

## **A. Test Results: Data Collection and Storage Verification and Validation Review (PMR1)**

### **1.0 Description**

The objective of the Data Collection and Storage Verification and Validation Review (PMR1) was to evaluate the key policies and procedures for collecting and storing both the raw data that BellSouth uses to create Service Quality Measurement (SQM) reports, and the preliminary data that BellSouth uses to produce the raw data.

### **2.0 Methodology**

This section summarizes the test methodology.

#### *2.1 Business Process Description*

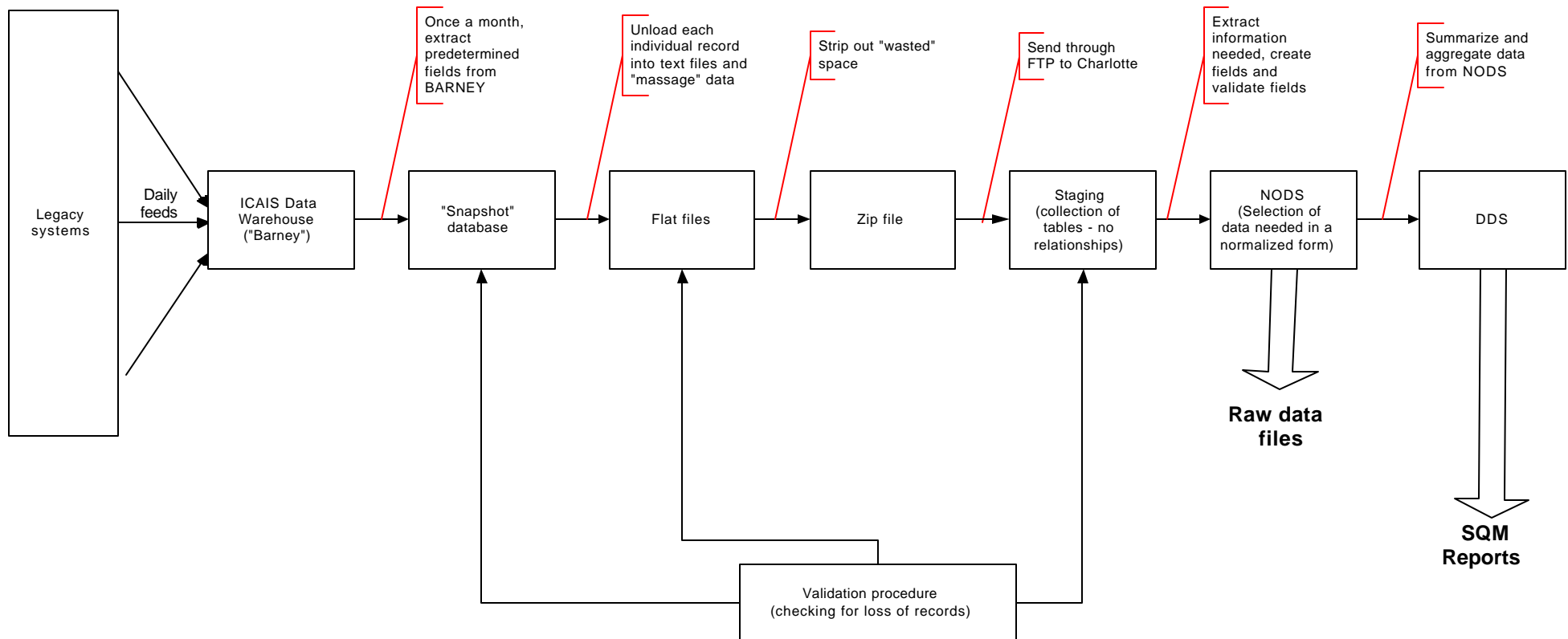
Figure VIII-1.1 shows the primary data collection process used by BellSouth to generate SQM reports. SQM reports are based on raw data created from data captured in BellSouth's legacy/source systems during the course of BellSouth business operations. Data accumulated in these systems are transferred on a daily basis to the Interexchange Carrier Analysis and Information System (ICAIS) data warehouse, which BellSouth calls Barney. These daily transfers are initiated and executed by automated scripts. Each month, a "snapshot" database is extracted from Barney and sent to Staging, a database used to store the data that will be analyzed. The snapshot database contains the records and data fields needed to calculate the SQMs. The transfer to Staging happens in three steps, as shown in the figure below. Validation checks are conducted during the process to verify counts of records and to protect against data loss. From staging, the data tables are transferred to the Normalized Operational Data Store (NODS), which puts the data into normalized form. NODS then passes the data to Dimensional Data Store (DDS), which summarizes and aggregates the data. SQM reports are generated by queries run against the DDS data. Data from NODS are also used to generate the raw data files, which are made available to CLECs and are used by BellSouth for validation purposes.

The Staging, NODS, and DDS systems are collectively known as the Performance Measurement and Analysis Platform (PMAP). Certain SQMs are calculated using PMAP exclusively, while others, referred to as "manual" SQMs, are calculated using data collected and stored by other systems. As shown in the figure, data tables for these SQMs are in some cases loaded into Staging or NODS. From these points, the data are handled in the same way as other SQM data. Some SQMs do not flow through the PMAP system at all. For such SQMs,

BellSouth personnel coordinate the collection of the necessary data, produce reports, and post the results on the PMAP Web site.

Eventually, BellSouth intends to produce all SQMs using PMAP with data collected by Staging.

Data storage and backup occurs at several points in the SQM data collection process. Individual backup schedules are maintained for the various legacy/source systems. The Barney data warehouse is the primary data storage location for data used to generate non-manual SQMs. Data storage for manual SQMs varies according to the specific data collection process used.

**Figure VIII-1.1: BellSouth PMAP Data Collection**

## 2.2 Scenarios

Scenarios were not applicable to this test.

## 2.3 Test Targets & Measures

The test target was the collection and storage of data for the production of SQMs. Processes, sub-processes, and evaluation measures are summarized in the following table. The last column “Test Cross-Reference” indicates where the particular measures are addressed in Section 3.1 “Results & Analysis.”

**Table VIII-1.1: Test Target Cross-Reference**

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Collection of Data	Data collection policies & procedures for CLEC and retail data	Adequacy and completeness of data collection policies and procedures	PMR-1-1-1
	Identified data collection control points	Applicability of and measurability from control points	PMR-1-1-2
	Data collection tools	Adequacy and scalability of data collection tools	PMR-1-1-3
	Internal controls	Adequacy and completeness of the internal control process	PMR-1-1-4
Storage of Data	Data storage policies & procedures for CLEC and retail data	Adequacy and completeness of data storage policies and procedures	PMR-1-2-1
	Identified storage sites	Applicability of and measurability from control points	PMR-1-2-2
	Data storage tools	Adequacy and scalability of data storage tools	PMR-1-2-3
	Internal controls	Adequacy and completeness of the internal control process	PMR-1-2-4

## 2.4 Data Sources

The data collected for the test are summarized in the table below.

**Table VIII-1.2: Data Sources for Data Collection and Storage  
Verification and Validation Review**

Document	File Name	Location in Work Papers	Source
KCI Request for Documents 121799	Request for Documents 121799.doc	PMR-1-A-1	KCI
BLS Raw Data Validation Procedures	RWDATVAL.doc	PMR-1-A-1	BLS Interconnection Operations – CLEC Performance Measurements
BLS Response to Question 1B of KCI Memo	QUES1B.doc	PMR-1-A-1	BLS Interconnection Operations – CLEC Performance Measurements
BLS Response to Question 1D of KCI Memo	QUES1D.doc	PMR-1-A-1	BLS Interconnection Operations – CLEC Performance Measurements
KCI Request for Documents 010700	Request for Documents 0107.doc	PMR-1-A-2	KCI
BLS Response to January 7, 2000 Request for Documentation memo	PROCES~1.doc	PMR-1-A-2	BLS Interconnection Operations – CLEC Performance Measurements
Georgia Public Service Commission Docket No. 7892-U	7892_ORDER.TIF	PMR-1-A-2	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
KCI Request for Completed Run Books	PMR1012500DocRqstAlford.doc	PMR-1-A-3	KCI
KCI Request concerning Data Retention	PMR_000222DataReqAlford.doc	PMR-1-A-4	KCI
BLS Response to KCI request concerning Data Retention	FW	PMR-1-A-4	BLS Interconnection Operations – CLEC Performance Measurements
KCI Request for Updated Issue Tracker	PMR3030300DocRqstAlford.doc	PMR-1-A-5	KCI
KCI Request for Documents on Preparation of Service Order Accuracy	PMR124030300DocRqstAlford	PMR-1-A-6	KCI
BLS Sample Run Documentation – Service Order Accuracy	SAMPLE~1.DOC	PMR-1-A-6	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the January 13, 2000 interview with Bill Sellers	PMR1_000113_IntReportAlford.doc	PMR-1-A-7	BLS Interconnection Operations – CLEC Performance Measurements
BLS Response to request for documentation resulting from interview with Bill Sellers	WES0006.DOC	PMR-1-A-7	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of February 2, 2000 interview with Stephanie Ford and Richard Bray	PMR2_000202_IntReportMoulin.doc	PMR-1-A-8	KCI

Document	File Name	Location in Work Papers	Source
BLS Spreadsheet comparing number of records in various filed	No Electronic Copy	PMR-1-A-8	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the February 8, 2000 interview regarding Legacy Source systems	PMR1_000208_IntReport Alford.doc	PMR-1-A-9	KCI
BLS Response to 2/8 Meeting Action Items	KPMG 02152000 Audit Response.doc	PMR-1-A-9	BLS Interconnection Operations – CLEC Performance Measurements
BLS Storage Manager Overview	KPMG Audit Attach #3.XLS	PMR-1-A-9	BLS Interconnection Operations – CLEC Performance Measurements
BLS LCSC Order Tracker Release Management Process	KPMG Audit Attach #5.vsd	PMR-1-A-9	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the February 11, 2000 interview regarding EDS' backup procedures and policies	PMR1_000211_IntReport Alford.doc	PMR-1-A-10	BLS Interconnection Operations – CLEC Performance Measurements
BLS E-mail from Bill Sellers about interview regarding EDS' backup procedures and policies	No Electronic Copy	PMR-1-A-10	BLS Interconnection Operations – CLEC Performance Measurements
KCI E-mail to Bill Sellers about interview regarding EDS' backup procedures and policies	No Electronic Copy	PMR-1-A-10	KCI

Document	File Name	Location in Work Papers	Source
BLS History file for PMAP Test	History.txt	PMR-1-A-10	BLS Interconnection Operations – CLEC Performance Measurements
BLS PMAP Regions	Regions.txt	PMR-1-A-10	BLS Interconnection Operations – CLEC Performance Measurements
BLS Sample Backup Reports	Example Backup Reports.doc	PMR-1-A-10	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the February 21, 2000 interview with Ray Lee	PMR1_000221_IntReport Alford.doc	PMR-1-A-11	KCI
BLS Completed Interview Guide from Ray Lee	IGLEE2.DOC	PMR-1-A-11	BLS Interconnection Operations – CLEC Performance Measurements
BLS Responses on Interview Summary from February 21, 2000 interview with Ray Lee	RAYSUM.DOC	PMR-1-A-11	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the February 28, 2000 interview regarding backup policies for Legacy Source systems	PMR1022800IntReportAlfordEDS.doc	PMR-1-B-12	KCI
BLS Responses on Interview Summary from February 28, 2000 interview, as an E-mail from Dan Baxter	No Electronic Copy	PMR-1-B-12	BLS Interconnection Operations – CLEC Performance Measurements



Document	File Name	Location in Work Papers	Source
BLS Responses on Interview Summary from February 28, 2000 interview	PMR1022800IntSumAlford EDS Feedback.doc	PMR-1-B-12	BLS Interconnection Operations – CLEC Performance Measurements
BLS List of participants in February 28, 2000 interview and walkthrough	02282000 Interview_Walkthrough Participants - Backup Process.doc	PMR-1-B-12	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report for the February 28, 2000 walkthrough of the Regional Data Center	PMR1_022800_WalkThroughRptAlford.doc	PMR-1-B-13	KCI
BLS Response on Interview Summary from February 28, 2000 walkthrough	KPMG walkthrough feedback.doc	PMR-1-B-13	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the February 29, 2000 and March 1, 2000 meetings with various SMEs	PMR1_000229_IntReport AlfordSMEs.doc	PMR-1-B-14	KCI
BLS Response on Interview Summary from the February 29, 2000 interview with Terri Ferrara	KPMG-I~1.DOC	PMR-1-B-14	BLS Interconnection Operations – CLEC Performance Measurements
BLS Response on Interview Summary from the March 1, 2000 interview with Treva Garner	TGSMEI~1.DOC	PMR-1-B-14	BLS Interconnection Operations – CLEC Performance Measurements
BLS Response on Interview Summary from the February 29, 2000 interview with Linda Gilley	GILLEY.DOC	PMR-1-B-14	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS Response on Interview Summary from the March 1, 2000 interview with Steve Elliott	KPMGNTV1.DOC	PMR-1-B-14	BLS Interconnection Operations – CLEC Performance Measurements
BLS Response on Interview Summary from the March 1, 2000 interview with Ted McDonald	No Electronic Copy	PMR-1-B-14	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the March 6, 2000 interview regarding backup policies for BONIS	PMR1_000306_IntRptAlfordEDS.doc	PMR-1-B-15	KCI
BLS Response on the Interview Summary from the March 6, 2000 interview regarding BONIS backup policies	PMR1030600IntSumEDS Alford FEEDBACK.doc	PMR-1-B-15	BLS Interconnection Operations – CLEC Performance Measurements
BLS List of participants in the March 6, 2000 interview regarding BONIS backup policies	0306000 Interview Participants - BONIS backup.doc	PMR-1-B-15	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report for the March 6, 2000 walkthrough of the PMAP Production Facilities	PMR1_030600_WalkthroughRptAlford.doc	PMR-1-B-16	KCI
BLS PMAP 2.0 March Production Runs	No Electronic Copy	PMR-1-B-16	BLS Interconnection Operations – CLEC Performance Measurements
BLS E-mail provided to SMEs of Run Jobs	No Electronic Copy	PMR-1-B-16	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
KCI Interview Report of the March 7, 2000 interview regarding the OS/DA metric and data collection by QMIS	PMR1_000307_IntReportAlfordQMIS.doc	PMR-1-B-17	KCI
BLS Georgia DA Data Input	No Electronic Copy	PMR-1-B-17	BLS Interconnection Operations – CLEC Performance Measurements
BLS Carolina/Georgia Toll Data Input	No Electronic Copy	PMR-1-B-17	BLS Interconnection Operations – CLEC Performance Measurements
BLS Corrections to OS/DA Diagram from Interview Summary	No Electronic Copy	PMR-1-B-17	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the March 7, 2000 interview with Phil Porter	PMR1_000307_IntRptAlfordPorter.doc	PMR-1-B-18	KCI
BLS Confirmation of the Interview Summary sent by KCI regarding the March 7, 2000 interview with Phil Porter	No Electronic Copy	PMR-1-B-18	BLS Interconnection Operations – CLEC Performance Measurements
BLS Service Quality Measurements Functional Organization	MOOREORG.PPT	PMR-1-B-19	BLS Interconnection Operations – CLEC Performance Measurements
BLS OSS Interface Availability Schedule Web site	No Electronic Copy	PMR-1-B-20	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS flow chart of the flow of information from Source Systems, through Staging, NODS, and DDS	PAGE4.DOC	PMR-1-B-21	BLS Interconnection Operations – CLEC Performance Measurements
BLS procedures used to calculate Coordinated Customer Conversions	CCCRep~1.DOC	PMR-1-B-22	BLS Interconnection Operations – CLEC Performance Measurements
BLS procedures used to gather data for OSS Response Interval	No Electronic Copy	PMR-1-B-23	BLS Interconnection Operations – CLEC Performance Measurements
BLS sample e-mail notifying the SMEs of validation results	No Electronic Copy	PMR-1-B-24	BLS Interconnection Operations – CLEC Performance Measurements
BLS flow charts describing how E911 data is used in/by different systems	No Electronic Copy	PMR-1-B-25	BLS Interconnection Operations – CLEC Performance Measurements
BLS information regarding Average Answer Time in Repair Centers (Business)	No Electronic Copy	PMR-1-B-26	BLS Interconnection Operations – CLEC Performance Measurements
BLS response from Dan Baxter regarding for February 28, 2000 interview regarding OSS Interface Availability and REM	FW	PMR-1-B-27	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
KCI Interview Report for the February 22, 2000 interview regarding Service Order Accuracy	PMR50222000IntRptFreundlich.doc	PMR-1-B-28	KCI
KCI Interview Report for the February 2, 2000 interview regarding Average Speed of Answer	PMR4_000202IntReportASALCSCWong.doc	PMR-1-C-29	KCI
KCI Interview Report for the February 3, 2000 interview regarding Average Speed of Answer	PMR4_000203IntReportASABusinessWong.doc	PMR-1-C-30	KCI
KCI Interview Report for the February 18, 2000 interview regarding OSS Interface Availability	PMR4_000218IntReportAvailabilityWong.doc	PMR-1-C-31	KCI
KCI Interview Report for the February 17, 2000 interview regarding Billing metrics	PMR4_000217IntReportBillingMoulinWong.doc	PMR-1-C-32	KCI
KCI Interview Report for the February 17, 2000 interview regarding E911 metrics	PMR4_000217IntReportE911Wong.doc	PMR-1-C-33	KCI
KCI Interview Report for the February 15, 2000 interview regarding Average Speed to Answer	PMR4_000215IntReportASAResidenceWong.doc	PMR-1-D-34	KCI
KCI Interview Report for the February 14, 2000 interview regarding Average Answer Delay	PMR4_000214IntReportAvgDelayBusinessWong.doc	PMR-1-D-35	KCI
KCI Interview Report for the February 15, 2000 interview regarding Average Answer Delay	PMR4_000215IntReportAvgDelayResidenceWong.doc	PMR-1-D-36	KCI
KCI Interview Report for the February 1, 2000 interview	PMR41and5_000201IntRptWong.doc	PMR-1-D-37	KCI
KCI Interview Report for the February 23, 2000 interview regarding OSS Response Interval	PMR4_000223IntReportM&ROSSResponseIntervalWong.doc	PMR-1-D-38	KCI

Document	File Name	Location in Work Papers	Source
BLS PMAP Run Book, Draft 11/02/99—BLS Proprietary	RUNBOO~1.DOC	CD: PMR1-CD1	BLS Interconnection Operations – CLEC Performance Measurements
BLS Performance Measurement and Analysis Platform (PMAP) Backup & Disaster Recovery Overview—BLS Proprietary	Backrec.doc	PMR-1-P-41	BLS Interconnection Operations – CLEC Performance Measurements
BLS Periodic Activities of an Oracle DBA—BLS Proprietary	DBAHBV3.doc	PMR-1-P-41	BLS Interconnection Operations – CLEC Performance Measurements
BLS Audit and Control Doc. for KCI —BLS Proprietary	Audit and Control Points2.doc	CD: PMR1-CD1	BLS Interconnection Operations – CLEC Performance Measurements
BLS <i>Issue Tracker</i> , issues #5000 - #5543—BLS Proprietary	No Electronic Copy	PMR-1-P-44	BLS Interconnection Operations – CLEC Performance Measurements
BLS <i>Issue Tracker</i> , issues #5536 - #5686—BLS Proprietary	No Electronic Copy	PMR-1-P-44	BLS Interconnection Operations – CLEC Performance Measurements
BLS “Binder4.zip / Binder5.zip” Zip Disk—BLS Proprietary	Zip Disk	PMR-1-P-45	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS PMAP Run Book “December Run” —BLS Proprietary	No Electronic Copy	PMR-1-P-46	BLS Interconnection Operations – CLEC Performance Measurements
BLS PMAP Run Book “Jan 2000 Run Book” —BLS Proprietary	No Electronic Copy	PMR-1-P-46	BLS Interconnection Operations – CLEC Performance Measurements
BLS Implementation Manual— BLS Proprietary	No Electronic Copy	PMR-1-P-47	BLS Interconnection Operations – CLEC Performance Measurements
BLS Audit Attachment #1—BLS Proprietary	KPMG Audit Attach #1.doc	PMR-1-P-48	BLS Interconnection Operations – CLEC Performance Measurements
BLS DCIB Backup SAM Manual—BLS Proprietary	DCI Backup SAM.doc	PMR-1-P-49	BLS Interconnection Operations – CLEC Performance Measurements
BLS Disaster Recovery Plan for CRIS—BLS Proprietary	DISPEDEN.DOC	PMR-1-P-50	BLS Interconnection Operations – CLEC Performance Measurements
BLS Disaster Recovery Plan for ARIS/EXACT—BLS Proprietary	DRARIS.DOC	PMR-1-P-51	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS List of Participants in the February 28, 2000 interview and Walkthrough—BLS Proprietary	02282000 Interview_Walkthrough Participants – Backup Process.doc	PMR-1-P-52	BLS Interconnection Operations – CLEC Performance Measurements
BLS backup schedule for SOCS—BLS Proprietary	SOCS Backup Schedule.doc	PMR-1-P-52	BLS Interconnection Operations – CLEC Performance Measurements
BLS backup schedule for LMOS—BLS Proprietary	LMOS Backup Schedule.doc	PMR-1-P-52	BLS Interconnection Operations – CLEC Performance Measurements
BLS backup schedule for TIRKS—BLS Proprietary	TIRKS Backup Schedule.doc	PMR-1-P-52	BLS Interconnection Operations – CLEC Performance Measurements
BLS backup documentation for CRIS—BLS Proprietary	No Electronic Copy	PMR-1-P-53	BLS Interconnection Operations – CLEC Performance Measurements
BLS February 2000 Run Book—BLS Proprietary	No Electronic Copy	PMR-1-P-54	BLS Interconnection Operations – CLEC Performance Measurements



Document	File Name	Location in Work Papers	Source
BLS January 2000 data from CRIS—BLS Proprietary	No Electronic Copy	PMR-1-P-55	BLS Interconnection Operations – CLEC Performance Measurements
User requirements document – Usage measured—BLS Proprietary	REQUIR~1.DOC	PMR-1-P-56	BLS Interconnection Operations – CLEC Performance Measurements
BLS audit documentation request for ICAIS Parity Reporting System—BLS Proprietary	Smith – Audit113099.doc	CD: PMR1-CD1	BLS Interconnection Operations – CLEC Performance Measurements
BLS data dictionary, part 1—BLS Proprietary	DATADIC1.XLS	PMR-1-P-58	BLS Interconnection Operations – CLEC Performance Measurements
BLS data dictionary, part 2—BLS Proprietary	DATADIC2.XLS	PMR-1-P-58	BLS Interconnection Operations – CLEC Performance Measurements
BLS data dictionary, part 3—BLS Proprietary	DATADIC3.XLS	PMR-1-P-58	BLS Interconnection Operations – CLEC Performance Measurements

#### 2.4.1 Data Generation/Volumes

This test did not rely on data generation or volume testing.

## 2.5 Evaluation Methods

KCI evaluated the data collection and storage policies and procedures in three steps. First, KCI examined the documentation provided to CLECs regarding the production of performance measures. Next, KCI interviewed BellSouth personnel using the interview guides that KCI developed based on the initial documentation reviews. From the information obtained in these meetings, KCI identified other key personnel to interview and other documents to examine. Third, KCI conducted a walkthrough of the BellSouth facilities where performance measures are produced, backup services are provided, and performance measurement data are stored.

## 2.6 Analysis Methods

The Data Collection and Storage Verification and Validation Review included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth-Georgia OSS Evaluation. These evaluation criteria, provided the framework of norms, standards and guidelines for the Data Collection and Storage Verification and Validation Review.

KCI analyzed the data collected for this review according to the evaluation criteria referenced above.

## 3.0 Results Summary

This section identifies the discrete evaluation criteria and test results.

### 3.1 Results & Analysis

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

**Table VIII-1.3: Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-1-1	BLS has adequate and complete data collection policies and procedures.	Satisfied	<p>BLS has established and documented procedures to collect data mechanically for its PMAP SQMs at pre-determined times. These include checks to verify the data and determine whether the collected data are updates of previously collected data. These procedures are documented in the following: Audit and Control Points<sup>2</sup> and the PMAP Run Books.</p> <p>BLS has established procedures to collect data manually on a regular schedule for its</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
			<p>manual SQMs.</p> <p>KCI observed no distinctions in the way BLS collects Retail data and CLEC data.</p>
PMR-1-1-2	BLS has well-identified points of data collection.	Satisfied	<p>BLS has defined the extraction tables for its PMAP SQMs and has identified the sources for all manual SQMs. BLS follows established procedures to collect these data. These procedures are documented in PMR1_000208_IntReportAlford.doc, KPMG 02152000 Audit Response.doc, PMR1_000229_IntReportAlfordSMEs.doc, PMR1_000307_IntReportAlfordQMIS.doc, CCCREP~1.DOC, PMR50222000IntRptFreundlich.doc, PMR4_000217IntReportBillingMoulinWong.doc, PMR4_000217IntReportE911Wong.doc, and Smith-Audit113099.doc.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-1-3	BLS has tools in place that enable it to collect data in an adequate and scalable manner.	Satisfied	<p>BLS populates the tables in Staging with snapshots of Barney data. These snapshots contain more data than is required for production of the current SQMs. The PMAP production team has been experiencing difficulty in creating these snapshots due to space limitations in Barney and is working on loading data directly into Staging without using Barney.</p> <p>In some areas, manual data collection has become onerous. The growth of collocation, for example, has increased the amount of data that must be manually collected to compute the related SQMs.<sup>1</sup></p> <p>The Service Order Accuracy SQM is still produced through a labor-intensive manual process though it is based on random samples instead of the entire service order population.</p> <p>BLS indicated during several interviews that work is underway to mechanize these processes as part of PMAP 3.0.</p>
PMR-1-1-4	BLS has adequate and complete internal controls for its data collection processes.	Satisfied	<p>BLS has tested the queries used by Barney to verify that the data are collected and transferred accurately. KCI reviewed the audit report<sup>2</sup> detailing these queries, and also conducted tests independently as part of its review of data integrity (PMR-4). Data are then transferred into PMAP using File Transfer Protocol (FTP), which has built-in verification checks. There are also record counts, FTP process verification checks, and internal tracking of errors to ensure data have been correctly transferred.</p> <p>Manual data collection includes checklists and other controls to ensure that the data collected are accurate.</p> <p>KCI based its satisfactory result for this</p>

<sup>1</sup> BellSouth is testing a mechanical procedure to process these measures through PMAP, and is encouraging the mechanization of data collection from all legacy/source systems.

<sup>2</sup> Referenced as “Smith – Audit113099.doc” in “Data Sources” section of this report.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			criterion on BLS's representation that it is mechanizing these manual processes as part of PMAP 3.0.
PMR-1-2-1	BLS has adequate and complete data collection policies and procedures.	Not Complete	<p>Barney retains raw, unprocessed data dating back to 1997. Within PMAP, BLS retains 36 months of DDS level data and 13 months of NODS level data.</p> <p>BLS backs up data in the legacy/source systems that provide data for both PMAP and manual SQMs. BLS has documented backup schedules and processes for determining which data to back up. Many of the legacy/source systems for manual SQM data do not retain sufficient source data to re-create prior month's reports. Most of these systems do not retain data for more than 45 to 60 days and several systems retain data for only a few days.</p> <p>One system could not provide sufficient data for re-creating any prior month's historical SQM report. KCI suggested that the raw data, the early-stage data, and the SQM reports be retained for a sufficient length of time to support any audits that might be required by the GPSC. See Exception 79 for additional information.</p>
PMR-1-2-2	BLS is able to identify the storage sites for the data used in metrics calculations.	Satisfied	<p>BLS has centralized its data centers in Charlotte, NC and in Birmingham, AL. PMAP production systems are located in Charlotte, but the developers are located in Birmingham. All legacy/source systems have been centralized in these locations.</p> <p>During a walkthrough of the facilities, KCI determined that BLS has a system in place to locate backups for all data, whether used in PMAP or manual SQMs. It tracks its tapes within the silos and ejects them when they have not been recently accessed. When these tapes are ejected, they are automatically assigned a storage location. BLS also has controls to determine whether these tapes are available for reuse.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-2-3	BLS has tools in place that enable it to store data in an adequate fashion and scale.	Satisfied	BLS has established procedures for monitoring its available storage capacity for online systems, including the legacy/source systems and the PMAP Systems as well as procedures for monitoring backup capacity for all systems. BLS has also established policies and procedures for acquiring additional capacity. BLS monitors available space on PMAP and can add additional within four weeks.
PMR-1-2-4	BLS has internal controls in place that assure that data stored accurately reflect data that was collected.	Satisfied	Backups have validation checks for operators. Logs also indicate when backups have failed. This is documented in PMR1022800IntReportAlfordEDS.doc, PMR1_022800_WalkThroughRptAlford.doc, PMR1_000306IntRptAlfordEDS.doc, and PMR41and5_000201IntRptWong.doc.