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BellSouth Telecommunications, Inc.
OSS Evaluation – Georgia
Supplemental Test Plan

Draft

Version 1.~~0~~1

Submitted by:

KPMG Consulting

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~~January 22~~March 1, 2000

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I. Document Control

A. Distribution

Table I-1: Distribution List for Document

Contact	Organization	Date Sent
David Burgess	Georgia Public Service Commission	
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B. Approved By

Table I-2: Approval List for Document

Person	Department	Date
David Burgess	Georgia Public Service Commssion	

Table I-3: Version Control

Version	Date	Reason
1.0	January 22, 2000	Initial Draft Release
1.1	March 1, 2000	Draft Release

C. Revision Notes

Draft March 2000	
Location	**Description of Change**
Test Plan Cover Page	Version and date
I. Document Control	
Page 1	Version, date, and reason
II. Introduction	
Page 3-4	B. Scope - Text and editorial changes
Page 7	F. Structure - Addition of appendices (table)
III. Test Plan Framework	
Page 8	A. Test Scenarios - Text and editorial changes
Page 9	B. Test Domains - Text change
IV. Performance Metrics Review Test	
Page 15	C. Scope - Text and editorial changes
Page 17	2.2 Objectives - Text and editorial changes
Page 18	Table IV-2 - Text and editorial changes
Page 23	Table IV-5 - Text and editorial changes
V. Pre-Ordering, Ordering, and Provisioning Test Section	
Page 27	B. Organization - Text and editorial changes
Page 28	C. Scope - Text and editorial changes; 1.0 Title - Test name and number change; 1.1 Description - Text and editorial changes
Page 29	1.1 Description - Text and editorial changes; 1.2 Objective - Text and editorial changes
Page 30-31	1.4 Test Scope - Text and editorial changes
Page 32	1.5 Test Approach - Text and editorial changes
Pages 33-38	2.0 - Addition of test
Pages 38-42	2.0 - Elimination of test
Page 42	3.0 Title - Number change; 3.1 Description - Text and editorial changes
Page 43	3.3 Entrance Criteria - Text and editorial changes
Page 46	4.0 Title - Test name and number change; 4.1 Description - Text and editorial changes; 4.2 Objective - Text and editorial changes; 4.3 Entrance Criteria - Text and editorial changes
Page 47	4.4 Test Scope - Text and editorial changes; Table V-4 - Title change, Text and editorial changes; Table V-5 - Title change, Text and editorial changes
Page 48	4.5 Test Approach - Text and editorial changes
Pages 49-52	5.0 - Elimination of test
Pages 53-54	6.0 - Elimination of test
Pages 54-56	5.0 - Additon of test
Pages 56-58	6.0 - Addition of test
Pages 58-61	7.0 - Addition of test
Appendix B	
Page 82	B. Proposed Products and Services for Evaluation - Text and editorial changes; C. Analysis and Commentary - Text and editorial changes
Appendix C	
Page 83	Addition of Appendix C, Test Scenarios

II. Introduction

A. Background

The Telecommunications Act of 1996 (the Act) requires BellSouth Telecommunications, Inc. (BLS) in Georgia to:

- Provide just, reasonable, and nondiscriminatory access to its operations support systems (OSS);
- Provide the documentation and support necessary for competitive local exchange carriers (CLECs) to access and use these systems; and
- Demonstrate that BLS's systems are operationally ready and meet prescribed performance standards.

Compliance with these requirements will allow competitors to obtain pre-ordering information, submit service orders for resold services and unbundled network elements (UNEs), submit trouble reports, and obtain billing information at a level deemed to be non-discriminatory when compared with BLS's retail operations.

The Georgia Public Service Commission (GAPSC) and BLS have directed KPMG LLP (KPMG) to design and execute this Supplemental Test Plan. This test, in combination with additional OSS evaluations executed under the direction of the GAPSC and described in *BellSouth - Georgia OSS Evaluation Master Test Plan* (Master Test Plan) will assist the GAPSC in assessing whether BLS is meeting the requirements of the Act.

B. Scope

This document describes the plan to evaluate BLS's OSS systems, interfaces, and processes that enable CLECs to compete with BLS for customers' local telephone service, beyond the scope of activities described by the GAPSC in the Master Test Plan.

The supplemental plan has been divided into ~~four~~ five test areas to organize and facilitate testing:

- Performance Metrics Review
- Pre-Order, Order & Provisioning
- Maintenance & Repair (*x*DSL)
- Billing
- Change Management

Within each of the test areas, the methods and processes to be applied to measure BLS's performance are described along with the specific points in the systems and processes where BLS performance will be evaluated. The results of the test will be compared

against measures and criteria identified by the GAPSC and other measures and criteria as deemed appropriate by the GAPSC. This plan also describes the application of scenarios to be used within the Pre-Order, Ordering & Provisioning test family in evaluating BLS's OSS and related support services. KPMG will develop scenarios used in the test to evaluate the functionality of BLS's pre-ordering, ordering, and provisioning systems for resale and *x*DSL products and services. The scenarios will be designed to depict real-world situations that CLECs currently face or may face in the near future. ~~The scenarios will be developed upon determination of the resale products to be tested, based on the process described in Appendix B.~~ The test will be conducted using the ~~latest~~ BLS interfaces in production for both electronic and manual order submission. These interfaces will include TAG (machine-to-machine) and EDI for resale products, and web and manual processes for *x*DSL products.

This supplemental plan will adopt the military-style test philosophy, which suggests a "test until you pass" approach. This is believed to be in the best interest of all parties seeking an open, competitive market for local services in Georgia.

C. Objective

The overall objective of this document is to provide a description of a plan to test additional BLS OSS systems, interfaces, and processes beyond those described in the GAPSC-approved Master Test Plan. This Supplemental Test Plan shall be the basis by which individual tests can be developed and executed. The test results will further assist the GAPSC in determining whether BLS's provision of access to OSS functionality enables and supports CLEC entry in the local market. To meet these objectives, KPMG developed this Supplemental Test Plan that will evaluate components of the CLEC/ILEC relationship under real world conditions.

D. Audience

The audience for this document falls into two main categories:

1. Readers using this document during the testing process
2. Interested parties who have some stake in the result of the BLS OSS evaluation and wish to have insight into the evaluation effort

The primary user of this document is KPMG, identified by BLS and the GAPSC as Test Manager. Others are the GAPSC, BLS, the CLECs, the Department of Justice (DOJ), the Federal Communications Commission (FCC), and other State Commissions.

Test Manager

KPMG, as Test Manager, has overall responsibility for the management of the testing process described in this document. This document will be used by KPMG to guide the various parties involved in this testing effort, including any additional entities utilized by KPMG to simulate the CLEC/ILEC relationship.

Georgia Public Service Commission

The Georgia Public Service Commission is responsible for providing input on additional tests, measures, or criteria that should be considered. KPMG will provide results and preliminary evaluation of the results to the GAPSC. The GAPSC is responsible for the final evaluation of the test results.

BellSouth

BLS will use this document to understand the supplemental testing framework and requirements in order to prepare for and support test execution.

The CLEC Community

The CLECs will use this document to understand the breadth and depth of the supplemental testing. In addition, this document describes the elements required of the CLECs to prepare for their role in the tests. The terms ALECs and CLECs are synonymous, and the term CLECs will be used throughout this document.

Department of Justice

The Department of Justice may observe the process of developing, conducting, and evaluating the tests.

The Federal Communications Commission

The Federal Communications Commission may observe the process of developing, conducting, and evaluating the tests.

E. Assumptions

This section describes the assumptions made in the development of this Supplemental Test Plan.

- BLS will provide suitable resources in sufficient numbers to assist KPMG with the evaluation effort.
- BLS will provide access to appropriate documentation.
- BLS will provide the necessary resources, facilities, and support for KPMG and/or designated vendor(s) to establish connectivity with its systems and to create the test bed required to execute the tests (e.g., office space; equipment; IDs; security access; customer accounts and addresses; and appropriate company codes).
- BLS will process test transactions as part of normal processing including the provisioning of some scenarios/test cases.
- BLS and, where appropriate, CLECs will provide the facilities required to execute the live scenarios.

- BLS and, where appropriate, CLECs will allow KPMG to observe retail and wholesale processes on-site during the evaluation effort.
- BLS and the CLECs will give KPMG access to historical data and current operational reports, as needed, to complete the evaluation.
- BLS will allow the inspection of algorithms that may have a bearing on parity access.
- BLS will maintain a stable environment for the duration of the evaluation.
- Regulatory, legal, and confidentiality issues or concerns can be resolved without significant impact to either the intent of the tests, the ability to execute the tests, or the schedules for their execution.

In some cases, certain order types, troubles, and processes may not be practically tested within the test. Examples include orders with very long interval periods or high volumes of test provisioning transactions. Accordingly, the test may take the form of an interview, inspection, live orders review, review of historical performance or operational reports, or some other method that will capture the performance of BLS with respect to the order types and processes in question. The Test Plans will identify the tests that can be executed live and those that must be executed by other means. Long interval tests that prove to have no alternative test methods that foreshorten the test will be referred, with a recommendation for disposition, to the GAPSC. The GAPSC will make the final decision regarding the disposition of such tests.

Operational, time, and resource constraints make it impossible to construct a completely exhaustive test suite. Provision has been made in the plan to amend or extend the test coverage if, in the judgment of the GAPSC, an amendment or extension is deemed justified.

F. Document Structure

This section describes the structure of the document. It includes a table that lists each major section number along with a brief description.

Table II-1 Document Overview

Sect. No.	Section	Content
I	Document Control	Identifies document distribution and necessary approvals.
II	Introduction to the Document	Documents project background, scope, and objectives, assumptions, and limitations. Includes who should read the document, and how it is structured.
III	Test Plan Framework	Describes the methodologies for additional testing of BLS's systems, interfaces and processes. Includes how testing is segmented and organized, testing components, entrance and exit criteria, data acquistion, and traceability.
IV	Performance Metrics Review Test Section	Describes the methods and procedures for additional evaluation of BLS's data collection, transfer, and processing into its performance metrics.

Sect. No.	Section	Content
V	Pre-Order, Order & Provisioning Test Section	Describes the methods and procedures for verifying and validating BLS's core systems and processes associated with ordering and provisioning resale and *x*DSL products, and through a series of transaction tests, manually submitted orders, and inspection.
VI	Maintenace and Repair Test Section	Describes the methods and procedures for evaluating BLS's processes for *x*DSL trouble reporting and repairs, and TAFI and ECTA functionality for resale services.
VII	Billing Test Section	Describes the methods and procedures for evaluating BLS's resale service billing and usage generation systems and processes.
VIII	Change Management Test Section	Describes the methods and procedures for evaluating BLS's processes for, and implementation of, its OSS '99 release.
Appendix A	Statistical Approach	Describes the statistical methods and procedures for evaluating BLS's performance for all Performance Metrics Review tests.
Appendix B	Resale Products for Functional Evaluation	Describes the methodology for testing BLS Resale products and services for functional evaluation.
Appendix C	Test Scenarios	Describes the scenarios for functional evaluation of Resale and *x*DSL products and services.

III. Test Plan Framework.

The supplemental evaluations of BLS's OSS are designed to build on those described in the Master Test Plan approved by the GAPSC. In constructing a Supplemental Test Plan, many factors were considered, including the systems and processes to be tested, the measurement points and respective evaluation criteria, and the necessary conditions required to stage successful, efficient, and objective evaluations. KPMG will execute all tests listed in this plan.

The supplemental test plan framework was defined along four key dimensions:

- Test Scenarios
- Test Domains
- Test Processes
- Evaluation Criteria

The test scenarios and the test domains define **what is to be tested**. *Test scenarios* provide the contextual basis for testing by defining the transactions, products, volumes, data elements, and other variables that must be considered and included during testing. The *test domains* define the systems and processes to be tested.

Test processes and evaluation criteria define **how testing will be conducted**. *Test processes* define the techniques, measures, inputs, activities, and outputs of each component test. *Evaluation criteria* serve as the basis for evaluation by defining the norms against which test results are compared.

These concepts are discussed in more detail in the following sections.

A. Test Scenarios

Based on KPMG's industry experience, the knowledge gained from the New York Public Service Commission Test and the Pennsylvania Public Utility Commission Test, as well as a review of the evaluations described in the Master Test Plan, KPMG has developed a representative set of additional test scenarios for evaluation in Georgia.

The test scenarios describe, at a high level, realistic situations in which CLECs purchase wholesale services from BLS to be resold to the CLECs' end-user customers on a retail basis. The key principles applied in generating the additional scenarios include: (1) emulating real world coverage, mix, and types of transactions while (2) balancing the requirement for practical and reasonably executable transactions that would not unduly disrupt normal production or negatively affect customer service. In general, each test scenario describes a real-world situation that will be used to create test cases. A summary of the scenarios ~~will be published in the STP following determination of the products and features to be tested, as described in Appendix B~~is provided in Appendix C.

B. Test Domains

The areas subject to testing exist in four domains that mirror major business functions performed by a telecommunications carrier:

- Pre-Order, Order, and Provisioning (PO&P)
- Maintenance and Repair (M&R)
- Billing (BLG)
- Change Management (CM)

These four domains correspond to four respective business functions that comprise, in part, the BLS/CLEC relationship.

Pre-Order, Order, and Provisioning Domain

This domain is comprised of the systems, processes, and other operational elements associated with BLS's support for Pre-Ordering, Ordering, and Provisioning activities for wholesale services. The purpose of the specified tests is to evaluate resale interface functionality and provisioning processes, to evaluate manual ordering and provisioning processes for *x*DSL services, to evaluate compliance with prescribed measurements, and to provide a basis for comparing this operational area to parallel systems and processes supporting BLS's Retail Operations.

Maintenance and Repair Domain

This domain is comprised of the systems, processes, and other operational elements associated with BLS's support for Wholesale Maintenance and Repair activities. The purpose of the specified tests is to evaluate Maintenance and Repair activities on resale services and *x*DSL-capable loops.

Billing Domain

This domain is comprised of the systems, processes and other operational elements associated with BLS's support for Wholesale Billing. The purpose of the specified tests is to evaluate activities for resale service billing and usage generation systems.

Change Management Domain

This domain is comprised of the policies and practices for managing change in the systems, processes and other operational elements necessary for BLS's establishment and maintenance of business relationships with the CLECs. Supplemental test activities in Change Management will focus on an evaluation of BLS's OSS '99 release.

C. Test Processes

Within each of the test domains, specific test processes to be executed have been defined.

In general, two kinds of tests have been developed:

- Transaction-Driven System Analysis - those that rely on initiation of transactions, tracking of transaction progress, and analysis of transaction completion results to evaluate a system under test.
- Operational Analysis - those that focus on the form, structure, and content of the business process under study. This test method will be used to evaluate day-to-day operations and operational management practices, including policy development, procedural development, and procedural change management.

CLEC Involvement

CLECs operating in Georgia will be given an opportunity to participate in specified components of this test. The inclusion of selected CLEC live transactions provides an alternative test method for transactions which may not be practical to provide through the test infrastructure, and facilitates a more realistic depiction of real world production. CLEC participation will also be solicited to provide real test cases during the test period.

Additionally, KPMG will organize regularly scheduled meetings with the GAPSC and the CLECs to keep interested parties apprised of all relevant aspects of the test activities described in this Supplemental Test Plan, as well as the activities described in the Master Test Plan.

D. Evaluation Criteria

Measures and their corresponding evaluation criteria provide the basis for conducting tests. Evaluation criteria are the norms, benchmarks, standards, and guidelines used to evaluate measures identified for testing. Evaluation criteria provide a framework for the scope of tests, the types of measures that must be taken during testing, and the approach necessary for analyzing results.

There are four types of evaluation criteria:

Table III-1: Evaluation Criteria

Evaluation Criteria Type	Description	Examples
Quantitative	These criteria set a threshold for performance where a numerical range of values is possible, such as response time.	System response time is four seconds or less.
Qualitative	These criteria set a threshold for performance	Documentation defining change

Evaluation Criteria Type	Description	Examples
	where a range of quality values is possible, such as level of customer satisfaction.	notification procedures is adequate.
Parity	These are criteria that require two measurements to be developed and compared, such as whether external response time is at least as good as internal response time.	CLEC transaction time is no greater than BLS Retail transaction time.
Existence	These are criteria where only two possible test results can exist (e.g., true/false, presence/absence), such as whether a document exists or not.	Documentation defining change notification procedures exists.

The evaluation criteria to be applied in the overall test effort are based largely on the legal and regulatory requirements for functionality and performance applicable to BLS's OSS. Overall, evaluation criteria are derived from three types of sources, as shown below.

Table III-2: Sources of Evaluation Criteria

Evaluation Criteria Source Types	Description
Legal and Regulatory Requirements	Requirements specified by statute and regulation, such as FCC orders, court orders, GAPSC regulations, federal and state statutes, and other binding requirements resulting from judicial or governmental proceedings.
Consensus Requirements	Norms, benchmarks and standards developed by formal consensus proceedings.
Good Management Practices (GMP)	Widely recognized standards and guidelines promulgated by sanctioned industry and governmental organizations and other bodies (e.g., Telecommunications and Industry Forum); also includes benchmarks, performance goals, and guidelines derived from industry and topic area experts, BLS and CLEC performance targets, publications, academic journals and other sources.

E. Test Process Elements

The test process includes a description of the test, its objectives, the targets and scope of the test, the measures to be used, the test scenarios which apply to the test, the test's inputs, activities, and outputs, as well as entrance and exit criteria. Each test process specifies the evaluation techniques used to capture and analyze information developed during testing and the evaluation measures used to conduct testing.

1.0 Entrance Criteria

Entrance criteria are those requirements that must be met before individual tests can commence. Global entrance criteria, which apply to every individual test (except where noted otherwise), include the following:

1. **The Test Plan has been approved.**

   The Supplemental Test Plan must be approved by the GAPSC.

2. **All legal dependencies have been resolved.**

   Any pending legal and regulatory proceedings that impact the ability to perform the additional test activities must be concluded in a manner, which allow testing to proceed. Any necessary legal or regulatory approvals must be secured.

3. **All required BLS interface capabilities must be operationally ready.**

   Electronic interfaces to all OSS access functions of Pre-Ordering, Ordering, and Provisioning must be fully tested and operational.

   For transaction tests to begin, the test infrastructure established for the test activities identified in the Master Test Plan must continue to be operationally ready.

Table III-3: Global Entrance Criteria

Criteria	Responsible Party
The Test Plan has been approved.	GAPSC
All legal dependencies have been resolved.	BLS, GAPSC
Resolutions to legal dependencies approved.	GAPSC
All required BLS interface capabilities must be operationally ready.	BLS
The Interface Test Tool must be operationally ready.	KPMG

2.0 Exit Criteria

Exit criteria are the requirements that must be met before the tests defined in the Test Plan can be concluded.

Global exit criteria, which apply to every individual test (except where noted otherwise), include the following:

1. **All test activities required by the test plan must be completed.**

   For each test, all fact finding and analysis activities must be completed. All results and test methodologies have been documented. Any exceptions must be resolved or re-testing completed, unless specifically exempted by the GAPSC.

2. **All change control, verification, and confirmation steps have been completed.**

   The results of test activities must be documented and reviewed for accuracy. Any results that require clarification or follow-up are confirmed.

In addition to these global exit criteria, test-specific exit criteria, where applicable, are defined within each test.

Table III-4: Exit Criteria

Criteria	Responsible Party
All required test activities must be completed	KPMG
All change control, verification, and confirmation steps have been completed	KPMG

3.0 Evaluation Techniques

Each test relies on one or more techniques to collect and record measurements and analyze the results. The five types of techniques defined for this test are described in the chart below.

Table III-5: Evaluation Techniques

Technique	Description
Transaction Generation	Transaction generation is the use of live, historical, and/or generated data which is executed through the system under review. The results of this test are evaluated for quality.
Report Review	Review and analysis of historical data, reports, metrics, and other information in order to assess the effectiveness of a particular system or business function. This includes performance measurement reports and other management reports.
Inspection	Physical review of process activities and products, including site visits, walk-throughs, read-throughs, interviews, and work center observations.
Logging	Monitoring activities and collecting information by logging process events and products as they happen. Logging can be mechanized or manual.
Document Review	Compilation and review of books, manuals, and other publications related to the process and system under study.

IV. Performance Metrics Review Test

A. Purpose

The purpose of this document is to define the specific tests to be undertaken in evaluating the systems, processes, and other operational elements associated with BLS's support for Performance Metrics (Service Quality Measurements). These tests are in addition to the initial metrics-related tests described in the *BellSouth - Georgia OSS Evaluation Master Test Plan*:

- PRE-2: Pre-Ordering Performance Results Comparison
- O&P-7: O&P Performance Results Comparison
- BLG-5: Billing Performance Results Comparison
- M&R-7: M&R Performance Results Comparison

B. Organization

The Performance Metrics Review is organized into three test target areas, which represent the key focus areas for testing in this domain. The three test target areas are:

- Standards & Definitions
- Data Processing
- Data Retention

The Performance Metrics scope section contains a series of tables that identify the specific tests to be associated with each target test area. The tables are organized based upon subject test matter.

The subsequent section, Performance Metrics Review "Test Process," provides additional information and tables that further define the testing approach, inputs, outputs, as well as entrance and exit criteria.

C. Scope

The Performance Metrics Review test family comprises three test target areas, representing important and generally distinct areas of effort undertaken by BLS. The three test target areas are:

- Standards & Definitions
- Data Processing
- Data Retention

Each target test area is further broken down into a number of increasingly discrete Process and Sub Process Areas that serve to identify the particular area of interest under test.

The Performance Metrics Review Test extends to all OSS process domains: Pre-Ordering; Ordering; Provisioning; Maintenance & Repair; Billing; Operator Services (Toll) & Directory Assistance; E911; ~~and~~ Trunk Group Performance and Collocation.

D. Test Process

Six tests have been designed to address the three test target areas. The organization of the subject test processes is as follows:

PMR1: Data Collection and Storage Verification and Validation Review

PMR2: Metrics Definition Documentation and Implementation Verification and Validation Review

PMR3: Metrics Change Management Verification and Validation Review

PMR4: Metrics Data Integrity Verification and Validation Review

PMR5: Metrics Calculation and Reporting Verification and Validation Review

PMR6: Statistical Evaluation of Transactions-Test Metrics

The three test target areas and six metrics tests will review Service Quality Measures reported by BLS, in part based on requirements of state and federal regulators.

The metrics tests will involve an examination of both live industry data and, where applicable, data from the test transactions performed by KPMG. Both CLEC (Resale and UNE) and Retail data will be included in the test.

1.0 Test PMR1: Data Collection and Storage Verification and Validation Review

1.1 Description

This test evaluates key policies and practices for collecting and storing raw and target data necessary for the creation of performance metrics. Both the procedures for data used in the calculation of the reported metrics and for data required in the calculation of retail analogs will be included. This test will rely on checklists and inspections.

1.2 Objectives

The objectives of this test are to determine the adequacy and completeness of key policies and procedures for collecting and storing performance data.

1.3 Entrance Criteria

Criteria	Responsible Party
All global entrance criteria satisfied	See Table III-3

Criteria	Responsible Party
Interview guides/questionnaire developed	KPMG
Interviewees identified and scheduled	BLS, KPMG
Detailed evaluation checklists completed	KPMG

1.4 Test Scope

Table IV-1 Test Target: Data Collection and Storage Verification and Validation Review

Process Area	Sub Process/ Attribute	Evaluation Measure	Evaluation Technique	Criteria Type
Collection of Data	Collection policies & procedures for CLEC and retail data	Adequacy and completeness of collection policies and procedures	Inspection Document review Report review	Qualitative
	Identified collection points	Applicability of and measurability from control points	Inspection	Qualitative
	Collection tools	Adequacy and scalability of data collection tools	Inspection	Qualitative
	Internal Controls	Adequacy and completeness of the internal control process	Inspection Document review Report Review	Qualitative
Storage of Data	Storage policies & procedures for CLEC and retail data	Adequacy and completeness of storage policies and procedures	Inspection Document review Report review	Qualitative
	Identified storage sites	Applicability of and measurability from control points	Inspection	Qualitative
	Storage tools	Adequacy and scalability of data storage tools	Inspection	Qualitative
	Internal Controls	Adequacy and completeness of the internal control process	Inspection Document review Report Review	Qualitative

1.5 Scenarios

This test does not rely on scenarios.

1.6 Test Approach

1.6.1 Inputs

1. BLS Metrics Policies and Processes documentation
2. PMAP documentation
3. Other procedural and technical documentation
4. Evaluation checklists

5. Interview guides

1.6.2 Activities

1. Gather information
2. Review collection and storage policies and procedures for both CLEC data and data used in calculations of retail analogs
3. Perform walkthrough of BLS facilities that are relevant to the production of performance measurements
4. Perform interviews and documentation reviews
5. Complete evaluation checklists and interview summaries
6. Develop and document findings

1.6.3 Outputs

1. Completed evaluation checklists and interview summaries
2. Summary report

1.7 Exit Criteria

Criteria	Responsible Party
Limited to Global Exit Criteria requirements	See Table III-4

2.0 Test PMR2: Metrics Definition Documentation and Implementation Verification and Validation Review

2.1 Description

This test evaluates the overall policies and practices for documenting and implementing metrics definitions. This includes policies and practices associated with both CLEC and retail measurements. This test will rely on checklists, document reviews and inspections.

2.2 Objectives

The objectives of this test are to determine the adequacy, completeness, accuracy, and logic of the performance metrics as documented. Implementation of the definitions in this test ~~is restricted to~~covers both the exclusions and business rules applied in the creation of the raw data and any exclusions and business rules that are applied in the calculation of the metrics from the raw data. This goes beyond the activities outlined in the Performance Results Comparison tests described in the Master Test Plan which seek to determine whether the metrics as produced by BLS are consistent with the documented definitions.

2.3 Entrance Criteria

Criteria	Responsible Party
All global entrance criteria satisfied	See Table III-3
Interview guides/questionnaire developed	KPMG

Criteria	Responsible Party
Interviewees identified and scheduled	BLS, KPMG
Detailed evaluation checklists completed	KPMG

2.4 Test Scope

Table IV-2 Test Target: Metrics Definition Documentation and Implementation Verification and Validation Review

Process Area	Sub Process/ Attribute	Evaluation Measure	Evaluation Technique	Criteria Type
Metrics Definition	Documentation of metrics definitions	Adequacy and completeness of Metrics Definitions	Inspection Document review Report review	Qualitative
	Documentation of calculation of metrics	Accuracy and logic of the documented calculation of metrics	Inspection Document review Report review	Qualitative
	Implementation of exclusions and business rules in creation of raw data and calculation of metrics	Consistency between documented exclusions and business rules, and exclusions and business rules used	Inspection Document review Report review	Qualitative
	~~Implementation~~ Validity ~~of other features~~ of instructions for ~~calculations in creation of raw data and~~ calculation of metrics	Consistency between documented ~~calculation~~ definitions and ~~calculation~~ documented instructions for calculation~~performed~~	Inspection Document review Report review	Qualitative

2.5 Scenarios

This test does not rely on scenarios.

2.6 Test Approach

2.6.1 Inputs

1. BLS metrics development documentation
2. PMAP documentation
3. Other procedural and technical documentation that may be appropriate
4. Evaluation checklists
5. Interview guides

2.6.2 Activities

1. Gather information
2. Perform interviews and documentation reviews
3. Complete evaluation checklists and interview summaries
4. Analyze the adequacy and appropriateness of the measures provided in BLS's SQM
5. Develop and document findings

2.6.3 Outputs

1. Completed evaluation checklists and interview summaries
2. Summary report

2.7 Exit Criteria

Criteria	Responsible Party
Limited to Global Exit Criteria requirements	See Table III-4

3.0 Test PMR3: Metrics Change Management Verification and Validation Review

3.1 Description

This test evaluates the overall policies and practices for managing changes in BLS's production and reporting of metrics. The changes of concern relate to the management and communication of: metrics definitions and standards, information systems, reports, raw data, documentation, and any related processes. The policies and practices involved relate to both CLEC measurements and, where the standards are retail analogs, retail measurements. This test will rely on checklists, document reviews and inspections.

3.2 Objectives

The objectives of this test are to determine the adequacy and completeness of key procedures for developing, conducting, monitoring, and publicizing change management of the performance metrics.

3.3 Entrance Criteria

Criteria	Responsible Party
All global entrance criteria satisfied	See Table III-3
Interview guides/questionnaire developed	KPMG
Interviewees identified and scheduled	BLS, KPMG
Detailed evaluation checklists completed	KPMG

3.4 Test Scope

Table IV-3 Test Target: Metrics Change Management Verification and Validation Review

Process Area	Sub Process/ Attribute	Evaluation Measure	Evaluation Technique	Criteria Type
Change Management	Developing change proposals	Completeness and consistency of change development process	Inspection Document review Report review	Qualitative
	Evaluating change proposals	Completeness and consistency of change evaluation process	Inspection Document review Report review	Qualitative
	Implementing change	Completeness and consistency of change implementation process	Inspection Document review Report review	Qualitative
	Intervals	Reasonableness of change interval	Inspection Document review Report review	Qualitative
	Documentation	Timeliness of documentation updates	Inspection Document review Report review	Qualitative
	Tracking change proposals	Adequacy and completeness of change management tracking process	Inspection Document review Report review	Qualitative

3.5 Scenarios

This test does not rely on scenarios.

3.6 Test Approach

3.6.1 Inputs

1. BLS metrics development documentation
2. PMAP documentation
3. Other procedural and technical documentation that may be appropriate
4. Evaluation checklists
5. Interview guides

3.6.2 Activities

1. Gather information
2. Perform interviews and documentation reviews
3. Complete evaluation checklists and interview summaries

4. Develop and document findings

3.6.3 Outputs

1. Completed evaluation checklists and interview summaries
2. Summary report

3.7 Exit Criteria

Criteria	Responsible Party
Limited to Global Exit Criteria requirements	See Table III-4

4.0 Test PMR4: Metrics Data Integrity Verification and Validation Review

4.1 Description

This test evaluates the overall policies and practices for processing the data used by BLS in the production of the reported performance metrics and standards. This test will rely on document reviews, inspections, and comparison of samples of data from different stages of processing. Historical CLEC-aggregate and retail data will be the subjects of the test.

4.2 Objectives

The objective of this test is to determine the integrity of key procedures for processing the data necessary to produce performance metrics.

4.3 Entrance Criteria

Criteria	Responsible Party
All global entrance criteria satisfied	See Table III-3
Interview guides/questionnaire developed	KPMG
Interviewees identified and scheduled	BLS, KPMG
Detailed evaluation checklists completed	KPMG

4.4 Test Scope

Table IV-4 Test Target: Metrics Data Integrity Verification and Validation Review

Process Area	Sub Process/ Attribute	Evaluation Measure	Evaluation Technique	Criteria Type
Data Integrity	Transfer of data from point(s) of collection, with emphasis on inappropriate deletions	Adequacy and completeness of the data transfer process	Inspection Document review Report review	Qualitative, Quantitative
	Conversion of data from unprocessed to processed form with emphasis on distortions	Adequacy and completeness of the conversion policies and procedures	Inspection Document review Report review	Qualitative, Quantitative

Process Area	Sub Process/ Attribute	Evaluation Measure	Evaluation Technique	Criteria Type
Data Transfer	Data transfer policies and procedures for CLEC and retail data	Adequacy and completeness of data transfer policies and procedures	Inspection Document review Report review	Qualitative
	Internal controls	Adequacy and completeness of the internal control process	Inspection Document review Report review	Qualitative

4.5 Scenarios

This test does not rely on scenarios.

4.6 Test Approach

4.6.1 Inputs

1. BLS Metrics Change Management Policies and Procedures documentation
2. PMAP documentation
3. Other appropriate procedural and technical documentation
4. Evaluation checklists
5. Interview guides

4.6.2 Activities

1. Gather documentation
2. Perform interviews and documentation reviews
3. Complete evaluation checklists and interview summaries
4. Gather sample of data
5. Analyze data
6. Develop and document findings

4.6.3 Outputs

1. Completed evaluation checklists and interview summaries
2. Summary report

4.7 Exit Criteria

Criteria	Responsible Party
Limited to Global Exit Criteria requirements	See Table III-4