BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Investigation into U S WEST Communications, Inc.'s Compliance with § 271 of the Telecommunications Act of 1996	Docket No. UT-003022
In the Matter of U S WEST Communications, Inc.'s Statement of Generally Available Terms Pursuant to Section 252(f) of the Telecommunications Act of 1996	Docket No. UT-003040

QWEST CORPORATION'S

VERIFIED COMMENTS
REGARDING THE ROC FINAL OSS TEST REPORT

CHECKLIST ITEM 2 – OSS

~~**June 3, 2002**~~
Errata Filing

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Qwest Corporation ("Qwest"), through its undersigned counsel, submits its verified comments regarding the Qwest Communications OSS Evaluation Final Report, Version 2.0, dated May 28, 2002, submitted by KPMG Consulting ("*KPMG Final Report*"), in accordance with this Commission's May 14, 2002 32nd Supplemental Order; Prehearing Conference Order; Notice of Prehearing Conference in this matter. The portions of these Verified Comments relating to Section 271/FCC standards for Operational Support Systems ("OSS"), the design and execution of the Regional Oversight Committee ("ROC") OSS Test, the Test results and commercial data relating to pre-ordering and maintenance and repair, Technical Assistance to the CLECs, ~~and~~ Interface Testing Environments, Commercial Data, and Third Party Test Results (Sections II, III, IV-A, IV-D, V-B, ~~and~~ V-C, V-D, and V-E) are verified by Lynn Notarianni. Ms. Notarianni's background and qualifications are set forth below, in the introductory section of these Verified Comments. The portions of these Verified Comments relating to Qwest's Change Management Process ("CMP") (Section V-A) have been verified by Judith Schultz. Ms. Schultz's background and qualifications are also set forth below, in the introductory section. The portions of these Verified Comments relating to test results for ordering, provisioning, and billing (Sections IV-B, IV-C, and IV-E) have been verified Christopher J. Viveros. Mr. Viveros's background and qualifications are also set forth below, in the introductory section.

I. INTRODUCTION

On May 28, 2002, KPMG Consulting ("KPMG") issued its Final Report regarding "Qwest Communications OSS Evaluation." This *Final Report* marked the culmination of more than three years of exhaustive and comprehensive effort, unlike any seen before, to determine whether Qwest's OSS meet the standards set forth under Section 271 of the Telecommunications

Act of 1996, as those standards have been amplified and applied by the FCC. KPMG's *Final Report*, along with Qwest's commercial results, demonstrates that Qwest has met those standards, and provides non-discriminatory access to its OSS as required by Section 271. In these comments, Qwest addresses the following issues:

- The Section 271/FCC standards applicable to the OSS Test, which require that a Regional Bell Operating Company ("RBOC") make its OSS available to competing local exchange carriers ("CLECs") on a non-discriminatory basis (Section II herein);
- The open and collaborative ROC process used to design and carry out the ROC OSS Test, which ensured that successful resolution of the test would prove that Qwest makes it OSS available to CLECs on a non-discriminatory basis (Section III herein);
- The results of the ROC OSS Test, and Qwest's commercial performance data, which both demonstrate that Qwest does make its OSS available on a non-discriminatory basis (Section IV herein); and
- CMP, Interface Test Environment and Technical Assistance issues related to the ROC OSS Test, which are factors the FCC will consider when determining whether Qwest has made its OSS available on a non-discriminatory basis. (Section V herein).

Lynn Notarianni has verified the comments in Sections III, IV-A, IV-D, V-B, and V-C. Ms. Notarianni is employed by Qwest as a Director in the Information Technologies ("IT") Wholesale Systems organization. Her business address is 930 15th Street, 10th Floor, Denver, Colorado. Ms. Notarianni's 17-year telecommunications career began in 1984 when she was

hired by U S WEST Communications, Inc. She has been employed by U S WEST, and its successor, Qwest, continuously since 1984. Since January 1996, Ms. Notarianni has managed Qwest's response to OSS-related regulatory issues with respect to the 1996 Act, FCC orders, state commission decisions, and other legal and regulatory matters. Additionally, she has led Qwest's effort to support OSS tests being conducted by the ROC and the Arizona Corporation Commission. She is responsible for testifying before federal and state regulatory agencies in arbitration cases, rulemakings, and complaint proceedings concerning Qwest's conformance with state and federal telecommunications laws and regulations. In fact, she has testified in numerous state arbitration hearings on OSS access, performance measures, cost recovery, and CLEC motions.

Ms. Notarianni has experience in transacting business with CLECs, as well as experience with the Qwest Wholesale products and interconnection services CLECs sell and utilize. Examples of this experience include: leading multiple OSS negotiations with CLECs, which resulted in draft contractual agreements; impacting interconnection product definition through system and process analysis support; and, driving the initial strategy behind the implementation of OSS gateway access for interconnection.

Judith Schultz has verified the comments relating to Change Management in Section V-A. Ms. Schultz is employed by Qwest as a Director in the Qwest Corporation Wholesale Service Delivery Organization. Ms. Schultz's office is located at 1005 17th Street, Denver, Colorado. Ms. Schultz has been employed by Qwest, or its predecessor, U S WEST, for approximately 20 years. Ms. Schultz is currently the Director responsible for Change Management, and as such, is

responsible for directing the Change Management Process redesign effort and managing the implementation of Qwest's Change Management Process.

Christopher J. Viveros has verified the comments in Sections IV-B, IV-C, and IV-E. Mr. Viveros is employed by Qwest as a Director in the Qwest Services Corporation Policy and Law organization. His business address is 1778 Montrose Dr., Concord, CA. Mr. Viveros attended California State University at Los Angeles where he majored in Computer Science. He has been employed by Qwest (formerly known as U S WEST) since January 2000. Prior to his employment with Qwest, Mr. Viveros worked for SBC/Pacific Bell for over 20 years. During his career, he has held positions in Marketing, Product Development, Regulatory and Network Implementation. Mr. Viveros is currently a member of the Qwest Policy and Law organization responsible for representing Qwest in a number of 271 proceedings. He has previously testified in the states of Arizona, California, Colorado, Idaho, Illinois, Iowa, Montana, Nevada, New Mexico, North Dakota, Ohio, Texas, Utah and Wyoming.

II. SECTION 271/FCC STANDARDS RELATING TO OSS ACCESS

The ROC OSS Test was painstakingly designed to determine whether Qwest provides access to OSS in a manner that satisfies Section 271 of the Telecommunications Act of 1996 ("the Act"), focusing, in particular, on the standards that the FCC has enunciated in previous Section 271 orders. Section 271(c)(2)(B)(ii) of the Act requires that Qwest provide "nondiscriminatory access to network elements in accordance with the requirements of sections

251(c)(3) and 252(d)(1)."[1] The FCC has held that OSS is among the network elements subject to sections 251(c)(3) and 252(d)(1).[2]

Previous FCC orders addressing section 271 applications have elaborated on the nondiscrimination standard of section 271(c)(2)(B)(ii). Specifically, for those functions that are analogous to the ones that Qwest provides to itself in connection with its own Retail services, the FCC has established a "retail analog test," pursuant to which Qwest must provide CLECs with access to these functions in "substantially the same time and manner" as it provides them to itself.[3] For those functions that have no retail analog, the FCC standard is that the access Qwest provides to CLECs must offer an efficient competitor a "meaningful opportunity to compete."[4]

As both the test results and Qwest's commercial performance data demonstrate, Qwest meets the FCC standards relating to OSS access. Qwest has deployed "the necessary systems and personnel to provide sufficient access to each of the necessary OSS functions . . . and is adequately assisting competing carriers to understand how to implement and use all of the OSS functions available to them."[5] "The OSS functions that [Qwest] has deployed are operationally

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1 47 U.S.C. § 271(c)(2)(B)(ii).

2 *See Local Competition First Report and Order*, 11 FCC Rcd at 15766 (¶523). *See also Georgia/Louisiana 271 Order* at App. D; *Arkansas/Missouri 271 Order*, 16 FCC Rcd at 20857-58 (App. D, ¶26); *Pennsylvania 271 Order*, 116 FCC Rcd at 17520 (App. C, ¶26).

3 *See Georgia/Louisiana 271 Order* at App. D; *Arkansas/Missouri 271 Order*, 16 FCC Rcd at 20859 (App. D, ¶29); *Pennsylvania 271 Order*, 16 FCC Rcd at 17521-22 (App. C, ¶29); *New York 271 Order*, 15 FCC Rcd at 3971 (¶44), *citing Michigan 271 Order*, 12 FCC Rcd at 20599.

4 Id.

5 Id.

ready, as a practical matter."[6] In addition, (1) Qwest "has developed sufficient electronic and manual interfaces to allow competing carriers equivalent access to all of the necessary OSS functions;" (2) Qwest has disclosed to CLECs "any internal business rules and other formatting information necessary to ensure that a carrier's requests and orders are processed efficiently;" and (3) Qwest's OSS "is designed to accommodate both current demand and projected demand."[7]

FCC orders provide that Qwest must provide CLECs access to five primary OSS functionalities: pre-ordering, ordering, provisioning, maintenance and repair, and billing.[8] These Verified Comments describe how the test results and commercial performance data demonstrate that Qwest meets these standards for each of the five primary OSS functionalities, and also describe how Qwest assists CLECs in utilizing these OSS functionalities.

III. TEST DESIGN AND EXECUTION

The ROC OSS Test process, which was initiated approximately three years ago, has been the subject of extensive and exhaustive collaboration between the ROC, state agencies, CLECs, Qwest and other parties.

Thirteen participating ROC states initiated a collaborative process to design an overall plan for ensuring that Qwest's OSS are available to CLECs in an open and non-discriminatory

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6 Id.

7 *See Georgia/Louisiana 271 Order* at App. D; *Arkansas/Missouri 271 Order*, 16 FCC Rcd at 20859-60 (App. D, ¶30); *Pennsylvania 271 Order*, 16 FCC Rcd at 17522 (App. C, ¶30); *New York 271 Order*, 15 FCC Rcd at 3992-93 (¶88).

8 Id.

manner.[9] The rationale for subjecting Qwest's OSS to the ROC process (as opposed to evaluating Qwest's OSS on a state-by-state basis) was to encourage collaboration among the states, the CLECs, Qwest and other industry participants. The intent was to ensure that all CLECs – whether they serve a small area or cover Qwest's entire region – are provided with non-discriminatory access to Qwest's OSS.

To assist in the development and execution of the ROC OSS Test, the ROC retained a number of professional consultants, who brought significant experience to the ROC because they had been involved in the testing of other RBOC OSS.

A. BACKGROUND AND STRUCTURE

As a first step in the development of an independent third party test, the ROC created an Executive Committee, now comprised of seven state regulatory commissioners, as well as a Steering Committee comprised of regulatory staff members from each participating state commission.[10] The task of these committees was to hire vendors to administer the test, as well as negotiate and oversee the overall test process. The Steering Committee oversaw the test process, assisted in developing and implementing the test, and was the first point of escalation for resolving test issues. The Executive Committee reviewed the overall progress of the test and made final decisions on escalated test issues.

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[9] Information about the ROC and the testing process is available on the ROC's OSS Information Repository at http://www.nrri.ohio-state.edu/oss/oss.htm. The Arizona Corporation Commission was the only state in Qwest's local service region to not participate in the ROC OSS Test. Arizona did not participate largely because its own OSS testing process was already underway when the ROC OSS test process convened.

[10] Initially, the Executive Committee was comprised of five commissioners.

In July 1999, the ROC selected the National Regulatory Research Institute ("NRRI") to serve as project administrator for the third party test. The NRRI was responsible for coordinating and providing advice, research and assistance to the Executive Committee and the Steering Committee. The NRRI also functioned as a liaison between the ROC, the Department of Justice ("DOJ") and the FCC.

The ROC also created a Test Administration Group ("TAG") to handle the day-to-day operations of the test. The ROC TAG was a collaborative forum comprised of – and open to – representatives of the ROC, Commission staff, test vendors, CLECs, industry associations, consumer groups, and Qwest. The purpose of the TAG was to enable the parties to work together in an informal but structured environment in designing and evaluating the test process, to ensure that CLECs have access to Qwest's OSS in a manner that provides them with a meaningful opportunity to compete in the marketplace for local service. The TAG provided technical assistance and subject matter expertise in test planning and execution and assisted in reviewing test results. Any party that wished to participate could become a member of the TAG. The TAG met weekly – usually by telephone conference – to discuss and decide every issue relating to the scope, implementation, and execution of the test. There were over 100 TAG meetings/teleconferences relating to the progress of the test.

In September 1999, the ROC hired Maxim Telecommunications Group Consulting ("MTG") to act as the project manager for the third party test. MTG has been responsible for representing the state regulatory agencies in day-to-day test management, including observing testing to ensure fairness and managing the overall schedule and quality of the test. MTG has played a pivotal role in managing interaction between the ROC and test vendors, facilitating

resolution of key issues from the TAG, Steering and Executive Committees, and moving the entire project to closure.

With MTG's guidance, the TAG immediately initiated discussions to determine the scope of the test. In late 1999 and early 2000, the TAG held several face-to-face meetings to discuss and agree on test principles, performance measures, and the documents that would describe the test.[11] These principles and performance measures were eventually identified and described in a Test Requirements Document ("TRD"). The TRD, a high level document that defines the major aspects of the test, was finalized in March 2000.[12]

In July 2000, through a competitive bid process, the ROC contracted with three additional parties to assist in implementing and administering the third party test. Specifically, the ROC retained KPMG Consulting ("KPMG"), which has considerable experience in evaluating OSS, to serve as the test administrator.[13] The ROC also hired Hewlett-Packard Consulting ("HP"), which also has considerable experience in evaluating OSS, to serve as a pseudo-CLEC in the testing process.[14] Finally, the ROC hired The Liberty Consulting Group ("Liberty") to conduct a comprehensive audit of the PIDs developed by the TAG to ensure that

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[11] The TAG held workshops to discuss the guiding principles and scope of the test on December 2, 1999, December 3, 1999 and February 9, 2000. The TAG also held a series of workshops relating to performance measures on January 19, 2000 and March 14, 2000.

[12] A copy of the TRD is attached hereto as Exhibit LMN-3. *See also* http://www.nrri.ohio-state.edu/oss/master/trd.pdf.

[13] KPMG was the lead test administrator for Bell Atlantic's OSS test in New York, which was the first successfully completed OSS test in the nation, as well as the third party test administrator in a number of other states.

[14] The pseudo-CLEC's role was to emulate a CLEC by establishing a business relationship and conducting on-going business with Qwest. To ensure that the pseudo-CLEC obtained unbiased information regarding Qwest's OSS, Qwest's operational personnel were "blind" to the identity of the pseudo-CLEC.

Qwest was properly measuring and recording its commercial data. Liberty's audit – which was completed on September 25, 2001, and resulted in the issuance of a comprehensive report – ultimately validated each PID measure.[15]

KPMG, as Test Administrator, developed a Master Test Plan ("MTP") based on the TRD. Unlike the TRD, the MTP sets forth a comprehensive plan for evaluating Qwest's OSS. ***[16]*** Before issuing its first draft of the MTP, KPMG posed several design questions to the ROC TAG for comment. After the submission of written comments, the ROC TAG held a workshop devoted to discussing the MTP design and the test statistical approach. This workshop was held between July 18, 2000 and July 20, 2000. After that workshop, on July 28, 2000, KPMG created the first version of the MTP, version 1.0. Once again, the parties submitted written comments followed by another workshop. The second MTP workshop was held on August 14-16, 2000, after which KPMG created MTP version 2.0. Additional comments resulted in MTP version 3.0, which was issued on September 25, 2000. This version was subsequently reissued with corrections and finalized on November 17, 2000.

The TAG also agreed to a process by which the MTP could be changed after it was finalized. The process provided for any TAG member to submit a request for a change to the MTP, called an "MTP change request," and provided for consideration by the vendors, comments by the parties and formal acceptance or rejection by the TAG. Such change requests

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15 A copy of Liberty's Performance Measures Audit, including Liberty's comments regarding the final audit is available at http://www.nrri.ohio-state.edu/oss/master/pid/pid.htm, titled "Liberty Response to Comments."

16 A copy of the MTP is attached hereto as Exhibit LMN-4. *See also* http://www.nrri.ohio-state.edu/oss/master/mtp/april/ROC_MTP_Version_5.2.pdf. Because the test has been an ongoing, collaborative, and, at times, evolving process, changes have been made to the MTP when necessary, to reflect decisions of the TAG.

resulted in MTP version 4.0, issued on October 3, 2001, version 5.0 issued on December 28, 2001, version 5.1 issued on February 15, 2002, and the final MTP version, version 5.2, issued on April 9, 2002.[17]

In addition to developing the TRD and MTP, the TAG reached agreement on a comprehensive set of measurement definitions, called the Performance Indicator Definitions, or PIDs, which describe the manner in which Qwest's performance is measured in both a commercial setting and for purposes of the test. These PIDs, which include "benchmarks" or required levels of performance, were developed by the TAG concurrent with the development of the TRD and MTP. Rather than negotiate the ROC PIDs from scratch, however, the TAG built upon existing performance measures reached in the collaborative OSS test conducted by the Arizona Corporation Commission.[18]

The TRD, MTP, and PIDs – individually and together – represent an unprecedented and comprehensive collaboration between the CLECs, state commission staff members, test vendors, and Qwest. The parties to the ROC invested substantial resources and effort, including many hours in face-to-face meetings, to reach agreement on nearly each and every word in those

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[17] There were a total of 30 MTP change requests. *See* http://www.nrri.ohio-state.edu/oss/master/master_change/master_change.htm.

[18] Because of the dynamic nature of Qwest's systems and product offerings, the PIDs developed by the TAG have undergone many changes since they were first established. General agreement within the TAG with respect to the vast majority of PIDs was reached around February 2000. Since then, the TAG has continued to refine each PID as needed. The PIDs today contain 53 measures and more than 700 submeasures. A comprehensive description of Qwest's PIDs – including the data collection, verification and reconciliation processes to which they have been subject – can be found at: http://www.qwest.com/wholesale/results/roc.html.

documents. Through these efforts, the parties reached consensus on hundreds of issues. In fact, there were only a small number of issues on which the parties could not reach agreement.[19]

When the TAG could not agree on an issue, the matter was escalated to the Steering Committee for resolution. If a party was dissatisfied with the Steering Committee's decision, it could escalate the dispute further to the Executive Committee.[20] Although some disputes required escalation to the Steering Committee and in some cases the Executive Committee, the vast majority of issues were resolved through the collaborative process within the TAG.

B. TEST PRINCIPLES AND DESIGN

The third party test of Qwest's OSS was designed with 20 overall guiding principles in mind. Generally, these principles were established in the TAG using the same collaborative process that was used for all other aspects of the TAG. Although these principles are set forth explicitly in the TRD and the MTP,[21] a number of them warrant mention here:

1. *Principle 3* requires that the third party test be "designed and scaled to represent the environment of the 13 states to ensure their ability to use the results in individual state proceedings."[22] Principle 3 further states that where differences within Qwest's local service regions exist, the test will be modified as appropriate

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19 Less than a dozen issues required formal impasse resolution. *See* http://www.nrri.ohio-state.edu/oss/tag/impasse/impasse.htm.

20 A description of the impasse resolution process is located at http://www.nrri.ohio-state.edu/oss/tag/disputeres/disputeres.htm.

21 *See TRD* (Exhibit LMN-3) at 14.

22 Id. at 15.

to address these regional and state differences.[23] Thus, the third party test was designed to cover all of Qwest's OSS features and functions in the 13 participating states.

2. *Principle 4* provides that communications relating to the planning, conduct, and evaluation of the third party test must include regular, open TAG meetings.[24] Faithful adherence to this principle has resulted in an unprecedented breadth and depth of participation and collaboration from state commission staff and representatives of CLECs and Qwest.

3. *Principle 5* states that the ROC third party test "will use guidelines established by the FCC and DOJ, and will draw on input from the ROC Steering Committee, individual state commissions, CLECs, Qwest and other TAG members."[25] It also notes that "CLECs . . . should play an active role in developing performance measurements and success criteria."[26] This clearly indicates that the ROC process was the product of true collaboration in both design and administration.

To ensure that the ROC third party test would provide a valid basis upon which each of the 13 participating ROC states could base their respective recommendations to the FCC regarding Qwest's section 271 applications, KPMG, in addition to administering the overall test,

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23 Id.

24 Id..

25 Id.

26 Id.

performed a Regional Differences Analysis ("RDA"). In doing so, KPMG interviewed a number of Qwest personnel and reviewed Qwest documentation to illuminate any differences in systems and processes throughout Qwest's territory.

KPMG's RDA, released on October 5, 2000,[27] found that Qwest's order management, provisioning, maintenance and repair, and CLEC relationship management and infrastructure are materially consistent across Qwest's three regions.[28] Although KPMG found that Qwest's CRIS billing system and Service Order Processors (SOPs) differ by region, it noted that Qwest has standardized most of its processes across these regions.[29] KPMG also noted that, although Qwest's provisioning in certain respects was not consistent across the three regions, a region-wide test presented an appropriate way to measure the company's OSS because the MTP could be designed to accommodate these differences. Test transaction volumes therefore were set at levels and distributed in such a way as to produce statistically valid results given the identified differences.

Testing was conducted pursuant to the scenarios presented in the MTP. As each test was administered, each of the relevant test vendors identified any issue(s) that required explanation, clarification or modification by Qwest. These issues were then reviewed through the

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[27] A copy of the RDA is attached hereto as Exhibit LMN-5. *See also* http://www.nrri.ohio-state.edu/oss/master/executionregional_differences_assessment_10-5-00.pdf.

[28] Qwest's current operating territory, and therefore much of its OSS legacy architecture, is the product of the merger of three predecessor Bell Operating Companies: Pacific Northwest Bell (covering Washington and Oregon); Mountain Bell (covering Arizona, Colorado, Idaho, Montana, New Mexico, Utah, and Wyoming); and Northwestern Bell (covering Iowa, Minnesota, Nebraska, North Dakota, and South Dakota). Pacific Northwest Bell's operating area is now referred to as Qwest's Western Region; Mountain Bell's operating area is now referred to as Qwest's Central Region; and Northwestern Bell's operating area is now referred to as Qwest's Eastern Region.

[29] *See RDA* (LMN-5) at 37.

"Observation and Exception" process, wherein the vendor documented issues or concerns with Qwest's performance.[30]

As Exceptions and Observations were identified, the ROC process required KPMG (or the relevant vendor) to develop a written description of the issue for Qwest. Qwest then responded in writing to each Observation and Exception, providing supplemental information where necessary in an effort to alleviate the concern. To ensure that the issues were addressed appropriately, a weekly telephone conference call was held between Qwest, the relevant test vendor(s) and any interested CLEC to discuss pending Observations and Exceptions.

Using the Observation and Exception process, 242 Observations and 256 Exceptions were identified in the ROC test. CLECs actively participated in the discussion and resolution of virtually all of these Observations and Exceptions.[31]

As described in the TRD and detailed in the MTP, the ROC third party test was conducted through a series of transactional and operational evaluations. These evaluations tested the five primary components of Qwest's OSS – pre-ordering, ordering, provisioning,

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[30] Generally, an "Observation" is a means of identifying either of the following: (1) a question regarding an area of a Qwest component being tested that the vendor cannot answer without additional guidance from Qwest; or (2) a potential deficiency in a Qwest component that could contribute to a negative finding. An "Exception" is a means of identifying a deficiency in a Qwest component that may result in a negative comment if left unresolved. Generally, an Observation represents a concern that has not risen to the level of an Exception. Qwest has attached as an exhibit each Exception or Observation discussed herein. These exhibits include the Disposition Report associated with each Exception/Observation, as well as the final Qwest response for each Exception/Observation. (See Exhibits JMS-6 through JS-OSS-11, and LMN-20 through LMN-46, and LMN-52).

[31] With only a handful of exceptions, Qwest satisfactorily addressed each of these Observations and Exceptions, resulting in the vendors closing these items as resolved. Those few Observations or Exceptions that were closed unresolved are address herein in Section IV and Section V of these Verified Comments. As discussed in greater detail in those sections, these few unresolved items do not alter the conclusion that Qwest provides CLECs access to its OSS in accordance with the standards set forth by Section 271 and the FCC.

maintenance and repair, and billing – and also evaluated the technical assistance Qwest offers CLECs , as well as Qwest's Change Management Process.[32]

C. TEST REPORTS

Actual transactional testing under the ROC process commenced on April 9, 2001. As each test was completed, KPMG issued a Discrete Test Report ("DTR")[33] for that test with the results. After each DTR was issued, the parties had an opportunity to comment on the DTR and those comments were evaluated and considered by KPMG, resulting in Revised Discrete Test Reports. These reports and results were subjected to further scrutiny through a series of transcribed Vendor Technical Conferences (VTCs). These VTCs were preceded by the submission of written questions surrounding the factual accuracy of the reports. During the VTCs the test vendors provided answers to the written questions as well as follow up questions.

At the completion of the vast majority of the OSS testing process, on April 19, 2002, KPMG and HP generated and delivered a *Draft Final Report* to the ROC that was similar to the Final Reports it prepared in the context of other RBOC OSS tests. The *Draft Final Report* integrated previously-delivered DTRs and additional test results that were not previously

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[32] The Change Management Process, or CMP, is intended to facilitate a discussion between CLECs and Qwest about product, process or OSS interface release changes, release life cycles, release notifications, communication intervals, and regularly scheduled CMP meetings. Team members include CLEC and Qwest representatives who gather to review CLEC and Qwest Change Requests. Qwest discusses its CMP in detail in Section V of these Verified Comments. A more complete description of Qwest's CMP is available at: www.qwest.com/wholesale/cmp/whatiscmp.html.

[33] For those tests that concluded within a month of the issuance of the *Draft Final Report*, a DTR was not issued. The results of these tests were incorporated in the *Draft Final Report*, which was then revised (following further TAG input) to create the *Final Report*.

reported. The *Draft Final Report* also included sections for test result summaries, overall evaluation, overall material and distribution and document control information.

Like all reports issued as part of the OSS test process, the *Draft Final Report* was subject to comment and deliberation by the TAG, including discussion in vendor technical conferences. Following this review process, KPMG and HP issued a *Final Report* on May 28, 2002. [34]

The ROC test included the following evaluations: (1) Pre-ordering, Ordering, and Provisioning Functional Evaluation; (2) Order Flow-Through Evaluation; (3) Pre-ordering, Ordering, and Provisioning Volume Performance Test; (4) Maintenance and Repair ("M&R") Functionality and End-to-End Trouble Report Processing Tests, including an M&R Volume Test; (5) Billing Usage and Carrier Bill Functionality Test; (6) CLEC Support Processes and Procedures Review; (7) Change Management Test; and (8) Performance Measure Audit. Each of these evaluations is described in turn below.

1. Pre-ordering, Ordering, and Provisioning Functional Evaluation (Tests 12, 12.7, 13, 12.8, 14, 14.7 and 14.8)

There were multiple tests that collectively validated the existence, functionality, and behavior of the Qwest interfaces and processes for pre-ordering, ordering, and provisioning.[35] Additionally, these tests evaluated generally Qwest's Wholesale performance in these areas in comparison to its Retail systems.[36] The tests consisted of live transactions submitted through the

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[34] Qwest filed a copy of the *Final Report* on 05/29/02. In addition, the *Final Report* is available at http://www.nrri.ohio-state.edu/oss/master/master.htm.

[35] *See* KPMG Final Report at Section IV, Test 12, subsection 1.0.

[36] Id.

IMA-GUI, IMA-EDI, NDM and TELIS electronic interfaces.[37] This evaluation was intended to examine an end-to-end view of the pre-ordering through provisioning processes, and included a mix of stand-alone pre-ordering transactions, along with pre-order transactions followed by Local Service Requests ("LSRs"),[38] supplements and cancels. In addition, this test was designed to compare actual functionality to Qwest's OSS documentation.[39]

This evaluation also included a review of Qwest's wholesale and Retail DSL loop qualification processes to determine if there is parity in the design, implementation and use of Qwest's loop qualification processes between Wholesale and Retail operations.[40] Another component of this evaluation was a comprehensive review of the methods and procedures used to handle orders that have been manually submitted or require manual intervention during order processing.[41] Finally, this evaluation included a comprehensive review of Qwest's provisioning processes. Specifically, KPMG evaluated Qwest's ability to properly provision orders and timely complete them;[42] whether Qwest's Wholesale provisioning processes are in parity with

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37 Interconnect Mediated Access-Graphical User Interface ("IMA-GUI") is a real time, human-to-computer, electronic interface that allows CLECs to access Qwest's OSS to perform a variety of pre-ordering, ordering and provisioning functions. Interconnect Mediated Access-Electronic Data Interchange ("IMA-EDI") is a real time, computer-to-computer, electronic interchange that allows CLECs EDI gateway access Qwest's OSS to perform a variety of pre-ordering, ordering and provisioning functions. Network Data Mover ("NDM") is a standard protocol that is used to provided access to Exchange Access Control Tracking ("EXACT"), Qwest's system for processing CLEC orders for products that require an Access Service Request ("ASR"), e.g., interconnection trunks. Telecommunications Information System ("TELIS") is a dial-up connection to EXACT.

38 Local Service Requests are the industry standard method for CLECs to request a transfer of or change to existing local service.

39 *See* KPMG *Final Report* at Section IV, Test 12, subsection 1.0.

40 *See* KPMG *Final Report* at Section IV, Test 12.7, subsection 1.0.

41 *See* KPMG *Final Report* at Section IV, Test 12.8, subsection 1.0.

42 *See* KPMG *Final Report* at Section IV, Test 14, subsection 1.0.

those used by Qwest's Retail operations;[43] and Qwest's processes used to support coordinated provisioning with CLECs.[44]

2. Order Flow-Through Evaluation (Test 13)

This evaluation verified Qwest's ability to mechanically convert LSRs into service orders without manual intervention for all order types that are designated as flow-through[45] by Qwest.[46] It also validated that the flow-through capabilities of Qwest's systems are consistent across the three regions.

3. Pre-ordering, Ordering, and Provisioning Volume Performance Test (Test 15)

This test measured Qwest's system capacity for processing pre-ordering queries and order transactions. It was designed to identify potential choke points at projected future volumes of the graphical user interface (GUI) and computer-to-computer (EDI) interface.[47]

This test consisted of three parts: (1) a "normal volume" test, using anticipated transaction volumes;[48] (2) a "peak" test using volumes at 150% of the normal volume test; and (3) a "stress" test using volumes at 250% of the normal volume test.[49] This test was intended to

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43 *See* KPMG *Final Report* at Section IV, Test 14.7, subsection 1.0.

44 *See* KPMG *Final Report* at Section IV, Test 14.8, subsection 1.0.

45 "Flow-through" means that an LSR will be processed through Qwest's systems to the point at which it receives a FOC without manually being worked by Qwest representatives.

46 *See* KPMG *Final Report* at Section IV, Test 13, subsection 1.0.

47 *See* KPMG *Final Report* at Section IV, Test 15, subsection 1.0.

48 Anticipated volumes were based on forecasts submitted by participating CLECs as well as Qwest's projected demand based on trended actual transactions/volumes. *See id.*

49 *See* KPMG *Final Report* at Section IV, Test 15, subsection 2.4.

examine the performance of Qwest's production pre-ordering and ordering systems and processes from the initiation of pre-order queries to the creation of internal service orders and the return of an order confirmation. Physical provisioning was not a part of this test.

4. M&R Functionality and End-To-End Trouble Report Processing Evaluations, Including an M&R Volume Test (Tests 16, 17, 18, 18.7 and 18.8)

The tests that comprised the evaluation of M&R functionality collectively validated the performance of Qwest's M&R functionality as documented. These tests included an evaluation of the functional equivalence of Qwest's M&R processing for Wholesale and Retail trouble reports.[50] Additionally, these tests evaluated Qwest's performance in making repairs under various wholesale maintenance test scenarios.[51] KPMG also evaluated the end-to-end repair processes in Qwest's M&R work centers to ensure that they were effective and adhered to common support/help desk procedures.[52] Finally, these tests included an M&R Volume Test, to verify that CEMR response times, for peak, stress and normal loads, met expectations.

5. Billing Usage and Carrier Bill Functionality Test (Tests 19, 19.6, 20, 20.7 and 24.10)

These tests evaluated the accuracy and completeness of all usage record types on Qwest's Daily Usage File ("DUF"),[53] in addition to the timeliness of DUF delivery.[54] They evaluated

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50 *See* KPMG *Final Report* at Section IV, Test 18.8, subsection 1.0.

51 *See* KPMG *Final Report* at Section IV, Test 18, subsection 1.0.

52 *See* KPMG *Final Report* at Section IV, Test 18.7, subsection 1.0.

53 The Daily Usage File, or DUF, contains the call records that detail the usage data Qwest records at its end office local and tandem switches. Generally, CLECs use the DUF to bill their end-user and carrier customers.

54 *See* KPMG *Final Report* at Section IV, Test 19, subsection 1.0.

Qwest's ability to accurately bill usage plus monthly recurring charges, and non-recurring charges on the appropriate type of bill.[55] Specific items evaluated included correct prices, and correct supporting information such as start/end dates, duration, standard amounts, and discounted amounts. These tests also evaluated the timeliness of bill delivery to CLECs.[56]

6. CLEC Support Processes and Procedures Review (Tests 24.3, 24.4, 24.5, 24.6, 24.7, 24.8 and 24.9)

These tests evaluated the systems, processes, and documentation provided by Qwest for establishing and maintaining CLEC business relationships.[57] The test included a determination of whether Qwest is adequately assisting CLECs to understand how to implement and use all of the OSS functions available to them. The areas included in the evaluation were: (1) Account Establishment and Management; (2) CLEC Forecasting; (3) CLEC Training; (4) Interface Development; (5) OSS Interface (IMA) Help Desk Support; (6) Interconnect Service Center Support; (7) Account Maintenance Support Center (Repair); and (8) Network Surveillance and Outage Notification.

7. Change Management Test (Test 23)

This evaluation determined the adequacy and completeness of Qwest's procedures for developing, documenting, publicizing, conducting, and monitoring Change Management.[58]

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55 *See* KPMG *Final Report* at Section IV, Test 20, subsection 1.0.

56 *See id.*

57 *See* KPMG *Final Report* at Section IV, Test 24.3, subsection 1.0

58 *See* KPMG *Final Report* at Section IV, Test 23, subsection 1.0 .

8. Performance Measure Audit

The main focus of the Performance Measure Audit ("PMA")[59] was to determine whether there were reasonable assurances that the performance as measured and reported by Qwest was equivalent to the performance that Qwest actually delivered.

IV. TEST RESULTS AND COMMERCIAL DATA DEMONSTRATE THAT QWEST MEETS THE FCC STANDARDS RELATING TO NON-DISCRIMINATORY ACCESS TO OSS

In the course of the Test, KPMG and HP executed a total of 32 tests, consisting of 711 evaluation criteria. Of those 711 criteria, ~~685~~ 684 had defined success criteria and ~~26~~ 27 were "diagnostic."[60] Notably, Qwest satisfied 645 of the ~~685~~ 684 non-diagnostic criteria and failed to satisfy only eleven (less than 1.6%). Of the remaining ~~29~~28, KPMG was "unable to determine" whether Qwest satisfied ~~26~~25, and three were deemed "not applicable" in the *Final Report*. Qwest will discuss the particulars relating to all test criteria that did not result in a finding of "satisfied," as well as all Test Observations or Exceptions that were not closed "resolved," in the specific sections herein addressing each of these tests. The vast majority of almost 500 Observations and Exceptions were successfully resolved or withdrawn. Only nine Exceptions and one Observation have been closed/unresolved; an additional five Exceptions have been closed/inconclusive. It is important to view the few items that were not satisfied within the scope of the overall

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59 *See* fn. 15, supra.

60 KPMG defines satisfied as "KPMG's analysis demonstrated that the evaluation criterion was satisfied through existing business operations components" and diagnostic as "the PID Standard is Diagnostic only." See KPMG Final Report at Section II, subsection 6.1.

Test, in the context of the hundreds of criteria that were satisfied, and in the context of Qwest's overall excellent performance in the Test.

Separate from (but related to) KPMG's evaluation of the test criteria, the test vendors – KPMG, HP, and Liberty Consulting, the performance measurement auditor – issued Observations and Exceptions when they encountered situations that could, without explanation or further testing, result in negative findings in their respective final reports.

The ROC OSS test (like other independent OSS tests) was designed to demonstrate that Qwest's OSS meets this last requirement – that it is "operationally ready, as a practical matter."[61] The OSS test, however, is not the only way – or, according to the FCC, even the best way – to demonstrate operational readiness. The FCC has held that "[t]he most probative evidence that OSS functions are operationally ready is actual commercial usage."[62] However, the FCC may also consider "the results of carrier-to-carrier testing, independent third-party testing, and internal testing."[63]

As discussed herein, many of the evaluation criteria designated "not satisfied," "unable to determine" or "not complete" in the *Final Report*, and the majority of the closed/unresolved Observations and Exceptions are mitigated by Qwest's commercial performance. For those test points and closed/unresolved Observations and Exceptions for which analogous commercial performance results are not available, there is additional evidence

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61 *See* KPMG *Final Report* at Section II, subsection 3.0.

62 *See, e.g., Vermont 271 Order* at App. D (¶ 31).

63 Id.

that Qwest's OSS is operationally ready or otherwise satisfies the requirements of Section 271.

That the test resulted in so few evaluation criteria not labeled "satisfied" and so few closed/unresolved Observations and Exceptions is indicative of Qwest's remarkable performance.

In assessing OSS commercial performance, the FCC repeatedly has held that it looks at the "totality of circumstances" and that "individual performance disparities . . . [are not] dispositive of whether a BOC has satisfied its checklist obligations."[64] The same logic applies to test results. Further, Qwest will demonstrate that none of the handful of unsatisfied evaluation criteria or closed/unresolved Observations and Exceptions have any significant impact on a CLEC's ability to provide service. These few items in no way diminish the conclusion that follows from the totality of the evidence, including Qwest's overall test performance and strong commercial performance results, that Qwest has satisfied its OSS-related Section 271 obligations.

The only evaluation criteria and Observations and Exceptions not discussed in this Section IV are those that pertain to the Change Management (Test 23) and Interface Testing (Test 24.6). These items will be discussed in Section V of these Verified Comments, dealing with Change Management, the Interface Test Environment and Technical Assistance.

The discussion of the test results and commercial performance results that follows will be organized to track the five primary components of Qwest's OSS – pre-ordering, ordering, provisioning, maintenance and repair, and billing.

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[64] Id. at App. D (¶ 31).

A. PRE-ORDERING

Pre-ordering allows CLECs to obtain and verify information (e.g., service availability, facility availability, etc.) in advance of submitting an order, on a real time basis, often while the CLEC's customer is on the phone with the CLEC representative. Pre-ordering helps ensure that the information provided when the CLEC submits an order is complete and accurate, allowing for more efficient processing of the order. ROC Test 12 (in part) and Test 12.7 (in its entirety) were designed to assess Qwest's performance relating to OSS pre-ordering functionalities. Qwest's pre-ordering performance in the test, as well as in the commercial domain, were measured against a number of specific pre-ordering PIDs, as described herein. Qwest satisfied 37 of 37 non-diagnostic (in other words, capable of being satisfied) pre-ordering related test criteria.[65] Further, actual commercial data for the past four months demonstrate that for each and every pre-ordering activity Qwest has met or exceeded the corresponding PID response time benchmarks. In short, Qwest's OSS performance in the pre-ordering domain has been exemplary.

KPMG's independent evaluation of Qwest's pre-ordering processes in the ROC test confirms that Qwest provides pre-ordering information to CLECs accurately and expeditiously, and in parity with Qwest's Retail operations. In Test 12, which included the pre-order functionality test, KPMG and HP tested and analyzed 14 distinct standalone pre-ordering

[65] There were, in addition, two diagnostic pre-ordering criteria, not subject to a satisfied/not satisfied assessment.

transaction scenarios.[66] In addition to validating pre-order transactions and their associated documentation, the test vendors evaluated the accessibility and responsiveness of the electronic IMA-EDI and IMA-GUI interfaces, as well as the accuracy and responsiveness of Qwest's Help Desks. Finally, the vendors conducted a parity assessment between Qwest's retail and wholesale loop qualification and information functionality.

The test vendors submitted more than 21,000 pre-order transactions and more than 600 pre-order test cases. In each of the transaction scenarios tested, all evaluation criteria were satisfied and resulted in successful outcomes.[67] As a result, there are no open, unresolved or incomplete issues associated with Qwest's pre-ordering functions. The *Final Report* identifies 28 evaluation criteria associated with Test 12 pre-order functionality. Twenty-two relate to pre-order timeliness, and six are associated with pre-order accuracy and completeness. The *Final Report* classifies 26 of the Test 12 pre-order evaluation criteria as "satisfied" and two as "diagnostic."

KMPG also evaluated Pre-order process accuracy and completeness. The test vendors determined that pre-order timeouts before receiving a response for both IMA-EDI and IMA-GUI were within the established benchmark for PID PO-1C of one-half of one percent (.50%). For

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66 Validate Customer Address, Appointment Availability, Appointment Selection, Customer Service Record, Connecting Facility Assignment, Cancel an Appointment or Reserved Telephone Number, Facility Availability Check, Facility Availability Check-ADSL, Meet Point Query, Loop Qualification Information, Determine Product and Feature Availability, Reserve Telephone Numbers, Obtain Directory Listings Information for an Existing UNE-L Customer, Obtain Design Layout Record (Cancel an Appointment or Reserved Telephone Number, Design Layout Record, Meet Point Query and Loop Qualification Information were evaluated for functionality only).

67 *See KPMG* Final Report at Section IV, Test 12, subsection 3.1.

IMA-GUI, 4,058 transactions were submitted and none timed out. For IMA-EDI, 17,486 transactions were tested and only 74 (.42%) timed out.[68]

Finally, the test vendors performed a thorough analysis in Test 12.7 of Qwest's DSL loop qualification pre-order processes and procedures used to support both retail and wholesale customers. The focus was to determine, "if parity exists in the design, implementation and use of Qwest's loop qualification process."[69] Eleven evaluation criteria related to DSL loop qualification and all eleven were "satisfied." KPMG determined that there was parity in the design, implementation and use of Qwest's loop qualification process and, also, in the remedial options available to CLECs and to Qwest customers. The test vendors affirmed that retail and wholesale customers have consistent processes for initiating, qualifying and escalating their requests for retail, ADSL and wholesale DSL services. Qwest's performance and capacity management processes are equivalent for Retail and Wholesale operations.

1. Pre-Ordering Commercial Performance Results

Qwest's Washington commercial performance results confirm that Qwest provides pre-ordering information to CLECs accurately and expeditiously, and in parity with Qwest's Retail operations, as follows:

- PIDs PO-1A-4 (IMA-GUI) and PO-1B-4 (IMA-EDI) establish a ten second standard for Qwest to return street address validation information in

[68] *See KPMG Final Report* at Section IV, Test 12, subsection 3.1, 12-2-2 and 12-2-3..

[69] *See KPMG Final Report* at Section IV, Test 12.7, subsection 1.0.

response to CLEC pre-order queries.[70] Qwest has met this benchmark[71] in each of the past four months.[72] In fact, Qwest also has met this benchmark for both IMA-EDI and the IMA-GUI in each of the past twelve months.[73]

- PIDs PO-1A-5 (IMA-GUI) and PO-1B-5 (IMA-EDI) establish a 12.5 second standard for Qwest to return customer service records ("CSRs") in response to CLEC pre-order queries.[74] Qwest has met this benchmark in each of the past four months.[75] In fact, Qwest also has met this benchmark for both IMA-EDI and the IMA-GUI in each of the past twelve months.[76]

- PIDs PO-1A-2 (IMA-GUI) and PO-1B-2 (IMA-EDI) establish a 25 second standard for Qwest to return service availability information in response to CLEC pre-order queries.[77] Qwest has met this benchmark in each of the past four

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70 ROC Performance Indicator Definitions (PIDs) are available at http://www.qwest.com/wholesale/results/roc.html. (Hereinafter "ROC PIDs").

71 *See* Washington Commercial Performance Results (PO-1B-4, PO 1A-4), available at http://www.qwest.com/wholesale/results/roc.html. Note that results for all PO-1 pre-ordering PIDs are reported on a region-wide basis.

72 The FCC has placed particular emphasis on the four months of commercial results preceding a Section 271 filing.

73 *See* Washington Commercial Performance Results (PO-1B-4, PO 1A-4), available at http://www.qwest.com/wholesale/results/roc.html. (hereinafter "Washington Commercial Performance Results")

74 ROC PIDs.

75 *See* Washington Commercial Performance Results (PO-1B-5, PO-1A-5).

76 Id.

77 ROC PIDs.

months.[78] In fact, Qwest also has met this benchmark for both IMA-EDI and the IMA-GUI in each of the past twelve months.[79]

- PIDs PO-1A-6 (IMA-GUI) and PO-1B-6 (IMA-EDI) establish a ten second standard for Qwest to return telephone number reservation information in response to CLEC pre-order queries.[80] Qwest has met this benchmark in each of the past four months.[81] In fact, Qwest has met this benchmark for both IMA-EDI and the IMA-GUI in each of the past twelve months.[82]

- PIDs PO-1A-3 (IMA-GUI) and PO-1B-3 (IMA-EDI) establish a 25 second standard for Qwest to return facility availability information in response to CLEC pre-order queries.[83] Qwest has met this benchmark in each of the past four months.[84] In fact, Qwest also has met this benchmark for both IMA-EDI and the IMA-GUI in each of the past twelve months.[85]

- PIDs PO-1A-7 (IMA-GUI) and PO-1B-7 (IMA-EDI) establish a 20 second standard for Qwest to provide access to Loop Qualification information in

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78 *See* Washington Commercial Performance Results (PO-1B-2, PO-1A-2).

79 Id.

80 ROC PIDs.

81 *See* Washington Commercial Performance Results (PO-1B-6, PO-1A-6).

82 Id.

83 ROC PIDs.

84 *See* Washington Commercial Performance Results (PO-1B-3, PO-1A-3).

85 Id.

response to CLEC pre-order queries.[86] Qwest has met this benchmark in each of the past four months.[87] In fact, Qwest has met this benchmark for both IMA-EDI and the IMA-GUI in each of the past twelve months.[88]

- PIDs PO-1A-8 (IMA-GUI) and PO-1B-8 (IMA-EDI) establish a 20 second standard for Qwest to provide access to information regarding the availability of Qwest DSL service for Resale.[89] Qwest has met this benchmark in each of the past four months.[90] In fact, Qwest has met this benchmark for both IMA-EDI and the IMA-GUI in each of the past ten months.[91]

- PIDs PO-1A-1 (IMA-GUI) and PO-1B-1 (IMA-EDI) establish a ten second standard for Qwest to return appointment scheduling information in response to pre-order queries.[92] Qwest has met this benchmark in each of the past four months.[93] In fact, Qwest also has met this benchmark for both IMA-EDI and the IMA-GUI in each of the past twelve months.[94]

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86 ROC PIDs.

87 *See* Washington Commercial Performance Results (PO-1B-7, PO-1A-7).

88 Id.

89 ROC PIDs.

90 *See* Washington Commercial Performance Results (PO-1B-8, PO-1A-8).

91 Id.

92 ROC PIDs.

93 *See* Washington Commercial Performance Results (PO-1B-1, PO-1A-1).

94 Id.

- PIDs PO-1C-1 (IMA-GUI) and PO-1C-2 (IMA-EDI) establish a benchmark threshold not exceeding 0.5% for timeouts[95] of pre-order transactions.[96] Qwest has met this benchmark for pre-ordering transactions placed through IMA-EDI in each of the past four months.[97] Qwest also has met the benchmark for pre-order transactions placed through the IMA-GUI in each of the past four months.[98] In fact, Qwest has met the benchmarks for both IMA-EDI and the IMA-GUI in each of the past twelve months.[99]

- PIDs PO-1D-1 (IMA-GUI) and PO-1D-2 (IMA-EDI) are designed to monitor and report the time it takes for Qwest to respond to pre-order queries that Qwest rejects due to invalid or incomplete query information.[100] Although no benchmark has been established for this PID (the results are evaluated for diagnostic purposes only), it is worth noting that over the past four months Qwest has responded to rejected pre-order queries submitted via IMA-GUI in 1.47 seconds on average and rejected pre-order queries submitted by IMA-EDI in 2.02 seconds on average.[101]

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95 Timeouts are pre-order transactions that did not receive a response within 200 seconds.

96 ROC PIDs.

97 *See* Washington Commercial Performance Results (PO-1C-2).

98 *See id.* (PO-1C-1).

99 *See id.* (PO-1C-2, PO-1C-1).

100 ROC PIDs.

101 *See* Washington Commercial Performance Results (PO-1D-2, PO-1D-1).

B. ORDERING

The FCC has held that "a BOC must demonstrate its ability to provide CLECs with access to the OSS functions necessary for placing wholesale orders."[102] To evaluate this, the FCC has stated that it "looks primarily at the BOC's ability to return order confirmation notices, order reject notices, order completion notices and jeopardies, and at its order flow-through rate."[103]

CLECs can commence the ordering process by submitting an LSR via IMA-EDI or IMA-GUI, or by faxing the order to the Qwest Service Delivery Centers. Qwest also makes available to CLECs two additional electronic interfaces (NDM and TELIS) for ordering via the Access Service Request ("ASR") process.

Tests 12 (in part), 12.8, 13, and 15 in the ROC test were designed to assess Qwest's performance relating to OSS ordering functionalities. Qwest's ordering performance in the test, as well as in the commercial domain, were measured against a number of specific PIDs, as described herein. The *KPMG Final Report* identifies 94 non-diagnostic evaluation criteria associated with Ordering. Qwest satisfied 88 of the 94 non-diagnostic (in other words, capable of being satisfied) Ordering related test criteria;[104] KPMG found that two criteria were not

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102 *Georgia/Louisiana 271 Order* at App. D; Arkansas/*Missouri 271 Order*, 16 FCC Rcd at 20863-64 (App. D, ¶ 36).

103 *Id.*; *see also Texas 271 Order*, 15 FCC Rcd at 18438 (¶ 170); *New York 271 Order*, 15 FCC Rcd at 4035-39 (¶¶ 163-66).

104 There were, in addition, 21 diagnostic ordering criteria, not subject to a satisfied/not satisfied assessment.

satisfied, and KPMG categorized the remaining four criteria as "unable to determine."[105] These test results, together with actual commercial data for the past four months demonstrate that Qwest's ordering interfaces and functionality meet 271 standards.

KPMG's independent evaluation provides compelling evidence that Qwest accommodates and processes CLEC orders accurately and expeditiously. KPMG evaluated Qwest's ability to process orders in four separate tests, (1) a Functionality Test (a part of Test 12); (2) a Manual Order Processing Evaluation (Test 12.8); (3) an Order Flow-Through Evaluation (Test 13); and (4) Volume Performance Test (Test 15). During the Ordering tests, KPMG created more than 4300 initial order test scenarios and more than 3500 order retest scenarios. As explained more fully below, Qwest successfully passed these tests.

1. Test 12

Test 12 tested the accuracy, accessibility, completeness and timeliness of Qwest's EDI, GUI and manual ordering interfaces. In addition, Test 12 evaluated the clarity of Qwest's ordering documentation and the timeliness, accuracy and completeness of Qwest's order responses. Test 12 reviewed all of the ordering notices including Functional Acknowledgements, FOCs, Rejections, Jeopardies, and Completions. Ordering test scenarios involved multiple order types including new, change, conversion, migration, moves, suspends, disconnects and others as agreed to by the ROC TAG.[106] Ordering test evaluation criteria focused on UNE-P, Resale, UBL flow-through, UBL non-flow-through, LNP flow-through

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105 An "unable to determine" finding meant that KPMG's evaluation and analysis were not able to fully determine that a criterion was satisfied or not satisfied. *See* Final Report at Section II, subsection 6.1.

106 Ordering scenarios were drawn from those defined in Appendix D of the Master Test Plan (LMN-4).

criteria and LNP non-flow-through products. Other products including Line Sharing, and Unbundled Dark Fiber were also ordered during Test 12. Some scenarios were developed to test specific product functionality, such as migrating to line splitting or converting from UNE-P to UNE loop, while other scenarios were repeated with several products (add new customer, move, add new lines).

Test 12 consisted of 51 non-diagnostic evaluation criteria, and nine diagnostic criteria. In the Final Report KPMG determined that Qwest satisfied 46 of the 51 non-diagnostic criteria. For the remaining five non-diagnostic criteria, KPMG assessed three as "unable to determine" (12-9-1, 12-9-2, and 12-11-4) and found that two criteria (12-9-4 and 12-9-5) were not satisfied. Out of 161 Test 12 related Observations and Exceptions, only two-- Exception 3061 and Observation 3110—were closed/unresolved.[107] None of these in any way diminish the conclusion that follows from Qwest's overall Test 12 performance, that Qwest provides pre-ordering, ordering and provisioning functionality to CLECs in a timely, non-discriminatory manner.

a. Evaluation Criteria 12-9-1, 12-9-2, 12-9-4 and 12-9-5

i. Evaluation Criteria 12-9-1 and 12-9-4

Criterion 12-9-1 evaluated whether Qwest provides Jeopardy Notices in advance of due dates for Resale products and services.[108] Criterion 12-9-4 evaluated whether

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107 The closed/unresolved Exception issued in Test 12, E3061, does not correspond to the evaluation criteria discussed here. It corresponds to test point 12-7-3, which KPMG designated "satisfied." Therefore, E3061 is discussed at the end of this section.

108 *See* KPMG *Final Report* at Section IV, Test 12, subsection 3.1, 12-9-1.

Qwest provides timely Jeopardy Notices for Resale products and services.[109] KPMG concluded that it was "unable to determine" whether Qwest satisfied criterion 12-9-1 because "Qwest did not issue any Jeopardy Notices for Resale products and services" during the test.[110]

KPMG concluded that evaluation criterion 12-9-4 was "not satisfied" because, following the publication of the *Draft Final Report*, KPMG issued Observation 3108 after it determined that there were eight Resale orders in the May-August, 2001 time frame that were not completed on time and that did not receive Jeopardy notices. While Observation 3108 was closed/resolved, KPMG nonetheless determined that criterion 12-9-4 was not satisfied because "the dual statistical test for the PO-9 PID resulted in a 'no-decision' for this PID."[111] Because of this "no decision" result, KPMG submitted this issue to the TAG for discussion and resolution. The discussion resulted in an impasse, and the issue was then referred to the ROC Steering Committee, which determined that Qwest had failed PID PO-9A, and accordingly, had not satisfied the related evaluation criterion 12-9-4.

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109 *See* KPMG *Final Report* at Section IV, Test 12, subsection 3.1, 12-9-4.

110 *See* KPMG *Final Report* at Section IV, Test 12, subsection 3.1, 12-9-1.

111 *See* KPMG *Final Report* at Section IV, Test 12, subsection 3.1, 12-9-4.

While Qwest did not agree with the Steering Committee decision,[112] the "not satisfied" determination for criterion 12-9-4 is obviated by Qwest's commercial performance results, which demonstrate that Qwest can – and indeed does – issue Jeopardy Notices for Resale products and services on a non-discriminatory, timely basis. Qwest has invested substantial resources into improving its performance in this area.

PO-8A evaluates the timeliness of Resale jeopardy notifications by measuring how far in advance of the due date in average days Qwest provides such notice.[113] This is precisely what criterion 12-9-1 (which KPMG assessed "unable to determine") evaluates. PO-9A measures the percentage of late Resale orders for which Qwest provides jeopardy notices.[114] This is precisely what evaluation criterion 12-9-4 (which KPMG found "not satisfied") measures. For both PIDs, Qwest's performance is measured against the Retail comparative (e.g., a parity standard).

Qwest has met PO-9A each of the past twelve months, providing jeopardy notifications at parity with Retail, in terms of the percentage of late orders for which jeopardy notifications were provided.[115] Qwest has met PO-8A in the past twelve

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112 To begin with, Qwest fails the dual hypothesis test (which assesses whether Qwest meets the parity standard) only if the PO-9 results are aggregated for all products, across all regions. The PO-9 PID, however, specifically calls for disaggregation by product type and region. When PO-9A resale results are viewed in this fashion—as directed by the PID—the results, based on the dual hypothesis test, are inconclusive. In addition, the orders at issue were submitted 9-12 months before KPMG issued the Observation, before Qwest had instituted a number of improvements relating to manual order processing. These improvements were based on a number of Exceptions and Observations related to manual order processing. A successful retest confirmed that Qwest had satisfactorily addressed these issues, and KPMG accordingly closed each of these Exceptions and Observations as "resolved." Qwest does not believe, therefore, that this small sample of 9-12 month old orders is in any way indicative of Qwest's current level of performance with regard to Resale jeopardy notices.

113 ROC PIDs.

114 Id.

115 *See* Washington Commercial Performance Results (PO-9A).

months.[116] This provides clear evidence that Qwest does, in fact, provide Wholesale jeopardy notices for Resale products at parity with Retail.

ii. Evaluation Criteria 12-9-2 and 12-9-5

The analysis relating to criteria 12-9-2 and 12-9-5 is identical to the analysis for criteria 12-9-1 and 12-9-4, above, except that 12-9-1 and 12-9-4 pertain to Resale, whereas 12-9-2 and 12-9-5 pertain to UNE-P. Criterion 12-9-2 evaluated whether Qwest provides Jeopardy Notices in advance of due dates for UNE-P products and services.[117] KPMG concluded that it was "unable to determine" whether Qwest satisfied this criterion because "Qwest did not issue any Jeopardy Notices for UNE-P products and services" during the test.[118] Criterion 12-9-5 evaluated whether Qwest provides timely Jeopardy Notices for UNE-P products and services.[119] KPMG found that this criterion was not satisfied, for the same reason that it found criterion 12-9-4 (discussed above; Resale) not satisfied.

Again, Qwest's commercial performance data provide a more complete picture of Qwest's performance, and demonstrate that Qwest does issue Jeopardy Notices for UNE-P products and services on a non-discriminatory, timely basis. PID PO-8D evaluates the timeliness of Jeopardy Notices (focusing on how far in advance of original due dates notices are provided) for UNE-P products and services.[120] This is precisely what criterion 12-9-2 measures.

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116 *See* Washington Commercial Performance Results (PO-8A).

117 *See* KPMG *Final Report* at Section IV, Test 12, subsection 3.1, 12-9-2.

118 *Id.*

119 *See* KPMG *Final Report* at Section IV, Test 12, subsection 3.1, 12-9-5.

120 ROC PIDs.

PID PO-9D evaluates the timeliness of Jeopardy Notices (focusing on the extent to which Qwest provides notices in advance of original due dates) for UNE-P products and services.[121] This is precisely what evaluation criterion 12-9-5 measures. Again, for these PIDs Qwest's performance is measured against the Retail comparative (e.g., a parity standard).

Qwest has met PO-9D (UNE-P) each of the past twelve months, providing jeopardy notifications at parity with Retail, in terms of the percentage of late orders for which jeopardy notifications were provided.[122] Qwest has met PO-8D (UNE-P) in the past twelve months.[123]

Given Qwest's success rate in the commercial setting, there is no reason the results of evaluation criteria 12-9-2 or 12-9-5 should preclude a finding by this Commission that Qwest complies with Section 271. Qwest's commercial performance results provides clear evidence that Qwest does, in fact, provide Wholesale jeopardy notices for UNE-P products at parity with Retail.

b. Evaluation Criterion 12-11-4 (and Observation 3110)

Evaluation Criterion 12-11-4 assessed whether the Qwest produced measures of pre-order/order performance results for HP transactions were consistent with KPMG produced HP measures. In assessing this criterion, KPMG issued an Observation due to discrepancies relating to reporting for the PO-5 PID. Significantly, though, KPMG found

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121 Id.

122 *See* Washington Commercial Performance Results (PO-9D).

123 *See* Washington Commercial Performance Results (PO-8D).

that, based on a Liberty re-audit of this measure, and the resolution of the related Observation, "Qwest satisfactorily addressed this issue."[124] Nonetheless, KPMG believed that, due to the human error issues relating to manual order processing, it was unable to conclude that this criterion was satisfied.

Observation 3110 is related to this determination. In retesting Exception 3120,[125] KPMG identified discrepancies in reported data for a handful of manually processed orders. Qwest confirmed that, for four of these orders, the discrepancies were due to human error in manual order writing. KPMG subsequently reviewed the 109 orders that had failed to flow through in the earlier testing of E3120 and identified seven additional instances of human error. Without further retesting specifically designed to assess the impact of human error on the accuracy and completeness of Qwest's PID reporting KPMG's was "unable to determine" if Qwest met the for criterion 12-11-4.

Qwest understands KPMG's concern, but believes that the number of human errors are within a reasonable tolerance level. Currently, the majority of CLEC orders are processed on a flow-through basis, and the percentage of orders handled in flow-through has increased over time.[126] Still, some percentage of orders will always require manual handling, and manual handling will always present the possibility of human error.

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124 *See* KPMG *Final Report* at Section IV, Test 12, subsection 3.1, 12-11-4.

125 *See* KPMG *Final Report* at Section IV, Test 12, subsection 3.1, 14-1-44.

126 *See* Washington Commercial Performance Results (PIDS PO-2A and PO-2B).

Throughout the test, KPMG and HPC tested order accuracy in a variety of ways. Test criteria 14-1-12 has a "satisfied" result because Qwest achieved 97.2% accuracy in post order CSRs compared with pre-order CSRs and LSRs. Test criteria 14-1-11 is also satisfied because Qwest achieved a rate of 96.7% accuracy with SOC completion dates. More recently, Qwest has completed an internal audit of orders submitted in April and March for Resale/ UNE-P and Loop products. For manual orders for Resale/UNE-P and for Loop the results are above 95% for both months.

Qwest has made a significant effort, however, to reduce the incidence of human error in manual order processing. In August 2002, Qwest will implement an IMA 10.1 enhancement that adds a system verification to ensure that the service order numbers on the FOC are correctly associated with the LSR, thereby substantially reducing manual processing errors in this area. In addition, Qwest has instituted an extensive quality assurance program, including reviews of manually typed orders that validate the date fields on the orders. Qwest provides regular individual feedback to its manual order typists based on these quality reviews. Additionally, on-site supervisors and coaches utilize these reviews to identify common, recurring errors, and then provide coaching to all manual order typists regarding these items. Qwest also provides ongoing training to manual order typists to improve order accuracy.[127] Qwest's sampling of manually

[127] The internal audit results for manual order accuracy are:

	March	April
Resale/UNE-P	95.7	98.8
Loop	98.5	100%

handled orders shows continuing improvement based on this quality assurance program. In response to KPMG's April 30, 2002 "Qwest Manual Order Entry PID Adequacy Study," Qwest has agreed to develop and present a proposal for a new performance measure addressing manual processing order accuracy. Qwest expects that this will address KPMG's concerns regarding the accuracy of manually handled orders.

In developing the new PID to measure Service Order accuracy, Qwest is reviewing the order accuracy measures developed by SBC. Following their examples, Qwest expects to focus initially on manual orders, and to exclude orders that have been cancelled, or that have received error notifications. The PID evaluates the degree to which Qwest accurately processes CLECs' Local Service Requests (LSRs), which are electronically-submitted and manually processed by Qwest, into Qwest Service Orders. Qwest hopes to begin manual reporting of this measure with June results reported in July. While Qwest wishes to begin this voluntary reporting immediately, Qwest also realizes that there is great interest in this PID and will use the Long-term PID Administration process to allow all interested parties input on the future definition of this PID.

c. Evaluation Criterion 12-7-3 (and Exception 3061)

Exception 3061 pertained to Qwest's issuance of FOCs. E3061 was issued because Qwest did not return more than 90% of FOCs for Resale PBX orders within 48 hours.[128] Instead, in the initial round of testing, Qwest returned 28 of 39 Resale PBX orders (72%) within 48 hours; in a retest, Qwest returned eleven of 13 Resale PBX

[128] *See* Disposition Report for E3061, attached as Exhibit LMN-21, and also available at www.nrri.ohio-state.edu/oss/master/exceptions/mar/e3061disposition_report.pdf.

orders (85%) within this time period. Although E3061 was closed/unresolved, KPMG found that Qwest "satisfied" the applicable evaluation criterion, 12-7-3.[129]

FOC returns are governed by PID PO-5, which measures commitments met for returning FOCs during standard intervals.[130] The Resale PBX orders submitted as part of the test fall into the PO-5B category, which governs FOCs that are received electronically via IMA-EDI (PO-5B-2) or IMA-GUI (PO-5B-1), and involve manual processing.[131]

Resale PBX orders are not disaggregated under PO-5B – that is, PO-5B requires that Resale orders be reported in the aggregate rather than on a product- or service-specific basis.[132] In the course of designing the ROC test and during subsequent workshops, the parties agreed to this aggregated PID formulation and agreed further that the benchmark for PO-5B would be 90% on an aggregate basis. KPMG departed from this agreed-upon formulation – and the approach the FCC has accepted in its Section 271 orders[133]– when it evaluated FOCs for Resale PBX orders (and other services) individually.

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129 *See* KPMG *Final Report* at Section IV, Test 12, subsection 3.1, 12-7-3.

130 ROC PIDs.

131 Id.

132 Id.

133 *See; e.g.*, Application by Bell Atlantic New York for Authorization Under Section 271 of the Communications Act To Provide In-Region, InterLATA Service in the State of New York, Memorandum Opinion and Order, 15 FCC Rcd 3953 (1999) ("New York 271 Order") at 4047-48 (¶180, n.566) (approving Bell Atlantic's performance under metrics that govern FOCs covering multiple Resale products); Application by SBC Communications Inc., et al., for Authorization to Provide In-Region, InterLATA Services in Texas, Memorandum Opinion and Order, 15 FCC Rcd 18354 (2000) at 18438-39 (¶171, n.461) (approving SBC's performance under metrics that govern FOCs covering both UNE-P and Resale POTS orders).

During the OSS test, Qwest met PO-5B for Resale orders in the aggregate.[134] In fact, with respect to Pseudo-CLEC orders, Qwest met PO-5B-1 with performance that reached as high as 100%; and, notwithstanding E3061, also reported FOC returns under PO-5B-2 for Resale orders that exceeded 90% in all three regions.[135]

Thus, Qwest's aggregate performance during the test was strong. The *only* product for which Qwest did not meet the 90% standard during the test was Resale PBX orders. Qwest's performance in the initial round of testing was the result of a one-time processing error that has since been corrected.[136] On retest – and following implementation of the new process – 13 PBX trunk orders were submitted. Qwest returned eleven FOCs within the 48-hour commitment and missed the commitment for only two LSRs, resulting in a performance level of 85%. Had Qwest returned only one additional FOC within 48-hours (or had the total sample size of orders been larger), it would easily have met the benchmark. Clearly, there is no systemic problem here.

Qwest's commercial performance in Washington supports this conclusion. Specifically, the commercial data shows that Qwest has exceeded the PO-5B benchmark in Washington with respect to Resale orders (which include Resale PBX orders) in each of the past eleven months.[137]

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134 *See* KPMG *Final Report* at Section IV, Test 12, subsection 3.1, 12-6-2.

135 *See* KPMG *Final Report* at Section IV, Test 12, subsection 3.1, 12-7-3.

136 Specifically, the eleven LSRs for which FOCs were not returned in the initial test were routed to the incorrect work group for processing. As a result – and because of the complex nature of PBX LSRs – the Qwest Interconnect Service Centers ("ISCs") failed to return FOCs for those eleven LSRs within the specified 48-hour interval. Qwest identified this issue at the end of July 2001, and implemented a daily call with the ISCs to prevent this problem from recurring. During the daily call, the ISCs analyze all routing situations and use that data to train ISC personnel on the proper routing of requests. Re-routing now is not permitted until a coach has been contacted to validate that the proposed routing is appropriate and accurate.

137 *See* Washington Commercial Performance Results (PO-5B)

Given Qwest's success rate in the commercial setting – and given the primacy of commercial performance data in the FCC's analysis –the closed/unresolved finding in connection with E3061 is not significant, particularly given that KPMG has found the related evaluation criterion "satisfied."

2. Test 12.8 (POP Manual Order Processing Evaluation)

Using operational analyses and interviews that focused on Qwest's Interconnection Service Centers, Test 12.8 analyzed order handling procedures for orders submitted manually and, also, for orders submitted via EDI or GUI that "drop out" and require manual handling. Qwest satisfied nine of ten Test 12.8 evaluation criteria.[138] KPMG was unable to determine whether one criterion (12.8-2) was satisfied.[139]

Test 12.8 evaluated whether Qwest's order handling procedures for both LSRs and ASRs were defined, documented and followed. Test 12.8 also assessed whether there were procedures in place to monitor the performance of ISC employees against these procedures and, also to improve the procedures. In addition, the test evaluated Qwest's exception handling procedures and assessed how well Qwest provides for CLECs when they have to escalate, inquire about and check the status of manual orders. Finally, the test included criteria that assessed Qwest's ability to monitor and adjust its manual order capacity. Qwest satisfied all of Test 12.8's evaluation criteria, with the exception of criterion 12.8-2, which KPMG assessed "unable to determine."

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138 *See* KPMG *Final Report* at Section IV, Test 12.8, subsection 3.1.

139 Id.

a. **Evaluation Criterion 12.8-2**

Evaluation criterion 12.8-2 assessed whether Qwest's procedures for manual order processing were defined, documented and followed. KPMG stated that it was unable to determine whether this criterion was satisfied because of the same manual order processing issues previously discussed above, in relation to evaluation criterion 12-11-4 and Observation 3110. During the course of Test 12.8-2, Qwest had satisfactorily addressed all KPMG questions and issues relating to manual order handling processing and procedures. The manual order processing errors associated with the late retest of Exception 3120, however, led KPMG to assess this criterion "unable to determine." For the same reasons previously identified above, concerning criterion 12-11-4 and Observation 3110 (manual order processing quality assurance improvements), this "unable to determine" item should not impact a finding that Qwest satisfies the necessary 271 requirements.

3. Test 13 (Order Flow-Through Evaluation)

Test 13 was conducted to evaluate Qwest's ability to seamlessly flow orders through IMA interfaces without manual intervention. The ten Evaluation Criteria cited for both EDI and GUI flow through performance have a "diagnostic" result due to the fact that neither PO-2A nor PO-2B had a PID defined standard for the test period. The test vendors assessed flow through results against Qwest's published documentation, *LSRs Eligible for Flow Through*, and other published documentation, including Qwest's IMA User Guide and Qwest's IMA Developer Worksheets, to validate the accuracy of Qwest's documentation on flow-through transaction types. Qwest satisfied all ten non-diagnostic Test 13 evaluation criteria relating to its documentation. In addition, one Test 13 criterion was diagnostic. The *KPMG Final Report*

indicates that Qwest order flow-through documentation is complete, accurate, clear and available to the CLEC community.[140]

4. Test 15 (POP Volume Performance Test)

Test 15 was designed (1) to evaluate the Qwest systems and processes associated with pre-order and order processes; and (2) to validate the performance of the interfaces and systems at future projected transaction volumes. Thirty-four evaluation criteria were defined to measure pre-order, order and errored transactions.[141] Thirty-two were associated with the Normal and Peak Tests and all had a result of Satisfied.[142] The remaining two evaluation criteria were associated with the Stress Test and had a result of Diagnostic since the Stress Test was diagnostic.[143] In reviewing the published results of the Stress Test, the Stress Test met the evaluation criteria defined for the Normal and Peak Tests. The published results show that the Qwest interfaces and systems will function successfully within currently defined performance parameters at future projected transaction volumes.[144]

5. Ordering Commercial Performance Data

Qwest's commercial performance data also confirm that Qwest's ordering interfaces and functionality meet 271 standards, as described below. Qwest will first discuss the primary GA (Gateway Availability) PIDS, GA-1A (IMA-GUI), GA-2 (IMA-EDI) and GA-4 (EXACT),

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140 *See* KPMG *Final Report* at Section IV, Test 13, subsection 3.1, 13-1-1.

141 *See* KPMG *Final Report* at Section IV, Test 15, subsection 3.1.

142 Id.

143 Id.

144 Id.

which relate the availability of Qwest's various interfaces. Qwest will then discuss PIDS PO-2 through PO-10, with the exception of the PO-7 measure for Billing Completion Notifications, which is treated in the discussion of the Billing related commercial results. The PO-2 through PO-10 PIDs generally relate to intervals associated with Ordering related activities, as explained herein.

- PID GA-1A provides that Qwest's IMA-GUI interface should be available to CLECs 99.25% of all scheduled hours of operation.[145] Qwest has met this benchmark in each of the past four months.[146] In fact, with the exception of two months, Qwest has met this benchmark in each of the past twelve months.[147]

- PID GA-2 provides that Qwest's IMA-EDI interface should be available to CLECs 99.25% of all scheduled hours of operation.[148] Qwest has met this benchmark[149] in each of the past four months.[150] In fact, with the exception of one month, Qwest has met this benchmark in each of the past twelve months.[151]

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145 ROC PIDs.

146 *See* Washington Commercial Performance Results (GA -1A).

147 Id.

148 ROC PIDs.

149 All GA PID results are reported on a region-wide basis.

150 *See* Washington Commercial Performance Results (GA -2).

151 Id.

- PID GA-4 provides that Qwest's EXACT interface should be available to CLECs 99.25% of all scheduled hours of operation.[152] Qwest has met this benchmark in each of the past four months.[153] In fact, Qwest has met this benchmark – posting 100% availability times – in each of the past twelve months.[154]

- The PO-5 PIDs relate to intervals for FOCs. When A CLEC submits a valid LSR, Qwest will return an FOC, which confirms that the CLEC's LSR has been received and submitted to the Qwest SOP for processing. The standard FOC interval, as established by the PO-5 PIDs, varies depending upon product type ordered and interface type utilized.[155] In total, there are sixteen combinations of product[156] and interface types, leading to sixteen discrete PO-5 sub-measures relating to FOC timeliness. Qwest has met all of the FOC benchmarks in Washington over the past four months for all sixteen combinations of product and interface types, including Resale.[157] Qwest has met each of the PO-5 benchmarks for Resale in each of the past four months.[158] In fact, Qwest has met these benchmarks in nearly all of the past twelve months.[159] Qwest has met each of

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152 ROC PIDs.

153 *See* Washington Commercial Performance Results (GA -4).

154 Id.

155 ROC PIDs.

156 Resale, Unbundled Loops, Local Number Portability ("LNP"), and LIS Trunks.

157 *See* Washington Commercial Performance Results (PO-5).

158 *See* Washington Commercial Performance Results (PO-5B-2(a), PO-5B-1(a), PO-5C-(a)).

159 Id.

the benchmarks for Unbundled Loops in each of the past four months.[160] In fact, Qwest has met these benchmarks in all of the past twelve months.[161] Qwest has met each of the benchmarks for LNP in each of the past four months.[162] In fact, Qwest met the benchmarks in each of the past twelve months.[163] Qwest has met the benchmark for LIS Trunks in each of the past four months.[164] In fact, Qwest has met this benchmark in each of the past twelve months.[165] In short, Qwest's PO-5 performance has been excellent, across all product types and interfaces.

- Qwest may reject FOCs with errors, instead of returning an FOC. The PO-3 PIDs apply to LSR Rejections, and measure the time it takes for Qwest to notify CLECs that their LSRs are rejected.[166] The PO-4 PIDs evaluate the percentage of orders that are rejected.[167] While specific performance benchmarks have been established for PO-3, PO-4 is a diagnostic PID. Qwest has met the PO-3B benchmarks for IMA-EDI in each of the past four months.[168] In fact, Qwest has consistently met these benchmarks for

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160 *See* Washington Commercial Performance Results (PO-5B-2(b), PO-5B-1(b), PO-5C-(b)).

161 Id.

162 *See* Washington Commercial Performance Results (PO-5B-2(c), PO-5B-1(c), PO-5C-(c)).

163 Id.

164 *See* Washington Commercial Performance Results (PO-5D).

165 Id.

166 ROC PIDs.

167 Id. (PO-4).

168 *See* Washington Commercial Performance Results (PO-3B-1, PO-3B-2).

the past twelve months in Washington.[169] Qwest has also met the PO-3A benchmarks for IMA-GUI in each of the past four months.[170] In fact, Qwest has met these benchmarks consistently over the past twelve months.[171] Qwest has met the PO-3C benchmark for orders submitted via facsimile in each of the past four months.[172] In fact, Qwest has met this benchmark each of the last twelve months.[173] Qwest's PO-3 and PO-4 performance has been very good, across all product types and interfaces.

- Once an LSR has been fully processed, provisioned and completed in the SOP, Qwest issues an LSR-level Work Completion Notice to the CLEC to indicate that its entire service order has been completed. The PO-6 PIDs governing Work Completion Notices evaluate the time it takes for a completion notice to be made available or transmitted to the CLEC once the order is completed in the SOP.[174] PID PO-6 provides that Qwest should provide Work Completion Notices to CLECs within six hours on average.[175] Qwest has met this benchmark for orders placed via IMA-EDI (PO-6B) and IMA-GUI (PO-6A) in each of the past four months.[176]

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169 Id.

170 *See* Washington Commercial Performance Results (PO-3A-1, PO-3A-2).

171 Id.

172 *See* Washington Commercial Performance Results (PO-3C).

173 Id.

174 ROC PIDs.

175 Id.

176 *See* Washington Commercial Performance Results (PO-6B, PO-6A).

- Occasionally, Qwest is unable to meet the commitment date for a particular LSR. When this happens, Qwest generates and transmits to the CLEC a Jeopardy Notice, indicating that the order is in jeopardy of not being fulfilled by its committed due date. The PIDs governing Jeopardy Notices consist of two separate measures, as previously described above in reference to test criteria 12-9-1 and 12-9-4. PO-8 evaluates the timeliness of jeopardy notifications by measuring how far in advance of the due date in average days Qwest provides such notice.[177] PO-9 measures the percentage of late orders for which Qwest provides such advance notice.[178] For these measures, Qwest's performance is measured against the Retail comparative as established by the PID (e.g., a parity standard).

- Qwest has met PO-9A (Non-Design Services),[179] PO-9B (Unbundled Loops and LNP),[180] PO-9C (LIS Trunk),[181] and PO-9D (UNE-P POTS)[182] in each of the past four months, providing jeopardy notifications for these products at parity with Retail, in terms of the percentage of late orders for which jeopardy notifications were provided.

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177 ROC PIDs.

178 Id. (PO-9).

179 *See* Washington Commercial Performance Results (PO-9A).

180 *See* Washington Commercial Performance Results (PO-9B).

181 *See* Washington Commercial Performance Results (PO-9C).

182 *See* Washington Commercial Performance Results (PO-9D).

- Qwest has met PO-8A (Non-Design Services), PO-8B (Unbundled Loops and LNP), and PO-8C (LIS Trunk), and PO-8D (UNE-P POTS) in each of the past four months. [183]

- The PIDs governing Qwest's flow-through rates monitor the extent to which electronically-transmitted LSRs flow directly to Qwest's SOP without human intervention or manual retyping.[184] PO-2A measures the percentage of *all electronic LSRs* that flow from the specified electronic gateway interface to the SOP without any human intervention, while PO-2B measures the percentage of *all "flow-through-eligible" LSRs* that flow from the specified gateway to the SOP without any human intervention.[185]

- PO-2A is a diagnostic PID, and Qwest's performance under PO-2A has steadily improved. Qwest has met virtually all of the PO-2B benchmarks for electronic flow-through eligible LSRs in each of the past four months. Qwest has met the Unbundled Loops benchmark for both IMA-EDI (PO-2B-2) and IMA-GUI (PO-2B-1) (70%) in each of the past four months.[186] Qwest has also met the LNP benchmark for both IMA-EDI (PO-2B-2) and IMA-GUI (PO-2B-1) (90%) in each of the past four months.[187] Qwest has also met the UNE-P POTS flow-through benchmark for IMA-GUI (PO-2B-1) (75%) and met -- or nearly met -- IMA-EDI (PO-2B-2) in each of the past

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183 *See* Washington Commercial Performance Results (PO-8).

184 ROC PIDs.

185 Id.

186 *See* Washington Commercial Performance Results (PO-2B-2 and PO-2B-1).

187 *See* Washington Commercial Performance Results (PO-2B-2 and PO-2B-1).

four months.[188] Finally, Qwest has met the Resale benchmark for IMA-GUI (PO-2B-1) (90%) in each of the past four months. Although Qwest met the benchmark for IMA-EDI (PO-2B-2) (90%) in only one of the past four months, the Washington volumes were very low. However, the regional results reflect that Qwest met the IMA-EDI (PO-2B-2) benchmark in each of the past five months.[189] Overall, Qwest's flow through rate on flow through eligible LSRs, as measured by PO-2B, has been excellent.

- Although not specifically required by the FCC, Qwest also measures LSR Accountability, which refers to the degree to which Qwest can account for all LSRs received electronically. PO-10, the PID for LSR Accountability, measures the number of LSRs Qwest receives from CLECs via IMA-EDI and IMA-GUI that Qwest has confirmed or accounted for in specific status categories as a percentage of all LSRs received in a specified reporting period.[190] Although Qwest's PO-10 performance results are evaluated for diagnostic purposes only, it is worth noting that in Washington Qwest was able to account for 100% of all LSRs in each of the past eleven months.[191]

C. PROVISIONING

Provisioning involves "the exchange of information between LECs where one executes a request for a set of products and services or unbundled network elements or combination thereof

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188 *See* Washington Commercial Performance Results (PO-2B-2 and PO-2B-1).

189 *See* Washington Commercial Performance Results (PO-2B-1 and PO-2B-2) and Regional Commercial Performance Results (PO-2B-2).

190 ROC PIDs.

191 *See* Washington Commercial Performance Results (PO-10).

from the other with attendant acknowledgments and status reports."[192] The FCC has held that "a BOC must provision CLEC orders for resale and UNE-P services in substantially the same time and manner as it provisions orders for its own retail customers."[193] The FCC historically has examined "a BOC's provisioning processes, as well as its performance with respect to provisioning timelines (*i.e.*, missed due dates and average installation intervals*)* and provisioning quality (*i.e.*, service problems experienced at the provisioning stage)" in determining whether the BOC meets this standard.[194] Generally, commercial data pertaining to Qwest's provisioning of most products and services will be discussed by the applicable Qwest checklist witness in the hearing in this matter, according to their respective checklist items of responsibility.

KPMG's independent evaluation of Qwest's provisioning process confirms that Qwest provisions CLEC orders accurately and expeditiously.[195] KPMG evaluated Qwest's ability to provision orders in three separate tests: (1) a Provisioning Evaluation (Test 14.0), (2) a Provisioning Process Parity Evaluation (Test 14.7); and (3) a Provisioning Coordination Process Evaluation (Test 14.8). KMPG in its *Final Report* determined that Qwest had satisfied 96 of the ~~105~~ 104 non-diagnostic evaluation criteria set forth in these tests.[196] KPMG found that four criteria were not satisfied, and was unable to determine whether the remaining ~~five~~ four criteria

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192 *Local Competition Order*, ¶ 514 n. 1245, ¶ 523 n. 1273.

193 *Georgia/Louisiana 271 Order* at App. D, *citing New York 271 Order*, 15 FCC Rcd at 4058 (¶ 196).

194 Id.

195 *See* KPMG *Final Report* at Section IV, Test 14, subsection 3.1.

196 In addition, there were two diagnostic criteria.

were satisfied.[197] The specifics relating to these ~~nine~~ eight evaluation criteria are discussed below in the context of the discrete provisioning tests.

1. Test 14 (Provisioning Evaluation Test)

Test 14 was a comprehensive review of Qwest's ability to accurately and expeditiously complete the provisioning of CLEC orders. The test involved verifying that orders submitted were properly provisioned as requested on the LSR, provisioned as documented in Qwest's internal Methods and Procedures, and that the provisioning was completed on time. Qwest successfully satisfied 33 of 42 non-diagnostic Test 14 evaluation criteria. KPMG found that four of these criteria (14-1-10, 14-1-14, 14-1-34[198] and 14-1-36) were not satisfied, and was unable to determine whether the other ~~five~~ four criteria (14-1-37, 14-1-38, 14-1-39~~, 14-1-43~~ and 14-1-44) were satisfied.[199]

a. Evaluation Criterion 14-1-10 (and Exception 3010)

Criterion 14-1-10 evaluated whether Qwest provisions Unbundled Dark Fiber ("UDF") by adhering to documented methods and procedure tasks.[200] KPMG concluded that this evaluation criterion was "not satisfied" due to low commercial activity on retest, and also issued

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197 ~~Qwest believes that one of these "unable to determine" criteria—specifically, evaluation criterion 14-1-43—is attributable to an error in the final report. Qwest has brought this issue to KPMG's attention. For more details, see Qwest's discussion of evaluation criterion 14-1-43.~~KPMG changed the result for Evaluation Criterion 14-1-43 from "Unable to Determine" to "Diagnostic" via an errata document KPMG submitted to the ROC TAG on June 11, 2002. See Exhibit LMN-54, KPMG's Qwest Communications OSS Evaluation Final Report Errata Document.

198 Evaluation Criteria 14-1-34 is not discussed any further because Qwest passed this criteria in the Western region and therefore the "not satisfied" result does not apply to Washington.

199 Again, Qwest believes that criterion 14-1-43 was included in the "unable to determine" items in error.

200 *See* KPMG *Final Report* at Section IV, Test 14, subsection 3.1, 14-1-10.

Exception 3010 relating to this issue.[201] The TAG agreed to suspend UDF Observations because the number of UDF orders that were observed by KPMG during retesting (10) did not meet the minimum of 35 samples required for valid statistical conclusions.[202]

There is virtually no UDF order activity in Qwest's 14-state region, so it is difficult for Qwest to prove through commercial data that it provisions UDF in accordance with documented methods and procedures.[203] Nonetheless, recent updates made to Qwest's UDF documentation, in addition to other process changes made during the course of the evaluation, provide sufficient evidence that Qwest is equipped to provision UDF on a timely, non-discriminatory basis. The FCC previously has held that, in the absence of adequate commercial data, a showing that the BOC is "capable" of meeting Section 271's criteria can be sufficient.[204] Qwest has repeatedly shown that it follows documented methods and procedures in other contexts.[205]

Further, in May 2002 Qwest modified its process to accept UDF orders via an Access Service Request, and provision and bill UDF in Qwest's Integrated Access Billings System ("IABS"). Qwest has successfully utilized this process, and these systems, to process special

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201 Id.

202 *See* Disposition Report for E3010, attached as Exhibit LMN-23, and also available at www.nrri.ohio-state.edu/oss/master/exceptions/feb/e3010disposition_report.pdf. E3010, which was closed/inconclusive, contains explanations as to how Qwest personnel adhere to documented UDF provisioning tasks. *See* Exhibit LMN-24.

203 Qwest's commercial performance for PID OP-3D for UDF in Washington shows that there have been only three observations since September 2001. *See* Washington Commercial Performance Results.

204 *See New York Section 271 Order*, 15 FCC Rcd at 4038-41 (¶¶ 166, 169).

205 *See* KPMG *Final Report* at Section IV, Test 14, subsection 3.1, (stating that Qwest adheres to documented method and procedure tasks in connection with provisioning high capacity circuits, hot cuts and xDSL circuits, ADSL line sharing circuits, and analog loops).

access service requests since the mid-1980s. Qwest believes that this process will similarly assure timely and accurate provisioning and billing of UDF orders. In light of this, there should be no question that Qwest is capable of following the methods and procedures unique to UDF.

b. Evaluation Criterion 14-1-14 (and Exception 3104)

Criterion 14-1-14 evaluated whether Qwest provisions Enhanced Extended Link ("EEL") circuits by adhering to documented methods and procedures.[206] KPMG concluded that this evaluation criterion was "not satisfied" due to low commercial activity on retest, and issued Exception 3104 relating to this same issue.[207] In the initial test, KPMG observed eleven orders relating to EELs.[208] Only two EEL-related orders were observed during retest.[209] Both tests therefore were below the relevant threshold for valid statistical conclusions.

As with UDF (evaluation criterion 14-1-10), Qwest possesses updated documentation on EELs, which KMPG evaluated and found satisfactory. Because Qwest has repeatedly shown that it is capable of following documented methods and procedures in other contexts, this Commission can reasonably infer that Qwest is equipped to provision EELs on a timely, non-discriminatory basis.[210]

c. Evaluation ~~Criteria 14-1-34 and~~ 14-1-36 (and Exception 3086)

206 *See* KPMG *Final Report* at Section IV, Test 14, subsection 3.1, 14-1-14.

207 Id.

208 Id.

209 Id.

210 *See* KPMG *Final Report* at Section IV, Test 14, subsection 3.1, 14-1-10.

Evaluation criteria ~~14-1-34 and~~ 14-1-36 addressed Qwest's performance under OP-4C, which measures the average installation intervals for orders that do not require the dispatch of a technician~~,~~ for ~~resold Business POTS and~~ UNE-P POTS ~~respectively~~. The standard is parity.[211] ~~For Business POTS (Criteria 14-1-34), Qwest met this standard and passed the test in its Central and Western Regions, although KPMG found that Qwest did not satisfy this standard in the Eastern Region. Business POTS Commercial Performance results, however, demonstrate that Qwest does meet the OP-4C PID in Washington. In fact, Qwest has satisfied the OP-4C parity standard in each of the last eleven months.~~[212]

Recent UNE-P POTS Commercial Performance results demonstrate that Qwest has improved its provisioning for this product in recent months. For UNE-P POTS, though Qwest only satisfied the OP-4C parity standard in two of the past four months, the "satisfied" months were the most recently reported months of March and April.[213] This evidences that Qwest's performance is trending in the right direction. The FCC has in previous Section 271 orders looked beyond earlier performance discrepancies when the BOC's most recent performance has been satisfactory.[214] Such is the case with Qwest's OP-4C performance specific to the UNE-P POTS product.

Qwest's commercial performance under OP-4C demonstrates that CLECs have a meaningful opportunity to compete in Washington and that the results of these criteria should not

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211 ROC PIDs.

212 *See* Washington Commercial Performance Results (OP-4C).

213 Id.

214 *See, e.g. Massachusetts 271 Order*, 16 FCC Rcd at 9038, n.291.

prevent a finding by this Commission that Qwest complies with Section 271~~. Despite Qwest's strong commercial performance, evaluation criteria 14-1-34 resulted in closed/unresolved E3086 because, during the test, Qwest did not meet PID OP-4C for non-dispatch Business POTS in its Eastern Region.~~ Criterion 14-1-36 ~~also~~ contributed to closed/unresolved Exception 3086 because, during the test, Qwest also did not meet PID OP-4C for non-dispatch UNE-P in all three regions – Western, Central and Eastern.[215]

It is worth noting that, however, with the exception of ~~Business POTS and~~ UNE-P, Qwest satisfied all of the OP-4C requirements for all product categories in ~~all regions~~ the Western and Central regions during the test.[216]

~~Qwest's commercial performance in Washington – which, as previously noted, is primary to a finding of compliance with Section 271 – shows that Qwest is capable of meeting (and indeed has met) the required parity standard for OP-4C in connection with non-dispatch resold Business POTS.[217] Accordingly, Qwest's commercial performance mitigates the significance of the closed/unresolved status of E3086 with respect to criterion 14-1-34. The commercial data provide evidence that Qwest is capable of provisioning Business POTS in compliance with OP-4C in Washington.~~

d. Evaluation Criteria 14-1-37, 14-1-38, and 14-1-39

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215 *See* Disposition Report for E3086, attached as Exhibit LMN-27, and also available at www.nrri.ohio-state.edu/oss/master/exceptions/april/e3086disposition_report.pdf.

216 *See* KPMG *Final Report* at Section IV, Test 14, subsection 3.1.

217 *See* Washington Commercial Performance Results (showing that Qwest has met OP-4C for Business POTS in Washington in each of the past four months).

Three of the criteria that resulted in "unable to determine" findings in the *Final Report* pertained to Qwest's ability to meet PID OP-6A in connection with Business POTS (14-1-37), Residential POTS (14-1-38), and UNE-P POTS (14-1-39).[218] OP-6A identifies "the average number of [business] days that late orders are completed beyond the committed due date."[219]

KPMG designated evaluation criteria 14-1-38 (Residential POTS) and 14-1-39 (UNE-P POTS) "unable to determine" because (to Qwest's credit) there were not any late orders for these products during the test.[220] In the absence of any test data, Qwest's commercial data demonstrates that, where orders for these products have on occasion been delayed, Qwest has shown that it indeed is meeting the required parity standard.[221] OP-6A, in addition to being disaggregated by product, is also divided into three subcategories: dispatch within MSA, dispatch outside of MSA, and non-dispatch. For the Residential POTS product, Qwest has met OP-6A for dispatch within MSA in all but one of the last twelve months in which observations occurred, for dispatch outside the MSA in each of the last twelve months in which observations occurred, and for non-dispatch in each of the last twelve months in which observations occurred.[222] For the UNE-P POTS product, Qwest has met OP-6A for dispatch within MSA in each of the last nine months in which observations occurred, for dispatch outside the MSA each of the last 12 months in which observations occurred, and for non-dispatch in each of the last

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218 *See* KPMG *Final Report*, Section IV, Test 14, subsection 3.1.

219 ROC PIDs.

220 *See* KPMG *Final Report* at Section IV, Test 14, subsection 3.1.

221 *See* Washington Commercial Performance Results (OP-6A).

222 Id.

twelve months in which observations occurred.[223] Qwest's OP-6A performance amply demonstrates that Qwest's Wholesale processing is at parity with its Retail processing.

Evaluation Criteria 14-1-37 (Business POTS) was designated "unable to determine" because, for the Western and Eastern Regions there was not enough data (to Qwest's credit, as this PID measures provisioning delay days) on which KPMG could base its analysis. Though there were very few delayed orders in the Central Region, KPMG did find that Wholesale Business POTS orders were delayed an average of only one day, as compared with to 9.4 days for Retail orders, resulting in a "satisfied" finding for the Central Region.[224] This demonstrates that, in those limited instances where Wholesale Business POTS orders are delayed, Qwest does meet the OP-6A PID. Qwest's performance in the commercial context demonstrates the same. For the Business POTS product, Qwest has met OP-6A for dispatch within MSA for 10 of the last 11 months in which observations occurred, for dispatch outside the MSA for each of the last 12 months in which observations occurred, and for non-dispatch in each of the last 12 months in which observations occurred.[225] Again, the fact that data does not exist for all months for this product means that there were no provisioning delays to even measure.

~~e. Evaluation Criterion 14-1-43~~

~~Evaluation Criteria 14-1-43 assesses whether Qwest meets PID OP-15 (Interval for pending orders delayed past due date – all products). OP-15 is a diagnostic PID, meaning that,~~

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223 Id.

224 *See* KPMG *Final Report* at Section IV, Test 14, subsection 3.1, 14-1-37.

225 *See* Washington Commercial Performance Results (OP-6A).

~~by definition, it is not capable of being "satisfied" or "not satisfied."[226] Qwest believes that the "unable to determine" finding associated with evaluation criteria 14-1-43 is accordingly attributable to an error, and has brought this issue to KPMG's attention. The "unable to determine" finding is a non-sequitur in the context of a diagnostic PID.~~

f. Evaluation Criterion 14-1-44 (and Exception 3120)

Criterion 14-1-44 evaluated whether "Qwest-produced measures of ordering and provisioning performance results for HP transactions [were] consistent with [analogous] KPMG-produced [] measures."[227] KPMG labeled this evaluation criterion "unable to determine" because it found some discrepancies between its own data and that of Qwest.[228] For the same reasons, this criterion resulted in Exception 3120, which was ultimately closed/resolved.[229]

To address the issues raised by KPMG, Qwest implemented – and is continuing to implement – system fixes, and is conducting additional training, and revising its documentation, as appropriate. Significantly, the *Final Report* states that "the Retest of Exception 3120 allowed KPMG Consulting to determine that Qwest fixed all of the system problems identified in this Exception (3120)."[230] Nonetheless, KPMG was unable to determine whether Qwest satisfied this

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226 *See* KPMG *Final Report* at Section V, Table V-6.

227 *See* KPMG *Final Report* at Section IV, Test 14, subsection 3.1, 14-1-44.

228 Id.

229 *See* Qwest Response to KPMG Comments, attached as Exhibit LMN-30, and also available at http://www.nrri.ohio-state.edu/oss/master/exceptions/april/e3120qwest_resp_kpmg_comments.pdf.

230 *See* KPMG *Final Report* at Section IV, Test 14, subsection 3.1, 14-1-44.

criterion because, while KPMG acknowledged that all system issues had been resolved, it had not had the opportunity to evaluate the impact of manual processing errors.[231]

The few Test 14 Evaluation Criteria that were either assessed as either "Not Satisfied" or "Unable to Determine" do not diminish Qwest's overall strong performance in Test 14. Test Results and Commercial Performance data both provide ample evidence that Qwest provisions wholesale services on a non-discriminatory basis.

2. Test 14.7 (Provisioning Process Parity Evaluation "PPE")

Test 14.7 reviewed the Qwest processes, systems and interfaces that provide provisioning support for CLECs.[232] The object of the PPE was to determine the extent to which Qwest's CLEC provisioning processes and systems operate at parity with its retail operations.[233] The results of the PPE appear in Table 14.7-2 of KPMG's *Final Report*. As noted in that table, Qwest satisfied all 50 criteria of the PPE.[234] Specifically, KPMG found, among other things, that (1) inputs to and outputs from the order processing systems use the same method for retail and wholesale operations; (2) the method and prioritization of orders in and outputs from the order processing systems, translation systems, problem resolution systems, engineering systems, dispatch systems, inventory systems, and coordination center systems use the same method for retail and wholesale operations; (3) the organization, execution of work, personnel skill sets, hours of operation, and methods and procedures in the translation centers, problem resolution

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231 Id.

232 *See* KPMG *Final Report*, Test 14.7, subsection 1.0.

233 Id.

234 *See* KPMG *Final Report*, Test 14.7, subsection 3.1.

centers, facilities centers, engineering centers, dispatch centers, and inventory centers are the same for retail and wholesale operations; and (4) that processes for evaluating and adjusting system infrastructure, equipment, office space and personnel utilization – based on current and forecasted volumes – are in place.[235]

3. Test 14.8 (Provisioning Coordination Process Evaluation)

Test 14.8 reviewed Qwest's procedures, processes and operational environment used to support coordinated provisioning with CLECs.[236] The results of the Provisioning Coordination Process Evaluation appear in Table 14.8-3 of the *Final Report*. As noted in that table, Qwest satisfied all 13 criteria of the PCPE.[237] Specifically, KPMG found that Qwest's provisioning coordination process is complete; correctly documented, maintained and published; accurate for purposes of tracking, forecasting and maintaining performance; and that responsibilities for performance improvement are appropriately defined and assigned.[238]

4. Test 22[239] (CLEC Network Provisioning)

Test 22 was designed to verify that Qwest provisions Network Design Requests ("NDRs"), collocation, and interconnection trunks in a timely, non-discriminatory manner.

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235 *See* KPMG *Final Report* at Section IV, Test 14.7, subsection 3.1.

236 *See* KPMG *Final Report* at Section IV, Test 14.8, subsection 1.0.

237 *See* KPMG *Final Report* at Section IV, Test 14.8, subsection 3.1.

238 Id.

239 Test 22 is discussed in this section because it deals with provisioning. Test 22 did not, however, evaluate the provisioning of unbundled network elements or resale for individual CLEC end-users. Rather, it evaluated Qwest's ability to provision CLEC orders for elements that CLECs use to design and build their own networks. For example, Test 22 evaluated Qwest's methods, procedures and processes to allow CLECs to prepare for and implement network designs, including customized routing, and also evaluated Qwest's methods and procedures relating to collocation and interconnection.

Qwest satisfied all but one of the thirty-four Test 22 evaluation criteria. KPMG was "unable to determine" whether a single evaluation criterion (22-1-10) was satisfied.

a. Evaluation Criterion 22-1-10

Criterion 22-1-10 evaluated whether "defined processes for NDRs are adhered to."[240] KPMG was "unable to determine" whether Qwest meets this evaluation criterion because Qwest did not process any NDRs in the course of the test.[241] KPMG's findings comport with Qwest's real world experience. Because the NDR process is typically invoked only by new entrants, Qwest has not completed any NDRs in the past year. In fact, Qwest received only two potential NDR orders in the past year. One was submitted by an unqualified CLEC (a switchless reseller that could not support the product), the other by a CLEC for which negotiations are currently underway. Clearly, the status of criterion 22-1-10 should not stand in the way of a finding of Section 271 compliance.

D. MAINTENANCE AND REPAIR

The FCC has held that "a BOC must provide requesting carriers with nondiscriminatory access to its maintenance and repair systems."[242] More specifically, the FCC has held that " to the extent a BOC performs analogous maintenance and repair functions for its retail operations, it must provide CLECs access that enables them to perform maintenance and repair functions 'in substantially the same time and manner' as the BOC provides its retail customers."[243] For

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240 *See* KPMG *Final Report* at Section IV, Test 22, subsection 3.1.

241 Id.

242 *See Georgia/Louisiana 271 Order*, ¶26.

243 Id., ¶38.

those maintenance and repair functions that have no retail analog, the FCC has held that a BOC must offer them in a manner that provides an efficient competitor a "meaningful opportunity to compete."[244] Qwest makes available three methods of accessing its M&R functionalities: Customer Electronic Maintenance Repair/Repair Call Expert ("CEMR/RCE"),[245] Electronic Bonding-Trouble Administration ("EB-TA"),[246] and calling or faxing a Qwest Service Center.

KPMG's M&R evaluation demonstrates Qwest's ability to provide CLECs with M&R functionality in substantially the same time and manner as it provides such functionality to itself. M&R testing was divided into six tests, as follows: (1) a CEMR Functional Evaluation (Test 16), which included a CEMR volume test as Phase 3 of that test; (2) a MEDIACC-EB-TA Functional Evaluation (Test 17); (3) an M&R End to End Trouble Report Processing (Test 18); (4) an M&R Work Center Support Evaluation (Test 18.7); (5) an End-to-End M&R Process Evaluation (Test 18.8); and (6) a Network Surveillance and Outage Support Evaluation (Test 24.9).[247] Qwest performed very well in each of these tests.

1. Test 16

Test 16, CEMR Functional Evaluation, was a comprehensive review of the trouble administration functional elements of CEMR, their conformance to documented specifications, and an analysis of its functionality in comparison to Qwest's retail front-end systems. Qwest's

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244 Id. ¶38.

245 CEMR is a real-time, human-to-computer interface that allows access to Qwest's back-office systems through the Internet.

246 EB-TA is a real time, computer-to-computer interface through which a CLEC can integrate its own back office systems with those of Qwest for M&R functions.

247 *See* MTP 5.2 (Exhibit LMN-4).

overall performance in this test was excellent. In its *Final Report*, KPMG concluded that Qwest had satisfied 27 of its 28 evaluation criteria regarding CEMR.[248] In addition, there was an additional test criterion that was merely diagnostic. The single evaluation criterion that was not satisfied in Test 16, criterion 16-3-5, was in Phase 3, Volume Test. The Volume Test included normal, peak, and stress tests, which measured Qwest's performance against benchmarks for 13 transactions. Qwest successfully met all 13 benchmarks for the normal days. Qwest met twelve of the 13 benchmarks for the peak test day accounting for 98.2% of total transactions executed. Non-designed edit transactions averaged 27 seconds, however, rather than the 24-second benchmark.[249]

KPMG issued Exception 3107 on the basis of the one benchmark missed, and this Exception was eventually closed/unresolved. In addition, KPMG concluded that test criterion 16-3-5 (Modify a trouble report transactions are processed within the guidelines established by the ROC TAG benchmark) was not satisfied on this same basis.

Based on Qwest's CEMR Logs for the most recent six month period, non-design edit transactions account for a mere 0.3%, on average, of actual CLEC transaction volumes.[250] In addition, Qwest independently set up and conducted three separate tests of non-design edit transactions to ensure that its CEMR response times were timely.[251] Each of these tests involved

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248 *See* KPMG *Final Report* at Section IV, Test 16, subsection 3.1.

249 The stress test portion of the CEMR volume test was diagnostic.

250 The CEMR logs are provided as Exhibit LMN-47.

251 *See* Disposition Report for E3107, attached as Exhibit LMN-31.

an even higher volume of transactions than those required by the Master Test Plan,[252] and testing was conducted during the business day when other transactions were being processed. Qwest met the 24 second benchmark during each of these tests, posting average transaction response times of 18.9, 18.1, and 22.4 seconds.[253] Qwest discussed the results of these internal tests in its response to Exception 3107.

This provides additional evidence that CLECs processing these types of transactions should experience response times within the benchmark. In any case, the extremely low volume of non-design edit transactions handled in CEMR make it extremely unlikely that the mere three second delay in connection with one test transaction at peak load would have a material impact on CLECs in a commercial setting.

Accordingly, Exception 3107 and unsatisfied test criterion 16-3-5 represent, at most, an anomaly that should not impact the actual production environment experience of CLECs. Qwest's strong overall Test 16 performance demonstrates that CEMR meets the requirements of Section 271. Qwest's commercial results relating to CEMR availability, discussed below, provided further compelling evidence of this fact.

2. Test 17

Test 17, The EB-TA Functional Test, evaluated the functionality of Qwest's EB-TA gateway.[254] The object of the test was to validate the existence and expected behavior of Qwest's

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252 *See* MTP (Exhibit LMN-4) at 72-78.

253 The CEMR performance results are provided as Confidential Exhibits LMN-C48A through LMN-C48D.

254 *See* KPMG *Final Report* at Section IV, Test 17, subsection 1.0.

EB-TA gateway functionality.[255] The results of the EB-TA Functional Test appear in Table 17-1.3 of the *Final Report*. As noted in that table, KPMG found that Qwest satisfied all eight evaluation criteria of the EB-TA Functional Test.[256] KPMG also found that the functionality of the Wholesale trouble reporting systems is comparable to the functionality of the Retail trouble reporting system.[257]

3. Test 18

Test 18, the End-to-End Trouble Report Processing Test, involved the execution of selected M&R test scenarios to evaluate Qwest's performance in making repairs under the conditions of various wholesale maintenance scenarios.[258] The quality of the repair process was assessed, and compared with Retail operations where retail data was available.[259] Qwest satisfied ten of the thirteen criteria for Test 18.[260]

In the course of Test 18, however, KPMG issued two Exceptions (3055 and 3058) that Qwest ultimately requested be closed/unresolved. In addition, Exception 3053 was closed/inconclusive. Two test criteria that were not satisfied (18-6-1 and 18-7-1), and one criterion that KPMG categorized as "unable to determine" (18-6-3) are related to these three

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255 Id.

256 *See* KPMG *Final Report* at Section IV, Test 17, subsection 3.1.

257 Id.

258 *See* KPMG *Final Report* at Section IV, Test 18, subsection 3.1.

259 Id.

260 Id.

Exceptions. Qwest will first address 18-6-1 (Exception 3055) and 18-6-3 (3053), as both are related to close out codes for trouble/repair tickets.

a. Evaluation Criterion 18-6-1 (and Exception 3055)

Criterion 18-6-1 evaluated whether "[c]lose out codes for out-of-service and service affecting wholesale UNE-P, resale and Centrex 21 troubles indicated in Qwest's systems . . . are consistent with the troubles placed on the lines."[261] KPMG concluded that Qwest did "not satisfy" this criterion and issued Exception 3055, which was closed/unresolved, because ultimately, on retest, Qwest entered correct close-out codes for only 108 of 122 (88.5%) of "dispatch in" and "dispatch out" HP accounts, falling short of KPMG's self-determined 95% benchmark.[262]

There are no commercial performance results for Evaluation Criterion 18-6-1 to compare with test results. However, as a practical matter, Qwest's performance during the retest would not in any way have negatively impacted an actual CLEC's ability to do business, based on the close-out codes used by Qwest.

Qwest uses close-out codes when closing out a repair ticket, in order to analyze the network, identify trends, and troubleshoot and repair potential problem areas. Close-out codes consist of four digits. The first two digits identify whether the trouble was a Qwest-issue or CLEC-issue, and, if a Qwest-issue, the internal Qwest department or equipment category that experienced the trouble. The second two digits identify more

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261 *See* KPMG *Final Report* at Section IV, Test 18, subsection 3.1, 18-6-1.

262 Id.

specifically the group or equipment component within the broader category that experienced the trouble. These second two digits have no significance for CLECs, as they do not affect Qwest's service to CLECs, Qwest's regulatory or financial reporting, or Qwest's commercial performance.

Trouble tickets also contain a narrative field. The narrative field is used by the Qwest technician, screener or dispatcher to further describe the found trouble, often with greater specificity than close-out codes can accommodate. In practice, the narrative field is always completed so the trouble experienced is clearly described for future analysis or reference.

During the test, KPMG believed that Qwest did not use accurate close-out codes for trouble reports on 14 HP accounts. But five of the inaccurate close-out codes Qwest used were inaccurate only with respect to the second two digits, which have little meaning or significance to CLECs. For those five tickets, the critical first two digits, which identify the problem as a Qwest-related or CLEC-related problem, were correct. In addition, all but six of the 14 tickets contained accurate, more detailed information in their narrative fields.

Had KPMG recognized the primacy of accurate narrative fields in closing out trouble tickets (rather than relying solely on coding numbers), it would have found that, as a practical matter, 116 of the 122 HP repair tickets it evaluated (95.08%) satisfied the actual CLEC business need associated with close out codes and narrative fields: understanding the nature of the repair-related issue. It is also should be emphasized that, putting aside Qwest's and KPMG's differing analysis of the close out code issue, the

retest did demonstrate that Qwest cleared the circuit faults and restored quality service in a timely manner, which is indisputably the most important and potentially CLEC-impacting consideration.

Qwest has since implemented additional training of its technicians to ensure that they code and close-out all trouble tickets correctly. Qwest also has implemented a weekly internal audit of trouble tickets to ensure that, among other things, they contain the correct coding. These audits indicate that this additional training has improved Qwest's close out codes accuracy; performance has been at 95% or above for each of the past eight weeks.[263] In short, the circumstances of evaluation criterion 18-6-1 and E3055 – and the action Qwest has taken in response – suggest that the results of criterion 18-6-1 in no way prevent CLECs from a meaningful opportunity to compete in the market for local service.

b. Evaluation Criterion 18-6-3 (and Exception 3053)

Criterion 18-6-3 evaluated whether "[c]lose out codes for out of service and service affecting wholesale DS1 and higher bit rate troubles indicated in Qwest's systems are consistent with the troubles placed on the line[.]"[264] KPMG concluded that it was "unable to determine" whether Qwest satisfied this evaluation criterion because of an insufficient sample size.[265] In the

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263 *See* Exhibit LMN-53 (Qwest State Audit Summary Disposition Codes- Washington). Note that no data was reported in Washington for the week ending March 29, 2002.

264 *See* KPMG *Final Report* at Section IV, Test 18, subsection 3.1, 18-6-3.

265 Id.

course of testing, KPMG submitted ten troubles, nine of which were correctly coded. This 90% performance did not satisfy KPMG's assigned benchmark of 95%.

Qwest's performance resulted in Exception 3053, which, for the same reasons, was closed/inconclusive.[266] However, as noted in the *Final Report*, KPMG found that the difference between the performance result and the standard was not statistically significant.[267]

Qwest believes that correctly coding nine out of ten troubles supports the conclusion that Qwest provides non-discriminatory access to its M&R functions. As a result, KPMG's designation of evaluation criterion 18-6-3 as "unable to determine" should not be seen as significant, when viewed in the context of Qwest's overall Test 18 performance.

c. Evaluation Criterion 18-7-1 (and Exception 3058)

Criterion 18-7-1 evaluated whether "[o]ut of service affecting wholesale UNE-P, resale, and Centrex 21 troubles that may or may not require the dispatch of a technician are successfully repaired."[268] KPMG concluded that Qwest did "not satisfy" this evaluation criterion because Qwest successfully repaired only 92% – not 95% – of such troubles.[269] Qwest's performance also resulted in E3058, which, for the same reasons Qwest did not satisfy the criterion, was closed/unresolved.[270]

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266 Id. *See also* Disposition Report for E3053, attached as Exhibit LMN-37, and also available at http://www.nrri.ohio-state.edu/oss/master/exceptions/jan/e3053disposition_report.pdf.

267 *See* KPMG *Final Report* at Section IV, Test 18, subsection 3.1.

268 *See* KPMG *Final Report* at Section IV, Test 18, subsection 3.1, 18-7-1.

269 Id.

270 *See* Disposition Report for E3058, attached as Exhibit LMN-35, and also available at www.nrri.ohio-state.edu/oss/master/exceptions/jan/e3058disposition_report.pdf.

KPMG claims to have assigned a 95% benchmark to evaluation criterion 18-7-1 because no "PID-defined standard" was available to assess whether Qwest successfully repairs out of service troubles.[271] This is not the case. PID MR-7 evaluates "the accuracy of repair actions, focusing on the number of repeat trouble reports received for the same trouble within a specified period (30 calendar days)."[272] MR-7 measures precisely the performance that KPMG purported to evaluate under criterion 18-7-1 ("successful repair"), because a repeat trouble report is an accurate barometer of the success of the first repair effort. MR-7 employs a parity standard, comparing Qwest's Wholesale performance in this area with its Retail performance.[273]

KPMG should have used MR-7 because, in the past, the FCC has held that, in light of its analogous retail components, "a parity standard is a more appropriate measure of maintenance and repair response time than [an] absolute benchmark."[274] Had KPMG relied upon MR-7 to assess Qwest's performance, it would have found that Qwest met the appropriate standard for "successful repairs."

In Washington, Qwest's overall performance under MR-7's parity standard has generally been very good. For most of the MR-7 disaggregations, Qwest has satisfied the parity standard in virtually all of the past twelve months.[275] Qwest's overall performance in Test 18 demonstrates that it provides nondiscriminatory access when processing trouble reports. The

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271 *See* KPMG *Final Report* at Section IV, Test 18, subsection 3.1, 18-7-1.

272 ROC PIDs.

273 Id.

274 *See New York 271 Order*, 15 FCC Rcd at 4070-71, n.697.

275 *See* Washington Commercial Performance Results (MR-7).

three items addressed above are not significant, when viewed in the context of Qwest's generally strong performance in Test 18.

4. Test 18.7 (M&R Work Center Support Evaluation)

Test 18.7 was a comprehensive operational analysis of the work center processes developed by Qwest to respond to CLEC questions, problems and issues pertaining to wholesale trouble reporting and repair operations.[276] Qwest satisfied all 19 components of the test.[277] The results of Test 18.7 appear in Table 18.7-2 of the *Final Report.*

5. Test 18.8 (End-to-End M&R Process Evaluation)

Test 18.8 measured the functional equivalence of Qwest's M&R processing for wholesale and retail trouble reports.[278] Qwest satisfied all 16 components of this evaluation.[279] The results of the End-to-End M&R Process Evaluation appear in Table 18.8-2 of the *Final Report*. Specifically, KPMG found that M&R procedures are consistent, repeatable and non-discriminatory between Wholesale and Retail operations**.**[280]

6. Test 24.9 (Network Surveillance Outage Report Evaluation)

Test 24.9 reviewed the processes, procedures, and other operational elements associated with Qwest's network surveillance responsibilities for Wholesale and Retail operations.[281]

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276 *See* KPMG *Final Report* at Section IV, Test 18.7, subsection 1.0.

277 *See* KPMG *Final Report* at Section IV, Test 18.7, subsection 3.1.

278 *See* KPMG *Final Report* at Section IV, Test 18.8, subsection 1.0.

279 *See* KPMG *Final Report* at Section IV, Test 18.8, subsection 3.1.

280 Id.

281 *See* KPMG *Final Report* at Section IV, Test 24.9, subsection 1.0.

Qwest satisfied all twelve components of this evaluation.[282] The results of the test appear in Table 24.9-3 of the *Final Report*. Specifically, KPMG found that processes are in place, complete, and adhered to by Qwest personnel.[283]

7. M&R Commercial Performance Results

Qwest's commercial performance results provide further compelling evidence that Qwest makes its M&R systems available to CLECs on a non-discriminatory basis. Certain of those commercial results (e.g., MR-7) were already discussed above in the context of the M&R related tests, but additional results relating to the availability of Qwest's systems bear mentioning:

- As of April 30, 2002, five CLECs were using EB-TA to access and perform maintenance and repair functions throughout Qwest's 14-state local region.[284] From January 2002 through April 30, 2002, the five CLECs processed approximately 58,000 transactions through EB-TA. PID GA-3 provides that Qwest should make EB-TA available to CLECs region-wide at least 99.25% of the time during any reporting period.[285] Qwest has met this standard each of the last four months.[286] In fact, Qwest has met this PID each of the past twelve months.[287]

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282 *See* KPMG *Final Report* at Section IV, Test 24.9, subsection 3.1.

283 Id.

284 Qwest data is provided on a Company level, as EB-TA, located in Denver, is used by all CLECs without regard to their location or their customer's location. Accordingly, the results for PID GA-3, which relates to the availability of the EB-TA system, are reported on a regional basis.

285 ROC PIDs.

286 *See* Washington Commercial Performance Results (GA-3).

287 Id.

- As of April 30, 2002, 41 CLECs have access to CEMR to perform maintenance and repair functions.[288] From January of 2002 through April 30, 2002, CLECs processed approximately 69,000 CEMR transactions. PID GA-6 provides that Qwest should make CEMR available region-wide to CLECs at least 99.25% of the time during any reporting period.[289] Qwest has met this standard each of the last four months.[290] In fact, Qwest has met this PID each of the past twelve months.[291]
- CLECs also can submit trouble reports through non-electronic means by calling or faxing the Repair Call Handling Center ("RCHC") and the Account Maintenance Support Center ("AMSC")[292] PID MR-2 provides that Qwest should answer the same percentage of CLEC calls to its Call Center, within 20 seconds, as it does for its own Retail customers region-wide.[293] Qwest has met this parity standard each of the past four months.[294] In fact, Qwest has met this PID each of the past twelve months.[295]

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288 As noted above, Qwest's CEMR data is provided on a Company level, as CEMR is used by all CLECs without regard to their location or their customer's location.

289 *See* ROC PIDs. CEMR replaced IMA-GUI Repair on April 20, 2001. GA-6 results are also reported on a regional basis.

290 *See* Washington Commercial Performance Results (GA-6).

291 Id.

292 As of November 2001, the RCHC handles all non-design repair calls and AMSC handles all design repair calls.

293 *See* ROC PIDs.

294 *See* Washington Commercial Performance Results (MR-2). MR-2 is also reported on a regional basis.

295 Id.

E. BILLING

The FCC has held that a BOC must provide CLECs with "nondiscriminatory access to its billing functions to enable [CLECs] to provide accurate and timely bills to their [end-user] customers."[296] More specifically, "a BOC must demonstrate that it provides [CLECs] with complete and accurate reports on the service usage of [CLECs' end-user] customers in substantially the same time and manner that a BOC provides such information to itself."[297] A BOC also must furnish "wholesale bills [to CLECs] in a manner that gives [them] a meaningful opportunity to compete" in the marketplace for local service.[298]

KPMG's independent evaluation of Qwest's billing functions confirms that Qwest bills CLECs accurately and expeditiously, and in turn enables CLECs to bill their end-users accurately and expeditiously. KPMG evaluated Qwest's billing functions in five separate tests: (1) a Billing Usage Functional Evaluation (Test 19); (2) a Carrier Bill Functional Evaluation (Test 20); (3) a Daily Usage Feed Returns, Production and Distribution Process Evaluation (Test 19.6); (4) a Bill Production and Distribution Process Evaluation (Test 20.7); and an ISC/Billing and Collection Center Evaluation (Test 24.10). Qwest successfully passed each of these tests. The Billing Tests consisted of 85 evaluation criteria; Qwest satisfied 78 of these criteria. KMPG found that it was "unable to determine" whether the remaining seven criteria were satisfied. As discussed herein, none of these seven "unable to determine" criteria diminish in any way the 78

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296 *Georgia/Louisiana 271 Order* at App. C, ¶39.

297 Id.

298 Id.

satisfied criteria that provide ample evidence regarding the accuracy and timeliness of Qwest's billing functionalities.

1. Test 19 (Billing Functional Usage Evaluation)

Test 19 was an analysis of Qwest's daily message processing, to ensure that usage record types, including access records, rated records, unrated record and credit records appear accurately on the DUF, according to the defined schedule. Test 19 confirmed that Qwest provides CLECs with accurate and timely usage data. In its *Final Report*, KPMG concluded that Qwest satisfied all six of its Test 19 evaluation criteria regarding the DUF.[299]

2. Test 19.6, Daily Usage Feed Returns, Production and Distribution Process Evaluation

Test 19.6 examined the operational processes and related documentation Qwest uses to create and transmit DUF files, accept DUF returns, and investigate potential errors.[300] The objective of this Evaluation was to determine the accuracy, completeness and timeliness with which Qwest executes these processes.[301] KPMG found that Qwest satisfied 17 out of 19 evaluation criteria.[302] In addition, KPMG found that it was "unable to determine" whether Qwest satisfied two evaluation criteria, 19.6-1-17 and 19.6-1-19, relating to Qwest's Co-Carrier Usage Return ("CCUR") functionality.[303] These two "unable to determine" items relating to CCUR,

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299 *See* KPMG *Final Report* at Section IV, Test 19, subsection 3.1.

300 *See* KPMG *Final Report* at Section IV, Test 19.6, subsection 1.0.

301 *See* KPMG *Final Report* at Section IV, Test 19.6, subsection 3.1.

302 Id.

303 Id.

discussed below, should not in any way affect the finding that follows from the other Test 19.6 results, that Qwest produces and distributes to CLECs the Daily Usage File ("DUF") in a timely, non-discriminatory manner. As discussed below, KPMG assessed these two criteria "unable to determine" merely because no CLECs currently utilize the CCUR functionality.

a. Evaluation Criteria 19.6-1-17 and 19.6-1-19

Evaluation Criteria 19.6-1-17 evaluates whether the "DUF is corrected and returned according to a defined schedule." Evaluation criterion 19.6-1-19 evaluates whether "CLECs can readily obtain status on DUF return requests." Qwest's CCUR system is designed to receive/return DUF records, analyze and determine correct billing numbers, and re-deliver DUF records within three days to the correct CLEC.[304] In addition, CCUR generates a confirmation report indicating receipt of returned usage, which provides CLECs with details such as whether the item is accepted, rejected, or dropped by CCUR.[305]

KPMG verified the existence of these processes; however, KPMG could not evaluate the use of CCUR because, currently, no CLECs subscribe to this automated process.[306] Nonetheless, HP, in its role as pseudo-CLEC, confirmed that CLEC are capable of using CCUR to return usage records to Qwest.[307]

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304 Id.

305 Id.

306 *See* KPMG *Final Report* at Section IV, Test 19.6, subsection 3.1.

307 *See* First Vendor Technical Conference transcript at 27, 29, 32 and 40, available at www.nrri.ohiostate.edu/oss/master/vendor_tech/vendor_tech.htm.

Qwest strives to transmit accurate usage records to the correct CLEC on every DUF transmission. This has to a great degree eliminated the need for CLECs to sign up for CCUR transmission capabilities. Furthermore, CLECs have an alternate method of addressing incorrect usage sent on the DUF. Specifically, Qwest provides Service Delivery Coordinator personnel, each assigned to specific CLECs, to handle and direct CLEC billing-related requests or concerns. KPMG verified the existence of this process and found that Qwest "satisfied" the evaluation criterion (19.6-1-18).[308] Accordingly, the "unable to determine" status of criteria 19.6-1-17 and 19.6-1-19, relating to the CCUR functionality that no CLEC currently uses, is not significant. Qwest satisfied all other Test 19.6 evaluation criteria.

3. Test 20, the Carrier Bill Functional Evaluation

Test 20 evaluated Qwest's ability to accurately bill usage plus monthly recurring charges ("MRCs"), fractional MRCs, and NRCs on the appropriate type of bill. This test also evaluated the timeliness of bill delivery to the CLECs, including both paper and electronic invoices. KPMG's independent evaluation of Qwest's Billing confirmed that Qwest provides CLECs with accurate, timely billing of usage, MRCs, fractional charges, and NRCs on the appropriate type of bill. In its *Final Report*, KPMG concluded that Qwest satisfied all 27 of its Billing related evaluation criteria.[309]

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308 *See* KPMG *Final Report* at Section IV, Test 19.6, subsection 3.1, 19.6-1-18.

309 *See* KPMG *Final Report* at Section IV, Test 20, subsection 3.1.

4. Test 20.7, the Bill Production and Distribution Process Evaluation

Test 20.7 examined Qwest's operational processes in connection with its production and distribution of timely and accurate Wholesale bills.[310] The object of the Bill Production and Distribution Process Evaluation was to determine whether Qwest's processes and procedures are sufficient to ensure that charges for products and services are accurately billed and delivered to CLECs in a timely manner.[311] Qwest satisfied 17 out of 21 evaluation criteria.[312] KPMG assessed the remaining four evaluation criteria (20.7-1-3, 20.7-1-4, 20.7-1-5, and 20.7-1-9) as "unable to determine." These "unable to determine" items are not significant in light of the basis for these determinations, and in the context of Qwest's satisfactory performance on all other Test 20.7 criteria. Qwest's discussion of these four "unable to determine" criteria follows.

a. Evaluation Criterion 20.7-1-3

Criterion 20.7-1-3 evaluated whether Qwest had cycle balancing procedures in place to identify and resolve out-of-balance conditions. KPMG confirmed that Qwest had necessary procedures and documentation in place relating to this item, for both the CRIS and IABS billing platforms, and even confirmed the existence of cycle balancing controls. Nonetheless, KPMG assessed this criterion as "unable to determine," because the activities associated with this criterion "are embedded in automated systems, rather than in manual processes.[313] In other words, as KPMG stated, it could not "conclusively validate Qwest's adherence to its defined

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310 *See* KPMG *Final Report* at Section IV, Test 20.7, subsection 1.0.

311 Id.

312 *See* KPMG *Final Report* at Section IV, Test 20.7, subsection 3.1.

313 Id.

cycle balancing processes,"[314] because these processes were contained within automated systems. This is by no means a negative finding; rather, it is simply an acknowledgment that KPMG could go no further with its evaluation of this criterion. Importantly, what KMPG was able to evaluate—including voluminous supporting documentation—it found satisfactory.

b. Evaluation Criterion 20.7-1-4

Evaluation Criterion 20.7-1-4 assessed whether Qwest's bill production and distribution process included "reasonability checks to identify errors not susceptible to pre-determined balancing procedures."[315] KPMG concluded that it was "unable to determine" whether Qwest satisfied this evaluation criterion because, while KPMG confirmed the existence of Qwest's bill validation procedures, it did not observe these procedures in practice during the test.[316]

As a proxy, KPMG examined Qwest's billing systems' outputs in the Carrier Bill Functional Evaluation (Test 20) to determine the effectiveness of Qwest's bill validation procedures.[317] Although KPMG issued several Observations and Exceptions during this test, all of them were closed as "satisfied."[318] Qwest therefore fully satisfied the requirements of Test 20.[319] However, because KPMG could not determine whether Qwest's satisfactory performance

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314 Id.

315 *See* KPMG *Final Report* at Section IV, Test 20.7, subsection 3.1.

316 Id.

317 Id.

318 Id.

319 Id.

on bill accuracy reflected Qwest's pre-production checks or post-production checks, it labeled evaluation criterion 20.7-1-4 as "unable to determine."[320]

Although KPMG did not determine whether the accuracy of Qwest's bills was due to pre- or post-production processes, it did determine (most importantly) that Qwest's bills are accurate.[321] Thus, the fact that KPMG was "unable to determine" whether Qwest had satisfied criterion 20.7-1-4 does not in any way diminish the conclusion that follows from Qwest's overall Test 20 performance, that Qwest produces and distributes bills to CLECs in a timely, non-discriminatory manner.

c. Evaluation Criterion 20.7-1-5

Test 20.7-1-5 evaluated whether Qwest's bill production and distribution process included "procedures to ensure that payments and adjustments are applied."[322] While KPMG confirmed that Qwest has in place automated systems to ensure that payments and adjustments are applied, it designated evaluation criterion 20.7-1-5 "unable to determine" because no transaction testing was conducted to apply payments or generate claims for which adjustments would have been required.[323]

Notwithstanding the lack of actual transaction testing, KPMG's comprehensive approach in evaluating Qwest's bill production and distribution processes provides this Commission with ample and compelling evidence that these processes are in place and do function properly. In the

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320 Id.

321 Id.

322 *See* KPMG *Final Report* at Section IV, Test 20.7, subsection 3.1.

323 Id.

course of its evaluation, KPMG interviewed Qwest subject matter experts, reviewed both internal and external Qwest documentation, and examined Qwest's processes, operational methods and procedures, organizational charts and supporting documentation.[324] In short, evidence exists to support a finding that Qwest is capable of applying, and does properly apply, payments and adjustments to its bills.

d. Evaluation Criterion 20.7-1-9

Test 20.7-1-9 evaluated whether Qwest's bill production and distribution process includes "procedures to ensure that bill retention requirements are operationally satisfied."[325] While KPMG confirmed that Qwest has in place automated systems designed to reproduce bill details and Summary Bill information for six years and 15 years, respectively, it concluded that it was "unable to determine" whether Qwest satisfied this criterion because the test's time frame did not exceed the bill retention time frame.[326]

Clearly, it is impossible to prove in the course of a two-year test that a company retains billing information for six or 15 years. Local competition under the Telecommunications Act of 1996 only became possible six years ago. Qwest possesses bills issued to CLECs that established service as far back as 1996 and 1997. It is only logical that the "unable to determine" status of evaluation criteria 20.7-1-9 should in no way affect a finding of Qwest's 271 compliance.

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324 Id.

325 *See* KPMG *Final Report* at Section IV, Test 20.7, subsection 3.1.

326 Id.

5. Test 24.10 (ISC/Billing and Collection Center Evaluation)

Test 24.10 examined the processes and documentation developed and employed by Qwest to support resellers and CLECs with usage (DUF) and/or billing related claims, inquiries, problems, and issues.[327] In its *Final Report*, KPMG concluded that Qwest's ISC/Billing practices and processes meet the needs of the CLEC community, and that Qwest satisfied eleven of twelve evaluation criteria for Test 24.10.[328] Specifically, KPMG found that the scope of responsibilities of the Billing Support Center is adequate to address customer inquiries; the processes include procedures to acknowledge and track CLEC requests and resolve them in a timely manner; the processes include procedures for the closure of claims; escalation procedures are defined; CLEC customers can initiate and obtain status information on a claim or query; the processes include procedures for management reporting and maintaining the security and integrity of CLEC data; and performance measures are defined, measured, and reviewed. Further details on the results of ISC Billing Evaluation can be found in Section 24.10 of the *Final Report.*

Test 24.10 resulted in one "unable to determine" criterion, but it in no way alters the conclusion that follows from the totality of the evidence, including the eleven Test 24.10 criteria that Qwest did satisfy, that Qwest's ISC/Billing and Collection Center adequately supports CLECs with usage- and billing-related claims, inquiries, problems and issues.

a. Evaluation Criterion 24.10-3-4

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327 *See* KPMG *Final Report*, Section IV, Test 24.10, subsection 1.0.

328 *See* KPMG *Final Report*, Section IV, Test 24.10, subsection 3.1.

Evaluation criteria 24.10-3-4 assessed whether Qwest's training of representatives is defined, documented, and followed.[329] KPMG concluded that it was "unable to determine" whether Qwest follows its training procedures because, as representatives are trained only as needed, no such training processes took place during the test.[330]

Notwithstanding the designation of evaluation criterion 24.10-3-4 as "unable to determine," Qwest adheres to its documented training procedures. In the past year alone, Qwest has held a total of 2,547 hours of training sessions for the ISC Billing and Collection Center. Sessions have ranged from a 1/2 hour to 16 hours. A total of 752 Qwest employees have participated in these training sessions. Qwest has scheduled roughly the same number of sessions in 2002. Qwest's training representatives also meet monthly with company managers to evaluate the program and assess ongoing needs. The strong positive feedback Qwest has received from those who have attended these training sessions shows that the defined and documented processes Qwest has established are resulting in effective training.

6. Billing Commercial Performance Results

Qwest's commercial performance results relating to billing provide further evidence that Qwest bills CLECs accurately and expeditiously, and in turn enables CLECs to bill their end-users accurately and expeditiously. Qwest's commercial performance results for all other Billing PIDs is as follows:

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329 Id.

330 Id.

- BI-1 measures the timeliness with which Qwest provides DUF records to CLEC Performance measure, dividing daily usage records into two groups, BI-1A and BI-1B.
- BI-1A measures the time interval, in average business days, from the date of recorded daily usage for UNEs and Resale to the date Qwest transmits or otherwise makes available such usage records to the CLEC.[331] For BI-1A, Qwest must provide such daily usage records at parity with its own Retail operations to satisfy this measure.[332] Qwest has satisfied this measure in each of the past four months.[333] In fact, Qwest has met BI-1A in each of the past twelve months.[334]
- BI-1B measures the percent of daily usage records for jointly-provided switched access provided to CLECs within four business days from the time when the usage was recorded.[335] To meet the PID standard, Qwest must provide these records to CLECs within four days at least 95% of the time.[336] Qwest has satisfied this measure

331 *See* ROC PIDs.

332 Id.

333 *See* Washington Commercial Performance Results (PID BI-1A).

334 Id.

335 *See* ROC PIDs.

336 Id.

in each of the past four months.[337] In fact, Qwest has met BI-1B in each of the past seven months.[338]

- BI-2 measures the timeliness of Qwest's delivery of industry-standard electronically transmitted UNE and Resale bills to CLECs.[339] Under BI-2, Qwest measures the number of days between the bill date and the bill delivery to the CLEC.[340] The measurement standard requires Qwest to deliver within ten days the same percentage of electronic bills to CLECs as it delivers to its own Retail customers.[341] The CRIS billing system automatically delivers industry standard electronic bills based on the order in which the bills queue. Therefore, the percentage of bills delivered within ten calendar days is at parity with the delivery interval for Qwest's Retail operations. In fact, because Qwest's systems and processes do not distinguish between the delivery of Wholesale and Retail electronic bills, the standard for this measure is "parity by design" – meaning that, by definition, Qwest renders the same service to CLECs as it does to its Retail customers.
- PID BI-3A evaluates the accuracy of Qwest's Wholesale UNE and Resale bills, by comparing billed revenue without errors (billed revenue minus the absolute value of

337 *See* Washington Commercial Performance Results (PID BI-1B).

338 Id.

339 *See* ROC PIDS.

340 Id.

341 Id.

adjustments due to errors) to the total revenue billed.[342] Qwest must provide accurate Wholesale bills at parity with its Retail operations.[343] Recognizing issues with its BI-3A reported results, in the fall of 2001 Qwest initiated a systematic analysis of its billing system. This analysis concentrated on comparing and validating rates that were loaded into the billing systems to the rate Qwest published in its Wholesale tariffs and in its contracts with CLECs. Qwest also implemented a process to communicate rate validation corrections to the CLECs. The process notifies CLECs of rate validation corrections ten business days prior to the implementation of the rate correction in Qwest's billing systems. The CLEC notification includes the UNE or resale product affected, the current billed rate, the corrected rate in the billing system, the effective date of the correction, the approximate month during which the correction will appear on the bill and the authority by which the rate is being corrected.[344]

- In early May 2002, as part of Qwest's effort to further understand the BI-3A results in some states, Qwest found that the results, as reported, were not consistent with the intent of the PID. Some adjustments are made through an automated process rather

342 *See* ROC PIDs.

343 Id.

344 Furthermore, Qwest improved and updated the Qwest Contract Rate Implementation End-to-End Process by adding process steps and validation tools for quality checks. Qwest also implemented internal controls, including management oversight and performance measurements to ensure compliance with the process improvements. Qwest has and will continue to implement billing system improvements to add, change and delete rate table data automatically. This process ensures quality rate table changes by eliminating the need for system developers to implement programming changes for routine rate table modifications.

than the issuance of individual service orders.[345] In that circumstance, for each item adjusted by the automated process, the billing system counts both a credit and a debit: a credit for the rate that was billed incorrectly and a debit for the correct rate, the difference of which is the actual amount adjusted. When the adjustment is extracted from the billing system for BI-3A reporting purposes, however, the reporting program incorrectly included both the removal of the incorrect rate and the addition of the correct rate as a total error rather than just reporting the amount adjusted due to error. For example, if the rate validation project found that a CLEC was being incorrectly billed $30.05 for a PBX trunk instead of $30.00, the CLEC's bill would reflect both a credit for $30.05 and a debit for $30.00 – for that same trunk – or a net credit of $0.05. When that adjustment is reported in the PID, instead of calculating only the amount of the $0.05 adjustment, the program was reporting an adjustment of $60.05, including both the $30.05 credit and the $30.00 debit. This logic error greatly exaggerates all automated adjustments--even minor adjustments-- that Qwest makes on a CLEC's bills. Qwest is reprogramming its reporting system to capture the correct calculation and anticipates having this change in place by July 2002. This should further improve Qwest's reported BI-3A results, which have already met the parity standard in each of the last four months.[346]

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345 This same automated process is used whenever billing adjustments are made en masse, including adjustments made due to Cost Docket implementation and the rate validation project.

346 *See* Washington Commercial Performance Results (BI-3A).

- BI-4 measures Qwest's UNE and Resale billing completeness.[347] A bill is considered complete when recurring and non-recurring charges associated with a completed service order are billed on the next available bill, as opposed to being charged to a CLEC on subsequent bills.[348] Qwest compares the number of service orders with recurring and non-recurring UNE and Resale charges associated with completed service orders that Qwest includes on the next available bill versus the total number of service orders with non-recurring and recurring charges associated with completed service orders on the bill.[349] Qwest must provide complete bills to CLECs at a rate at parity with Qwest's own Retail service.[350] Qwest has met the BI-4A measure for UNEs and Resale for each of the past four months.[351]
- PO-7 evaluates the timeliness with which Qwest makes electronic billing completion notifications available to CLECs.[352] Qwest provides electronic billing completion notices to CLECs in two formats, IMA-GUI (PO-7A) and IMA-EDI (PO-7B). In both cases (IMA-GUI and IMA-EDI), Qwest measures, as a percentage, how often the interval from service order completion date to the billing completion notice

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347 *See* ROC PIDs.

348 Id.

349 Id.

350 Id.

351 *See* Washington Commercial Performance Results (BI-4A).

352 *See* ROC PIDS.

availability date is five days or less.[353] To provide a comparison to Qwest's own Retail operation, Qwest also measures the percentage of times in which a Qwest Retail order is posted in the CRIS billing system within five days from the time the service order is posted in the Qwest SOP.[354] The PID standard is parity with Qwest's Retail operations.[355]

- For PO-7A, Qwest has met this standard in each of the past four months.[356]
- There is no current reported data for PO-7B, because no CLECs currently have signed up to received IMA-EDI Billing Completion Notifications within Qwest's 14-state territory. Until a CLEC opts to receive the IMA-EDI transmission, there will be no commercial results to evaluate Qwest's performance under PO-7B.

V. CHANGE MANAGEMENT, TECHNICAL ASSISTANCE AND INTERFACE TESTING

As defined by the FCC, "change management" refers to the "methods and procedures that the BOC employs to communicate with competing carriers regarding the performance of, and changes in, the BOC's OSS."[357] In its Section 271 orders, the FCC has also included in its discussion of change management the assistance a BOC provides to CLECs, the OSS test environment made available to CLECs, help desk support, CLEC training, EDI documentation

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353 *See id.*

354 *See id.*

355 *See id.*

356 *See* Washington Commercial Performance Results (PO-7A).

357 *Georgia/Louisiana 271 Order*, Appendix D (¶ 41).

and other CLEC technical assistance. The FCC has set forth the following evaluation criteria for change management:

1. Evidence showing that information relating to the change management process is clearly organized and readily accessible to competing carriers;

2. Evidence showing that competing carriers had substantial input in the design and continued operation of the change management process;

3. Evidence showing that the change management plan defines a procedure for the timely resolution of change management disputes;

4. Evidence that Qwest has demonstrated a pattern of compliance with its change management plan;

5. Evidence demonstrating that Qwest adequately assists competing carriers in the use of available OSS functions;

6. Evidence of the efficacy of the documentation Qwest makes available to competing carriers for the purpose of building an electronic gateway; and

7. Evidence of the availability of a stable testing environment that mirrors production.[358]

The following sections address these standards. The first section describes how Qwest's change management process ("CMP") satisfies factors one through 4. The second section describes how Qwest satisfies factor five by assisting competing carriers in the use of available OSS functions, and how Qwest satisfies factor six by providing efficacious documentation Qwest to CLECs for the purpose of building electronic gateways. The final

[358] *See, e.g., Georgia/Louisiana 271 Order* at App. D, ¶¶ 40-42.

section describes how the testing environments Qwest provides to CLECs, including Interoperability and SATE, satisfy factor 7.

A. CHANGE MANAGEMENT PROCESS

The change management process is used to process and communicate to CLECs changes to Qwest's OSS interfaces and to products and processes. This section discusses the FCC factors that relate to Qwest's change management process itself – that is, factors one through 4:

1. Evidence showing that information relating to the change management process is clearly organized and readily accessible to competing carriers;

2. Evidence showing that competing carriers had substantial input in the design and continued operation of the change management process;

3. Evidence showing that the change management plan defines a procedure for the timely resolution of change management disputes; and

4. Evidence that Qwest has demonstrated a pattern of compliance with its change management plan. [359]

Qwest's CMP clearly meets these FCC standards. As the next section demonstrates, CMP has been jointly developed by CLECs and Qwest, and is the most extensive and complete change management process in the country. [360]

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[359] *See, e.g., Georgia/Louisiana 271 Order* at App. D, ¶¶ 40-42.

[360] Qwest's Wholesale Change Management Process Document ("CMP Framework") is attached as Exhibit JMS-2, and can also be found on the "What is CMP?" page of Qwest's wholesale web site at the following URL: http://www.qwest.com/wholesale/cmp/whatiscmp.html.

1. CMP has been redesigned in extensive negotiations between Qwest and CLECs.

Qwest has spent the last ten months meeting with CLECs in a collaborative effort to address CLEC concerns with CMP -- a process known as "CMP Redesign." The core redesign team is composed of representatives from CLECs and Qwest, and meetings are open to all interested parties. Several CLECs have attended, as well as members of the Colorado Commission Staff and representatives of KPMG and Cap-Gemini, Ernst & Young. The redesign procedures were developed by the core team. Qwest and the CLECs have met regularly, generally four days per month, since July 2001. The schedules, agendas, and minutes of the redesign meetings are posted on the CMP website.[361]

The CLEC/Qwest redesign team agreed to begin negotiating from the current industry draft standard for change management -- OBF Issue 2233, version a1v1. The CLEC-Qwest redesign team agreed that the procedures developed by the redesign effort would be implemented as soon as practicable by Qwest as each section was completed. However, the language would remain in draft form, subject to a final review of the document.

The redesign team has reached agreement on all substantive aspects of CMP. The redesigned processes include extensive procedures that go beyond the change management processes elsewhere in the country and that are not required under Section 271, such as procedures for making changes to Qwest's products and processes.[362]

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[361] *See* http://www.qwest.com/wholesale/cmp/teammeetings.html.

[362] *See, e.g., Georgia/Louisiana 271 Order* at 103 (¶ 180) & n.673 (noting that "our prior orders recognize that changes that do not impact OSS interfaces are not necessarily required to be a part of a change management process.").

The parties to the Redesign process have resolved all significant CLEC concerns, and only one issue reached an impasse.[363] Of the issues that CLECs identified as important (these were given the designation "1" or "0"),[364] the redesign team has reached agreement in principle on all issues, and language has been developed and incorporated into the CMP Framework on all but three level 1 issues and two level 0 issues.

The following core provisions of Qwest's redesigned CMP have been implemented for more than six months: scope, types of change, CR processing, introduction/change/retirement of OSS interfaces, prioritization, SATE, and the escalation and dispute processes, during which Qwest has compiled an impressive overall compliance rate of nearly 99%.

2. The redesigned CMP meets all FCC standards.

By working extensively with CLECs, Qwest has been able to develop a change management process that addresses CLEC concerns and all FCC standards. During the CMP Redesign, Qwest has been willing to develop processes that go well beyond the change management processes of other BOCs. For example, Qwest has agreed to an extensive CMP for product and process changes. In addition, CLECs and Qwest have reached agreement in principle on a unique process for CLECs to request a delay in Qwest's implementation of

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[363] The one impasse issue concerned whether changes related to Performance Indicator Definitions ("PIDs") necessary to meet performance measurements and avoid fines under a Performance Assurance Plan ("PAP") would be treated as Regulatory Changes or as Qwest Originated Changes. The Colorado PUC resolved this is sue in the CLECs' favor on March 13, 2002, and such CRs are treated as Qwest Originated Changes in all states.

[364] The initial list of issues identified by AT&T and filed with the Colorado and Arizona commissions was prioritized in the CMP redesign sessions by CLECs and Qwest. The result of that prioritization is set forth in two charts, which are attached as exhibits to this declaration. Exh. JMS-3 (Ranking of ATT Priority List Items Identified as 1's) (May 2, 2002); Exh. JMS-4 (Ranking of ATT Priority List Items Identified as 0's) (May 2, 2002).

changes that have a moderate to major impact on CLEC operating procedures. The redesign team has extensively discussed this process and agreed to nearly all of the language describing it

The results of the ROC OSS Test support a finding that Qwest's CMP meets FCC standards. Test 23, the Change Management Evaluation, included a review of the completeness and consistency of the change request process. Overall, the results for Test 23 showed that Qwest had satisfied eleven of the 18 criteria, with seven categorized as "unable to determine." [365] Nine of the 18 criteria evaluated the Systems CMP, the remaining nine criteria evaluated the Product/Process CMP that the FCC has not required for Section 271 purposes.

Regarding the Systems CMP, KPMG found the following criteria to be satisfied: (1) "[t]he change management process responsibilities and activities are defined," (2) "[t]he change management process is in place and documented," (3) "[t]he change management process has a framework to evaluate, categorize, and prioritize proposed changes," (4) "[t]he change management process includes procedures for allowing input from all interested parties," (5) "[t]he change management process defines intervals for considering and notifying customers about proposed changes," and (6) "[d]ocumentation regarding proposed changes is distributed to wholesale customers." [366] The remaining three Systems CMP criteria were found to be "unable to determine". [367]

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[365] *See KPMG Final Report* at Section IV, Test 23, subsection 3.1.

[366] *See KPMG Final Report* at Section IV, Test 23, subsection 3.1, 23-1-1 to 23-1-6.

[367] *See id.*

Regarding the Product/Process CMP, KPMG found the following criteria to be satisfied: (1) "[t]he change management process responsibilities and activities are defined," (2) "[t]he change management process has a framework to evaluate, categorize, and prioritize proposed changes, (3) "[t]he change management process includes procedures for allowing input from all interested parties," (4) "[t]he change management process defines intervals for considering and notifying customers about proposed changes," and (6) "[d]ocumentation regarding proposed changes is distributed to wholesale customers." [368] The remaining four Product/Process CMP criteria were found to be "unable to determine". [369]

Those test results, along with Qwest's implementation of the redesigned CMP, demonstrate that Qwest meets the FCC standards for change management, as set forth in the following sections.

3. Factor 1: information relating to the change management process is clearly organized and readily accessible to competing carriers.

Qwest's web site sets forth the current change management process, including the governing document for change management (the CMP Framework)[370] and other useful information. [371] Through the redesign process, CLECs have had substantial input into the organization and clarification of change management related materials on the web site.

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[368] *See id.*

[369] *See id.*

[370] *See* CMP Framework, which can be found at the following URL: http://www.qwest.com/wholesale/cmp/whatiscmp.html

[371] The Qwest change management web site can be found at the following URL: http://www.qwest.com/wholesale/cmp/index.html.

There should be no issues regarding the clarity of the CMP Framework, as it was produced jointly by Qwest and CLECs. This document contains the agreements reached through extensive collaborative negotiations between the CLEC community and Qwest. The current, implemented CMP Framework includes every element that the FCC has considered necessary for Section 271 approval. It also contains every aspect of the OBF Issue 2233 draft document.

The CMP Framework is also attached to the Qwest SGAT as Exhibit G. Section 12.2.6 of the SGAT contains the language governing change management. Qwest and CLECs negotiated this SGAT language during the CMP redesign sessions, and the parties have reached agreement on the language.

The redesigned language that has been agreed-to has been implemented. However, the parties will review the language at the end of the redesign process, to determine whether any changes should be made. The fact that a final review will occur in no way detracts from the fact that CLECs and Qwest reached agreement regarding the processes and Qwest has implemented those agreements. Indeed, Qwest has conducted its wholesale business pursuant to the CMP Framework for several months.

The results of the ROC OSS Test demonstrate that Qwest provides easily accessible and well-organized information regarding its change management process on its wholesale web site. KPMG specifically found that Qwest satisfactorily distributes documentation to CLECs.[372] KPMG found that Qwest uses email and the wholesale web site to

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[372] Qwest Communications OSS Evaluation Final Report, Version 2.0, submitted by KPMG Consulting, dated May 28, 2002 ("*Final Report*"), Test 23, Table 23-2 (Test Cross-Reference 23-1-6 and 23-2-6). The *Final Report* can be found at the following URL: http://www.nrri.ohio-state.edu/oss/master/kpmg_final-final/final-final_report.htm.

distribute documentation regarding proposed changes to CLECs, including information about open CRs, Qwest's response to escalated CRs, software release notes, and process document releases and updates. Interactive CR Status Reports containing information about existing systems and product/process CRs are available on the CMP web site and included in the monthly CMP distribution package. In addition, information about ongoing escalations is available on the CMP web site.

In its Final Report, KPMG listed "Unable to Determine" as the result for its evaluation of whether Qwest's Product/Process change management process is in place and documented, stating that the CMP Framework does not include all elements KPMG believes are essential.[373] In support of this claim, KPMG points only to Exception 3094, which relates to the fact that KPMG was unable to observe Qwest's adherence to the new Qwest-initiated product/process change process in practice. Setting aside KPMG's concern regarding its ability to observe the new process, the redesign team agreed to the detailed process for Qwest-initiated product/process changes and that process is set forth in section 5.4 of the CMP Framework. Thus, this process clearly is documented. KPMG also points to the process that allows CLECs to postpone a Qwest-initiated product/process change. Qwest has agreed in principle to a process that will allow CLECs to postpone Qwest's implementation of product/process changes. Again, this process is unique in the country and far exceeds the FCC's evaluation criteria.

Although these processes are not required, and no other BOC has agreed to them, Qwest has agreed to address CLEC concerns by implementing them. Qwest will continue to

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[373] *See KPMG Final Report* at Section IV, Test 23, subsection 3.1, 23-2-2.

comply strictly with agreed-upon CMP procedures in those areas. It does not follow, however, that KPMG's inability to follow Qwest's compliance with these additional procedures over a long period of time should have implications for Section 271 compliance. Any doubts about Qwest's future compliance with these elements of the CMP should be erased by Qwest's strong record of compliance with those CMP elements that have been in place six months or more. This record, combined with KPMG's other positive findings, support the conclusion that Qwest has met the FCC change management criteria.

Indeed, in its Final Report, KPMG found that Qwest's CMP satisfactorily defines change management process responsibilities and activities.[374] KPMG found that the CMP defines and describes the roles, responsibilities, and activities of the Qwest change management staff, other relevant Qwest employees, and CLEC representatives who participate in CMP. Specifically, KPMG further found that Qwest internal methods and procedures documentation contains information about the roles and responsibilities of the change management staff and relevant Qwest information technologies, product, and process groups. Finally, KPMG found that the draft CMP document is accessible on the Qwest CMP Web site.

4. Factor 2: CLECs have had substantial input in the design and continued operation of CMP.

There can be no legitimate question that CLECs have had -- and will continue to have -- substantial opportunities for meaningful input into the design and operation of Qwest's CMP. Qwest and the CLECs have met regularly, for more than 38 days since July 2001, to

[374] *See KPMG Final Report* at Section IV, Test 23, subsection 3.1, 23-1-1and 23-2-1.

collaboratively redesign Qwest's change management procedures. The schedules, agendas, and minutes of the CMP and CMP redesign meetings are posted on the Qwest CMP web site. Minutes from these meetings are posted on Qwest's CMP website and distributed to participating CLECs regularly.[375]

Further, the CMP provides CLECs with substantial opportunities for input into the continued operation of the change management process. Qwest and CLECs jointly participate in the CMP forum for managing changes related to Qwest's OSS interfaces, products, and processes throughout the lifecycle of a CLEC- or Qwest-initiated change. KPMG found that "the change management process includes procedures for allowing input from all interested parties."[376] KPMG further found that, beginning on July 11, 2001, Qwest and CLECs have held bi-weekly, collaborative CMP redesign sessions to address CLEC concerns regarding the Qwest change management process. KPMG further found that Qwest had responded to issues raised during testing by implementing improvements to existing notification processes and addressing remaining issues in the redesign meetings.

5. Factor 3: CMP defines a procedure for the timely resolution of change management disputes.

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[375] Qwest's CMP website can be found at http://www.qwest.com/wholesale/cmp. Minutes of CMP team meetings are available at http://www.qwest.com/wholesale/cmp/teammeetings.html.

[376] *See KPMG Final Report* at Section IV, Test 23, subsection 3.1, 23-1-4 and 23-2-4.

Qwest has implemented the escalation and dispute resolution procedures Qwest and the CLECs jointly developed through the redesign process. The procedures are set forth in the CMP Framework.[377]

The change management escalation and dispute resolution procedures were developed jointly by Qwest and the CLECs in the redesign process. The escalation procedures apply to all items that are the within the scope of the CMP, as well as to issues surrounding the CMP itself and its administration.[378] The escalation procedures contain specific instructions for communicating to Qwest the escalated issue, including a statement of the CLEC's desired resolution and a request for interim action, if applicable. At the CLECs' request, the escalation process has been streamlined and now offers CLECs a single point of contact for a given issue. The Qwest single point of contact is responsible for providing a final binding position regarding the escalated issue within seven days for a disputed change request and within 14 days for other escalations. Escalation requests and Qwest and CLEC responses are posted to the website.

A CLEC or Qwest may bypass the escalation process and immediately invoke the dispute resolution process. Like the escalation process, the CMP contains specific requirements for describing and documenting the dispute. If the parties agree, the dispute can be resolved externally through an alternative dispute resolution process; alternatively, a CLEC or Qwest may submit the issue to an appropriate regulatory agency.

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[377] CMP Framework, Sections 14 and 15.

[378] Escalations are internal, meaning that an issue is escalated within Qwest's management ranks. In contrast, dispute resolution involves external resources.

As of May 24, 2002, the escalation procedures have been invoked on one occasion with regard to systems changes, and on five occasions with regard to product and process changes. The dispute resolution procedures had not yet been invoked.

6. Factor 4: Qwest has demonstrated a pattern of compliance with its change management plan.

The FCC also evaluates whether the RBOC has demonstrated a pattern of compliance with its change management plan. As set forth below, many of the core provisions of Qwest's redesigned CMP has been implemented for more than six months. The evidence establishes that Qwest has compiled a strong record of compliance with the redesigned CMP.

Qwest has undertaken substantial efforts to train its personnel on the requirements of the CMP and to keep its personnel updated on current CMP requirements. On November 26, 2001, Qwest released mandatory internal training on the redesigned CMP for Qwest employees and contractors. This training was targeted to Account Managers, Service Managers, Service Delivery Coordinator Managers, Wholesale and Retail Product Managers, Process Specialists, IT Managers, Network Managers, and CMP Personnel. Over 9,000 personnel in those departments successfully completed the training via a self-paced web-based module. Individuals who completed the training were tracked via a unique identification number. Qwest will provide this training on an annual basis to targeted employees. Since the release of the initial training, detailed methods and/or job-specific training has been developed and delivered to employees and contractors who perform the functions identified in the CMP.

Exhibit JMS-5 consists of a matrix that catalogues Qwest's compliance with each of the sections of the CMP Framework, including implementation dates for various sections of

the redesigned CMP and the meeting of applicable milestones. Those milestones are the agreed-upon timeframes and deliverables in the CMP Framework, and are set forth in the relevant sections of the CMP Framework.

Qwest tracks its compliance with the milestones and other provisions set forth in the CMP. From the very beginning of its implementation of the redesigned change management process, Qwest has amassed an impressive compliance rate with the redesigned CMP. The following percentages reflect Qwest's compliance with CMP provisions from the date on which they were implemented

- In processing CRs, Qwest has met nearly 99% of its commitments.
- In introducing a new GUI, Qwest has met 100% its commitments.
- In changing an application-to-application interface, Qwest has met 100% of the milestones reached thus far.
- In changing a graphical user interface ("GUI"), Qwest has met 100% of the milestones.
- In processing escalations, Qwest has met nearly 98% percent of its commitments.

More detail regarding Qwest's implementation and compliance with the redesigned process is set forth below.

Scope. Qwest has complied with the agreed-upon scope of the CMP. Qwest implemented the expanded scope more than seven months ago. Between October 3, 2001 and May 29, 2002, Qwest processed 178 new OSS interface CRs and 50 new product and process CRs. As of May 24, 2002, Qwest has only rejected one CR on the grounds that it was not within the scope of the CMP. That CR requested a change to the method by which one of Qwest's performance indicator definitions ("PIDs") is measured. The redesign team subsequently agreed that changes to relating to PIDs and how they are measured are not within the scope of CMP.

Managing the Change Management Process. Most of the requirements specified in this section have been in place for over eight months. For example, CMP Managers have been in place since the inception of CMP in 1999. CR Project Managers have been in place and fulfilling the roles and responsibilities described in this section since August 2001. Escalation/Dispute Resolution Managers have been in place and fulfilling the roles and responsibilities described in this section since September 2001.

Meetings. The redesigned provisions have been in place for more than nine months. In fact, many of the requirements specified in this section have been in place for much longer. For example, Qwest has conducted at least one CMP monthly meeting per month and provided meeting materials, referred to as distribution packages, since the inception of CMP in 1999. In October 2001, CMP monthly meetings were extended to two full day sessions at the request of the CLEC participants. An improved distribution package format was introduced in September 2001 for the product/process CMP meetings and in October 2001 for the systems CMP meetings. Qwest has recorded meeting minutes since August 15, 2001 for product/process CMP meetings, and since September 19, 2001 for systems CMP meetings. In addition, Qwest has made a number of improvements to its CMP web site as a result of the redesign effort. Qwest also has met its obligations to (1) track and document the status of change requests; (2) hold regular CMP meetings; (3) provide meeting materials in advance of the meetings; and (4)

record meeting discussion, action items, and issues. This information may be found on Qwest's CMP web site.[379]

Types of Change. While the redesigned provisions have been in place for more than eight months, it is important to note that CLECs have had the ability to submit CRs since the inception of Qwest's CMP in 1999.[380] Indeed, between January 1, 2000 and September 30, 2002, Qwest processed and closed 68 OSS Interface CRs. The redesigned process provides for Regulatory, Industry Guideline, CLEC Originated, and Qwest Originated CRs. Qwest has processed CRs in all of these categories.

Change Request Initiation Process. Qwest has complied with the redesigned process for nearly seven months. In Qwest's processing of change requests, it has met its obligations with regard to the following nine agreed-upon process milestones: 1) sending acknowledgements to the CR originator; 2) posting CRs to Qwest's CMP website; 3) contacting customers to schedule clarification meetings; 4) conducting meetings to clarify CLEC CRs; 5) providing initial responses to CLEC CRs; 6) posting initial responses to Qwest's CMP website; 7) presenting CRs; 8) providing final responses to CLEC CRs (if applicable); and 9) posting final responses to Qwest's CMP website (if applicable).[381]

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[379] *See, e.g.*, http://www.qwest.com/wholesale/cmp/changerequest.html (linking to status of change requests); http://www.qwest.com/wholesale/cmp/teammeetings.html (linking to CMP schedules, current meeting materials and minutes) http: qwest.com/wholesale/cmp/tmarchive (linking to previous meeting materials including minutes).

[380] The redesign team reached impasse regarding an issue relating to the definition of Regulatory CRs. That issue has been resolved. Even before resolution of that issue, the redesign team had reached agreement on the other aspects of the Regulatory Change definition and the impasse resolution did not change the language contained in the definition.

[381] *See* CMP Framework, § 5.1.3 (describing milestones in the CR initiation process). The data for these milestones is available on the CMP website.

Between November 1, 2001 and May 29, 2002, Qwest processed 127 new OSS Interface CRs. Of a possible 812 milestones, Qwest was responsible for missing four milestones. This equates to a 99.51% compliance rate with the CLEC/Qwest Initiated OSS Interface CR Process. During this same time, Qwest processed 36 new Product and Process CRs. Of a possible 301 milestones, Qwest was responsible for missing seven milestones. This equates to a 97.67% compliance rate with the CLEC Initiated Product and Process CR Process. Significantly, the compliance rate for this process from January through May 2002 was 100%.

Between April 1, 2002, and May 29, 2002 Qwest processed 44 new Qwest-originated product and process changes, including four Level 4 changes that required a CR. Qwest tracks notification requirements for Level 1-4 changes and CR requirements for Level 4 changes. Qwest was responsible for missing eight of a possible 245 notification requirement milestones for the Level 1-4 notification requirements. This equates to a 96.73% compliance rate with the process. Qwest met its commitments on all 25 possible CR requirement milestones, resulting in a compliance rate of 100%. Qwest also has developed a checklist that is reviewed whenever changes are made to Qwest's retail products, processes, center operations, or systems to determine whether any action is necessary to maintain retail and wholesale parity.[382] Qwest

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[382] *See also* Joint CLEC Brief Regarding Qwest's Change Management Process, filed in Colorado PUC Docket No. 97I-198T, April 8, 2002, at 15 (conceding that Qwest has implemented "adequate processes to ensure timely and adequate notification to wholesale customers of retail changes that impact[ ] them as well as to ensure parity between Qwest's retail and wholesale customers.") Some CLECs have raised an issue in connection with this checklist, arguing that Qwest failed to notify its wholesale customers of a change in retail product and process relating to the availability of ISDN loops on which there is integrated pair gain "IPG." There was no change in Qwest's products or processes, however, as ISDN loops with IPG have been available and provisioned to CLECs for years, including the complaining CLECs.

discussed this checklist with CLECs at a redesign meeting, and the CLECs agreed that it was adequate.

OSS Interface Release Calendar. Qwest has complied with the improved OSS Interface Release for over six months. Qwest already provided a calendar that set forth OSS release information. The redesigned process included additional customer-facing system information. The revised OSS Interface Release Calendar was posted on the web in November 2001. Quarterly updates were posted on the web in January 2002 and April 2002.

Introduction of a New OSS Interface. The redesigned process for the introduction of a new OSS interfaces — both application-to-application interfaces and GUIs — has been in place for more than six months. Qwest has not introduced a new application-to-application OSS interface since agreement was reached. However, Qwest introduced a new GUI called FORCAST on March 8, 2002. There are six milestones Qwest tracks with the introduction of a new GUI. Qwest demonstrated 100% compliance with these milestones.

Change to Existing OSS Interfaces. The redesigned process incorporated many requirements that Qwest had already implemented for some time. For example, for more than two years, Qwest has implemented not more than three major IMA releases and three IMA point releases within a calendar year, spaced at least three months apart. Similarly, Qwest has provided versioning —pursuant to which Qwest supported the previous major IMA release for six months after the subsequent major IMA-EDI release has been implemented — for more than two years.

More specifically, the process for changes to application-to-application interfaces pursuant to Section 8.1 has been in place for more than six months. Qwest introduced changes to

an existing OSS application-to-application interface (IMA) on April 4, 2002. Qwest tracks six milestones for such changes. Specifically, Qwest met the following milestones with respect to the IMA 10.0 release: draft Interface Technical Specification (April 4), Walkthrough (April 10-19), Qwest response to CLEC comments (May 8), Final Interface Technical Specifications (May 8), Joint Testing Period (May 18-June 16). The only remaining milestone for release 10.0 is deployment of the release itself on June 16, 2002.

Similarly, the process for changes to GUIs pursuant to Section 8.2 has been in place for more than six months. Qwest introduced changes to an existing GUI, the Customer Electronic Maintenance and Repair ("CEMR"), on April 7, 2001. Qwest tracks four milestones for such changes. Qwest met the following milestones with respect to changes to an existing graphical user interface (CEMR): draft GUI Release Notice (issued April 7), Qwest response to CLEC comments (April 14), Final Interface Release Notice (April 14), and deployment (May 5). Qwest demonstrated 100% compliance with these milestones.

PO-16 measures the timeliness of Qwest's release notifications.[383] For PO-16, Qwest met the PID for the past four months. In January, February, and March, Qwest met the PID, although it issued one untimely release notification in each month.[385] In April, Qwest

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[383] The ROC TAG is considering adopting changes to PO-16, on a prospective basis, to update and clarify certain elements of the PID. (Exhibits LMN-6: "PO-16 Michael Williams Email 05/20/02", LMN-7: "PO-16 – Timely Release Notifications – 20 May 02 Draft Revised Proposal [redline]", LMN-8: "PO-16 – Timely Release Notifications – 20 May 02 Draft Revised Proposal [non-redlined]")

Qwest has restated its PO-16 results in order to accurately report information regarding the notices that fall within the PO-16 definition.

[385] If ten or fewer notifications are released during any reporting period, then Qwest and CLECs have agreed that a single miss is viewed as meeting the PID. *See* ROC PID 4.1 at 23. Thus, Qwest met PO-16 for each of the past four months.

issued five out of five release notifications on a timely basis. Although final PID results are not yet available for May, Qwest's own data show that six of six release notifications were timely issued.

Qwest has made significant improvements to its tracking and release notification internal procedures. It has designated a project manager to be responsible for ensuring that OSS Interface release notifications are tracked and issued on a timely basis. These new procedures, including the appointment of a project manager, became effective on April 1, 2002. KPMG, in the Final Report, concluded Qwest's notification procedures were adequate, although it concluded that it did not have a long period of time to observe them after they were in place – KPMG noted in Exception 3110, that due to the test schedule, it could not evaluate the timeliness of certain Qwest notifications.[386] In its Supplemental Disposition Report regarding Exception 3110, KPMG stated that it had "reviewed Qwest internal process documents and verified that software and product/process documentation teams have procedures to prepare documents and distribute them in accordance with the intervals specified in the *Master Redlined CLEC-Qwest CMP Redesign Framework*."[387] In light of the extensive evidence of Qwest's continued compliance with virtually every other aspect of the CMP, and in light of the recent improvements in the PO-16 results due to steps taken by Qwest to ensure compliance with release notification

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[386] *See KPMG Final Report*, at Section IV, Test 23, subsection 3.1, 23-1-9 and 23-2-9; Exception 3110 (discussed below).

[387] KPMG Disposition Report for Exception 3110, issued April 2, 2002 (Exhibit JMS-10).

intervals, Qwest has demonstrated a pattern of compliance with CMP requirement for notifications.[388]

Retirement of Existing OSS Interfaces. The redesigned process for the retirement of an existing OSS interfaces has been in place for more than six months. However, Qwest has not retired any OSS interfaces since agreement was reached.

Prioritization. Much of the redesigned prioritization process has been in effect for more than nine months. Beginning in August 2001, CLECs began prioritizing Qwest Originated CRs. In August 2001, and again in October/November 2001, CLECs and Qwest jointly prioritized CLEC-Originated CRs and Qwest-Originated CRs for the IMA 10.0 Release. In February 2002, CLECs and Qwest jointly prioritized CLEC-Originated CRs, Qwest-Originated CRs, and Industry Guideline CRs for the IMA 11.0 Release. At that time, there were only nine outstanding CLEC-initiated IMA CRs.

KPMG stated that it was not able to observe the entire prioritization process for a major software release end-to-end or to observe the process after the definition of "Regulatory Change" was resolved.[389] KPMG has been able to observe the prioritization process for IMA release 10.0, IMA release 11.0, and SATE. The fact that Qwest and the CLECs were at impasse over whether PID/PAP related CRs should be treated as Regulatory CRs or as Qwest or CLEC Originated CRs during the prioritization process for the IMA 10.0 and 11.0 Releases did not

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[388] The FCC considers steady recent improvement in performance measures to be an indicator that problems have been resolved. *Georgia/Louisiana 271 Order*, ¶ 140, n. 494.

[389] *See KPMG Final Report*, at Section IV, Test 23, subsection 3.1, 23-1-8. These were also issues in Exception 3111, which KPMG closed undetermined for those reasons. Exception 3111 relates to Qwest's process for prioritizing and packaging CRs for major IMA releases (Exhibits JMS-8 and JMS-9).

affect KPMG's ability to evaluate Qwest's adherence to the prioritization process.[390] KPMG has observed Qwest's adherence to each phase of the prioritization and packaging processes for major system releases. These observations demonstrated Qwest's compliance with the process.

Application-to-Application Interface Testing. SATE has been available to the CLECs since August 2001 and was used by CLECs to migrate their systems to the IMA 8.0 Release and later releases. Specifically, ten CLECs — five individually and an additional five through a service bureau — have tested in SATE and are now in production.

Production Support. Qwest has complied with the redesigned process for more than three months. Between February 2, 2002 and May 24, 2002, there were ten planned outages. In each instance, Qwest met the specified notification intervals. Further, it has been Qwest's practice for some time to conduct post-deployment meetings, as it did to review the recent IMA 9.01 Release. Between February 1, 2002 and March 31, 2002 Qwest processed no trouble tickets with a severity level of 1, eleven tickets with a severity level of 2, 496 tickets with a severity level of 3, and three tickets with a severity level of 4.

Escalation Process. Qwest has complied with the redesigned escalation process for over six months. In Qwest's processing of escalations, it has met its obligations with regard to the following agreed-upon process milestones: (1) acknowledging receipt of escalation; (2) posting escalation on Qwest's CMP website; (3) issuing notice to CLECs; and (4) providing

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[390] The recent impasse resolution regarding the definition of a Regulatory Change restricted the Regulatory Change definition and expanded the Qwest Originated Change definition to allow CLECs to prioritize changes that every other RBOC treats as Regulatory Changes. The FCC has approved several other RBOC change management processes that provide CLECs virtually no input, but that allow the RBOC total discretion to designate changes as regulatory and to determine how to implement such changes.

Qwest's binding response.[391] As of May 2002, Qwest processed one OSS Interface escalation and five Product/Process escalations. Of a possible 48 milestones, Qwest was responsible for missing one milestone. This equates to a 98% compliance rate with the Escalation Process. Qwest also met its obligations regarding the development and implementation of a web-based tool for escalation requests.

Dispute Resolution. The redesigned dispute resolution process has been in place for over six months. However, the process has not been invoked since agreement on the process was reached.

Product Catalogs and Technical Publications. In compliance with its commitments during section 271 workshops, Qwest has also substantially revised or created 236 product catalogs ("PCATs") and 27 technical publications ("TechPubs"). Qwest notified CLECs of the opportunity for CLECs to provide comments or feedback regarding all of these PCATs and TechPubs. Qwest also made a commitment to provide green highlighting of all changes published in the PCAT and to redline all changes published in the TechPubs beginning January 2, 2002. Since then, Qwest has substantially revised or created 231 PCATs and 27 TechPubs. All of these documents contained the agreed-upon highlighting/redlining web notification forms, history logs, and customer notification forms.

B. QWEST ADEQUATELY ASSISTS COMPETITORS IN IMPLEMENTING AND USING QWEST'S OSS (TECHNICAL ASSISTANCE)

[391] *See* CMP Framework, § 14.2 (describing escalation cycle and milestones). The data for these milestones is available on the CMP website. (Exhibit JMS-2).

As part of its change management analysis, the FCC evaluates whether the BOC "is adequately assisting competing carriers to understand how to implement and use all of the OSS functions available to them."[392] That requirement is addressed by factors five and six of the FCC's evaluation of change management:

5. Evidence demonstrating that Qwest adequately assists competing carriers in the use of available OSS functions; and

6. Evidence of the efficacy of the documentation Qwest makes available to competing carriers for the purpose of building an electronic gateway.

The ROC OSS Test results support the conclusion that Qwest adequately assists CLECs in their use of available OSS functions and the conclusion that Qwest's EDI documentation provides CLECs with sufficiently detailed interface design specifications. The FCC has previously evaluated the efficacy of a BOC's EDI documentation by considering the total number of CLECs who have successfully implemented EDI interfaces.[393] As of April 24, 2002, a total of 29 individual CLECs have been certified to use Qwest's EDI and three more CLECs are in the process of EDI certification. In addition, the fact that two CLECs were able to construct EDI interfaces and certify products within 107 days of contacting Qwest is also evidence of the efficacy of Qwest's EDI documentation.[394]

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[392] Arkansas/Missouri 271 Order, 16 FCC Rcd at 20865, App. D at ¶ 40, quoting Bell Atlantic New York 271 Order, 15 FCC Rcd at 3999-4000, ¶102.

[393] *See, e.g., Texas 271 Order*, 15 FCC Rcd at 18411 (¶ 119); *Massachusetts 271 Order*, 16 FCC Rcd at 9049-50 (¶ 112).

[394] *See Texas 271 Order*, 15 FCC Rcd at 18414 (¶ 124) (holding that the fact that one CLEC was able to test and go into production quickly in EDI was good evidence of the efficacy of the BOC's EDI documentation).

1. Qwest's Technical Assistance for CLECs

Qwest offers CLECs an extensive array of training and assistance with respect to its OSS. One of the most useful sources of information for CLECs is the Qwest Wholesale Website.[395] The website provides CLECs with a one-stop shop for CLEC support materials, including information on establishing a wholesale relationship with Qwest, specific products and services through the Product Catalog ("PCAT"), and information on Qwest CLEC training programs. [396]

The ROC Third Party Test evaluated Qwest's CLEC support programs, in whole or in part, in several evaluations: (1) several tests contained within the Qwest CLEC Support Processes and Procedures Review (Test 24); (2) an Evaluation of Qwest's Order and Transaction Creation Documentation and Maintenance (Test 10); (3) a P-CLEC OSS Interface Evaluation (Test 12-B); (4) a P-CLEC Account Management Evaluation (Test 12-C); and (5) a POP Manual Order Processing Evaluation (Test 12.8). Qwest successfully passed these tests with regard to technical support functions, as reflected in the *Final Report*.

In its *Final Report*, KPMG concluded that Qwest's account establishment and management processes meet the needs of the CLEC community. [397] Specifically, KPMG found that account establishment and management responsibilities and activities are defined; account

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[395] The Qwest Wholesale Website is available at http://www.qwest.com/wholesale.

[396] Qwest made available to CLECs approximately 20 different instructor-led training courses in multiple cities throughout Qwest's 14-state territory in 2001. Over 1,000 CLEC employees, representing 198 different CLECs, have attended more than 180 classes covering approximately 20 different courses in 2001. Qwest is maintaining a similar curriculum in 2002. Qwest also offers 35 web-based interactive training programs to CLECs. Qwest makes available 25 additional downloadable courses that CLECs may access.

[397] *See KPMG Final Report*, Test 24.3, Table 24.3-2.

management staff is organized to provide account coverage; instructions for contacting account managers are defined and published; and procedures for escalating critical and unresolved customer issues are defined and adhered to. [398] KPMG concluded that Qwest had satisfied ten of eleven evaluation criteria in the *Final Report*. [399] One criterion resulted in an unable-to-determine finding. Test criterion 24.3-9 evaluated whether Qwest returns customer calls according to documented time guidelines. [400] KPMG concluded that it was "unable to determine" whether Qwest met this test point because of the test schedule and Qwest's recent establishment of several communication response time guidelines. [401]

KPMG noted in the *Final Report* that Qwest had updated its process for obtaining regular feedback from CLECs about the Account Team's ability to respond to customer calls on a timely basis. [402] Further, KPMG noted that Qwest had updated its Service Management Issues database that tracks the status of issues for CLEC customers and that Qwest had published revised intervals on its Wholesale Website. [403]

The CLEC Training Review ("CLEC TR") evaluated Qwest's training practices and documentation for CLECs engaged in establishing and maintaining a business relationship

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[398] *See id.*

[399] *See id.*

[400] *See KPMG Final Report*, at Section IV, Test 23, subsection 3.1, 24.3-9.

[401] *See id.*

[402] *See id.*

[403] *See id.*

with Qwest. [404] Qwest satisfied every component of the examination. [405] Specifically, KPMG found that training process responsibilities and the scope of the training process are defined and documented, and that the essential elements of the training process are in place and documented. [406] KPMG also found that Qwest's training offerings are scalable in response to additional demand, and that training process performance metrics are defined and measured. [407] KPMG concluded that Qwest had satisfied ten of ten test criteria. [408] Additionally, HP concluded that Qwest had satisfied all twelve criteria in their evaluation of Qwest's Web Based and Instructor Led Training and Training Materials. [409]

The Wholesale Systems Help Desk Review ("WSHD Review") evaluated Qwest's IMA help desk functions that provide technical support for Qwest's OSS interfaces and for other systems-related issues. [410] In its *Final Report*, KPMG concluded that Qwest's WSHD and its procedures meet the needs of the CLEC community. [411] Specifically, KPMG found that WSHD responsibilities and activities are defined and documented; customers can initiate the trouble ticket process and access the status of a trouble ticket; and customer escalation procedures are

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[404] *See KPMG Final Report*, at Section IV, Test 24.5, subsection 3.1.

[405] *See KPMG Final Report*, at Section IV, Test 24.5, subsection 3.1, Table 24.5-2.

[406] *See id.*

[407] *See id.*

[408] *See id.*

[409] *See KPMG Final Report*, at Section IV, Test 10, subsection 3.1, Table 10-1-26, *10-5-1 through 10-5-12*.

[410] *See KPMG Final Report*, at Section IV, Test 24.7, subsection 3.1

[411] *See KPMG Final Report*, at Section IV, Test 24.7, Table 24.7-4.

defined and documented. [412] Of 13 evaluation criteria, KPMG concluded that Qwest had satisfied all 13 criteria in the *Final Report*.[413]

The Interconnect Service Center Support Review ("ISCS Review") evaluated Qwest's service center processes developed by Qwest to support resellers and CLECs with OSS-related questions, escalations, problems and issues. [414] Both HP and KPMG concluded that Qwest's ISC and its procedures meet the needs of the CLEC community. [415] Specifically, HP was able to reach the ISC Call Center and obtain complete and accurate information when HP required assistance with transaction processing or interpretation of information. [416] KPMG also found that ISC support processes are documented, followed, and meet the needs of the CLEC community. [417] Of two applicable evaluation criteria contained within the evaluation, HP concluded that Qwest had satisfied both criteria in the *Final Report*. [418] Similarly, KPMG concluded that Qwest had satisfied all of its twelve test criteria. [419]

In an Observation that was eventually resolved, Observation O3086, KPMG noted that in response to many of the Observations and Exceptions in the Third Party Test, Qwest

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[412] *See id.*

[413] *See id.*

[414] *See KPMG Final Report* at Section IV, Test 24.8, Section 1.0.

[415] *See KPMG Final Report* at Section IV, Test 24.8, subsection 3.1

[416] *See id.*

[417] *See id.*

[418] *See id.*

[419] *See id.*

pledged to undertake additional internal training. In response to Observation 3086, Qwest documented quality initiatives (both new measures and new interventions). KPMG closed this Observation after conducting additional interviews and observations on April 12, 2002. [420]

In the *Final Report* section for the Evaluation of Qwest's Order and Transaction Creation Documentation and Maintenance, HP concluded that Qwest's guidelines and business rules documentation, including Qwest training materials, meet the needs of the CLEC community. [421] Specifically, HP found that Qwest's training and other documentation are readily available to the CLEC community, are comprehensive, and are accurate and consistent with other materials provided to the CLEC community. [422] HP concluded that Qwest had satisfied all 106 applicable criteria in the *Final Report*. [423]

The P-CLEC Interface Evaluation "analyzed [HP's] ability to establish interface connectivity with Qwest to carry out various wholesale activities." [424] As noted in the *Final Report*, HP successfully migrated to and conducted certification activities in three IMA-EDI Releases (6.0, 7.0, and 8.0) as part of this evaluation using Qwest's documentation and assistance from the EDI Implementation Team. [425]

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[420] *See id.* at Test Cross-Reference 24.8-6.

[421] *See KPMG Final Report*, at Section IV, Test 10, Table 10-1.26.

[422] *See id.*

[423] *See id.*

[424] *See KPMG Final Report*, at Section IV, Test 12-B, Section 1.0.

[425] *See KPMG Final Report*, at Section IV, Test 12-B, subsection 3.1,1.

In the P-CLEC Account Management Evaluation, HP evaluated "all aspects of the Qwest CLEC account relationship that arose during [HP's] execution of its planned testing activities." [426] HP found that Qwest's account establishment and management processes meet the needs of the CLEC community.[427] Specifically, HP "found the overall relationship with its Qwest Account Team to be positive," [428] and that "Qwest's published Account/Service Management guidelines, in conjunction with the approach Qwest takes to address the needs of CLECs, on a case-by-case basis for issues, special requests, escalations and other issues, was sufficient to meet [HP's] needs." [429]

2. EDI Documentation Provided to CLECs

Qwest provides CLECs with assistance in developing an EDI interface in the following ways: (1) providing CLECs with a well-documented EDI implementation process and individually working with CLECs via a CLEC-specific IMA-EDI development team;[430] (2) making available detailed interface design specifications and other documentation; and (3) working collectively with CLECs on EDI development through the change management process.

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[426] *See KPMG Final Report*, at Section IV, Test 12-C subection 1.0.

[427] *See KPMG Final Report*, at Section IV, Test 12-C subection 3.0.

[428] *See KPMG Final Report*, at Section IV, Test 12-C, subsection 3.1.1.

[429] *See KPMG Final Report*, at Section IV, Test 12-C, subsection 3.1, subection 3.1.3.

[430] To aid in the CLEC EDI implementation process, Qwest makes a CLEC-specific IMA-EDI Implementation Team available to CLECs who are planning to use the application-to-application interface. The IMA-EDI Implementation Team for each CLEC is composed of a project manager, technical support engineer, and a business analyst. The IMA-EDI Implementation Team also provides technical assistance to CLECs by answering business and interface-related questions. During implementation, all CLEC issues are tracked and reviewed on a weekly basis to ensure closure and to assist the CLEC in completing their EDI implementation.

The FCC has previously evaluated the efficacy of a BOC's EDI documentation by considering the total number of CLECs who have successfully implemented EDI interfaces.[431] As of May 1, 2002, a total of 29 CLECs have been certified to use Qwest's EDI and three CLECs are in the process of EDI certification.[432] The volume of transactions submitted via EDI provide additional evidence of the efficacy of Qwest's EDI documentation. For instance, from May 1, 2001 to April 30, 2002, Qwest processed approximately ~~1,034,000~~952,000 pre-order transactions via EDI for 20 individual CLECs.[433] Similarly, from May 1, 2001 to April 30, 2002, Qwest processed approximately 583,000 order transactions via EDI for 22 individual CLECs.[434] In addition, the fact that two CLECs were able to construct EDI interfaces and certify products within 107 days of contacting Qwest is also evidence of the efficacy of Qwest's EDI documentation.[435]

The results of the Third Party Test also confirm that Qwest has satisfied this aspect of the FCC's 271 requirements. The Third Party Test evaluated the efficacy of Qwest's documentation in three reviews: (1) the Order and Transaction Creation Documentation Evaluation (Test 10); (2) the P-CLEC OSS Interface Evaluation (Test 12-B); and (3) the OSS

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[431] *See, e.g., Texas 271 Order*, 15 FCC Rcd at 18411 (¶ 119); *Massachusetts 271 Order*, 16 FCC Rcd at 9049-50 (¶ 112).

[432] *See* Confidential Exhibit LMN-C51.

[433] *See ~~id. at ¶ 7~~*Exhibit LMN-50.

[434] *See ~~id. at ¶ 7~~*Exhibit LMN-49.

[435] *See id.* at ¶ 5. *See Texas 271 Order*, 15 FCC Rcd at 18414 (¶ 124) (holding that the fact that one CLEC was able to test and go into production quickly in EDI was good evidence of the efficacy of the BOC's EDI documentation).

Interface Development Review (Test 24.6). As described more fully below, Qwest has satisfied all of these tests.

The Order and Transaction Creation Documentation Evaluation was a "comprehensive review of the public documentation that Qwest provides to the CLEC community to assist in the preparation and submission of transactions." [436] In the *Final Report*, HP concluded that Qwest's IMA-EDI documentation meets the needs of the CLEC community.[437] Specifically, HP found that IMA Disclosure documentation and the EDI Implementation Guidelines are readily available to CLECs, are comprehensive in their detail, and can be easily understood by the intended audience. [438] HP concluded that Qwest had satisfied all 106 applicable criteria in the *Final Report*. [439]

The P-CLEC OSS Interface Evaluation analyzed HP's "ability to establish interface connectivity with Qwest to carry out various wholesale activities."[440] This evaluation covered HP's activities for the IMA-EDI implementation and release migration processes, billing data and the M&R implementation process. As noted in the *Final Report*, HP successfully migrated to and conducted certification activities in three IMA-EDI Releases (6.0, 7.0, and 8.0) as part of this evaluation using Qwest's documentation and EDI Implementation Team.[441]

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[436] *See KPMG Final Report*, at Section IV, Test 10, subsection 3.1.

[437] *See KPMG Final Report*, at Section IV, Test 10, Table 10-1.26.

[438] *See id.*

[439] *See id.*

[440] *See KPMG Final Report*, at Section IV, Test 12-B, subsection 3.1.

[441] *See id*. at § 3.0.

During this test, HP certified 13 pre-order transactions, 16 products, and five post-order transactions.[442]

The OSS Interface Development Review ("OSS ID Review") evaluated Qwest's documentation, specifications and support provided to CLECs in developing, providing, and maintaining OSS interfaces.[443] In its *Final Report*, KPMG concluded that Qwest had satisfied 46 of 48 evaluation criteria for Test 24.6.[444] Specifically, KPMG found that Qwest has a documented methodology for interface development; makes available to customers interface specifications that define applicable business rules, data formats/definitions, and transmission protocols; and has integrated procedures for updating interface specifications with formal change management procedures involving customers.[445] The two evaluation criteria that Qwest has not yet satisfied relate to the interface test environment, and will be discussed below.[446]

C. QWEST MAKES AVAILABLE A STABLE TESTING ENVIRONMENT THAT MIRRORS PRODUCTION (INTERFACE TESTING ENVIRONMENT).

This section addresses the final factor in the FCC's evaluation of change management:

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[442] *See id*. at Table 12-B-1.1.

[443] *See KPMG Final Report*, at Section IV, Test 24.6, subsection 3.1.

[444] *See KPMG Final Report*, at Section IV, Test 24.6, Table 24.6-2.1.

[445] *See id.*

[446] *See id.*

7. Evidence of the availability of a stable testing environment that mirrors production.[447]

As this section demonstrates, Qwest provides CLECs the option of two test environments, each of which meet this requirement. As part of the end-to-end interface testing process, Qwest provides two alternative testing environments to CLECs, each of which is a "stable test environment that mirrors production."[448] One is Qwest's stand-alone test environment ("SATE"), and the other is Qwest's Interoperability environment. CLECs may test in either or both, as they choose.

In evaluating Qwest's satisfaction of the Section 271 criteria for interface testing, it is important for the Commission to examine the full picture of Qwest's testing opportunities. SATE and the Interoperability environment both are successful testing environments, each of which independently meets the FCC's criteria.

1. Qwest Testing Process

Qwest aids CLECs in developing and certifying their EDI interfaces and migrating to new EDI releases. Before a CLEC may interface with Qwest's EDI, the CLEC must complete a certification process that demonstrates that its EDI is capable of effectively interacting with Qwest's EDI. This certification process consists of three stages: (1) establishing connectivity; (2) progression testing; and (3) controlled production.[449] Whether a CLEC chooses to test in the interoperability environment or in SATE or both, the CLEC must also do

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[447] *See, e.g., Georgia/Louisiana 271 Order* at App. D, ¶¶ 40-42.

[448] *See Arkansas/Missouri 271 Order*, 16 FCC Rcd at 20865, App. D. at ¶ 40.

[449] *See KPMG Final Report*, at Section IV, Test 24.6,, subsection 2.1.1.1. See generally "Overview of Interface Testing (Exhibit LMN-9).

connectivity testing beforehand and controlled production after, in order to obtain certification that its EDI interface is production-ready.

Establishing Connectivity. To establish connectivity, Qwest and the CLEC verify that they are able to pass transactional information to each other over a dedicated connection.[450] The purpose of this initial stage is to verify the physical network lines are properly connected and that data can be transmitted using the defined network protocol.

Progression Testing. After a CLEC has established connectivity with Qwest, the CLEC progresses to the next stage. In this stage of testing, CLECs submit test transactions to Qwest via the EDI interface to determine whether they receive appropriate responses from Qwest's systems. Qwest provides two distinct environments for testing: Interoperability and SATE.[451] CLECs can choose to test in the Interoperability environment, SATE, or both; testing in these environments is not mutually exclusive. These two environments are discussed in more detail below.

Controlled Production. After successfully completing the initial stages of the EDI certification process (establishing connectivity and progression testing), CLECs must complete Controlled Production ("CP") before being fully certified for EDI use.[452] This stage is really a controlled test in the production environment. During CP, CLECs submit requests to the

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[450] *See KPMG Final Report*, at Section IV, Test 24.6, subsection 2.1.1.1.

[451] *See KPMG Final Report*, at Section IV, Test 24.6, subsection 2.1.1.4.

[452] *See KPMG Final Report*, at Section IV, Test 24.6, subsection 2.1.1.1.

Qwest production environment for provisioning as real production orders. Any question or issues the CLECs may have can be addressed jointly and immediately.

2. The Interoperability Environment

Qwest established its first CLEC test environment in 1997, which subsequently evolved into the Interoperability environment in 1998. To date, 26 individual CLECs have tested in the Interoperability environment and subsequently have gone into production. When a CLEC tests in the Interoperability environment, it submits IMA data transactions through EDI to Qwest's Interoperability environment. This environment uses a copy of the production IMA EDI software, thereby providing a production-like environment in which CLECs may test.

The Interoperability environment validates transactions against actual production data using real production legacy systems to validate the data for pre-order and order transactions, including validation of account data. These transactions are submitted by the system into a test database that is a copy of the production IMA database, yet is physically separate from production. Because order transactions are not sent to the production databases, post-order transactions in the Interoperability environment are manually generated and issued back as an EDI response to the CLEC EDI interface. Each of the transaction types for pre-order, order and post-order activities that is supported by the production IMA release is likewise supported in the Interoperability environment.

The Interoperability environment supports all of the releases that are maintained in production, providing CLECs with the ability to test different versions of IMA releases at the same time. New versions of IMA are released in the Interoperability environment approximately

30 calendar days prior to their release in production. Each release is available to CLECs for six months after the next subsequent major IMA-EDI release is made available in production.

To aid CLECs in their implementation of IMA in the Interoperability environment, Qwest makes available a CLEC-specific IMA-EDI Implementation Team.[453] As with other interface systems, Qwest provides CLECs with the opportunity to submit CMP Change Requests for the Interoperability environment.

3. The Stand-Alone Test Environment (SATE)

Qwest implemented SATE on August 1, 2001, as an alternative testing environment to the Interoperability environment.[454] Testing in the SATE environment can be performed in place of, or in addition to, conventional testing in the Interoperability environment, for both initial certification that CLEC systems will interface with Qwest's IMA-EDI systems and for subsequent testing of new releases of IMA-EDI software.

SATE provides a CLEC with the ability to learn how Qwest's IMA-EDI functions work and the ability to test its interface in a test environment that returns pre-defined test scenarios that mimic production responses. Qwest provides the account data and scenario information (test decks) to users through the IMA-EDI Data Document for SATE.[455] Scenario submissions do not leave SATE during testing. By providing CLECs with a self-contained, production-like environment for sending transactions, CLECs have the opportunity to experience

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[453] *See KPMG Final Report*, at Section IV, Test 24.6, subsection 2.1.1.4.

[454] *See KPMG Final Report*, at Section IV, Test 24.6, subsection 2.1.1.4.

[455] CLECs may also request additions or changes to the test decks. Qwest generally is able to meet such requests within two weeks of approval.

an environment that acts like production IMA-EDI without interfacing with the actual production environment. SATE uses test account data and requests that are subjected to the same IMA-EDI edits as those used in production.[456] SATE also permits CLECs to perform "regression testing," in which a CLEC determines whether systems changes on its end will affect its ability to interface via EDI with Qwest. Qwest's IMA-EDI Implementation Team works directly with CLECs using SATE.

A SATE Users' Group was formed in November 2001 as part of the CMP Forum, to give Qwest and CLECs an opportunity to communicate their current plans and needs, respectively, as well as to jointly present a list of change requests to CMP that ensures that future SATE enhancements meet the needs of CLECs.

Qwest built SATE to provide all products that were currently being ordered by CLECs through IMA-EDI.[457] Qwest continues to monitor the products that CLECs express interest in and has created CMP CRs to add products to SATE. CLECs may request through the change management process that Qwest include additional products and functionality in its suite of SATE transactions.[458]

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[456] IMA (GUI and EDI) edits ensure that LSRs are populated in accordance with Qwest business rules as well as with the correct data characteristics and field length.

[457] The list of products can be found in the IMA-EDI Implementation Guide, which is available at http://www.qwest.com/wholesale/ima/edi/document.html.

[458] *See* EDI Implementation Guide (Exhibit LMN-10), available at http://www.qwest.com/wholesale/ima/edi/document.html/wholesale/ima/edi/document.html. The process states that "additional functionality can be agreed upon and added in later releases. Requests for transactions not currently supported may be requested via CMP." *See id.*

As a further enhancement to SATE, Qwest has provided automated post-order responses in SATE since Release 9.0 (January 26, 2002), through the Virtual Interconnect Center Knowledge Initiator ("VICKI"). VICKI is described in detail in the attached "White Paper on the Virtual Interconnect Center Knowledge Initiator."[459] This new functionality provides CLECs with the ability to experience the behavior of IMA-EDI consistent with production timing of post-order transactions.[460] It also ensures that CLECs receive automated responses consistent with those received in production.[461]

Although CLECs currently use SATE with success, Qwest is continuing to enhance SATE. For instance, despite the FCC's view that a BOC's test environment is not required to test flow-through,[462] Qwest has implemented flow-through for all products in SATE that are flow-through eligible. Adding flow-through to SATE gives a CLEC the capability of testing whether a given local service request would flow-through as if it had been sent to production.[463] A CLEC has the option of (1) sending its SATE transaction to a copy of the

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[459] "White Paper on the Stand Alone Test Environment (SATE) Virtual Interconnect Center Knowledge Initiator," Dec. 7, 2001, Version 1.00 ("VICKI White Paper") (Exhibit LMN-12); *see also* "White Paper on Flow Through in SATE," Jan.3, 2002, version 1.00 (LMN-13); "Hewlett-Packard Company's SATE Summary Evaluation Report for Qwest IMA-EDI SATE," Final Release Version 2.0, December 21, 2001 (LMN-15); "IMA-EDI SATE VICKI Paths for the SATE," version 10.01, May 17, 2002 (LMN-19).

[460] VICKI is a tool that Qwest provides in the SATE environment to automatically generate valid production order and post-order responses to CLEC-generated test transactions. This further strengthens the CLEC's ability to test their EDI interface in a stand-alone fashion, with reduced requirements for CLEC/Qwest interaction. See VICKI White Paper (Exhibit LMN-12).

[461] Those post-order transactions that currently are done manually by an Interconnect Service Center ("ISC") representative in production are not automated in SATE. Those transactions are completed manually in SATE, as they are in production by ISC representatives.

[462] *See Texas 271 Order*, 15 FCC Rcd at 18421 (¶ 138).

[463] Testing using flow-through is described in more detail in Qwest's "White Paper on Flow Through in the Stand Alone Test Environment," January 3, 2002, Version 1.00 (Exhibit LN-OSS- 12).

production service order processor, where only flow-through eligible LSRs will successfully flow, or (2) receiving a specified test scenario response.[464]

4. Stable Test Environment Mirrors Production

Qwest's Interoperability environments and SATE each independently satisfy the FCC's requirements that BOCs make available a "stable testing environment that mirrors production."[465]

Stability of the Test Environment. The FCC has defined a "stable testing environment" as "one in which the BOC makes no changes to the proposed release during the test period."[466] First, both the Interoperability environment and SATE are stable because Qwest has undertaken to make no changes (other than bug fixes) during the 30-day period prior to implementation of a major release. This requirement has been incorporated into Qwest's change management procedures in the section titled "Change to Existing OSS Interfaces."[467] If a serious code issue is found during the 30-day window, however, Qwest will implement the bug (emergency) fix. The implementation of bug fixes allows CLECs to test with the fixed code prior to the production deployment and therefore increases the stability of the test environment.

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[464] *Id.* Unlike BellSouth's CLEC Application Verification Environment, SATE will utilize distinct service order processors for SATE to avoid confusing test and production data. *See Evaluation of the Department of Justice Comments on BellSouth Georgia/Louisiana 271 Application*, CC Docket No. 01-277, filed Nov. 6, 2001, at 34.

[465] *See Rhode Island 271 Order*, App. D. at ¶ 42.

[466] *See Massachusetts 271 Order*, 16 FCC Rcd at 9048 (¶ 109).

[467] *See* CMP Framework, § 5.1.8.

KPMG found that Qwest made available both testing environments to CLECs "approximately 30 calendar days prior to production deployment of a new version of IMA."[468]

Qwest also makes both the Interoperability environment and SATE available to CLECs for an extended testing period. They are available to CLECs approximately 30 days prior to and six months after each major IMA-EDI release.[469] This practice, known as "versioning," allows CLECs to remain using a prior release even after implementation of a new release, to give them time to decide when to migrate to the new release. Thus, beginning with the release of EDI 9.0 in February 2002, CLECs will be able to test in both Interoperability and in SATE for any one of three releases (7.0, 8.0, and 9.0) at the same time.[470] (In the Interoperability environment, versioning had already been possible).[471] The FCC has approved of versioning because it "ensures that system changes and enhancements do not adversely affect a carrier's ability to access the BOC's OSS."[472]

Mirroring the Production Environment. Both the Interoperability environment and SATE satisfy the FCC's requirement that the interface testing environment mirror the

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[468] *See KPMG Final Report*, at Section IV, Test 24.6, subsection 2.1.1.4.

[469] *See KPMG Final Report*, at Section IV, Test 24.6, subsection 2.1.1.4. SATE is available for testing of both major EDI releases and point releases, but the 30-day stable testing period prior to release is available only for major releases. This is consistent with the FCC's requirements and with the CMP redesign procedures agreed to by CLECs and Qwest. *See, e.g., Massachusetts 271Order*, 16 FCC Rcd at 9016 (¶ 111).

[470] *See* OSS Calendar, which can be found on the Qwest Wholesale Website, available at http://www.qwest.com/wholesale/cmp/osscalendar.html.

[471] *See* IMA-EDI Implementation Guide (Exhibit LMN-10), available at http://www.qwest.com/wholesale/ima/edi/document.html.

[472] Application of Verizon New England Inc., et al., for Authorization to Provide In-Region, InterLATA Services in Massachusetts, 16 FCC Rcd 8988 (2001) at ¶ 107, quoting Texas 271 Order, 15 FCC Rcd at 18408, 115.

production environment. The FCC has held that in order to satisfy its "mirroring production" standard, a BOC need not provide a testing environment that is "identical to its production environment."[473] Rather, it is sufficient for a BOC to show that "the testing and production environments perform the same key functions."[474]

The Interoperability environment by definition mirrors the production environment. The Interoperability test environment uses a copy of the EDI software used in production, uses real production pre-order and order databases to validate and accept the LSR, and provides EDI responses generated by Qwest personnel that mirror production responses.[475] SATE also mirrors production because it allows CLECs to run transactions that generate the same responses as in production without actually using production data or production systems. Qwest provides CLECs with test decks of predefined responses to test in SATE, and those responses mirror production. Transactions submitted by CLECs through SATE use the same IMA-EDI software that is used in production, as well as the same CLEC EDI software. All known differences between production and SATE are documented on an on-going basis. If the implementation of IMA-EDI functionality into SATE causes the system behavior to differ from production, Qwest will likewise document this information. [476] Transactions between Qwest and

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[473] *Texas 271 Order*, ¶ 138.

[474] *Id.*

[475] *See generally* "Overview of Interface Testing" (Exhibit LMN-9).

[476] While SATE mirrors production, it is not a complete replica of the production environment. Because of the nature of the test environment, some differences arise. For details on the differences between SATE and production, see the Overview section of the IMA-EDI SATE Data Document, Exhibit LMN-14, which can also be found on the Qwest Wholesale Website at http://www.qwest.com/wholesale/ima/edi/document.html.

CLECs submitted through SATE therefore operate almost identically to those submitted through the actual pre-ordering, ordering and post-ordering processes. [477] This enables CLECs to, in effect, run transactions with Qwest without using their own account data. CLECs also can use SATE to evaluate products they are considering offering to determine whether they can do so effectively through their IMA-EDI interfaces. To further enhance SATE, Qwest now provides automated post-order responses (since January 26, 2002), and flow-through components, even though the FCC has not required this capability under Section 271.[478]

D. COMMERCIAL DATA

Commercial results support these conclusions. To date, five individual CLECs, as well as five others through a service bureau,[479] have successfully completed testing using SATE and have achieved production status for EDI implementation of pre-ordering capabilities. In approving SBC's 271 application in Texas, the FCC found it compelling evidence of the adequacy of SBC's new test environment that three carriers had used it to achieve production status, with two carriers using it for a new release.[480] Here, the commercial data is even stronger.

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[477] The structure of data in SATE mirrors the structure of production data, but the actual content of SATE data is not identical to the content of any instance of production data. SATE does not contain production data so that a CLEC can easily test any production scenario without concern for any privacy issues. While the responses may occasionally differ between production and SATE, the test environment utilizes the same processing logic as the production system. As a result, the structure of the response should mirror production.

[478] *See Texas 271 Order,* 15 FCC Rcd at 18421 (¶ 138).

[479] Several CLECs interested in testing their EDI interfaces are represented by service bureaus. A service bureau is a company that provides a variety of outsourced services to CLECs, including, but not limited to, establishing and maintaining connectivity between BOCs and CLECs, administering databases and managing associated hardware, as well as producing and transmitting EDI transactions.

[480] *See Texas 271 Order,* ¶ 134.

As noted above, a total of ten carriers have achieved production status after testing through SATE (individually or through a service bureau).

There is one PID that is relevant to SATE (PO-19). This SATE PID "evaluates Qwest's ability to provide accurate production-like tests to CLECs for testing both new releases and between releases in the SATE environment."[481] Specifically, PO-19 measures the percentage of SATE test transactions that are successfully completed for a software release or mid-release performance test based upon the transactions reported in the Qwest SATE Document. In a January meeting, the ROC TAG agreed that a 95% benchmark would apply to PO-19 beginning in March. As reflected in the commercial performance results, Qwest met the 95% standard in Washington for March and April.[482] For the five month period between December 2001 and April 2002, Qwest successfully executed 98.73, 94.57, 95.38, 97.10, and 99.70 percent of test transactions within SATE.[483] Thus, Qwest either met the current benchmark or fell only a fraction of a percentage point short of it during the past five months.

Although Qwest has negotiated the current PO-19 PID with the CLECs, Qwest is currently proposing a modification to PO-19 based on feedback from AT&T in the most recent Arizona OSS Test workshop. This modification would include a sub-measure to execute the same transactions in production and in SATE, to further measure the extent to which SATE mirrors production.

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[481] ROC PID.

[482] *See* Washington Commercial Performance Results (PO-19).

[483] *See* Washington Commercial Performance Results (PO-19).

Commercial data also supports the conclusion that the Interoperability test environment provides an effective means for CLECs to test and certify their EDI interfaces. To date, 26 CLECs have successfully tested through Interoperability and achieved production status. There is no PID to measure the ability of test transactions in the Interoperability environment to mirror production. As discussed above, however, because test transactions go directly to legacy production databases, they will match the production responses.

E. THIRD PARTY TEST RESULTS

KPMG evaluated Qwest's SATE in Test 24.6, the OSS Interface Development Review Test. [484] KPMG found that Qwest had satisfied the vast majority of the test criteria related to interface development. [485] Of the 48 separate test criteria evaluated, KPMG found that 46 were satisfied. Many of these are directly related to EDI interface testing. KPMG found, for example, that (1) "Qwest has a documented methodology for conducting carrier-to-carrier testing with customers seeking to interconnect;" (2) "Carrier-to-carrier test environments are available and segregated from Qwest production and development environments;" (3) On call customer support for interface testing is provided; (4) Carriers are provided with documented specifications for active test environments; (5) "Active test environments are subject to version control, and carriers are notified before changes are made to active test environments;" (6)

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[484] *See KPMG Final Report*, at Section IV, Test 24.6, Table 24.6-2.1 and Table 24.6-2.2.

[485] *See KPMG Final Report*, at Section IV, Test 24.6, Table 24.6-2.1.

"Procedures are defined to log software 'bugs,' errors, and omissions in specifications and other issues discovered during carrier-to-carrier testing." [486]

Many other criteria found satisfied in Test 24.6 are also closely related to the adequacy of EDI interface testing. As one example, "methods and procedures are defined for ensuring that changes found during all phases of testing are incorporated into instances of software code." [487]

The only EDI interface test criterion that KPMG found "unsatisfied" is whether "a functional test environment is made available to customers for all supported interfaces." [488] KPMG identified the following issues as remaining at the close of its testing, which resulted in two closed unresolved Exceptions. [489]

First, KPMG noted that "SATE transactions are manually generated, and that the environment does not support flow-through transactions." [490] Qwest has addressed both of these issues, through the implementation of automated responses (VICKI) in January 2002 and

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[486] *See KPMG Final Report*, at Section IV, Test 24.6, Table 24.6-2.1.

[487] *See KPMG Final Report*, at Section IV, Test 24.6, Table 24.6-2.1, 24.6-1-18

[488] *See KPMG Final Report*, at Section IV, Test 24.6, Table 24.6-2.1, 24.6-1-8. The other test criterion that KPMG found unsatisfied is related to testing of the maintenance and repair electronic interface (EB-TA). This issue is discussed below, in connection with closed unresolved Exception 3109.

[489] These SATE-related closed unresolved Exceptions, E3077 and E3095 are discussed in detail below.

[490] *See KPMG Final Report*, Test 24.6, Table 24.6-2.1, Cross-Reference 24.6-1-8.

through the implementation of flow-through capability.[491] Moreover, the FCC has not required flow-through capability under Section 271. [492]

Second, KPMG raised concerns about "the process for adding new IMA products for testing as well as adding existing products not currently supported in SATE." [493] These concerns have been fully addressed by Qwest's redesigned change management process. [494]

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[491] This issue was identified in Exception 3077 (Exhibits LMN-41 and LMN-42). In that Exception, the first KPMG concern was that "SATE does not generate post-order responses in the same manner in which they are created in the production environment." KPMG agreed that VICKI appears to have enhanced some aspects of EDI interface testing. However, KPMG believed that VICKI had the following limitations: (1)VICKI response times may not match production response times, (2) VICKI response detail may not match production response detail, and (3) VICKI does not support "real world scenario testing." As KPMG acknowledged in its Disposition Report, the first and second bulleted items have been addressed by April 15, 2002, modifications to VICKI supporting documentation. The third KPMG bulleted item noted above is KPMG's view that SATE does not provide "real world scenario testing." The concerns expressed by KPMG about "real world scenario testing" have been addressed by Qwest's completion of its implementation of flow-through capability in SATE in May 2002. More fundamentally, as noted above, the FCC has not required that test environments have flow-through capability under Section 271.

Because the test closed before flow-through implementation was complete, KPMG closed this issue unresolved. Another KPMG concern was that the "volume of order responses supported in SATE is restricted due to manual response handling." KPMG noted that limitations appeared to stem from the manual response generation required for SATE, and that with the implementation of VICKI, the resource requirements necessary to support SATE transactions were diminished. It therefore considered this aspect of E3077 to be resolved. The final KPMG concern was that the "data contained within the order responses is not consistent, and may not mirror the data that would be found in production responses." Qwest has compared the errors generated from the legacy systems returned through Qwest's 8.0 production EDI interface over a 6-month period with the errors contained in SATE. Qwest has published this list and discussed it in the CMP forum. Beginning with IMA-EDI release 9.0, SATE contains all IMA-EDI generated error messages that occur in production, as well as commonly triggered legacy system errors. Through the data request process, a CLEC can request that Qwest code any other legacy system errors into SATE. Thus, CLECs have the ability to add any legacy error messages not currently contained in SATE. The SATE testing environment thus "performs the same key functions" as production.

See also CLEC Order Volumes (05/05/01-04/30/02) (LMN-49); CLEC pre-Order Volumes (05/01/01-04/30/02) (LMN-50).

[492] *See Texas 271 Order*, 15 FCC Rcd at 18421 (¶ 138).

[493] *See KPMG Final Report*, at Section IV, Test 24.6, subsection 3.1, Table 24.6-2.1, 24.6-1-8**]**.

[494] This issue was identified in Exception 3095. *See* KPMG Disposition Report for Exception 3095 (Exhibits LMN-43 and LMN-44), *also available at* www.nrri.ohio-state.edu/oss/master/exceptions/april/e3095disposition_report.pdf ("E3095 Disposition Report").

Through the CMP Redesign Process, CLECs and Qwest have agreed upon a process for CRs to be submitted to add products and make other changes to SATE. Through the CMP process, Qwest and CLECs also jointly prioritize the SATE CRs for inclusion in future EDI releases. [495] In addition, a SATE Users' Group, composed of representatives of CLECs, Qwest, HP, and KPMG, meets monthly as part of the CMP Forum. [496]

Pursuant to the CMP process, and as of mid-May, Qwest has submitted 23 CRs for the addition of new products to SATE. (At the time SATE was implemented, these products were ordered by CLECs through IMA-GUI interfaces, if they were ordered at all.) Also pursuant to the agreed-upon CMP prioritization process, Qwest and CLECs jointly prioritized these CRs. [497] After this joint prioritization process, two of these CRs were highly ranked for inclusion in an upcoming release. Specifically, one CR (relating to FBDL) was ranked third and another CR (relating to EELs) was prioritized fifth for inclusion in Release 11.0. CLECs have indicated little or no interest in 15 of the remaining CRs. Qwest therefore announced its plans to withdraw these CRs or transfer to individual CLECs the ownership of these CRs at the regular CMP meeting on April 18, 2002. One CLEC assumed sponsorship of one of the 15 CRs. Qwest withdrew the remaining 14 CRs on April 26, 2002.

As noted above, 26 CLECs have successfully developed EDI interfaces with Qwest using the Interoperability testing environment. Thus, to the extent there might be a CLEC

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[495] *See id.*, § 10.

[496] *See* SATE Users' Group Meeting Minutes, November 13, 2001 (LMN-11).

[497] CMP Framework at § 10 (Exhibit JMS-2).

that would be interested in testing an EDI interface for a product that is not yet available in SATE, that CLEC may use the Interoperability testing environment to certify the EDI interface, and may pursue adding that product to SATE through the CMP process. This evidence shows that the process for adding products to SATE is well established and that the CLECs community does not appear to have an immediate need to add many products to SATE.

The final issue raised by KPMG, identified in Exception 3109, relates to Qwest's testing environment for CLECs that are building interfaces to its Mediated Access Electronic Bonding for Trouble Administration (MEDIACC EB-TA). [498] EB-TA is Qwest's computer-to-computer maintenance and repair interface, and is used by both CLECs and Interexchange Carriers. EB-TA is offered as an alternative to Customer Electronic Maintenance and Repair ("CEMR"), an online system for maintenance and repair. As an initial matter, the FCC has not required that BOCs provide CLECs with an electronic interface for maintenance and repair activities in order to obtain Section 271 approval. As the FCC has stated:

> The FCC has in the past held that the provision of an integrated, computer-to-computer maintenance and repair interface is not required to satisfy the "substantial same time and manner" test, provided that the BOC otherwise demonstrates that it provides equivalent access to its maintenance and repair functions. [499]

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[498] KPMG Disposition Report for Exception 3109 (Exhibits LMN-39 and LMN-40), *also available at* www.nrri.ohio-state.edu/oss/master/exceptions/march/e3109disposition_report.pdf.

[499] *See New York 271 Order*, 15 FCC Rcd at 4069 (¶ 215).

In addition, the FCC has not applied its "stable test environment that mirrors production" requirement beyond pre-ordering and ordering transactions. [500]

KPMG tested several aspects of the EB-TA interface, and found it satisfactory in every respect other than that identified in E3109. It determined that CLECs were able to test all of the agreed-upon scenarios, and it did not have criticisms of the scope or functionality of the test environment. In Test 17, it examined the existence and expected behavior of the EB-TA interface by submitting trouble tickets through a CLEC's gateway. Qwest satisfied all criteria with 100 percent results and without the issuance of any Observations or Exceptions. [501] In Test 24.6, with the sole exception of Criterion 24.6-2-9 (the issue in E3109), KPMG found that all test criteria were satisfied, including methodology, interface specifications, carrier-to-carrier testing, production interface support, and capacity management of the interface. [502]

KPMG issued Exception 3109 because test scenarios for non-designed services are processed by the LMOS production mainframe. [503] The EB-TA test environment provides CLECs with a true representation of how transactions will function and respond in Qwest's EB-TA production environment. In Qwest's experience, the fact that EB-TA testing uses the LMOS production applications is not detrimental or limiting, but rather is advantageous to the CLEC,

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[500] *See, e.g., Kansas/Oklahoma 271 Order*, 16 FCC Rcd at 6319 (¶ 168).

[501] *See KPMG Final Report*, at Section IV, *Test 17*, Table 17-3.

[502] *See KPMG Final Report*, at Section IV, Test 24.6, Table 24.6-2.2.

[503] *See* E3109 Disposition Report at 1. When a CLEC submits a repair ticket through EB-TA, the ticket is electronically generated and passed to one of two Qwest backend systems. It is passed to LMOS for non-designed tickets and to the WFA/C for designed tickets. *See Final Report* Test 24.6, Table 24.6-2.2, Test Cross-Reference 24.6-2-9**]**. The tickets are then processed, as are all Qwest repair tickets, by LMOS and WFA and all attending statuses are electronically passed back to the CLEC through EB-TA.

because it permits the full functionality of EB-TA to be tested. As noted above, four CLECs have tested successfully using EB-TA, and the interface has been utilized successfully by CLECs and interexchange carriers for six years.

Overall, KPMG found that Qwest's documentation was adequate to help CLECs understand the overall test environments (Interoperability and SATE). [504] HP tested in the Interoperability environment. [505] HP also evaluated Qwest's interface testing program in Test 12-B, the P-CLEC OSS Interface Evaluation. [506] HP evaluated the adequacy of Qwest's documentation for supporting Qwest's interface testing process utilizing Interoperability testing. HP was satisfied with Qwest's performance. It is also significant that HP successfully conducted certification and migration activities for releases 6.0, 7.0 and 8.0 for a number of functionalities. [507]

HP's comprehensive evaluation of SATE in Arizona provides additional support for the conclusion that SATE is adequate to meet the Section 271 requirements. After completing this comprehensive evaluation, HP concluded "SATE is adequate to support Qwest CLEC Testing in the State of Arizona, given the current level of CLEC usage." [508] In that report, HP also offered a list of recommended actions for the future. [509] In a December 31, 2001,

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[504] *See KPMG Final Report*, at Section IV, Test 24.6, Table 24.6-1, Test Cross-Reference 24.6-1-1.

[505] *See KPMG Final Report*, at Section IV, Test 24.6, Section 2.4.

[506] *See KPMG Final Report*, at Section IV, Test 24.6, subsection 3.1, 12-B-1.

[507] *See KPMG Final Report*, at Section IV, Test 24.6, subsection 3.1, 12-B-10.

[508] *See id.*

[509] *See id.* at 8 (Section 2.1).

response, Qwest outlined its plans to address HP's recommendations. [510] HP's second evaluation was based on HP's recommendation #7 in the initial evaluation: "To ensure that the SATE is adequate for full release testing, HP recommends that IMA SATE release 9.0 be tested." [511] After completing this second evaluation, HP concluded that "the Qwest SATE is adequate to support New Release Testing by a CLEC." [512]

In sum, the interface testing process and testing environments provided to CLECs by Qwest satisfy the Section 271 requirements for a stable test environment that mirrors production. [513] The commercial data, which show that numerous CLECs have tested EDI interfaces and gone to production using Qwest's interface testing process, including both the Interoperability environment and SATE, provide strong support for this conclusion. The ROC third party test results also show that, for the most part, Qwest has satisfied the test criteria. Those issues remaining unresolved in the third party test go to areas beyond that which the FCC has required to satisfy Section 271, and are not, in any event, significant enough to affect the conclusion that Qwest has met the checklist requirements under the FCC's applicable standards. And, as noted in previous sections of this declaration, Qwest's technical assistance and EDI

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[510] Qwest's Response to HP's SATE Recommendations, ACC Docket No. T-00000A-97-0238, December 31, 2001 (Exhibit. LMN-16). On February 14, 2002, HP filed a response to Qwest's filing, in which it indicated it would initiate a further review of SATE in connection with its evaluation of IMA 9.0. *See* Exhibit. LMN-17 (HP Comments on Qwest Response to Recommendations).

[511] *See id.*

[512] Hewlett-Packard Company's SATE New Release Test Summary Report – 9.0 Transaction Test for Qwest IMA EDI SATE, Version 2.0, March 29, 2002 ("HP SATE New Release Test Summary Report") at § 2.1 (Exhibit. LMN-18).

[513] *See Georgia/Louisiana 271 Order* at App. D, ¶ 42.

documentation are effective in enabling CLECs to build an EDI interface and test it through to production and after.