

**Performance Assurance Plan
Verizon Massachusetts**

Summary of Examination Approach

PricewaterhouseCoopers Examination Approach for the Performance Assurance Plan Verizon Massachusetts

A. Summary of Examination Approach

We were engaged to examine Verizon Communications Inc.'s (the "Company") compliance with the requirements set forth in the Performance Assurance Plan Verizon Massachusetts (the "PAP") during the period from May 1, 2002 through May 31, 2002 (the "Evaluation Period"), and management's assertion (the "Assertion"), included in the Report of Management on Compliance with the Performance Assurance Plan Verizon Massachusetts, that the Company complied with the PAP during the Evaluation Period.

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants and, accordingly, included examining, on a test basis, evidence about the Company's compliance with the requirements of the PAP and performing such other procedures as we considered necessary in the circumstances. Our examination does not provide a legal determination on the Company's compliance with specified requirements. This summary is intended solely for the information and use of the Massachusetts Department of Telecommunications and Energy and is not intended to be and should not be used by anyone other than these specified parties. However, this summary is a matter of public record and its distribution is not limited.

The following summary of the examination procedures that we performed does not comprise a detailed description of all of the procedures that we performed nor include the detailed results of the procedures performed. Our examination approach for the PAP for the month of May 2002 included an assessment of Verizon's internal controls over performance measurement reporting and substantive testing procedures for performance measurement reporting and the bill credit calculation.

Our assessment of Verizon's internal controls included documenting and understanding Verizon's internal controls as they relate to the completeness and accuracy of the performance measurement calculations as well as the security, operations and change management controls over the performance measurement reporting and CLEC bill credit calculation environments.

Substantive testing was performed using PwC's metric and payment replication platforms. Using the metric replication platform, we obtained original source transaction data from the point in the Verizon systems where source data are gathered, as well as necessary supporting documentation (PAP requirements, data dictionaries, supplemental data tables, etc.), independently replicated Verizon's calculations to test the completeness and accuracy of the metric calculations selected for testing and compared results to those reported by Verizon. Using the payment replication platform, we obtained performance measurement data reported by Verizon, independently replicated Verizon's calculations to test the completeness and accuracy of the CLEC bill credit calculations and compared results to those reported by Verizon. Under certain circumstances, the PAP requires the use of multiple months of performance measurements data to calculate the CLEC bill credits. In

these circumstances, our examination did not include performing procedures on the performance measurement data reported by the Company for months other than May 2002.

B. Metric Selections and Criteria

Because Verizon maintains multiple metric calculation processes within each service category (e.g. Ordering, Provisioning), and the specific business rules applied to the metrics within each service category vary, we believe that the metrics do not constitute a homogenous population that lends itself to the application of statistical sampling. We believe that the use of a judgmental sample across the underlying Verizon processes and major service categories is a more effective testing methodology.

The selection of the specific performance metrics included in our sample was designed to achieve the following objectives:

- ✓ Coverage across major “processes” and applications used in the metric calculation process.
- ✓ Coverage across all Modes of Entry, as defined in the PAP.
- ✓ Coverage across all levels of risks related to CLEC bill credits as defined by the weights in Appendix A of the PAP with emphasis on metrics with a higher importance.
- ✓ Coverage across most Critical Measures that are subject to CLEC bill credits.
- ✓ Coverage across all Special Provisions as defined in the PAP.
- ✓ Coverage across more complex metrics.

In total, we selected 128 out of the 252 metrics in the PAP or approximately 51% for testing, consisting of wholesale metrics and the retail compare metrics, where applicable. This included 27 out of 33 of the high importance by weight measures and 10 out of 12 of the Critical Measures, and all 4 of the Special Provisions. In addition we selected 2 of the 4 Change Control Assurance Plan metrics. Please refer to Attachment A for a complete list of metrics selected for testing.

C. Workplan

The following is a summary of the procedures we performed to examine the accuracy and completeness of the performance measurements for May 2002 and related CLEC bill credits, as defined in the Assertion.

1. Examination of Data Reliability

- a. Verified existence of business rule requirements, reporting methods and procedures, and reporting system documentation.
 - Reviewed business rules used in the metric calculation systems for May 2002.
- b. Compared PAP language and other PAP requirements against performance measurement definitions specified by Verizon metric calculation systems.
 - Assessed whether the business rules applied by the metric calculation systems are consistent with the business rules present in the PAP for each metric re-calculation selected.
- c. Tested that data calculations from the point in the Verizon systems where source data are gathered are accurate and in accordance with the PAP language.
 - Evaluated Verizon's methods, procedures and processes, as well as the control environment surrounding metric calculations.
- c.1.) Manual Inputs: As stated in the Assertion, "where manual processes were used to enter information into the underlying operating support systems related to missed appointment codes, completion dates, application dates and times, appointment type codes, notification dates, disposition codes, trouble cleared date and time, and out of service indicators, such manually entered information were complete and accurate."
 - Conducted interviews of appropriate Verizon personnel to document understanding of manual entry processes for the manual fields listed above.
 - Obtained complete listing of center locations where manual fields are entered into Verizon's Operating Support Systems (OSS).
 - Interviewed appropriate Verizon personnel to document our understanding of the Retail, Wholesale and UNE centers and the specific systems utilized where the manual data entry occurs to the fields listed in the Assertion.
 - Selected the centers to visit for testing where the manually entered fields listed above are input into the OSS.
 - Documented understanding of procedures and controls in place over manual entry processes.
 - Performed tests over the completeness and accuracy of manual data entry processes in place.
- c.2.) Metric Input Data – Performed for each of the metric calculation processes (eg. Pre-Order, Ordering, etc.)
 - Documented and assessed Verizon's procedures for determining the point in the Verizon systems where source data are gathered and for pulling the data completely and accurately.

- Documented our understanding of the process flow of data from the source system through to the metric calculation system.

c.3.) Data Collection and Metric Calculation -Performed for each of the metric calculation processes (eg. Pre-Order, Ordering, etc.)

- Assessed cut-off procedures for recording and collection of data from the point in the Verizon systems where source data are gathered before and after the cut-off date.
- Assessed processes in place for collecting data from the feeder systems, from the point in the Verizon systems where source data are gathered, and for calculating performance measurements in a complete, accurate and timely manner.

c.4.) Documented understanding of the overall centralized change management processes in place.

- Conducted interviews of Verizon personnel to document understanding of the centralized change management processes.
- Reviewed the change management documentation to understand the change management processes being used by the Company.
- Reviewed and evaluated the impact of changes implemented through the change management process that affected the May 2002 data.

c.5.) Documented our understanding of Verizon's Quality Assurance Processes over the calculation and reporting of performance metrics.

- Conducted interviews of Verizon personnel to document our understanding of the replication processes.
- Documented our understanding of Verizon's procedures for Wholesale Quality Assurance Team (WQAT) metric replications.
- Reviewed the job aids used for the replication process to document understanding of the replication process being used by Verizon.
- Obtained results of WQAT procedures and reviewed issues identified as a result of replication.

2. Report Timeliness and Completion

- a. Secured copies of reports filed with the Department for Verizon performance month May 2002. Verified reports were filed timely in accordance with the PAP requirements.
- b. Reviewed report and interviewed Verizon employees responsible for generating the report to determine completeness of the data, as reported.
- c. Evaluated policies and practices for collecting and storing data from the pull point, which are necessary for the creation of performance metrics. Conducted interviews with Verizon data collection and storage personnel and reviewed Verizon documentation to document our understanding of the process.

3. Implementation of Ordered Statistical Methodology
 - a. Examined and tested the statistical formulas used by Verizon to determine if "parity" exists between Verizon Massachusetts's wholesale and retail performance. Verified that formulas are consistent with Appendix D of the Massachusetts Performance Assurance Plan.
 - b. Tested accuracy of CLEC bill credits for both facilities based and non-facilities based CLECs receiving credits
 - Tested the accuracy of the volumes used in the credit calculations for each of the four Modes of Entry – Resale, UNE, DSL, and Interconnection Trunks.
 - Replicated the calculations of all CLEC bill credits for the month of May 2002, applying the rules surrounding the Mode of Entry, Critical Measures, Special Provisions and Change Control Assurance Plan, as required in the PAP based upon the performance measurement data reported by the Company for the applicable months.

ATTACHMENT A – METRICS SAMPLE

Metrics Selected for substantive testing:

Metric	Products	# Sub-metrics
PO-1-01 through PO-1-06	EDI, Web GUI, Retail	18
PO-2-02	EDI	1
PO-4-01	CLEC Type 3,4,5	1
PO-4-03	CLEC Type 1-5	1
OR-1-04	Resale: POTS, Specials UNE: 2-wire digital, 2-wire xDSL, Line sharing, Platform, Specials	7
OR-1-12	CLEC Trunks	1
OR-2-04	Resale: POTS, Specials UNE: 2-wire digital, 2-wire xDSL, Line sharing, Platform, Specials	7
OR-4-09	Resale and UNE	2
OR-5-03	Resale and UNE	2
PR-4-01	Resale, UNE, Retail: Specials UNE EEL and IOF	5
PR-4-01	Retail and CLEC trunks	2
PR-4-02	Resale: POTS, Specials UNE, Retail: POTS, Specials, 2-wire digital, 2-wire xDSL, Line sharing	12
PR-4-02	Retail and CLEC trunks	2
PR-4-04	Resale: POTS, Retail: POTS, 2-wire digital, Line sharing UNE: Platform, New Loop, 2-wire digital, 2-wire xDSL, Line sharing	9
PR-4-05	Resale: POTS Retail: POTS, Line sharing UNE: Platform, Line sharing	5
PR-4-07	UNE LNP	1
PR-6-01	CLEC and Retail trunks	2
PR-6-02	UNE hot cut loop	1
PR-9-01	UNE	1
MR-1-01, 03, 04	CLEC	3
MR-1-01, 03, 04	Retail	3
MR-4-01	Retail and CLEC trunks	2

Metric	Products	# Sub-metrics
MR-4-01	Retail, Resale, UNE specials	3
MR-4-02	Resale: POTS Retail, UNE: POTS, 2-wire digital, 2-wire xDSL, line sharing	9
MR-4-03	Retail, Resale, UNE: POTS	3
MR-4-08	Retail, Resale, UNE: POTS, Specials	6
MR-5-01	Retail and CLEC trunks, Retail, Resale, UNE: POTS, Specials	8
NP-1-03, NP-1-04	CLEC	2
NP-2-05 through NP-2-08	CLEC: New and Augment	8
BI-1-02	CLEC	1
Total		128