response to Preliminary Finding 18 (revised).
[296] Response to Data Request #268.
[297] Response to Preliminary Finding 19 (revised). Verizon also stated that the error had no effect on reported results for November 2005.
[298] Verizon provided updated CMAs on January 17, 2006.
[299] This includes the wholesale and retail calculations for PR-6-01-2100, PR-6-01-3113, PR-6-01-3140, and PR-6-01-3342, the wholesale calculations for PR-6-03-2100, PR-6-03-3112, PR-6-03-3140 and PR-6-03-3342, and the retail calculations for PR-6-01-3341, PR-6-01-3343 and PR-6-01-3345.
[300] In other PR measures, Verizon excludes orders with an LSRN beginning with a "ZZ" as Verizon-initiated orders. Verizon maintained it should not exclude these from PR-6. Verizon now excludes this particular type of administrative order from some PR-6 sub-metrics but not others.
[301] Response to Data Request #358.

Verizon indicated that it planned to reconcile the measures as soon as it completed its analysis. Verizon stated that this had a very minimal impact on reported results (varying from a 0 to 0.03 percent change in reported results for the September and November 2005 reporting months), and that there was no impact on PAP payments for PR-6-01 (PR-6-03 is not a PAP metric). Verizon added that because the December 2005 New York Commission Order eliminated UNE-P metrics, it does not need to take any further action to correct this error.[302]

1. Other Issues

The PR-9-01 Guidelines do not define a specific cut-over window for Large Job Hot Cuts, as Verizon negotiates the interval for Large Job Hot Cut with the CLEC. According to the performance standards, Large Job Hot Cuts may be completed over multiple days, and Verizon completes them in the order specified by the CLEC at a specified time.[303] Verizon stated that it does not have multiple-day projects, and that it would negotiate specific due dates with the CLEC for individual orders. Verizon considers the order missed if it starts the Large Job after the start date, regardless of start time.[304] Liberty believes that the Guidelines language regarding the performance standard for Large Job Hot Cuts could be clearer.

[302] Response to Preliminary Finding 20 (revised).
[303] Although not specified in the Guidelines, the December 16, 2004, New York Commission order states that Large Job Hot Cuts should be assigned a default frame due time of 11:00 p.m.
[304] Response to Data Request #354.

VI. Maintenance & Repair Performance Measures

A. Introduction

The Maintenance and Repair (MR) measures report on Verizon's ability to provide maintenance and repair services to CLECs with quality comparable to that provided to its own retail customers. In particular, they report on the responsiveness of Verizon's OSS maintenance interfaces and on the frequency of troubles and Verizon's performance in resolving them. The Guidelines list five MR measures:

- MR-1: Response Time OSS Maintenance Interface
- MR-2: Trouble Report Rate
- MR-3: Missed Repair Appointments
- MR-4: Trouble Duration Intervals
- MR-5: Repeat Trouble Reports.

The MR domain has 23 sub-measures.[305]

The PAP focuses on the following four MR measures and 13 sub-measures:

- MR-1-01 and MR-1-06
- MR-3-01 and MR-3-02
- MR-4-01, MR-4-02, MR-4-03, MR-4-04, MR-4-05, MR-4-06, MR-4-07, and MR-4-08
- MR-5-01.

The PAP identifies MR-3-01, MR-4-01, MR-4-04, MR-4-06, MR-4-08, and MR-5-01 as Critical Measures.

Liberty discussed many aspects of the MR domain in detail in its previous audit reports, and did not repeat that information here. In those reports, Liberty summarized the Guidelines description for each sub-measure, including the metric formula, allowable exclusions, reporting dimensions, and applicable standard. Liberty provided an overview of Verizon's business processes and systems that generate the data used for these measures. Liberty described the process by which Verizon extracts data from its legacy maintenance and repair source systems and sends them to the NMP data warehouse, and then extracts data from the NMP warehouse to create the data tables that it uses to process results each month. Liberty described the NMP data tables that Verizon uses to calculate results, including key data fields, logic variables, or derived values specific to each measure. Liberty also described Verizon's approach to calculating each measure and discussed if its method of defining data fields and implementing exclusions was consistent with the Guidelines.

[305] Appendix A contains a complete list of the sub-measures.

B. General Analysis and Evaluation

As part of the current audit, Liberty reviewed the relevant version of the Guidelines to identify any changes since the previous audits. Liberty reviewed the MCCNs pertinent to the MR domain that Verizon issued in the interim, and inquired about any system or process changes not addressed in the notices. Liberty also reviewed Verizon's updated NMP documentation and Verizon's CMAs. Liberty also replicated a selection of CLEC aggregate and Verizon retail results.

1. Changes to the Guidelines

Liberty reviewed the Guidelines for MR in effect for the September 2005 data month and compared them to the Guidelines in effect during the previous audits and found that the differences conformed to the Guidelines changes set forth in the New York Commission orders issued since the previous audits.[306] The differences were primarily language changes designed to generalize the requirements to be applicable to the entire Verizon-East region[307] and to improve clarity or to provide additional information.[308] However, Liberty identified a few changes that do affect or could affect the calculation of the measures:

- Verizon excludes switch and translation troubles from the retail analog of the UNE POTS Loop, UNE 2-Wire Digital Loop, and UNE 2-Wiire xDSL Loop for MR-2, MR-3, and MR-4. Verizon introduced this change in accordance with Metric Change Control No. 11205, which implemented the August 27, 2004, New York Commission order.[309] Previously, this exclusion was applicable only to MR-4-07 and MR-4-08. However, Liberty notes that the Retail Analog Compare table of the new Guidelines still specifies that this applies only to MR-4-07 and MR-4-08 and thus needs to be updated to be consistent with the revised *Exclusions* sections of the MR-2, MR-3, and MR-4 Guidelines. Liberty addresses this issue in Finding 14.
- For MR-2, MR-3, MR-4, and MR-5, the performance standard for UNE 2-Wire Line Sharing and UNE 2-Wire xDSL Line Splitting is now listed as "Parity with VADI/DSNO and Retail Line Sharing." Verizon also added the words "and Retail Line Sharing" in the new Guidelines, consistent with the August 27, 2004, New York Commission order.[310] Verizon explained that this addition did not represent a change in its method for calculating the results.[311] Verizon made this change to

[306] Responses to Data Requests #8 and #9.
[307] For example, Verizon added language to specify differences that apply to certain jurisdictions in the Verizon-East region.
[308] For example, the MR-2 Guidelines now define, in detail, the customer direct and customer referred troubles that comprise Category 1 troubles. Also, the Guidelines for MR-4 now make clear that UNE 2-Wire xDSL Loop, UNE 2-Wire xDSL Line Sharing, and UNE 2-Wire xDSL Line Splitting comprise the "UNE 2-Wire xDSL products" for which limited stop clock applies.
[309] Responses to Data Requests #8 and #13.
[310] Response to Data Request #8.
[311] Response to Data Request #23.

clarify the transactions that it includes now that DSNO, formerly known as VADI is no longer a separate subsidiary of Verizon.

2. Change Controls

Liberty reviewed the MCCNs applicable to the MR domain that Verizon issued since the previous audits.[312] Liberty found that some of these changes were of an administrative nature or implemented internal process improvements. However, Liberty identified a few changes, in addition to the one noted above, that do, or could, affect the calculation of the measures:

- Effective with the October 2004 data month, Verizon introduced a change that incorporated the voice channels of Line Sharing into the POTS line counts for the MR-2 measures.[313] Previously, Verizon excluded these channels from the line counts.
- Effective with the February 2005 data month, Verizon implemented a change in the method it uses to designate certain special circuits for inclusion in the retail disaggregation of some MR-2 and MR-4 sub-measures.[314] This change added in DS1 and DS3 special circuits identified as VADI/DSNO.[315]
- Effective with the February 2005 data month, Verizon introduced an automated implementation of the manual procedure it had used for calculating the results for the Resale DS0 and Non-DS0 disaggregation (product code 2216) of the MR-4 sub-measures.[316] As noted in Finding 15, however, Liberty determined that, although Verizon implemented this change for retail transactions, they failed to do so for CLEC transactions.
- Effective with the February 2005 data month and in compliance with the August 27, 2004, New York Commission order, Verizon began including the new UNE Loop Sharing product as a component of the UNE 2-Wire xDSL Loop disaggregation (product code 3342).[317] Liberty verified from an examination of the CMAs that Verizon incorporated the Loop Sharing product into the MR-2, MR-3, MR-4, and MR-5 calculations for product code 3342.
- Effective with the May 2005 data month, Verizon introduced a correction to exclude Verizon affiliate transactions in the GTE service area in Virginia from the wholesale counts in the MR-2-01-5000 reported results.[318] Verizon properly excluded the affiliate transactions from the Bell Atlantic service area.
- Effective with the May 2005 data month, Verizon implemented a change in the calculation of the denominators (line counts) of MR-2 for UNE 2-Wire Digital

[312] In response to Data Request #78, Verizon verified that all the maintenance and repair-related system or process changes had been captured in these change control notices.
[313] Metric Change Control No. 10976.
[314] Metric Change Control Nos. 11096 and 11564. This issue also affects certain PR-6 sub-measures.
[315] Response to Data Request #118.
[316] Metric Change Control No. 10803.
[317] Metric Change Control No. 11246, response to Data Request #134, and Interview #3, January 31, 2006.
[318] Metric Change Control No. 11257.

Loops (product code 3341).[319] Verizon determined that it had not been including in the denominators certain digital circuits containing troubles that Verizon had included in the numerator. Before this change, Verizon had only included circuits for which the Product Indicator field was set to "Loop Digital," which designated loop ISDN products. However, with this change Verizon added circuits for which the Product Indicator field is set to "Digital," designating UNE-P ISDN products (for which Verizon provides the switching capability). There are only a small number of such circuits. Liberty has verified from an examination of the CMAs that Verizon incorporated the UNE-P ISDN product into the MR-2, MR-3, MR-4, and MR-5 calculations for product code 3341.[320]

- Effective with the July 2005 data month, Verizon implemented a change to prevent certain retail Line In Use (LIU) transactions from being included in MR-1-06 when they should be excluded.[321]
- Effective with the August 2005 data month, Verizon implemented a change to correct the method it uses in MR-1 for converting times of maintenance and repair query transactions from Greenwich Mean Time (GMT) to Eastern Standard Time (EST).[322] Verizon had determined that it had subtracted four hours instead of five hours from GMT to determine the equivalent EST time during the most recent previous standard time period (October 31, 2004 through April 3, 2005). Verizon noted, "[t]ransactions between 12:00:00 and 12:59:59 GMT were being included and should have been excluded and transactions between 21:01:00 and 22:00:00 GMT were excluded and should have been included. Per the guidelines, Local Services Interface – Trouble Administration (LSI-TA) transactions are included in the measure during the time period from 8:00 am to 5:00 pm."[323]
- Effective with the October 2005 data month, Verizon implemented a change to correct its calculation of the response times for MR-1.[324] Having recently introduced a new maintenance and repair system (known as vRepair), Verizon noted, "[w]ith the transition to vRepair, the guidelines were updated to remove the exclusion of circuit ownership validation. Subsequently, it was determined that Verizon still excluded the entitlement time for Repair and Trouble Administration System (RETAS) error transactions. The MR-1 calculations have been changed, per CCRs 11607 and 11842, to the sum of the transaction duration, eliminating any subtraction or addition of entitlement times."[325]

3. Other Changes

As an additional change, Verizon began reporting combined MR results for the former Bell Atlantic and former GTE service areas in Virginia for the June 2004 data month. Verizon revised

[319] Metric Change Control Nos. 11363 and 11626.
[320] Responses to Data Requests #113, #174, and #346; Interview #3, January 31, 2006.
[321] Metric Change Control No. 11655.
[322] Metric Change Control Nos. 11559, 11668, and 11669.
[323] Response to Data Request #114.
[324] Metric Change Control Nos. 11607 and 11842.
[325] Response to Data Request #115.

its MR calculations to incorporate this change. For MR-1, Verizon now uses a state code of VN and a BA_GTE indicator of "M" to designate transactions from both the former Bell Atlantic and the former GTE service areas. For MR-2, MR-3, MR-4, and MR-5, Verizon added logic to add both the VA and VG state codes in the calculation. In the troubles data used for these calculations, VA designates troubles from the former Bell Atlantic service area, and VG designates troubles from the former GTE service area.[326] Using a list of Virginia central offices from the former GTE service area provided by Verizon, Liberty was able to verify that Verizon includes troubles associated with this service area, both from central offices that were originally GTE and those that were originally Contel, in the metric calculations.[327]

4. Review of the Accuracy of Reported Results

Liberty reviewed Verizon's updated NMP documentation for the MR domain.[328] Liberty found Verizon's documentation to be generally complete and accurate, although not always easy to use. However, Liberty found that some of the documentation for MR-1 did not yet reflect the new method that Verizon uses to capture the combined transactions from the former GTE and former Bell Atlantic territories.[329] Liberty addresses this issue in Finding 2.

Liberty reviewed all the MR CMAs and found most of them to be accurate.[330] Liberty found that the MR-2-03-3341 (retail) and MR-2-04-3112 CMAs have incorrect logic specifying the product disaggregation. However, Verizon noted that this incorrect logic resulted from errors in the generation of the CMAs rather than in the actual production code, and Liberty's successful replication of these sub-measures supports this statement.[331]

Using its own algorithms, Liberty replicated selected sub-measures for the September 2005 data month using the Virginia data that Verizon provided.[332] Liberty chose sub-measures for replication that allowed it to test the calculations for each product disaggregation in each MR measure. Liberty also replicated sub-measures for which it had raised findings or encountered other issues in previous audits. Liberty was able to replicate Verizon's reported results for all the selected sub-measures except the retail analogs of UNE xDSL Line Sharing and UNE xDSL Line Splitting for MR-2, MR-3, MR-4, and MR-5, as explained in Finding 16.

C. New Measures

There are no new maintenance and repair measures.

326 Interview #2, January 17, 2006.
327 Response to Liberty 2005 Potomac Audit Preparedness Preliminary Question #2, provided August 12, 2005.
328 Response to Data Request #77.
329 Response to Data Request #141.
330 Responses to Data Requests #188 and #189. See also Finding 16.
331 Responses to Data Requests #188 and #189.
332 Responses to Data Requests #53 and #54.

D. Status of Findings from Previous Audits

Liberty identified 14 findings associated with the MR domain during the previous Virginia audit. Because the issues raised in these findings were also applicable to West Virginia, Liberty reviewed their status during the previous West Virginia audit and found that a number of the issues had been resolved by that time. As part of its analysis during the current audit, Liberty again reviewed the status of findings that remained open and other issues that were not completely resolved at the end of the previous West Virginia audit to determine whether the issues were resolved and the findings could be closed. Liberty discusses the current status of all the MR-related findings from the previous Virginia audit below.

1. Resolved Findings

Previous Virginia Audit Finding 72: Verizon does not report MR-1 results for all required services.[333] (Classification 1)

During the previous Virginia audit, Liberty found that Verizon included only POTS-type services in its MR-1 calculations, a restriction not documented in the Guidelines. During the previous West Virginia audit, Liberty found that the updated Guidelines specified this restriction, thereby resolving the issue.

Previous Virginia Audit Finding 73: Verizon is making an unjustified exclusion when calculating MR-1-04 results.[334] (Classification 1)

During the previous Virginia audit, Liberty noted that Verizon was excluding certain types of cancellation transactions from the MR-1-04 results. During the previous West Virginia audit, Verizon stated that the CWG had reached consensus to amend the Guidelines to change the denominator in the formula for MR-1-04 to "Number of Close/Cancel Trouble transactions," which would resolve the issue. During the current audit, Liberty verified that the November 2005 Guidelines have incorporated this change.[335]

Previous Virginia Audit Finding 74: Verizon is under-reporting the CLEC's response time for MR-1.[336] (Classification 1)

During the previous Virginia audit, Liberty noted that Verizon excluded from the overall wholesale MR-1 response time some time associated with retrieving information from its backend systems and performing security functions, a procedure that was inconsistent with the Guidelines. During the previous West Virginia audit, Liberty found that the exclusion no longer

[333] Previous District of Columbia and Maryland Audit Findings 71.
[334] Previous District of Columbia and Maryland Audit Findings 72.
[335] Response to Data Request #12.
[336] Previous District of Columbia and Maryland Audit Findings 73.

applied with the implementation of the new vRepair system. Therefore, Liberty considered the issue resolved.

Previous Virginia Audit Finding 75: Verizon does not meet the intent of the Guidelines for MR-1-03.*[337] *(Classification 2)

During the previous Virginia audit, Liberty found that Verizon did not meet the intent of the Guidelines for MR-1-03 because Verizon's reported results for MR-1-03 included both modify transactions and those request cancellation transactions that did not result in canceling the trouble ticket. During the previous West Virginia audit, Liberty found that the updated Guidelines now specify this procedure, thereby resolving the issue.

Previous Virginia Audit Finding 76: Verizon's MR-1 documentation is inadequate.*[338] *(Classification 3)

During the previous Virginia audit, Liberty found that the NMP documentation for MR-1 contained errors and was too generic. During the previous West Virginia audit, Liberty reviewed an updated version of the MR-1 NMP process documentation and concluded that it was adequate, thereby resolving the finding.

Previous Virginia Audit Finding 77: Verizon's quality control process is inadequate to assure accurate data for MR-2 through MR-5 metric calculations.*[339] *(Classification 3)

During the previous Virginia audit, Liberty concluded that Verizon's quality control processes were inadequate to assure the accuracy of the manually entered maintenance and repair data, and hence the accuracy of MR performance measures. During the previous West Virginia audit, Liberty further reviewed Verizon's procedures, including a number of improvements Verizon had introduced, and concluded that the evidence provided supported the fact that Verizon's manually entered data is reasonably accurate. Furthermore, Verizon appeared to have a quality control system in place that successfully monitored and improved the manual data input process and could correct data that people entered erroneously. Therefore, Liberty considered the issue to be resolved.

[337] Previous District of Columbia and Maryland Audit Findings 74.
[338] Previous District of Columbia and Maryland Audit Findings 75.
[339] Previous District of Columbia and Maryland Audit Findings 76.

Previous Virginia Audit Finding 78: Verizon's interpretation of the MR-2 through MR-5 metrics includes assumptions that the Guidelines do not document.*[340] *(Classification 4)

During the previous Virginia audit, Liberty noted nine specific items in which Verizon's interpretation of practices used in calculating the MR-2, MR-3, MR-4, and MR-5 measures was undocumented or not clearly documented in the Guidelines. During the previous West Virginia audit, Verizon noted that the JSC reached consensus on the resolution of these issues, in some cases agreeing that no action was necessary and in others determining that Verizon should clarify the Guidelines. During the current audit, Liberty verified that the November 2005 Guidelines have incorporated the necessary changes.[341]

Previous Virginia Audit Finding 79: Verizon's documentation of the algorithms it uses to perform the metrics calculations for MR-2 through MR-5 includes numerous errors.*[342] *(Classification 3)

During the previous Virginia audit, Liberty identified a number of errors in the CMAs for the MR-2, MR-3, MR-4, and MR-5 measures. During the previous West Virginia audit, Liberty reviewed updated CMAs for MR-2 through MR-5, which indicated that Verizon had resolved these issues. Furthermore, as indicated in Section I.C, Liberty now understands that Verizon's procedure for producing the CMAs provides an inherently imperfect representation of Verizon's algorithms. Liberty therefore considers this finding closed.

Previous Virginia Audit Finding 80: Verizon does not adhere to the Guidelines in the calculation of MR-2-02 and MR-2-03 for 2-Wire xDSL Line Splitting.*[343] *(Classification 4)

During the previous Virginia audit, Liberty noted that Verizon excluded installation troubles from MR-2-02 and MR-2-03 2-Wire xDSL Line Splitting (product code 3345), although the Guidelines did not specify such an exclusion for that product. During the previous West Virginia audit, Verizon stated that the JSC reached consensus to amend the Guidelines to specify this exclusion. During the current audit, Liberty verified that the November 2005 Guidelines have incorporated this change.[344]

[340] Previous District of Columbia and Maryland Audit Findings 77.
[341] Responses to Data Requests #12 and #94.
[342] Previous District of Columbia and Maryland Audit Findings 78.
[343] Previous District of Columbia Audit Finding 79 and Previous Maryland Audit Finding 80.
[344] Responses to Data Requests #12 and #34.

Previous Virginia Audit Finding 81: Verizon does not correctly apply the exclusion of installation troubles in MR-2-02 and MR-2-03.[345] (Classification 2)

During the previous Virginia audit, Liberty found that Verizon's algorithm for excluding installation troubles in MR-2-02 and MR-2-03 was incorrect, because it double flagged some troubles as both installation troubles and repeat troubles. During the previous West Virginia audit, Liberty noted that Verizon had made corrections to its metric procedures to correct the error, thereby resolving the issue.

Previous Virginia Audit Finding 82: Verizon's algorithm for calculating MR-2-05 for specials is not in accordance with the Guidelines.[346] (Classification 2)

During the previous Virginia audit, Liberty noted that Verizon's logic for calculating resale and UNE specials for MR-2-05 included trouble codes other than those specified in the Guidelines. During the previous West Virginia audit, Verizon stated that the JSC reached consensus to amend the Guidelines to specify the inclusion of the additional trouble codes. During the current audit, Liberty verified that the November 2005 Guidelines have incorporated this change.[347]

Previous Virginia Audit Finding 83: Verizon's algorithm for calculating MR-4-03 for UNE POTS Loop is incorrect.[348] (Classification 2)

During the previous Virginia audit, Liberty found that Verizon's algorithm for calculating MR-4-03 for UNE POTS Loop was incorrect because it did not correctly apply the "limited stop clock," as required by the Guidelines. During the previous West Virginia audit, Liberty noted that Verizon had made corrections to its algorithms to correct the error, thereby resolving the issue.

Previous Virginia Audit Finding 84: Verizon's algorithm for calculating the MR-4-07 and MR-4-08 retail analog for UNE POTS Loop applies incorrect exclusions.[349] (Classification 2)

During the previous Virginia audit, Liberty found that Verizon's algorithm for the MR-4-07 and MR-4-08 UNE POTS Loop retail analogs failed to properly exclude all the translation and switch troubles from the calculation, as required by the Guidelines. During the previous West Virginia audit, Liberty noted that Verizon had made updates to its algorithms to correct the error, thereby resolving the issue.

[345] Previous District of Columbia Audit Finding 80 and Previous Maryland Audit Finding 81.
[346] Previous District of Columbia Audit Finding 81 and Previous Maryland Audit Finding 82.
[347] Responses to Data Requests #12 and #35.
[348] Previous District of Columbia Audit Finding 82 and Previous Maryland Audit Finding 84.
[349] Previous District of Columbia Audit Finding 83 and Previous Maryland Audit Finding 85.

Previous Virginia Audit Finding 85: Verizon's description of MR-5 in the Guidelines is unclear.*[350] *(Classification 4)

During the previous Virginia audit, Liberty raised a concern about the inconsistency of the terms Verizon used in the MR-5 Guidelines to describe which repeat troubles to include. Based on further explanations Verizon provided during the previous West Virginia audit, Liberty was satisfied that the Guidelines are adequate and the finding could be closed.

2. Unresolved Findings

Liberty found that all of the MR-related findings identified in previous audits had been resolved.

E. New Findings

Liberty has three new findings related to the maintenance and repair domain.

Finding 14: In Verizon's Guidelines, the *Exclusions* sections for MR-2, MR-3, and MR-4 are inconsistent with the Retail Analog Compare table. (Classification 4)

Verizon introduced changes in the *Exclusions* sections of the Guidelines for MR-2, MR-3, and MR-4 that specify the exclusion of "Switch and Translation troubles from the Retail compare of UNE POTS Loop, UNE 2-Wire Digital Loop, and UNE 2-Wire xDSL Loop." Verizon introduced these change in accordance with Metric Change Control No. 11205, which implemented the August 27, 2004, New York Commission order.

In reviewing the changes in the Guidelines, Liberty found the Retail Analog Compare table to be inconsistent with this change. This table specifies that the exclusion of switch and translation troubles from maintenance and repair retail analogs applies only to the retail analog of UNE POTS Loop and only for the sub-measures MR-4-07 and MR-4-08. Although this exclusion was appropriate prior to the changes implemented through Metric Change Control No. 11205, it is no longer applicable.

In response, Verizon agreed with the finding and indicated that "Verizon will propose a clarification to update the Retail Analog Compare table."[351]

[350] Previous District of Columbia Audit Finding 84 and Previous Maryland Audit Finding 86.
[351] Response to Preliminary Finding 2 (revised).

Finding 15: Verizon's automated procedure for calculating the CLEC results for the Resale DS0 and Non-DS0 disaggregation of the MR-4 sub-measures does not include the Non-DS0 transactions. (Classification 3)

During the previous Virginia audit, Liberty noted that Verizon had not included Non-DS0 transactions in its automated procedures for calculating the CLEC results for the Resale DS0 and Non-DS0 disaggregation (product code 2216) of the MR-4 sub-measures. During those audits, Verizon explained that they included such transactions in the calculations manually but also planned to correct the automated procedures to include the transactions. During the current audit, Verizon provided Liberty with the MCCNs implemented since the previous audits, including Metric Change Control No. 10803.[352] The business reason and description for this MCCN are, in part, as follows:[353]

> *Some MR-4 metrics are disaggregated by DS0 and Non-DS0 level. The Wholesale/Retail code does not contain the non-DS0 criteria represented by the "@" sign. There was a single VA trouble detected in Feb 04. No other states impacted. The Non-DSO criteria needs to be added to … the Wholesale and Retail MR-4 2216 metrics where it does not exist.*

Verizon lists the status of Metric Change Control No. 10803 as "complete" and the first date in production as February 2005. However, after examining the MR-4 CMAs applicable to the September 2005 data month, Liberty determined that, although Verizon had completed the change described in Metric Change Control No. 10803 for the retail (Verizon) MR-4 sub-measures, they had failed to complete the change for the wholesale (CLEC) sub-measures.[354] Verizon confirmed this determination and noted that the CMAs provided to Liberty correctly "match the production code" and that "[t]he production CLEC code is not currently including DS_LEVEL='@'."[355] Furthermore, Verizon noted that "Verizon has implemented a process to manually review for DS_Level=@ and adjusts the metric accordingly each month if warranted. The code to automate the calculation of the wholesale measure will be updated at a later date."[356]

Finding 16: Verizon's calculation of the retail analogs of UNE xDSL Line Sharing and UNE xDSL Line Splitting for MR-2, MR-3, MR-4, and MR-5 does not capture all the relevant transactions. (Classification 2)

The Guidelines for MR-2, MR-3, MR-4, and MR-5 specify that the retail analog of both UNE xDSL Line Sharing (product code 3343) and UNE xDSL Line Splitting (product code 3345) is "Parity with VADI/DSNO and Retail Line Sharing."[357] Verizon's logic for calculating this analog contains the requirement that only transactions with Test Account Indicator = V are included in the calculation.[358] Liberty investigated the data used for MR-2, MR-3, MR-4, and

[352] Response to Data Request #13.
[353] Response to Data Request #13.
[354] Response to Data Request #14.
[355] Response to Data Request #223.
[356] Response to Preliminary Finding 6 (revised).
[357] Response to Data Request #1.
[358] Response to Data Request #14.

MR-5, and found valid transactions with Test Account Indicator = N that meet the criteria specified in the Guidelines. Verizon agreed with Liberty's observation and noted that it was "aware of this issue. Some VADI records are not being categorized as Retail. These VADI records should be included in Line Share or Line Split as appropriate." Verizon also noted that the code should include transactions with Test Account Indicator =N.[359]

In response, Verizon agreed with the finding, but stated that no further action is required on this issue. Verizon noted, "Per the NY December 2005 C2C Order, Line Sharing and Line Splitting metrics will be eliminated, therefore no further corrective action will be necessary since these metrics will no longer be reported."[360] Verizon also noted that the error had minimal reporting impact and no PAP payment impact for Virginia, because correcting it adds only five more troubles to the base of troubles.[361]

[359] Response to Data Request #182 (revised).
[360] Response to Preliminary Finding 5 (revised).
[361] Response to Preliminary Finding 5 (revised).

VII. Network Performance Measures

A. Introduction

The Network Performance (NP) measures report on the percent of final trunk groups that exceed blocking standards and the ability of Verizon to establish and augment collocation arrangements. The Guidelines list the following two NP measures:

- NP-1: Percent Final Trunk Group Blocking
- NP-2: Collocation Performance.

The NP domain has 12 sub-measures.[362] The NP-1-03, NP-1-04, NP-2-01, NP-2-02, NP-2-05, NP-2-06, NP-2-07, and NP-2-08 sub-measures are included in Verizon's PAP. The PAP also identifies all of these sub-measures, except NP-1-03, as Critical Measures.

Liberty discussed many aspects of the NP domain in detail in its previous audit reports, and did not repeat that information here. In those reports, Liberty summarized the Guidelines description for each sub-measure, including the metric formula, allowable exclusions, reporting dimensions, and applicable standards. Liberty provided an overview of Verizon's business processes and systems that generate the data used for these sub-measures. Liberty described the process by which Verizon extracts data from its legacy source systems and sends them to the NMP data warehouse, and then extracts data from the NMP warehouse to create the data tables that it uses to process results each month. Liberty described the NMP data tables that Verizon uses to calculate results, including key data fields, logic variables, or derived values specific to each measure. Liberty also described Verizon's approach to calculating each sub-measure and discussed whether its method of defining data fields and implementing exclusions was consistent with the Guidelines.

B. General Analysis and Evaluation

As part of the current audit, Liberty reviewed the relevant version of the Guidelines to identify any changes since the previous audits. Liberty reviewed the MCCNs pertinent to the NP domain that Verizon issued in the interim, and inquired about any system or process changes not addressed in the notices. Liberty also reviewed Verizon's updated NMP documentation and Verizon's CMAs. Liberty also replicated a selection of CLEC aggregate and Verizon retail results.

1. Changes to the Guidelines

Liberty reviewed the Guidelines for NP in effect for the September 2005 data month and compared them to the Guidelines in effect during the previous audits and found that the differences conformed to the Guidelines changes set forth in the New York Commission orders

[362] Appendix A contains a complete list of the sub-measures.

issued since the previous audits.[363] Liberty found no changes in the NP domain that affect the calculation of the measures.[364]

2. Change Controls

To examine changes since the previous audits, Liberty reviewed the MCCNs that Verizon issued since the previous audits that were applicable to the NP domain. In addition to changes of an administrative nature, such as updating standard tables, Liberty found one MCCN that could affect calculations in the NP domain. Effective with the October 2004 data month, Verizon implemented Metric Change Control No. 11122, which corrected the PAP calculations for the NP-1 sub-measures to include the correct penalty dollar amounts and list of CLECs for blocked trunks.[365]

3. Other Changes

Verizon began reporting combined NP results for the former Bell Atlantic and former GTE service areas in Virginia in the June 2004 data month. For the NP-1 sub-measures Verizon accomplished this combined reporting using the former Bell Atlantic data found in the NP-1 fact tables and a manually created file containing the trunk group blocking results data for the former GTE service area. NMP loads the two data files into a transient table where Verizon merges the former GTE and former Bell Atlantic results in order to calculate and report the combined results for Virginia.[366] Verizon indicated that it has plans to mechanize the trunk group blocking feed from the former GTE central offices in 2006; however, Verizon has not determined an exact date for this enhancement.[367] For the NP-2 sub-measures, Verizon uses the sum of the VA (former Bell Atlantic) and VG (former GTE) state codes to arrive at the entire state results. The fact tables used for Liberty's NP-2 replications did not contain any VG results, because there was no collocation activity in the former GTE central offices during the month of September 2005.[368] Therefore, Liberty could not confirm that Verizon includes the former GTE offices in the NP-2 sub-measures.

4. Review of the Accuracy of Reported Results

Liberty reviewed Verizon's updated NMP documentation for the NP domain.[369] Verizon updated the documentation to correct the *Exclusion Rules* and *Other Rules* sections for the NP-1

[363] Responses to Data Requests #8 and #9.
[364] Verizon did revise the *Report Dimensions* for the NP-1-01 sub-measure to remove Verizon Retail as a report criterion. In response to Data Request #249, Verizon explained that this was an administrative change to make the Guidelines for the NP-1 measure consistent with those of the other measures and that it did not affect the way Verizon calculates or reports the NP-1 results.
[365] Response to Data Request #13.
[366] Response to Data Request #79 and #129.
[367] Response to Data Request #316.
[368] Interview #2, January 17, 2006.
[369] Response to Data Request #79.

measure.[370] Liberty also found that Verizon added an exclusion for "third party disruptions" to the list of "other rules" for the NP-1 measure.[371] However, in discussions with the JSC, Verizon agreed to stop using the code that identifies a third party disruption; therefore, this is not a valid exclusion, which makes the documentation out of date.[372] Liberty addresses this issue in more detail in Finding 2.

Liberty also reviewed Verizon's network performance CMAs and found only one significant change from the previous audits: an update in the formula for the numerator of the CLEC-specific calculation for the NP-1-01-5000 measure. Verizon stated, however, that it made the revision to correct an error in the CMA and that it did not make any changes to the actual production code.[373]

Using its own algorithms, Liberty replicated the September 2005 CLEC aggregate and retail results for the NP-1-01 sub-measure and the CLEC aggregate results for the NP-2-01, NP-2-02, NP-2-03, NP-2-04 and NP-2-05 sub-measures using the Virginia data that Verizon provided.[374] Liberty was able to replicate Verizon's reported results in all cases.

C. New Measures

There are no new network performance measures.

D. Status of Findings from Previous Audits

Liberty identified seven findings associated with the NP domain during the previous Virginia audit. Because the issues raised in these findings were also applicable to West Virginia, Liberty reviewed their status during the previous West Virginia audit and found that a number of the issues had been resolved by that time. Liberty also issued one new NP-related finding that is also applicable to Virginia. As part of its analysis during the current audit, Liberty again reviewed the status of findings that remained open and other issues that were not completely resolved at the end of the previous West Virginia audit to determine whether the issues were resolved and the findings could be closed. Liberty discusses the current status of all the NP-related findings from the previous Virginia and West Virginia audits below.

[370] Verizon made these changes in response to Previous West Virginia Audit Finding 5, as discussed in Section VII.D below.
[371] In response to Data Request #123, Verizon defined "third party disruption" as it relates to the calculation of the NP-1 metric results as "blocks that were caused by a party other than Verizon or the CLEC."
[372] Response to Data Request #123.
[373] Responses to Data Requests #14 and #128.
[374] Response to Data Requests #57 and #58.

1. Resolved Findings

Previous Virginia Audit Finding 86: Verizon is not following a requirement in the Exclusions section of the Guidelines.[375] (Classification 2)

During previous Virginia audit, Liberty found that Verizon did not follow the process described in the *Exclusions* section of the NP-1 Guidelines, which indicates that Verizon will notify CLECs electronically about trunk group blockages that may be CLEC-caused and allow them to respond before excluding those trunk groups from NP-1. In its previous West Virginia Audit Final Report, Liberty noted that the JSC reached agreement on January 25, 2005 for Verizon to implement an electronic notification process for trunk blocking that may be CLEC-caused. During the current audit, Verizon indicated that it had implemented this electronic notification process and provided Liberty with a detailed outline of the operational steps involved.[376]

Previous Virginia Audit Finding 87: Verizon is not reporting retail results for all NP-1 sub-metrics.[377] (Classification 2)

During the previous Virginia audit, Liberty found that the Guidelines for NP-1 included Verizon retail in the *Report Dimensions* section. However, Verizon reported retail results only for NP-1-01 and NP-1-02, but not for NP-1-03 or NP-1-04. In its previous West Virginia Audit Final Report, Liberty noted that the JSC reached agreement on January 25, 2005 for Verizon to remove the term "retail" from the Guidelines effective with the February 2005 data month. During the current audit, Liberty reviewed the Guidelines in effect for the September 2005 data month and found that "retail" has in fact been removed from the NP-1 *Report Dimensions*.

Previous Virginia Audit Finding 88: Verizon is not making the same exclusions to all the NP-1 sub-metrics.[378] (Classification 4)

During the previous Virginia audit, Liberty found that although the *Exclusions* section of the Guidelines for NP-1 were not specific to any of the NP-1 sub-measures, Verizon did not make the same exclusions to all the NP-1 sub-measures. In its previous West Virginia Audit Final Report, Liberty noted that the JSC reached consensus on January 25, 2005, for Verizon to clarify the language in the Guidelines. Verizon subsequently provided the November 2005 Guidelines updated based on the April 15, 2005, New York Commission order.[379] During the current audit, Liberty verified that the November 2005 Guidelines contain the NP-1 language changes that resolve this issue.

[375] Previous District of Columbia Audit Finding 85 and Previous Maryland Audit Finding 87.
[376] Response to Data Request #18.
[377] Previous District of Columbia Audit Finding 86 and Previous Maryland Audit Finding 88.
[378] Previous District of Columbia Audit Finding 87 and Previous Maryland Audit Finding 89.
[379] Response to Data Request #12 (revised).

Previous Virginia Audit Finding 89: Verizon overstates its NP-1 results.[380] ***(Classification 2)***

During previous Virginia audit, Liberty found that in the calculation of NP-1 results, Verizon treated final trunk groups with no data the same as those that had data and were not blocked beyond the threshold. The Guidelines did not explicitly document this practice which, unless authorized, has the effect of artificially improving Verizon's reported NP-1 performance results. During the current audit, Verizon stated that it had updated the November 2005 Guidelines for NP-1 based on the April 15, 2005, New York Commission order to include language explicitly documenting Verizon's practice.[381] Liberty verified that the NP-1 *Definition* section of the November 2005 Guidelines contains the following revised language that addresses this issue:

> *"The NP-1-01 and NP-1-02 sub-metrics include all Final Trunk Groups (FTG) provisioned per CLEC request regardless of whether or not the CLEC utilizes the FTG."*

Previous Virginia Audit Finding 90: Verizon's methods and procedures documentation for NP-1 is too generic.[382] ***(Classification 3)***

During the previous Virginia audit, Liberty raised some concerns about Verizon's documentation of the methods and procedures for developing and calculating the NP-1 measure. During the previous West Virginia audit, Liberty found that Verizon had corrected these documentation issues, thereby resolving the finding.

Previous Virginia Audit Finding 91: Verizon has adopted conventions for calculating the NP-2 performance metrics that are either not consistent with or not addressed in the Guidelines.[383] ***(Classification 4)***

During the previous Virginia audit, Liberty found that Verizon has adopted conventions for calculating the NP-2 performance measures that are either not consistent with or not addressed in the Guidelines. Based on further review during the previous West Virginia audit, Liberty concluded that the wording of the Guidelines is adequate, thereby resolving the finding.

Previous Virginia Audit Finding 92: Verizon's documentation for the NP-2 metrics is outdated and inaccurate.[384] ***(Classification 3)***

During the previous Virginia audit, Liberty found that Verizon's documentation for NP-2 was inadequate. During the previous West Virginia audit, Liberty found that Verizon had updated its documentation for the NP-2 measure to address the issue, thereby resolving the finding.

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[380] Previous District of Columbia Audit Finding 88 and Previous Maryland Audit Finding 90.
[381] Response to Data Request #12.
[382] Previous District of Columbia Audit Finding 89 and Previous Maryland Audit Finding 91.
[383] Previous District of Columbia Audit Finding 90 and Previous Maryland Audit Finding 92.
[384] Previous District of Columbia Audit Finding 91 and Previous Maryland Audit Finding 93.

Previous West Virginia Audit Finding 5: Verizon's NP-1 documentation contains inaccuracies. (Classification 3)

During the previous West Virginia audit, Liberty identified exclusions listed in the "Verizon NMP Maintenance – East Network Performance Metric Design" document that the Guidelines did not support. During the current audit, Verizon provided updated NMP documentation highlighting the sections that were modified as a result of the finding. Liberty reviewed the changes and was satisfied that the documentation was properly updated to conform to the Guidelines.[385]

2. Unresolved Findings

Liberty found that all of the NP-related findings identified in previous audits had been resolved.

E. New Findings

Liberty has no new findings related to the network performance domain.

[385] Response to Data Request #17.

VIII. Billing Performance Measures

A. Introduction

The billing measures report on Verizon's performance in providing in a timely manner i) daily usage feeds, ii) carrier bills, and iii) acknowledgement and resolution of billing claims. The Guidelines list the following three billing measures:

- BI-1: Timeliness of Daily Usage Feed (DUF)
- BI-2: Timeliness of Carrier Bill
- BI-3: Billing Accuracy & Claims Processing.

The BI domain has six sub-measures.[386] The PAP for the Potomac region includes three sub-measures: BI-1-02, BI-3-04, and BI-3-05. Of these, the PAP identifies BI-3-04 and BI-3-05 as Critical Measures.

Liberty discussed many aspects of the BI domain in detail in its previous audit reports, and did not repeat that information here. In those reports, Liberty summarized the Guidelines description for each sub-measure, including the metric formula, allowable exclusions, reporting dimensions, and applicable standard. Liberty provided an overview of Verizon's business processes and systems that generate the data used for these measures. Liberty described the process by which Verizon extracts data from its legacy billing source systems and sends them to the NMP data warehouse, and then extracts data from the NMP warehouse to create the data tables that it uses to process results each month. Liberty described the NMP data tables that Verizon uses to calculate results, including key data fields, logic variables, or derived values specific to each measure. Liberty also described Verizon's approach to calculating each measure and discussed whether its method of defining data fields and implementing exclusions was consistent with the Guidelines.

B. General Analysis and Evaluation

Liberty previously identified no major issues with the billing domain, and focused its review on changes since the previous audits. As part of the current audit, Liberty reviewed the relevant version of the Guidelines to identify any changes since the previous audits. Liberty reviewed the MCCNs pertinent to the billing domain that Verizon issued in the interim, and inquired about any system or process changes not addressed in the notices. In addition, Liberty reviewed Verizon's updated NMP documentation and Verizon's CMAs. Liberty also conducted replication of most CLEC aggregate results for Virginia.

[386] Appendix A contains a complete list of the sub-measures.

1. Changes to the Guidelines

During the current audit, Liberty reviewed the Guidelines relevant to the September 2005 data month and found that the billing Guidelines were consistent with the changes set forth in the August 25, 2004, New York Commission order.[387] These changes included a few updates for the BI-1 and BI-3 measures, but none for BI-2.[388] They were primarily language updates designed to improve clarity, and none had an effect on the calculation of measure results.

2. Change Controls

Liberty reviewed the MCCNs that Verizon issued since the previous audits. In addition to a process improvement change, Verizon identified an issue with its report generation process.[389] Verizon found that when there were duplicate entries in a CLEC lookup table, its report process added results twice to derive a CLEC total; the error reportedly did not affect CLEC aggregate totals. Verizon corrected the problem for the September 2004 data month.[390]

3. Other Changes

In September 2005, Verizon consolidated the Carrier Access Billing System (CABS) South with CABS East. According to Verizon, the conversion did not impact billing measures and did not affect any of the NMP processing or programs.[391]

Verizon began reporting combined billing results for the former Bell Atlantic, former Contel, and former GTE service areas in Virginia for the June 2004 data month. Verizon's source billing systems send data to NMP with an original state code based on territory. NMP creates a duplicate record with a state code of VN for each source record when it creates the data marts used for metric calculation.[392] Verizon calculates results for the billing measures for all state codes, and then reports the result for those with a state code of VN as the Virginia result.[393] Liberty substantiated that Verizon included billing records from all three territories in reported results.

[387] Responses to Data Requests #8 and #9.
[388] As an example, for the numerator and denominator of the BI-3-08 sub-measure, Verizon replaced the word "credit" with "adjustment" and added the phrase "in the report month" for clarity.
[389] Verizon completed Metric Change Control No. 10943 to modify its NMP code to distinguish between bills with the same distribution date but different bill dates. According to the response to Data Request #13, this was an issue in the North states only, but Verizon implemented the change in the South states to maintain consistent coding.
[390] Metric Change Control No. 11059.
[391] Response to Data Request #82.
[392] Interview #2, January 17, 2006. When it identifies records containing all the same information except for the original state code, Verizon creates only one VN record to avoid duplication. In response to Data Request #304, Verizon explained that in some cases a bill may have charges from more than one former territory, and the source system sends one record to NMP for each state territory.
[393] Response to Data Request #144.

4. Review of the Accuracy of Reported Results

Liberty reviewed Verizon's updated NMP documentation for the BI domain.[394] The changes that Verizon made to the documentation since the last audit primarily dealt with internal system issues and data feeds, or related to states not covered by this audit. In general, Liberty found Verizon's billing documentation to be adequate and up to date. However, Verizon's fact table layouts still contain the reference to state VA rather than VN.

Liberty also reviewed Verizon's CMAs. The only significant change to the CMAs from the previous audits was the replacement of the prior state code reference for Virginia with the new one that reflects the combined territories of the former Bell Atlantic, Contel, and GTE territories.

Liberty replicated the September 2005 CLEC aggregate results for the BI-1-02, BI-2-02, BI-3-04, BI-3-05, and BI-3-07 sub-measures using the Virginia data that Verizon provided.[395] Liberty was able to replicate Verizon's reported results in all cases.

Currently, Verizon calculates results for the BI-3-08 sub-measure manually. Verizon opened a change control to automate the calculation, but has not yet scheduled it for implementation.[396] Liberty reviewed the manual spreadsheet data that Verizon used to calculate the BI-3-08 sub-measure in Virginia for September 2005. Liberty replicated Verizon's reported CLEC aggregate result using the spreadsheet data.

C. New Measures

There are no new billing measures.

D. Status of Findings from Previous Audits

Liberty identified one finding associated with the BI domain during the previous Virginia audit. Because the issues raised in this finding were also applicable to West Virginia, Liberty reviewed its status during the previous West Virginia audit and found that the finding could be closed. During the current audit, Liberty reviewed the status of BI issues from these previous audits and discusses their status below.

[394] Response to Data Request #81.
[395] Responses to Data Requests #61 and #62.
[396] Response to Data Request #112.

1. Resolved Findings

Previous Virginia Audit Finding 93: Verizon has adopted certain conventions for calculating the BI measures that are not reflected in the Guidelines.[397] ***(Classification 4)***

During the previous Virginia audit, Liberty found that a number of the conventions Verizon used for calculating the BI measures were not reflected in the Guidelines. Based on further review during the previous West Virginia audit, Liberty concluded that the wording of the Guidelines is adequate, thereby resolving the finding.

Liberty identified one additional billing issue that was not resolved as of the end of the previous West Virginia audit. The title of the BI-3-08 sub-measure in the Guidelines was "% CLEC Billing Claims Not Appearing on the Bill within 45 Days." However, Verizon calculates and reports for BI-3-08 the percentage of claims where a credit *did* appear on the bill within 45 days, which is consistent with a standard of 97.5 percent. Verizon subsequently informed Liberty that the JSC of the CWG had reached consensus in January 2005 to correct the title of the measure to "% CLEC Billing Claim Adjustments Appearing on the Bill within 45 Days." The April 13, 2005, New York Commission order adopted this language change effective the November 2005 reporting month. The November 2005 Guidelines list the corrected title for the BI-3-08 sub-measure.

2. Unresolved Findings

Liberty found that all of the BI-related findings identified in previous audits had been resolved.

E. New Findings

Liberty has no new findings related to the billing domain.

[397] Previous District of Columbia Audit Finding 92 and Previous Maryland Audit Finding 94.

IX. Operator Services, Directory Assistance, and General Performance Measures

A. Introduction

The Operator Services and Database (OD) measures report on the speed of answer for operator and directory assistance services. The Guidelines list the following one OD measure:[398]

- OD-1: Average Speed of Answer.

The OD domain has two sub-measures.[399] The OD-1 measure is not included in Verizon's PAP.

Liberty discussed many aspects of the OD domain in detail in its previous audit reports, and did not repeat that information here. In those reports, Liberty summarized the Guidelines description for each sub-measure, including the metric formula, allowable exclusions, reporting dimensions, and applicable standard. Liberty provided an overview of Verizon's business processes and systems that generate the data used for these sub-measures. Liberty described the process by which Verizon extracts data from its legacy source systems and sends them to the NMP data warehouse, and then extracts data from the NMP warehouse to create the data tables that it uses to process results each month. Liberty described the NMP data tables that Verizon uses to calculate results, including key data fields, logic variables, or derived values specific to each measure. Liberty also described Verizon's approach to calculating each sub-measure and discussed if its method of defining data fields and implementing exclusions was consistent with the Guidelines.

B. General Analysis and Evaluation

As part of the current audit, Liberty reviewed the relevant version of the Guidelines to identify any changes since the previous audits. Liberty reviewed the MCCNs pertinent to the OD domain that Verizon issued in the interim, and inquired about any system or process changes not addressed in the notices. Liberty reviewed Verizon's updated NMP documentation and Verizon's CMAs. Liberty replicated Verizon's reported CLEC aggregate and Verizon retail results in all four jurisdictions.

1. Changes to the Guidelines

Liberty reviewed the Guidelines for OD in effect for the September 2005 data month and compared them to the Guidelines in effect during the previous audits and found that the

[398] The Guidelines also list OD-2- LIDB, Routing and OS/DA Platforms. However, the Guidelines also indicate that Verizon does not have the capability to report on the OD-2 performance area. In response to Data Request #250, Verizon indicated that it had included the OD-2 measure in the 1998 New York Interim Guidelines as a placeholder for potential future development; however, Verizon never fully developed the measure in any of the Verizon East states.

[399] Appendix A contains a complete list of the sub-measures.

differences conformed to the Guidelines changes set forth in the New York Commission orders issued since the previous audits.[400] Liberty also found a change to the report dimensions for the OD-1-02 sub-measure that the New York Commission orders did not address. The Guidelines in effect for the September 2005 audit month list report dimensions for this sub-measure that differ from those of OD-1-01, but the actual report dimensions for these two sub-measures are the same. Liberty addresses this issue in Finding 17.

2. Change Controls

To examine changes since the previous audits, Liberty reviewed the MCCNs that Verizon issued since the previous audits and found that none of the notices issued by Verizon were specific to the OD domain.

3. Other Changes

For all the other metrics domains, Verizon began reporting combined OD results for the former Bell Atlantic and former GTE service areas in Virginia for the June 2004 data month. However, Verizon only reports the OD-1 measure for the former Bell Atlantic service area in Virginia. The operator service/directory assistance call centers that serve the former Bell Atlantic service area do not serve the former GTE service area in Virginia. Additionally, Verizon indicated that it is unable to distinguish the performance for the former GTE service area of Virginia from call center performance for the other former GTE states served by the call center.[401] Liberty addresses this issue in Finding 18.

4. Review of the Accuracy of Reported Results

Liberty reviewed Verizon's updated NMP documentation for the OD domain and found that Verizon did not make any significant changes to this documentation since the last audit.[402] In general, Liberty found Verizon's OD documentation to be adequate and up to date.

Liberty also reviewed Verizon's CMAs and found that Verizon had only made administrative changes (*e.g.,* removing the state specific criteria) since the previous audits.[403] Liberty also found that the CMAs contained a state code of VN for Virginia; however, according to Verizon, the OD measures do not report on VN for Virginia. Verizon stated that it will correct this error in the next version of the CMAs.[404] Using the fact table data provided by Verizon for metric replication, Liberty verified that for the OD measures Verizon uses a state code of VA only.[405]

[400] Responses to Data Requests #8 and #9.
[401] Response to Data Request #352
[402] Response to Data Request #83.
[403] Response to Data Request #14.
[404] Response to Data Request #318.
[405] Response to Data Requests #64 and #65.

Using its own algorithms, Liberty replicated the September 2005 CLEC aggregate and retail results for the OD-1-01 and OD-1-02 sub-measures using the Virginia data that Verizon provided.[406] Liberty was able to replicate Verizon's reported results in all cases.

C. New Measures

There are no new OD measures.

D. Status of Findings and Other Issues from Previous Audits

Liberty identified two findings associated with the OD domain during the previous Virginia audit. Because the issues raised in these findings were also applicable to West Virginia, Liberty reviewed their status during the previous West Virginia audit and found that the findings could be closed. During the current audit, Liberty reviewed the status of OD issues from these previous audits and discusses their status below.

1. Resolved Findings

Previous Virginia Audit Finding 94: Verizon's OD-1 documentation is inadequate.[407] (Classification 3)

During the previous Virginia audit, Liberty found that Verizon's OD-1 documentation contained some errors. During the previous West Virginia audit, Liberty noted that Verizon had corrected the documentation problems, thereby resolving the issue.

Previous Virginia Audit Finding 95: The OD-1 section of the Potomac states' C2C Report is misleading.[408] (Classification 3)

During the previous Virginia audit, Liberty noted the C2C Report for OD-1 contained incorrect labeling of the results. During the previous West Virginia audit, Liberty found that Verizon had corrected the errors, thereby resolving the issue.

2. Unresolved Findings

Liberty found that all of the OD-related findings identified in previous audits had been resolved.

[406] Responses to Data Requests #65 and #66.
[407] Previous District of Columbia Audit Finding 94 and Previous Maryland Audit Finding 95.
[408] Previous District of Columbia Audit Finding 95 and Previous Maryland Audit Finding 96.

E. New Findings

Liberty has two new findings related to the OD domain.

Finding 17: Verizon's Guidelines for the OD-1 measure are unclear. (Classification 4)

The *Report Dimensions* section of the Guidelines for the Potomac jurisdiction contains the following language:

For metric OD-1-01 Operator Services – Speed of Answer Company:

- *State Specific Retail/Resale combined*
- *State Specific CLEC (facilities based and UNE-P)*

For metric OD-1-02 Directory Assistance – Speed of Answer

- *State Specific Retail/Resale combined*

State or regional Specific Operator Service Centers

The last criterion for the OD-1-02 sub-measure (*i.e.,* "State or regional Specific Operator Service Centers") has a footnote that reads, "[i]f no NY CLEC traffic is handled by these centers, the data will not be reported."

Verizon explained that both the OD-1-01 and OD-1-02 sub-measures report combined facilities-based and UNE-P directory assistance traffic at a state-specific level. Verizon also explained that the footnote for the OD-1-02 sub-measure indicates that the C2C report for any given jurisdiction in the Potomac area will have no reported values if the Operator Service Centers for that jurisdiction do not handle any CLEC facilities-based or UNE-P traffic.[409]

Given Verizon's explanation, it is unclear why the language of the *Report Dimensions* section of the Guidelines differs for the two sub-measures. Furthermore, because the conditions of the OD-1-02 footnote should have the same impact on OD-1-01 results as on OD-1-02 results and Verizon has confirmed that the footnote applies to the Potomac jurisdictions, it is also unclear why the footnote only relates to the OD-1-02 sub-measure and contains a reference to "NY CLEC traffic."

Although Verizon agrees that the Guidelines are unclear, it does not believe that they are contradictory. Verizon indicated that it will propose the following clarification to the Guidelines:[410]

Report Dimensions (OD-1-01 and OD-1-02):

- *State Specific Retail/Resale combined*
- *State Specific CLEC (facilities based and UNE-P)*

[409] Response to Data Request #239.
[410] Response to Preliminary Finding 10.

A footnote applicable to both OD-1-01 and OD-1-02:

"If no state specific CLEC traffic is handled by these centers, the data will not be reported for the individual state."

Finding 18: Verizon's OD-1 Guidelines do not clearly indicate that the state results reported for Virginia only represent the former Bell Atlantic service area. (Classification 4)

In June 2004, Verizon implemented Metric Change Control No. 10660 which combined the former Bell Atlantic and GTE services areas in Virginia for reporting metric results. Verizon only reports the OD-1 results for the former Bell Atlantic service area in Virginia. Verizon explained that this is because, in Virginia, the operator service/directory assistance call centers that serve the former Bell Atlantic service area do not serve the former GTE service area.[411] Additionally, Verizon indicated that it cannot distinguish the call center performance for the former GTE service area in Virginia from call center performance for the other former GTE states in the Verizon Southeast footprint. The Guidelines for the OD-1 measure specify the reporting geography to be "State Specific" and do not reflect the exclusion of the former GTE service area from the Virginia OD-1 reported results.

Verizon agreed with this finding stating that it had omitted, in error, the specific language indicating that the OD-1 measure only applied to the "Verizon Virginia Inc. Service area" from the *Geography* section of the Guidelines when it consolidated the Guidelines into the regional Guidelines. Verizon noted that there was no metric impact, but that it will propose a clarification to the Guidelines to specify the reporting geography.[412] Upon review of the June 2004 Virginia Guidelines in which Verizon combined reporting of the former GTE and former Bell Atlantic service areas and a letter from Verizon to the Virginia State Corporation Commission regarding Case No. PIC-2001-00226, dated January 27, 2004, Liberty determined that the Commission was made aware of the service area restrictions associated with this measure and agrees that this is a documentation issue.[413]

[411] Response to Data Request #352.
[412] Response to Preliminary Finding 15.
[413] Response to Preliminary Finding 15 (supporting documentation).

Appendix A

Pre-Ordering

PO-1: Response Time OSS Pre-Ordering Interface

- PO-1-01: Average Response Time – Customer Service Record (CSR)
- PO-1-02: Average Response Time – Due Date Availability
- PO-1-03: Average Response Time – Address Validation
- PO-1-04: Average Response Time – Product & Service Availability
- PO-1-05: Average response Time – Telephone Number Availability and Reservation
- PO-1-06: Average response Time – Mechanized Loop Qualification – xDSL
- PO-1-07: Average Response Time – Reject Query
- PO-1-08: Percent Timeouts
- PO-1-09: Parsed CSR

PO-2: OSS Interface Availability

- PO-2-02: OSS Interface Availability – Prime-Time
- PO-2-03: OSS Interface Availability – Non-Prime-Time

PO-3: Contact Center Availability

- PO-3-02: Percent Answered within 30 Seconds – Ordering
- PO-3-04: Percent Answered within 30 Seconds – Repair

PO-4: Timeliness of Change Management Notices

- PO-4-01: Percent Change Management Notices sent on Time
- PO-4-02: Change Management Notice – Delay one to seven days
- PO-4-03: Change Management Notice – Delay eight plus days

PO-5: Average Notification of Interface Outage

- PO-5-01: Average Notice of Interface Outage

PO-6: Software Validation

- PO-6-01: Software Validation

PO-7: Software Problem Resolution Timeliness

- PO-7-01: Percent Software Problem Resolution Timeliness
- PO-7-02: Delay Hours – Software Resolution – Change – transactions failed, no workaround
- PO-7-03: Delay Days – Software Resolution – Change – Transaction failed with workaround
- PO-7-04: Delay Hours – Failed/rejected Test Deck Transactions – Transactions failed, no workaround

PO-8: Manual Loop Qualification

- PO-8-01: Percent On Time – Manual Loop Qualification
- PO-8-02: Percent On Time – Engineering Record Request

Ordering

OR-1: Order Confirmation Timeliness

- OR-1-02 % On Time LSRC – Flow-through
- OR-1-04 % On Time LSRC/ASRC – No Facility Check (Electronic – No Flow-through)
- OR-1-06 % On Time LSRC/ASRC – Facility Check (Electronic – No Flow-through)
- OR-1-08 % On Time ASRC – No Facility Check (Fax/Mail)
- OR-1-10 % On Time ASRC – Facility Check (Fax/Mail)
- OR-1-12 % On Time FOC
- OR-1-13 % On Time Design Layout Record (DLR)
- OR-1-19 % On time Response – Request for Inbound Augment Trunks

OR-2: Order Reject Timeliness

- OR-2-02 % On Time LSR Reject – Flow-through
- OR-2-04 % On Time LSR/ASR Reject – No Facility Check (Electronic – No Flow-through)
- OR-2-06 % On Time LSR/ASR Reject – Facility Check (Electronic – No Flow-through)
- OR-2-08 % On Time Reject – No Facility Check (Fax)
- OR-2-10 % On Time Reject – Facility Check (Fax)
- OR-2-12 % On Time Trunk ASR Reject

OR-3: Percent Rejects

- OR-3-01 % Rejects
- OR-3-02 % LSR Resubmission Not Rejected

OR-4: Timeliness of Completion Notification

- OR-4-11 % Completed orders with neither a PCN nor BCN sent
- OR-4-16 % Provisioning Completion Notifiers sent within one (1) Business Day
- OR-4-17 % Billing Completion Notifiers sent within two (2) Business Days

OR-5: Percent Flow-Through

- OR-5-01 % Flow-through – Total
- OR-5-03 % Flow-through Achieved

OR-6: Order Accuracy

- OR-6-01 % Service Order Accuracy

- OR-6-03 % Accuracy – LSRC
- OR-6-04 % Accuracy – Directory Listing

OR-7: % Order Confirmation/Rejects Sent Within Three (3) Business Days

- OR-7-01 % Order Confirmation/Rejects Sent Within Three (3) Business Days

OR-8: Order Acknowledgement Timeliness

- OR-8-01 % Acknowledgements on Time

OR-9: Order Acknowledgement Completeness

- OR-9-01 % Acknowledgement Completeness

OR-10: PON Notifier Exception Resolution Timeliness

- OR-10-01 % of PON Exceptions Resolved Within Three (3) Business Days
- OR-10-02 % of PON Exceptions Resolved Within ten (10) Business Days

OR-11: Timeliness of Loss of Line Report

- OR-11-01 % UNE-P/Resale Line Loss Notifications in Days.

Provisioning

PR-1: Average Interval Offered

- PR-1-01 Average Interval Offered – Total No Dispatch
- PR-1-02 Average Interval Offered – Total Dispatch
- PR-1-03 Average Interval Offered – Dispatch one (1) to five (5) Lines
- PR-1-04 Average Interval Offered – Dispatch six (6) to nine (9) Lines
- PR-1-05 Average Interval Offered – Dispatch (≥ 10 Lines)
- PR-1-06 Average Interval Offered – Specials DS0
- PR-1-07 Average Interval Offered – Specials DS1
- PR-1-08 Average Interval Offered – Specials DS3
- PR-1-09 Average Interval Offered – Total
- PR-1-12 Average Interval Offered – Disconnects
- PR-1-13 Average Interval Offered – Hot Cuts – No Dispatch

PR-3: Completed within Specified Number of Days

- PR-3-01 % Completed in one (1) Day, one (1) to five (5) Lines – No Dispatch
- PR-3-03 % Completed in three (3) Days, one (1) to five (5) Lines – No Dispatch
- PR-3-06 % Completed in three (3) Days, one (1) to five (5) Lines – Dispatch
- PR-3-08 % Completed in five (5) Days, No Dispatch
- PR-3-09 % Completed in five (5) Days, one (1) to five (5) Lines – Dispatch

- PR-3-10 % Completed in six (6) Days, one (1) to five (5) Lines – Total
- PR-3-11 % Completed in 10 Business Days
- PR-3-12 % Completed in 15 Business Days
- PR-3-13 % Completed in 26 Business Days[414]

PR-4: Missed Appointments

- PR-4-01 % Missed Appointment – Verizon - Total
- PR-4-02 Average Delay Days – Total
- PR-4-03 % Missed Appointment – Customer
- PR-4-04 % Missed Appointment – Verizon – Dispatch
- PR-4-05 % Missed Appointment – Verizon – No Dispatch
- PR-4-07 % On Time Performance – LNP Only
- PR-4-08 % Missed Appointment – Customer – Due to Late Order Confirmation
- PR-4-14 % Completed On Time – 2-Wire xDSL
- PR-4-15 % On Time Provisioning – Trunks

PR-5: Facility Missed Orders

- PR-5-01 % Missed Appointment – Verizon – Facilities
- PR-5-02 % Orders Held for Facilities > 15 Days
- PR-5-03 % Orders Held for Facilities > 60 Days
- PR-5-04 % Orders Cancelled (> five (5) days) after Due Date – Due to Facilities

PR-6: Installation Quality

- PR-6-01 % Installation Troubles reported within 30 Days
- PR-6-02 % Installation Troubles reported within seven (7) Days
- PR-6-03 % Installation Troubles reported within 30 Days – FOK/TOK/CPE

PR-8: Percent Open Orders in a Hold Status

- PR-8-01 Percent Open Orders in a Hold Status > 30 Days
- PR-8-02 Percent Open Orders in a Hold Status > 90 Days

PR-9: Hot Cut Loops

- PR-9-01 % On Time Performance – Hot Cut
- PR-9-02 % Early Cuts – Lines (MD and VA only)
- PR-9-03 % of Large Job Hot Cut Project Negotiations Completed
- PR-9-04 % On Time Batch Due Date
- PR-9-08 Average Duration of Hot Cut Installation Troubles.

[414] The December 16, 2004, New York Commission order refers to PR-3-12 and PR-3-13 as PR-3-13 and PR-3-14, respectively. In response to Data Request #255, Verizon stated that it corrected the metrics numbers in its compliance filings.

Maintenance and Repair

MR-1: Response Time OSS Maintenance Interface

- MR-1-01: Average Response Time – Create Trouble
- MR-1-02: Average Response Time – Status Trouble
- MR-1-03: Average Response Time – Modify Trouble
- MR-1-04: Average Response Time – Request Cancellation of Trouble
- MR-1-05: Average Response Time – Trouble Report History (By TN/Circuit)
- MR-1-06: Average Response Time – Test Trouble (POTS Only)

MR-2: Trouble Report Rate

- MR-2-01: Network Trouble Report Rate
- MR-2-02: Network Trouble Report Rate – Loop
- MR-2-03: Network Trouble Report Rate – Central Office
- MR-2-04: Percent Subsequent Reports
- MR-2-05: Percent CPE/TOK/FOK Trouble Report Rate

MR-3: Missed Repair Appointments

- MR-3-01: Percent Missed Repair Appointment – Loop
- MR-3-02: Percent Missed Repair Appointment – Central Office
- MR-3-03: Percent CPE/TOK/FOK – Missed Appointment

MR-4: Trouble Duration Intervals

- MR-4-01: Mean Time to Repair – Total
- MR-4-02: Mean Time to Repair – Loop Trouble
- MR-4-03: Mean Time to Repair – Central Office Troubles
- MR-4-04: Percent Cleared (All Troubles) Within 24 Hours
- MR-4-05: Percent Out of Service Greater than Two Hours
- MR-4-06: Percent Out of Service Greater than Four Hours
- MR-4-07: Percent Out of Service Greater than 12 Hours
- MR-4-08: Percent Out of Service Greater than 24 Hours

MR-5: Repeat Trouble Reports

- MR-5-01: Percent Repeat Reports within 30 Days

Network Performance

NP-1: Percent Final Trunk Group Blocking

- NP-1-01: Percent Final Trunk Groups Exceeding Blocking Standard
- NP-1-02: Percent Final Trunk Groups Exceeding Blocking Standard (no exceptions)

- NP-1-03: Number Final Trunk Groups Exceeding Blocking Standard – 2 Months
- NP-1-04: Number Final Trunk Groups Exceeding Blocking Standard – 3 Months

NP-2: Collocation Performance

- NP-2-01 – Percent On Time Response to Request for Physical Collocation
- NP-2-02 - Percent On Time Response to Request for Virtual Collocation
- NP-2-03 – Average Interval – Physical Collocation
- NP-2-04 – Average Interval – Virtual Collocation
- NP-2-05 – Percent On Time – Physical Collocation
- NP-2-05 – Percent On Time – Virtual Collocation
- NP-2-07 – Average Delay Days – Physical Collocation
- NP-2-08 – Average Delay Days – Virtual Collocation

Billing

BI-1: Timeliness of Daily Usage Feed (DUF)

- BI-1-02: % DUF in four (4) Business Days

BI-2: Timeliness of Carrier Bill

- BI-2-02: Timeliness of Carrier Bill

BI-3: Billing Accuracy & Claims Processing

- BI-3-04: % CLEC Billing Claims Acknowledged within two (2) Business Days
- BI-3-05: % CLEC Billing Claims Resolved within 28 Calendar Days After Acknowledgement
- BI-3-07: % Full or Partial Denials
- BI-3-08: % CLEC Billing Claims Not Appearing on the Bill within 45 Days.[415]

Operator Services and Database

OD-1: Average Speed of Answer

- OD-1-01: Average Speed of Answer – Operator Services
- OD-1-02: Average Speed of Answer – Directory Assistance

[415] The title of the BI-3-08 sub-measure was not corrected in the Guidelines applicable to this audit. Verizon actually measures and reports the percentage of claims that did appear on the bill within 45 days.

Appendix B

Status of Findings from Previous Virginia Audit

Previous Virginia Audit Finding Number	Resolved during Previous West Virginia Audit	Resolved during Current Audit	Unresolved during Current Audit period
1	X		
2	X		
3	X		
4	X		
5	X		
6		X	
7	X		
8	X		
9		X	
10			X
11	X		
12	X		
13		X	
14		X	
15		X	
16		X	
17	X		
18	X		
19		X	
20			X
21	X		
22	X		
23	X		
24		X	
25	X		
26			X
27			X
28	X		
29	X		
30	X		
31	X		
32			X
33			X
34	X		
35			X
36		X	
37			X

Previous Virginia Audit Finding Number	Resolved during Previous West Virginia Audit	Resolved during Current Audit	Unresolved during Current Audit period
38		X	
39			X
40			X
41			X
42	X		
43	X		
44	X		
45			X
46	X		
47	X		
48		X	
49	X		
50			X
51			X
52	X		
53			X
54		X	
55			X
56	X		
57		X	
58		X	
59			X
60			X
61	X		
62	X		
63			X
64			X
65	X		
66	X		
67	X		
68	X		
69			X
70			X
71	X		
72	X		
73		X	
74	X		
75	X		
76	X		
77	X		
78		X	
79	X		

Previous Virginia Audit Finding Number	Resolved during Previous West Virginia Audit	Resolved during Current Audit	Unresolved during Current Audit period
80		X	
81	X		
82		X	
83	X		
84	X		
85	X		
86		X	
87		X	
88		X	
89		X	
90	X		
91	X		
92	X		
93	X		
94	X		
95	X		