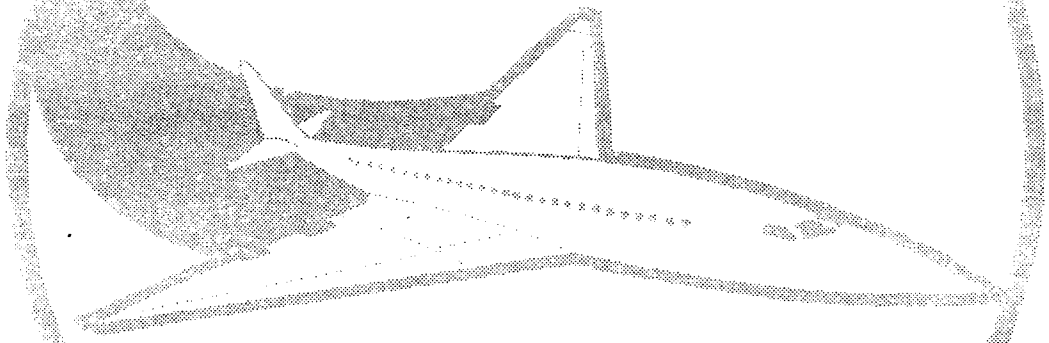
(2)

GNAS Maintenance Control Center (GMCC) Design Qualification Test and Evaluation (DQT&E) Test Procedures

Richard Van Suetendael



June 1992

DOT/FAA/CT-TN91/40

U.S. Department of Transportation
Federal Aviation Administration

Technical Center
Atlantic City International Airport, N.J. 08405

NOTICE

This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The United States Government assumes no liability for the contents or use thereof.

The United States Government does not endorse products or manufacturers. Trade or manufacturers' names appear herein solely because they are considered essential to the objective of this report.

Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
DOT/FAA/CT-TN91/40		

4. Title and Subtitle
GNAS MAINTENANCE CONTROL CENTER (GMCC)
DESIGN QUALIFICATION TEST & EVALUATION (DQTE)
TEST PROCEDURES

5. Report Date
June 1992

6. Performing Organization Code

8. Performing Organization Report No.
DOT/FAA/CT-TN91/40

7. Author(s)
Richard Van Suetendael

9. Performing Organization Name and Address
U.S. Department of Transportation
Federal Aviation Administration
Technical Center
Atlantic City International Airport, New Jersey 08405

10. Work Unit No. (TRAIS)

11. Contract or Grant No.

13. Type of Report and Period Covered
Technical Note

12. Sponsoring Agency Name and Address
U.S. Department of Transportation
Federal Aviation Administration
Maintenance Automation Program
Washington, D.C. 20591

14. Sponsoring Agency Code

15. Supplementary Notes

16. Abstract

This document presents the procedures used for Design Qualification Test and Evaluation (DQT&E) testing of the General National Airspace System (GNAS) Maintenance Control Center (GMCC). As Test Director, ACN-250 conducted DQT&E testing at the Federal Aviation Administration (FAA) Technical Center, Atlantic City International Airport, N.J.

The purpose of the test is to verify that the phase I and phase II GMCC design requirements are met.

17. Key Words	18. Distribution Statement
General National Airspace System (GNAS) Maintenance Control Center (GMCC) Remote Maintenance Monitoring System (RMMS) Maintenance Management System (MMS)	Document is on file at the Technical Center Library, Atlantic City International Airport, New Jersey 08405

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	360	

Form DOT F 1700.7 (8-72) Reproduction of completed page authorized

TABLE OF CONTENTS

	Page
EXECUTIVE SUMMARY	v
1. PURPOSE	1
2. LOCATION AND SCHEDULE	1
2.1 Test Location	1
2.2 Test Schedule	1
3. REFERENCE DOCUMENTS	2
3.1 GMCC Program Documentation	2
3.2 RMMS Program Documentation	2
3.3 Other Documentation	2
4. GMCC DQT&E PROCEDURES	2
4.1 DQT1 - Component Inspection, Initialization, Integration, and Checkout Test	3
4.2 DQT2 - Local Area Network/Software Checkout Test	4
4.3 DQT3 - Full Service System State Verification	7
4.4 DQT4 - Reduced Service System State Verification	9
4.5 DQT5 - Reconfigured System State Verification Test	11
APPENDICES	
A - Test Verification Requirements Traceability Matrix (TVRTM)	
B - NAS Specification Test Verification Requirements Traceability Matrix (TVRTM)	
C - Test Conduct Forms	

EXECUTIVE SUMMARY

This document presents the procedures used for Design Qualification Test and Evaluation (DQT&E) testing of the General National Airspace System (GNAS) Maintenance Control Center (GMCC). As Test Director, ACN-250 conducted DQT&E testing at the Federal Aviation Administration (FAA) Technical Center, Atlantic City International Airport, NJ.

The purpose of DQT&E testing is to verify that the phase I and phase II GMCC design requirements are met. The phase I configuration consists of Commercial-Off-The-Shelf (COTS) hardware and software procured from the Office Automation Technology and Services (OATS) contract. The phase II configuration included a Local Area Network (LAN) interfaced to the Maintenance Processor Subsystem (MPS), status board monitor, and weather display.

Successful completion of DQT&E establishes the GMCC design baseline configuration. Any hardware changes to the configuration will require repeating DQT&E testing. Software changes may require retesting, depending on the extent or nature of the changes.

A DQT&E Test Report will be prepared upon completion of testing.

1. PURPOSE.

The General National Airspace System (GNAS) Maintenance Control Center (GMCC) provides continuous real-time automation support to Federal Aviation Administration (FAA) maintenance personnel for the monitoring, control, and maintenance of FAA facilities, systems, and equipment. The GMCC will centralize the management and control of maintenance operations for all National Airspace System (NAS) facilities under GMCC jurisdiction. In addition, the GMCC will automate maintenance operations, including remote monitoring of facilities and equipment, alarm processing, restoration, certification, and preventive maintenance (PM).

The Design Qualification Test and Evaluation (DQT&E) will be performed in three phases. Each phase is described below:

a. Phase I: Since the phase I GMCC was previously tested during the Maintenance Data Terminal (MDT) evaluation, DQT&E testing will only consist of the standard Office Automation and Technology Services (OATS) contractual demonstration.

b. Phase II: All phase II interfaces and functions will be tested, including the network to the Maintenance Processor Subsystem (MPS), MPS functions, the Local Area Network (LAN), workstation software, and external services.

c. Phase III: Testing will include all GMCC graphics and enhancements.

This document describes step-by-step procedures of phase I and phase II testing, for the purpose of verifying that the functionality of the GMCC system is satisfied by the software and hardware elements procured under the FAA's Office of OATS' contract and that these elements meet the design requirements as previously established during the prototype development and design selection efforts. It provides the test location, test schedules, test assumptions, and test operation instructions.

2. LOCATION AND SCHEDULE.

2.1 TEST LOCATION.

The DQT&E testing will take place at the FAA Technical Center site.

2.2 TEST SCHEDULE.

Ten working days have been allocated for DQT&E testing. Test results will be documented in a Letter of Findings and a Test Report. The Letter of Findings will be delivered 10 working days after completion of the testing. The draft GMCC DQT&E Test Report will be delivered 45 working days after completion of the testing. This Test Report will include a matrix listing the functions tested and will identify a pass/fail result for each function. It will also identify whether the system as a whole passes or fails.

3. REFERENCE DOCUMENTS.

3.1 GMCC PROGRAM DOCUMENTATION.

a. GMCC Type A System Specification, FAA-E-2875, December 5, 1990, DOT/FAA.

b. GMCC Type B1 Prime Item Specification, FAA-EE-005D, June 22, 1990, DOT/FAA.

3.2 RMMS PROGRAM DOCUMENTATION.

a. NAS System Specification, Functional and Performance Requirements for the National Airspace System General, NAS-SS-1000, Volume I, December 1986, DOT/FAA.

b. NAS System Specification, Functional and Performance Requirements for the National Airspace System Maintenance and Operations Support Element, NAS-SS-1000, Volume V, December 1986, DOT/FAA.

c. Remote Maintenance Monitoring System Interface Control Document MPS to RMS and RMSC, NAS-MD-790, June 10, 1986, DOT/FAA.

d. Functions and Operational Requirements of the NAS Maintenance Control Center, NAS-MD-794, March 15, 1986, DOT/FAA.

3.3 OTHER DOCUMENTATION.

a. Draft Design Qualification Test Plan for the GNAS MCC, June 18, 1990.

b. NAS Operational Test and Evaluation (OT&E)/Integration of the Interim Monitor and Control Software (IMCS) Test Procedures, DOT/FAA/CT-TN90/43, June 1991.

4. GMCC DQT&E PROCEDURES.

The GMCC DQT&E test approach is based on the requirements defined in the GMCC Type A System Specification, FAA-E-2875, and GMCC Type B1 Prime Item Specification, FAA-EE-005D (reference documents 3.1.a and 3.1.b). Each requirement or specification will be verified through implementation of one or more test sequences. Each test sequence may verify more than one requirement or specification. In order to provide traceability between the Test Procedures and the FAA-E-2875 requirements, a Test Verification Requirements Traceability Matrix (TVRTM) is provided in appendix A. Tests have been defined to address each grouping of requirements.

Appendix B contains the TVRTM which specifies NAS requirements to be verified during this phase of testing. Because phase I was previously tested via the MDT/OATS evaluation, and phase III is not available, DQT&E focuses on phase II requirements.

4.1 DQT1 - COMPONENT INSPECTION, INITIALIZATION, INTEGRATION, AND CHECKOUT TEST.

4.1.1 Test Objectives/Expectations.

The objective of this test is to verify that each GMCC component is undamaged and operational. Each component will be examined for outward physical damage prior to power up or connection to any other component. This test will be performed by American Telephone and Telegraph Company (AT&T) as part of phase I testing.

4.1.2 Test Assumptions and Interdependencies.

For DQT1, it is assumed that the GMCC workstation and accompanying documentation is available at the test site. Component failure will not prevent advancing to the next test series unless it is a critical component for the following test sequences.

4.1.3 Manning and Responsibilities.

The DQT1 has the following personnel requirements:

a. Test Manager - Responsible for briefing the test team, defining the necessary test team assignments, coordinating the test resources, assuring proper recording of the test results, red-lining test procedures to reflect as-tested activities, the coordination of Trouble Reports, and debriefing the test team.

b. Test Engineers - Responsible for inspecting the components, recording the condition of the components (i.e., noting any damaged components) during the AT&T unpacking, setup, integration, and initialization.

c. AT&T - Responsible for unpacking, setting up and initializing GMCC workstations, LAN, and other components.

4.1.4 Test Support Hardware and Software.

The following items will be required to support DQT1:

a. GMCC equipment

b. Printers - as required at the GMCC workstation and MPS.

c. Appropriate software - Microgate 6530 Emulation Software to provide GMCC access to Maintenance Management System (MMS)/Interim Monitor and Control Software (IMCS), and the following GMCC/OATS software: MS-DOS 3.3, Unix System V Operating System (OS), Microsoft Excel for Windows, Microsoft Word for Windows, StarLAN Software, Superbase 4, PackRat, Back-It and Status Board. Service A and B interfaces were not available.

4.1.5 Test Operation Instructions.

The information required to perform DQT1 is provided in this section.

4.1.5.1 Test Setup.

The test setup for DQT1 assumes that the StarLAN network is fully operational and all required hardware and software is available for network functionality.

4.1.5.2 Test Conduct.

The DQT1 consists of one test sequence which is provided in appendix C. As installation of each component is performed, power will be applied and pass/fail determination will be made as to whether or not proper operation has been achieved based upon manufacturer's accompanying documentation. Components that use central or intelligent processors will be initialized with accompanying software as applicable. Pass/fail determination will be made as to whether or not proper operation has been achieved based upon manufacturer's accompanying documentation.

After all components are powered on and initialized, they will be integrated into a system configuration and observed to determine if physical connection of one device to another causes any adverse operational effects.

4.1.5.3 Termination and Restart of Test.

Not applicable.

4.1.5.4 Safety Considerations.

The DQT1 does not require any special safety considerations.

4.1.6 Test Data Reduction and Analysis.

Pass/fail determinations for DQT1 will be made by inspection. Data analysis for this test is not applicable. Successful completion will be indicated by a pass/fail method. Should a component fail as a result of the conduction of DQT1, the component will be retested if deemed appropriate by the test manager. Component failure will not preclude advancing to the next test sequence unless it is a critical component for the following test sequences.

4.2 DQT2 - LOCAL AREA NETWORK/SOFTWARE CHECKOUT TEST.

4.2.1 Test Objectives/Expectations.

The objective of this test is to verify that all communications connections/ interfaces are operational and commercial-off-the-shelf (COTS) software installed on the Local Area Network (LAN) is accessible and operates in a manner prescribed by manufacturer's documentation. This test will be performed by ACN-250 as part of phase II testing.

4.2.2 Test Assumptions and Interdependencies.

For DQT2, it is assumed that the GMCC workstation and accompanying documentation is available at the test site. Failure of the LAN to operate in the prescribed manner will preclude advancing to the next test series.

4.2.3 Manning and Responsibilities.

The DQT2 has the following personnel requirements:

a. Test Manager - Responsible for briefing the test team, defining the necessary test team assignments, coordinating the test resources, assuring proper recording of the test results, red-lining test procedures to reflect as-tested activities, the coordination of Trouble Reports, and debriefing the test team.

b. Test Engineers - Responsible for execution of test activities including operation of the equipment, recording of test data, and analysis of test data to determine results.

c. GMCC Technician - Responsible for maintaining MPS configuration, assisting in MMS/IMCS startup, and assisting in backing up test data. The MPS operator must be on call to maintain MPS operation and support testing if necessary.

4.2.4 Test Support Hardware and Software.

The following items will be required to support DQT2:

a. GMCC equipment (four GMCCs connected to one MPS via BROUTERS and modems).

b. MPS - RMMS interface to the GMCC. The IMCS software running on the MPS will be used to monitor the Remote Monitoring Subsystem (RMS) operations and provide remote control of RMS subsystems for maintenance functions. The MMS software running concurrent with IMCS software will be used to perform administrative type functions.

c. Printers - as required at the GMCC workstation and the MPS.

d. Appropriate software - Microgate 6530 Emulation Software to provide GMCC access to MMS/IMCS, and the following GMCC/OATS software: MS-DOS 3.3, Unix System V Operating System (OS), Microsoft Excel for Windows, Microsoft Word for Windows, StarLAN Software, Superbase 4, PackRat, Back-It and Status Board. Service A and B interfaces were not available.

4.2.5 Test Operation Instructions.

The information required to perform DQT2 is provided in this section.

4.2.5.1 Test Setup.

The LAN will be set up as specified in the manufacturer's documentation. An interface to the Tandem will be provided to access MMS/IMCS functions.

4.2.5.2 Test Conduct.

The DQT2 consists of 11 test sequences provided in appendix C.

General StarLAN network commands will be performed and the results of the commands will be observed in test sequence DQT2.1 and DQT2.2. The StarLAN network will be used to access GMCC/OATS software located on the primary server. All COTS software packages will be accessed simultaneously from each General Purpose Workstations (GPWS). These test sequences are numbered DQT2.3 through DQT2.11 and are described below:

a. DQT2.1 Network Administration Test - This test will verify that system administration functions can be performed from the network server.

b. DQT2.2 LAN Checkout Test - This test will verify that general StarLAN network commands can be performed at each GMCC workstation using the StarLAN network software. Links to the server will be established and verified. A server administration test will also be performed.

c. DQT2.3 MS-DOS Software Checkout Test - This test will verify that the Disk Operating System (DOS) is resident and functional on each GMCC workstation. Basic DOS commands will be issued and the results recorded.

d. DQT2.4 Unix V OS Software Checkout Test - This test will verify that the Unix V OS is resident and functional on the GMCC server. Basic Unix V OS commands will be issued and the results recorded.

e. DQT2.5 Microsoft Excel Software Checkout Test - This test will verify that access to the Microsoft Excel software is resident and functional on each GMCC workstation.

f. DQT2.6 MicroGate 6530 Software Checkout Test - This test will verify that access to the MicroGate 6530 software is resident and functional on each GMCC workstation.

g. DQT2.7 Superbase 4 Software Checkout Test - This test will verify that access to the Superbase 4 software is resident and functional on each GMCC workstation.

h. DQT2.8 PackRat Software Checkout Test - This test will verify that access to the PackRat software is resident and functional on each GMCC workstation.

i. DQT2.9 Back-It Software Checkout Test - This test will verify that access to the Back-It software is resident and functional on each GMCC workstation.

j. DQT2.10 Word for Windows Software Checkout Test - This test will verify that access to the Word for Windows software is resident and functional on each GMCC workstation.

k. DQT2.11 Microsoft Windows Software Checkout Test - This test will verify that access to the MS-Windows software is resident and functional on each GMCC workstation. It will also verify that simultaneous operations can be performed using MS-Windows from one GMCC workstation.

4.2.5.3 Termination and Restart of Test.

The DQT2 may be terminated and then restarted at the last completed test step.

4.2.5.4 Safety Considerations.

The DQT2 does not require any special safety considerations.

4.2.6 Test Data Reduction and Analysis.

The success of the test will be determined by the system's ability to meet the requirements and give the predicted responses to the step-by-step procedures presented in the Test Conduct Forms for DQT2 in appendix C.

4.3 DQT3 - FULL SERVICE SYSTEM STATE VERIFICATION.

4.3.1 Test Objectives/Expectations.

The objective of this test is to verify Full Service System State requirements. The GMCC full service system state is defined as all workstations, processors, and communications lines being fully operational. A series of tests and demonstrations will be performed to verify Full Service System State requirements as stated in the following paragraphs.

4.3.2 Test Assumptions and Interdependencies.

For DQT3, it is assumed that the GMCC workstation and accompanying documentation is available at the test site. Failure of the LAN to operate in the prescribed manner will preclude advancing to the next test series.

4.3.3 Manning and Responsibilities.

The DQT3 has the following personnel requirements:

a. Test Manager - Responsible for briefing the test team, defining the necessary test team assignments, coordinating the test resources, assuring proper recording of the test results, red-lining test procedures to reflect as-tested activities, the coordination of Trouble Reports, and debriefing the test team.

b. Test Engineers - Responsible for execution of test activities including operation of the equipment, recording of test data, and analysis of test data to determine results.

c. GMCC Technician - Responsible for maintaining MPS configuration, assisting in MMS/IMCS startup, and assisting in backing up test data. The MPS operator must be on call to maintain MPS operation and support testing if necessary.

4.3.4 Test Support Hardware and Software.

The following items will be required to support DQT3:

a. GMCC equipment

b. MPS - Remote Maintenance Monitoring System (RMMS) interface to the GMCC for remote communications and control. The IMCS software running on the MPS will be used to monitor the RMS operations and provide remote control of RMS subsystems for maintenance functions. The MMS software running concurrent with IMCS software will be used to perform administrative type functions.

c. Printers - as required at the GMCC workstation and the MPS.

d. Appropriate software - Microgate 6530 Emulation Software to provide GMCC access to MMS/IMCS, and the following GMCC/OATS software: MS-DOS 3.3, Unix System V OS, StarLAN Software, Calendar/Time Management for use of the GMCC to access MPS representative data.

e. LM-1 protocol analyzer - provides a means to view and record real-time link level data for later analysis. The LM-1 runs on an International Business Machines Corporation (IBM) compatible personal computer (PC).

f. RMS simulator configured as an Air Traffic Control Beacon Interrogator (ATCBI)-5 RMS.

4.3.5 Test Operation Instructions.

The information required to perform DQT3 is contained in this section.

4.3.5.1 Test Setup.

The Test Setup for DQT3 assumes that the StarLAN network is fully operational and all required hardware and software is available for network functionality. The Tandem hardware should be directly interfaced with the StarLAN network so that independent MMS/IMCS sessions may be conducted. These sequences will be performed on one of the four active GMCCs to demonstrate that the network is fully functional with the MPS.

4.3.5.2 Test Conduct.

The DQT3 consists of 12 test sequences, IT3.1 through IT3.12, which are discussed below and provided in appendix C.

These test sequences will confirm that the GMCC is capable of running in the Full Service System State. The following test sequences are designed to validate these requirements:

a. DQT3.1 Full Service System State Initialization Test - This test sequence will verify that the GMCC equipment is configured and initialized as required to test the GMCC Full Service System State.

b. DQT3.2 MPS Software Compatibility Test - This test will verify that the GMCC is capable of accessing the MPS resident MMS/IMCS software packages by utilizing the Microgate 6530 Terminal Emulation software package.

c. DQT3.3 Simultaneous Workstation Operation Test - This test will verify that all GMCC workstations are operational. The MMS/IMCS operations will be performed on two of more of the workstations simultaneously.

d. DQT3.4 GMCC Operational Control Test - This test will verify that the GMCC has operational control of its jurisdictional facilities by sending commands, acknowledging alarms, and monitoring and unmonitoring of specific sites and/or data points via MMS/IMCS.

e. DQT3.5 Real-time Monitoring Test - This test will verify the capability of the GMCC to perform real-time monitoring of its jurisdictional facilities via MMS/IMCS.

f. DQT3.6 GMCC Certification Test - This test will verify the capability of the GMCC to perform certification of facility performance via MMS/IMCS.

g. DQT3.7 Status and Alarm Handling Test - This test will verify the capability of the GMCC to control status indicators and process alarms via MMS/IMCS.

h. DQT3.8 Non-Facility Information Monitoring Test - This test will verify the capability of the GMCC to monitor non-facility information via MMS/IMCS.

i. DQT3.9 Full Service System State Response Time Test - This test will verify response time requirements by performing response time tests via MMS/IMCS. The response time requirements used for this test are the IMCS response times and do not reflect any specific GMCC response times.

j. DQT3.10 GMCC Reporting Test - This test will verify GMCC reporting functions by utilizing MMS/IMCS functions.

k. DQT3.11 GMCC Loading Test - This test will verify that all GMCC workstations run independent MMS/IMCS sessions simultaneously. All workstations will be running two MMS sessions and a Tandem Advanced Command Language (TACL) session and the effects on the network will be recorded.

l. DQT3.12 GMCC Network Reliability Test - This test will verify that the GMCC network can reliably process alarms sent continuously from monitored facilities.

4.3.5.3 Termination and Restart of Test.

The DQT3 may be terminated and restarted at the last completed test step.

4.3.5.4 Safety Considerations.

The DQT3 does not require any special safety considerations.

4.3.6 Test Data Reduction and Analysis.

Data analysis for DQT3 will be accomplished by reviewing the GMCC status screens, IMCS database files, and the LM-1 recorded data.

The success of the test will be determined by the system's ability to meet the requirements and give the predicted responses to the step-by-step procedures presented in the Test Conduct Forms for DQT3.

4.4 DQT4 - REDUCED SERVICE SYSTEM STATE VERIFICATION.

4.4.1 Test Objectives/Expectations.

The objective of DQT4 is to verify Reduced Service System State requirements, via system type tests/demonstrations. Successful completion of DQT4 will be indicated by pass/fail method and through data analysis.

The DQT4 will be verified during subsequent GMCC testing.

4.4.2 Test Assumptions and Interdependencies.

For DQT4, it is assumed that the GMCC equipment and accompanying documentation is available at the test site.

4.4.3 Manning and Responsibilities.

The DQT4 has the following personnel requirements:

a. Test Manager - Responsible for briefing the test team, defining the necessary test team assignments, coordinating the test resources, assuring proper recording of the test results, red-lining test procedures to reflect as-tested activities, the coordination of Trouble Reports, and debriefing the test team.

b. Test Engineers - Responsible for execution of test activities including operation of the equipment, recording of test data, and analysis of test data to determine results.

c. GMCC Technician - Responsible for maintaining MPS configuration, assisting in MMS/IMCS startup, and assisting in backing up test data. The MPS operator must be on call to maintain MPS operation and support testing if necessary.

4.4.4 Test Support Hardware and Software.

The following items will be required to support DQT4:

a. GMCC equipment

b. MPS - Remote Maintenance Monitoring System (RMMS) interface to the GMCC for remote communications and control. The IMCS software running on the MPS will be used to monitor the RMS operations and provide remote control of RMS subsystems for maintenance functions. The MMS software running concurrent with IMCS software will be used to perform administrative type functions.

c. Printers - as required at the GMCC workstation and the MPS.

d. Appropriate software - Microgate 6530 Emulation Software to provide GMCC access to MMS/IMCS, and the following GMCC/OATS software: MS-DOS 3.3, Unix System V OS, Microsoft Excel for Windows, Microsoft Word for Windows, StarLAN Software, Superbase 4, PackRat, Back-It, and Status Boards. Service A and B interfaces were not available.

e. LM-1 protocol analyzer - provides a means to view and record real-time link level data for later analysis. The LM-1 runs on an IBM compatible PC.

4.4.5 Test Operation Instructions.

The information required to perform the DQT4 is provided in this section.

4.4.5.1 Test Setup.

The DQT4 does not require any special safety considerations.

4.4.5.2 Test Conduct.

The DQT4 consists of one test sequence which is provided in appendix C. The requirements for DQT4 have been deferred to subsequent DQT&E testing.

4.4.5.3 Termination and Restart of Test.

The DQT4 may be terminated and then restarted at the last completed test step.

4.4.5.4 Safety Considerations.

The DQT4 does not require any special safety considerations.

4.4.6 Test Data Reduction and Analysis.

Data analysis for DQT4 will be accomplished by comparison of actual and expected test data as defined for the Reduced Service System State requirements. Failure of the GMCC to perform functions in the reduced operations mode will preclude advancing to the next test series.

4.5 DQT5 - RECONFIGURED SYSTEM STATE VERIFICATION TEST.

4.5.1 Test Objectives/Expectations.

The objective of DQT5 is to verify Reconfigured System State requirements via system type tests/demonstrations. Successful completion of DQT5 will be indicated by pass/fail method and through data analysis.

The DQT5 will be verified during subsequent GMCC testing.

4.5.2 Test Assumptions and Interdependencies.

For DQT5, it is assumed that the GMCC equipment and accompanying documentation is available at the test site.

4.5.3 Manning and Responsibilities.

The DQT5 has the following personnel requirements:

a. Test Manager - Responsible for briefing the test team, defining the necessary test team assignments, coordinating the test resources, assuring proper recording of the test results, red-lining test procedures to reflect as-tested activities, the coordination of Trouble Reports, and debriefing the test team.

b. Test Engineers - Responsible for execution of test activities including operation of the equipment, recording of test data, and analysis of test data to determine results.

c. GMCC Technician - Responsible for maintaining MPS configuration, assisting in MMS/IMCS startup, and assisting in backing up test data. The MPS operator must be on call to maintain MPS operation and support testing if necessary.

4.5.4 Test Support Hardware and Software.

The following items will be required to support DQT5:

a. GMCC equipment

b. MPS - RMMS interface to the GMCC for remote communications and control. The IMCS software running on the MPS will be used to monitor the RMS operations and provide remote control of RMS subsystems for maintenance functions. The MMS software running concurrent with IMCS software to perform administrative type functions.

c. Printers - as required at the GMCC workstation and the MPS.

d. Appropriate software - Microgate 6530 Emulation Software to provide GMCC access to MMS/IMCS, and the following GMCC/OATS software: MS-DOS 3.3, Unix System V OS, Microsoft Excel for Windows, Microsoft Word for Windows, StarLAN Software, Superbase 4, PackRat, Back-It and Status Boards. Service A and B interfaces were not available.

e. LM-1 protocol analyzer - provides a means to view and record real-time link level data for later analysis. The LM-1 runs on an IBM compatible PC.

4.5.5 Test Operation Instructions.

The information required to perform the DQT5 is provided in this section. The requirements for DQT5 have been deferred to subsequent DQT&E testing.

4.5.5.1 Test Setup.

TBD

4.5.5.2 Test Conduct.

The DQT5 consists of two test sequences, DQT5.1 and DQT5.2, which are discussed below and provided in appendix C. These test sequences will confirm that the GMCC is capable of running in the Reconfigured System State. The DQT5.1 test will verify that the GMCC is able to perform all of the functions specified for the Full Service System State except that the GMCC shall not allow the operators to alter the status of any facility in its jurisdiction. Any time that a GMCC transfers all of its operational responsibilities to an Area Control Facility MCC (AMCC) or another GMCC serviced by the same MPS, it is considered to be in the Reduced Operations Mode. Therefore, verification of reduced operations mode will be conducted by performing a subset of DQT3 tests and demonstrations.

The DQT5.2 test will verify that the GMCC will accept the operational responsibility for another GMCC serviced by the same MPS.

4.5.5.3 Termination and Restart of Test.

The DQT5 may be terminated and then restarted at the last completed test step.

4.5.5.4 Safety Considerations.

The DQT5 does not require any special safety considerations.

4.5.6 Test Data Reduction and Analysis.

Data analysis for DQT5 will be accomplished by comparison of actual and expected test data as defined for Reconfigured System State requirements. Failure of the GMCC to perform functions in the reconfigured operations mode will preclude advancing to the next test series.

APPENDIX A - TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

The TVRTM identifies the DQT&E requirements and relates them to the individual tests in the Test Procedures that verify them.

Requirements which have been deferred or not implemented in this phase of testing are so noted in the TVRTM.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1 - Performance Characteristics	a. Transmit/receive data to/ from designated facilities and personnel	D	DQT3.4	Operational Control	
		b. Input, process, and output data in accordance with 3.2.1.4 and 3.2.1.5	D	DQT3.4	Operational Control	
		c. Operates in Full Service System State within stated response times	D	DQT3.1, DQT3.9	System Init, System Response Time	
		d. Operates in Reduced Service System State (provides essential services)	X			1
		e. Operates in Reconfigured Service System State (accepts/transfers operational functions from/to another MCC when required)	X			2

1 - Reduced Service System State will be verified during subsequent GMCC Testing.
2 - Reconfigured Service System State will be verified during subsequent GMCC Testing.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		f. Provides capability (i.e. supports all operator actions required to change system states) to coordinate and control the transfer of operational functions to any other GMCC regardless of system state	X			1
		g. Operation of GMCC equipment shall not be degraded by, nor degrade operation of any other GMCC regardless of system state				
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1 - Full Service System State	a. All workstations, displays, processors, and communications lines are fully operational	D	DQT3.1	System Init	
		b. Possesses operational control and responsibility over facilities in area of jurisdiction	D	DQT3.3, DQT3.4	Simultaneous WS Operation, Operational Control	

1 - Not available for DQT&E testing. This will be tested during subsequent GMCC Testing.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		c. Upon systems restart, GMCC shall initiate operations in the Full Service System State	D	DQT3.1	System Init	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.1 - Realtime Monitoring Function	a. Provides capability for around-the-clock realtime determination/display of facility/equipment performance characteristics including status data at the facility, system, subsystem, equipment and service levels	X			1
		b. Provide access to automated comparison of actual performance parameter values to pre-established standards tolerances and thresholds	X			2
		c. Provide capability for real-time certification of facility performance	D	DQT3.6	Certification	3

1 - GMCC Performance Data is not available.
2 - Performance Parameter values are not available.
3 - Certification Data is not available. However, DQT&E will verify that the GMCC has access to RMS Certification Commands.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.1.1 - Facility Monitoring Subfunction	a. Provide all current RMS facility performance data via MPS	X			1
		b. Provide access to appropriate contacts to receive current status data for non-remote-controlled facilities	X			2
		c. Provide access to all monitored facility logs, alarm and certification history data, waivers, key performance and/or certification parameter trends, and other available non-realtime supporting performance documentation	D	DQT3.3, DQT3.6, DQT3.10	Simultaneous WS Operation, Certification Reporting	3
		d. Provide access to capability to disable/enable of status changes	D	DQT3.7	Status/Alarm Handling	

1 - GMCC Performance data is unavailable.
2 - This requirement has been deferred.
3 - Waivers, key performance and certification parameter trends have not been implemented.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.1.2 - Facility Status Display Subfunction	a. Provide displays of current status of all facilities within jurisdiction	D	DQT3.3	Simultaneous WS Operation	
		b. Provide capability to simultaneously present multiple categories of data	D	DQT2.11	Windows	
		c. Significant data easily distinguished	D	DQT3.3	Simultaneous WS Operation	
		d. Provides realtime status information on request at following level of detail:				
		1) Current operational relationships among facilities (including status of communications links)	X			1
		2) Current facility operational configuration	D	DQT3.3, DQT3.4	Simultaneous WS Operation, Operational Control	
		3) Facility operation including all current RMS data (via MPS)	D	DQT3.3	Simultaneous WS Operation	

1 - This requirement has been deferred.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		e. Displays organized to enable "zoom in" from status overview	D	DQT2.11	Windows	1
FAA-XX-XXXX - GMCC A-Level Specification	3.2.1.1.1.3 - Facility Alarm Subfunction	a. Provide capability to set alert thresholds	X			2
		b. Provide priority-conditioned notification of all facility alarms via aural/visual presentations	D	DQT3.7	Status/Alarm Handling	
		c. Provide a means to verify/ acknowledge assigned facility alarms/"return to normal" messages	D	DQT3.7	Status/Alarm Handling	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.1.4 - Non-Facility Information Monitoring Subfunction	Provide current non-facility-related information (e.g., weather, NOTAMS, etc.)	X			3

1 - Verified through the commercial-off-the-shelf software package MS-Windows.
2 - Alert thresholds can only be set at the Local Terminal.
3 - Non-facility information monitoring has not been implemented.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.1.5 - Facility Log Entry Subfunction	Provide capability to enter statements into monitored facility log	D	DQT3.10	Reporting	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.1.6 - Security Access Subfunction	Provide access to relevant security information	D	DQT3.3	Simultaneous WS Operation	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.2 - Non-Realtime Monitoring Function	Retrieve, display and analyze performance data from automated systems and field personnel	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.2.1 - Facility Performance Checklist Subfunction	Provide access to checklist of all key performance/certification parameters (with associated tolerance/threshold values) for any selected facility within jurisdiction	X			2
FAA-XX-XXXX GMCC A-Level	3.2.1.1.1.2.2 - Facility History And Trends Subfunction	a. Provide access to specified facility logs, alarm/ certification histories, waivers, and other non-realtime facility performance data	X			1

1 - Performance data for GMCC is not available.
2 - GMCC checklists have not been implemented. This requirement has been deferred to subsequent GMCC Testing.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.3.2 Command Sequence Checklist Subfunction	a. Provide access to menus/ checklists which detail specific commands/command sequences to use for performance of each available remote maintenance control action for each facility in jurisdiction	X			1
		b. Provide capability to bypass menus/checklists	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.3.3 Emergency and Backup Test Subfunction	Provide means to test operational readiness of emergency backup/safety features of monitored facilities	X			2
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.3.4 Positive Feedback Subfunction	a. Provide positive feedback that indicates control actions produced desired results	D	DQT3.4	Operational Control	
		b. Provide positive feedback for operator errors	D	DQT3.4	Operational Control	

1 - GMCC checklists have not been implemented. This requirement has been deferred to subsequent GMCC Testing.
2 - This requirement will be verified during System Level Testing.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.2.4 - Facility Scheduling Checklist Subfunction	a. Provide access to checklist of all facilities in jurisdiction requiring shutdown for performance of routine scheduled maintenance within specified time interval	X			2
		b. Provide access to checklist of all facilities in jurisdiction requiring certification within specified time interval	X			1
		c. Provide access to checklist of all facilities in jurisdiction for which certifications are overdue or for which there are a pre-defined significant levels of non-performance for PM actions supporting certification	X			1

1 - GMCC checklists have not been implemented. This requirement has been deferred to subsequent GMCC Testing.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.2.5 - Logistics Management Information Subfunction	Provide access to general information concerning logistics within jurisdiction	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.2.6 - Field Organization Points of Contact Subfunction	Provide access to appropriate points of contact within AF/AT field organizations and telephone numbers	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.3 - Facility Control Function	Provide capability to alter status, configuration, mode or performance of monitored facility	D	DQT3.4	Operational Control	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.3.1 Facility Control Message Transmission Subfunction	Provide capability to transmit control messages to monitored facilities	D	DQT3.4	Operational Control	

1 - This requirement has been deferred.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.3.2 - Command Sequence Checklist Subfunction	a. Provide access to menus/ checklists which detail specific commands/command sequences to use for performance of each available remote maintenance control action for each facility in jurisdiction	X			1
		b. Provide capability to bypass menus/checklists	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.3.3 - Emergency and Backup Test Subfunction	Provide means to test operational readiness of emergency backup/safety features of monitored facilities	X			2
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.3.4 - Positive Feedback Subfunction	a. Provide positive feedback that indicates control actions produced desired results	D	DQT3.4	Operational Control	
		b. Provide positive feedback for operator errors	D	DQT3.4	Operational Control	

1 - GMCC checklists have not been implemented. This requirement has been deferred to subsequent GMCC Testing.
2 - This requirement will be verified during System Level Testing.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.4 - Communication and Coordination Function	a. Receive/disseminate facility performance/maintenance data from/to AF field elements, users, and third parties	X			1
		b. Provide voice/data communication links to all monitored facilities within jurisdiction and with other MCCs	X			1
		c. Provide backup communications to serve area of jurisdiction	X			1
		d. Provide the capability to enable authorized non-routine users to access data through normal security procedures	X			2
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.4.1 - Internal (FAA) Communications Links Subfunction	a. Provide access to two-way voice and data communications (internal to FAA) at any operator position	X			1

1 - Voice/data communication links will be verified during site level testing.
2 - This requirement will be verified during OT&E/I/ST&E testing.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		b. Provide hardware/software to establish and support non-GMCC voice/data communications through Government-furnished communications equipment at any operator position	D			1
		c. Provide access to voice/data communications links to Work Center responsible for maintenance of a given failed facility and receive technical reports from the field via these links	X			2
		d. Provide access to voice/data communications links to an on-site systems specialist at each facility in area of jurisdiction	X			2

1 - DQT&E will verify a phone line and/or modem is available at the testing site.
2 - Voice/data communication links will be verified during site level testing.

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		e. Provide access to a voice/ data communications link to a designated single AT point of contact	X			1
		f. Provide access to voice/data communications links to other GMCC's to facilitate transfer of maintenance and control responsibilities related to facility maintenance and re-configuration activity	X			1
		g. Provide access to a dedicated, protected (level of protection TBD) "hot-line" voice and/or data link to NMCC	X			1

1 - Voice/data communication links will be verified during site level testing.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		h. Provide access to voice/data communications links to the FAA Depot to facilitate field requests and deliveries of P1 (highest priority) spare parts required for facility restoration	X			1
		i. Provide access to voice/data communications links to AF/AT management/field supervisory personnel, including home and enroute callback access	X			1
		j. Provide access to voice/data communications links to NFSSs	X			1
		k. Provide access to voice/data communications links to designated ATC personnel	X			1

1 - Voice/data communication links will be verified during site level testing.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		1. Provide access to voice communications links to higher-level FAA personnel (at other Sector and Regional Offices) on the notification lists described in section 3.2.1.1.4.4	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.4.2 - External (Non-FAA) Communications Links Subfunction	a. Provide capability to exchange two-way voice/data communications (external to FAA organizations) at any operator position	X			1
		b. Provide hardware/software to establish and support non-GMCC voice/data communications through Government-furnished communications capabilities at all operator positions	D			2

1 - Voice/data communication links will be verified during site level testing.
2 - DQT&E will verify a phone line and/or modem is available at the testing site.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		c. Provide capability to communicate by voice with AT and AF supervisory personnel and systems specialists either at their homes after normal working hours, in vehicles en route, or in monitored facilities 1) Display names, addresses, certifications, and telephone numbers of these personnel along with priorities of contact for certain operational situations	X			1
		d. Provide access to voice communications links to appropriate military contacts for coordination of restoration actions at joint use facilities	X			1

1 - Voice communication links will be verified during site level testing.

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		e. Provide access to voice communications links to TELCO, power companies, or other utilities responsible for provision of prime power or communications links to remote facilities	X			1
		f. Provide access to voice communications links to all local, state, and Federal organizations that respond to emergencies involving FAA facilities	X			1
		g. Provide access to voice communications links to airport authorities and other designated third parties	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.4.3 - Coordination Support Subfunction	a. Provide access to graphic map displays for reference purposes to be made available at the GMCC-WS	X			2

1 - Voice communication links will be verified during site level testing.
2 - Graphic map displays will be verified during GMCC system level testing.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		b. Provide access to automatically-updated graphic status displays of all facilities within jurisdiction area as well as those facilities monitored by other GMCCs and present on any display	X			1
		c. Provide access to displays of scheduled flight inspections for facilities within jurisdictional area, including date/time and facility involved	X			1
		d. Provide access to displays of current locations and IDs of AF maintenance personnel currently performing maintenance actions	X			1

1 - This requirement has been deferred.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.4.4 - Actions and Modifications Checklists Subfunction	a. Provide access to a checklist of available remote control or reconfiguration actions to pursue under various facility alarm conditions for each facility in jurisdictional area	X			1
		b. Provide access to checklists of AF and other personnel to be notified and actions to be taken under various aircraft incident circumstances	X			1
		c. Provide access to a checklist of facility shutdowns that are scheduled within a specified interval, together with the time of shutdown, expected duration and indications as to whether or not AT approval is required	X			1

1 - GMCC checklists have not been implemented. This requirement has been deferred to subsequent GMCC testing.

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		d. Provide access to a checklist of required coordination acciviites for each facility in jurisdiction	X			1
		e. Provide access to checklists of emergency actions as required by FAA Orders and Directives for upward and downward notification within the organization	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.4.5 - Aircraft Incident Electronic Archive Subfunction	a. Provide access to the means to electronically archive all relevant facility logs, performance and control data	D	DQT3.3	Simultaneous WS Operation	
		b. Provide capability to generate hard copies of all documents archived in this manner	D	DQT3.3	Simultaneous WS Operation	

1 - GMCC checklists have not been implemented. This requirement has been deferred to subsequent GMCC testing.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.4.6 - Flight Inspection Reports Subfunction	Provide access to flight inspection reports for all facilities within jurisdiction	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.4.7 - NOTAM Information Access Subfunction	Provide access to NOTAM data, RENOTs, and GENOTs concerning facility operation within own jurisdiction of adjacent GMCCs				
FAA-XX-XXXX GMCC A-Level Specifiction	3.2.1.1.5 - Reporting Function	GMCC shall initiate and maintain an accurate, verifiable, and legally valid record of all actions taken by operators with respect to facility performance or maintenance management within jurisdiction	D	DQT3.3	Simultaneous WS Operation	2
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.5.1 - GMCC Log Subfunction	Provide means to enter data into electronic storage files resident on the MPS	D	DQT3.10	Reporting	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.5.2 - Monitored Facility Log Subfunction	Provide capability to make pertinent entries into facility logs for all monitored facilities within jurisdiction	D	DQT3.10	Reporting	

1 - This requirement has not been implemented.
2 - Operator actions will be recorded. GMCC does not yet maintain actions with respect to facility performance.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.5.3 - Scratch Pad Subfunction	Provide access to erasable non-volatile "scratch pad" electronic data file to store information	D	DQT3.9	System Response Time	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.1.6 - Training Operations	a. Supports training operations in the Full Service System State	X			1
		b. Provides an operator-selectable capability to dedicate one or more operator positions to training operations. During this time, all other work-stations shall continue to operate normally	X			1
		c. Supports initiation of training operations on a position-by-position basis	X			1

1 - Training operations have not been implemented.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		d. All WSs dedicated to training shall be unable to control or modify any operational database or checklists, or any facility. Otherwise, each WS dedicated to training operations shall have full control of all GMCC functions	X			1

1 - Training operations have not been implemented.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		e. When an operator position is dedicated to training operations, GMCC shall support either of the following types of operation: 1) GMCC shall simulate a training exercise at the operator position A. During the simulation, GMCC shall simulate normal operation and use of all system functions at the operator position B. Actual facility control, modification of any operational database or checklist, and outside communications shall be disabled	X			1

1 - Training operations have not been implemented.

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		2) GMCC shall support the normal operation of the operator position except that actual facility control and modification of any operational database or checklist is disabled.	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.2 - Reduced Service System State	Performs all of the functions of the Full Service System State operating under the following exceptions:	X			2
		a. At least one operator workstation is fully operational				
		b. Either voice or radio communications are fully operational	X			2
		c. Both the FSD and Weather Data functional areas are fully operational	X			2

1 - Training operations have not been implemented.
2 - Reduced Service System State will be verified during subsequent GMCC Testing.

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		d. The system is meeting all Reduced Service response time requirements of section 3.2.1.5	X			1
		e. The GMCC has operational control and responsibility over the facilities in its area of jurisdiction (only)	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.3 - Reconfigured System State	a. All hardware and software functions are operational	X			2
		b. All workstations, displays, processors, and communications lines are operational	X			2
		c. Meets all response time requirements of section 3.2.1.5	X			2
		d. Operates in either the reduced or augmented mode of operation	X			2

1 - Reduced Service System State will be verified during subsequent GMCC Testing.
2 - Reconfigured System State will be verified during subsequent GMCC Testing.

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		e. Is capable of performing all functions for the Full Service System State	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.3.1 Reduced Operations Mode	Performs all the functions specified for the Full Service System State except that GMCC shall not allow the operators to alter the status of any facility in its jurisdiction; all operational responsibilities transferred to another GMCC or Area Control Facility MCC (AMCC) serviced by the same MPS	X			2
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.3.2 - Augmented Operations Mode	a. Takes operational responsibility for another GMCC	X			3

1 - Reconfigured System State will be verified during subsequent GMCC Testing.
2 - Reduced Operations Mode will be verified during subsequent GMCC Testing.
3 - Augmented Operations Mode will be verified during subsequent GMCC Testing.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		b. Performs all of the functions specified for the Full Service System State and meet all response time requirements for its area of jurisdiction and the jurisdiction of the GMCC for which it has taken responsibilities	X			1
		c. Provides capability to perform twice the maximum workload requirements specified for a single GMCC in the Full Service System State	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.4 Design Limits	Sufficent number of communications links and sufficent communications bandwidth available to support operations in Augmented Mode of Reconfigured System State	X			1

1 - Cannot be verified during DQT&E.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.5.1.1 - Data Collection Requirements	Collects and presents key performance parameter, diagnostic performance parameter or facility data for a single report from MPS in a mean time of one (1) second after receipt at the GMCC input buffer	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.5.1.2 Alarm and Alert Requirements	a. Displays alarms, alerts, and state changes from all designated subsystems within a mean time of 1.0 second and a maximum time of 2.0 seconds	D	DQT3.9	System Response Time	
		b. Prepares an alarm or an alert acknowledgement within a mean time of 1.0 second and a maximum time of 2.0 seconds	D	DQT3.9	System Response Time	

1 - Performance parameter data is not available for the GMCC.

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		c. Deactivates an alarm or an alert indication within a mean time of 1.0 second and a maximum time of 2.0 seconds	D	DQT3.9	System Response Time	
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.5.1.3 - Communications Requirements	Accepts data from and transfers data to the MPS at a rate of at least 19,200 bps.	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.5.2 - Reduced Service Response Time Requirements	In the Reduced Service System State, GMCC shall meet the same response time requirements as in Full Service System State	X			2
FAA-XX-XXXX GMCC A-Level Specification	3.2.1.5.3 - Reconfigured Response Time Requirements	In the Reconfigured System State, GMCC shall meet the same response time requirements as in the Full Service System State	X			3
FAA-XX-XXXX GMCC A-Level Specification	3.2.2 - System Capability Relationships	a. In the Full Service System State, GMCC shall perform all functions assigned to this system state	D	DQT3	ALL	

1 - This requirement will be verified during subsequent GMCC Testing.
2 - Reduced Service System State will be verified during subsequent GMCC Testing.
3 - Reconfigured System State will be verified during subsequent GMCC Testing.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		b. In the Reconfigured System State, GMCC shall perform all functions of this specification in both the Reduced Operations and Augmented Operations modes	X			1
		c. In the Reduced Service System State, GMCC shall perform all functions of this specification except as limited by section 3.2.1.2	X			2
FAA-XX-XXXX GMCC A-Level Specification	3.2.3.1 MPS Interface	Provides an interface with MPS hardware	D	DQT3.3	Simultaneous WS Operation	
FAA-XX-XXXX GMCC A-Level Specification	3.2.3.2 MMS Interface	a. Provides an interface with MMS software	D	DQT3.3	Simultaneous WS Operation	
		b. Each operator workstation capable of conducting an independent MMS session	D	DQT3.3	Simultaneous WS Operations	

1 - Reconfigured System State will be verified during subsequent GMCC Testing.
2 - Reduced Service System State will be verified during subsequent GMCC Testing.

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		c. Exchanges the following types of data: 1) Checklists of facility parameters, trend values, facility logs, scheduled maintenance, alarm and certification histories, waivers, procedures for maintenance verification, and points of contact within user and maintenance organizations 2) Facility logs, alarm histories, and other non-realtime facility performance data as required to verify actions in the realtime enviornment, and for entry of certification statements in the monitored facility log	D	DQT3.3, DQT3.6	Simultaneous WS Operation Certification	

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		3) Command checklists or menus for performance of remote control actions	X			1
		4) Facility performance trends, locations of AF systems specialists currently performing maintenance actions, checklists of recommended facility restoration actions, incident or emergency procedures, and notification or callback lists	X			1
		5) Access security control for MMS and (I)MCS	D	DQT3.3	Simultaneous WS Operation	
		6) Selected MMS logs and reports for printout at the GMCC worksite	D	DQT3.3	Simultaneous WS Operation	
FAA-XX-XXXX GMCC A-Level Specification	3.2.3.3 - (I)MCS Interface	a. Provides an interface with (I)MCS software	D	DQT3	All	

1 - GMCC checklists have not been implemented. This requirement has been deferred to subsequent GMCC Testing.

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		b. Each operator workstation shall be capable of conducting an independent (I)MCS session	D	DQT3.3	Simultaneous WS Operation	
		c. Access to (I)MCS shall be through the MMS interface which provides for system security, control, and authentication	D	DQT3.3	Simultaneous WS Operation	
		d. The GMCC interfae with (I)MCS shall exchange the following types of data: 1) Realtime data on facility performance and status. The Remote Maintenance Monitoring System (RMMS), of which (I)MCS is a component, will be the source of all facility parameter, notification and alarm data, and will be used for generation of all internal self-verification checks	D	DQT3.4, DQT3.7	Operational Control Status/Alarm	

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		2) Transmission of control commands to monitored facilities and reception of realtime data concerning facility status from monitored sites, and monitoring and/or emergency/backup system integrity checks	D	DQT3.4	Operational Control	
		3) Display data of facility operational status and alarms	D	DQT3.4	Operational Control	
		4) Selected (I)MCS logs and reports for hard copy printout	D	DQT3.3	Simultaneous WS Operation	
FAA-XX-XXXX GMCC A-Level Specification	3.2.3.4 - Weather Data Systems Interface	a. Provides an interface Weather Data Systems (WDS)	X			1
		b. Presentation of weather data coincides with jurisdiction	X			1
		c. Receives weather data for realtime retrieval and display	X			1

1 - The Weather Data Systems Interface is unavailable but will be verified during GMCC Integration Testing.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
FAA-XX-XXXX GMCC A-Level Specification	3.2.3.5 - Consolidated NOTAM System Interface	Provides an interface with Consolidated NOTAM System, Leased Service A and B (or functionally equivalent replacement), and NADIN and exchanges the following types of data:	X			1
		a. Current NOTAM data including reports concerning facilities within the GMCC area of jurisdiction and other GMCCs	X			1
		b. GENOTs and RENOTs	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.3.6 - National Flight Inspection Reporting System (NFIRS) Interface	Provides an interface with NFIRS and exchanges the following types of data:	X			2
		a. Flight inspection reports				
		b. Schedule of flight checks				

1 - The consolidated NOTAM System Interface is unavailable but will be verified during GMCC Integration Testing.
2 - The NFIRS interface is unavailable but will be verified during GMCC Integration Testing.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
FAA-XX-XXXX GMCC A-Level Specification	3.2.3.7 - Telephone Communications Network Interface	Provides an interface with local telephone utility for voice communications	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.3.8 - Two-Way Radio Communications Network Access	a. Provides access to two-way radio communications b. Includes voice links with systems specialists in remote locations or vehicles c. This Government-furnished equipment shall be housed in the GMCC workstation	X			2
FAA-XX-XXXX GMCC A-Level Specification	3.2.4 - Physical Characteristics	Capable of operating in a standard office environment and meets all appropriate requirements for protective coatings, weight and dimensional limits, transportation and storage, security, durability, safety, vulnerability, color, and device characteristics	I	DQT1		

1 - Voice communications will be verified during site level testing.
2 - Radio communications will be verified during site level testing.

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
FAA-XX-XXXX GMCC A-Level Specification	3.2.4.1 - Protective Coatings	Newly-designed equipment finished in accordance with the applicable provisions of FAA-STD-001	I	DQT1		
FAA-XX-XXXX GMCC A-Level Specification	3.2.5.1 - Reliability	Meets reliability limit of 2,573 hours Mean Time Between Failures	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.5.2 - Maintainability	Meets maintainability limit of 0.5 hours Mean Time to Repair	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.2.5.3 - Availability	Meets availability requirement of .9998057	X			1
FAA-XX-XXXX GMCC A-Level Specification	3.3.1 - System Security	a. Designed and constructed to provide protection against unauthorized system access	D	DQT3.4	Operational Control	
		b. Provides protection against unauthorized modifiction to any system element	D	DQT3.4	Operational Control	

1 - This requirement has been deferred.

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		c. Provides security against loss of system services by the inadvertent or unauthorized action of other system users	D	DQT3.4	Operational Control	
		d. Provides protection against unauthorized modification or bypass of any system security logic	D	DQT3.4	Operational Control	
		e. Alerts personnel and identifies source of attempts to defeat system security features	D	DQT3.4	Operational Control	
FAA-XX-XXXX GMCC A-Level Specification	3.4 - Documentation	a. Product Specification: GMCC design shall be documented in product specifications in accordance with FAA-STD-005D	1			

APPENDIX A: GMCC DQT&E
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
		b. Interface Control Documents: All GMCC Interfaces shall be documented in Interface Control Documents (ICDs) in accordance with applicable paragraphs of FAA-STD-025	I			
		c. Configuration Management Plan: The CM Plan shall be prepared in FAA-D-249d format	I			
FAA-XX-XXXX GMCC A-Level Specification	3.5 - Logistics	GMCC requirements for ILS, logistics support analysis (LSA), and hardware and software maintenance shall be satisfied in accordance with FAA Order 1800.58	I			
FAA-XX-XXXX GMCC A-Level Specification	3.6 - Personnel and Training	The GMCC training program shall be prepared and conducted in accordance with FAA-STD-028A	I			

APPENDIX B

NAS SPECIFICATION TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

This TVRTM identifies specific NAS requirements from NAS-SS-1000 Volume I, NAS SS-1000 Volume V, and NAS-MD-794, and relates them to the individual tests in the Test Procedures that verify them.

APPENDIX B: NAS-SS-1000 VOLUME I
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
NAS-SS-1000 VOLUME I	3.2.1.1.9.1.a	Continually monitor subsystem performance to obtain the data needed by specialists for maintenance and operations support.	D	DQT3	ALL	
NAS-SS-1000 VOLUME I	3.2.1.1.9.1.b	Provide the status of subsystem to specialists and generate an alarm upon the deviation of designated parameters from prescribed limits.	D	DQT3.7	Status/Alarm Handling	
NAS-SS-1000 VOLUME I	3.2.1.1.9.1.f	Provide for the organization and processing of the information necessary for the management of maintenance resources and the preparation of NAS status reports.	D	DQT3.3	Simultaneous WS Operation	
NAS-SS-1000 VOLUME I	3.2.1.1.9.1.g	Provide the specialist access to the monitoring, control, and data management capabilities.	D	DQT3	ALL	

APPENDIX B: NAS-SS-1000 VOLUME
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
NAS-SS-1000 VOLUME I	3.2.1.2.9.a	Provide the capability to continually monitor the status, alarms/alerts and performance data of selected subsystems.	D	DQT3	ALL	
NAS-SS-1000 VOLUME I	3.2.1.2.9.b	Provide the capability to detect the present alarms and state changes from selected subsystems within an average time of 10 seconds and a maximum time (99th percentile) of 60 seconds.	T	DQT3.9	System Response Time	
NAS-SS-1000 VOLUME I	3.2.1.2.9.c	Provide the capability to execute control commands within an average time of 5 seconds and a maximum time (99th percentile) of 15 seconds.	T	DQT3.4	Operational Control	
NAS-SS-1000 VOLUME I	3.2.1.2.9.e	Provide an acknowledgement to a specialist of a subsystem's receipt of a valid test command within an average time of 15 seconds and a maximum time (99th percentile) of 75 seconds.	T	DQT3.9	System Response Time	

APPENDIX B: NAS-SS-1000 VOLUME I/VOLUME V TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
NAS-SS-1000 VOLUME I	3.4	Documentation for the NAS system, elements, subsystems, including interfaces, shall be prepared, processed, and controlled in accordance with applicable standards and specifications.	I			
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.1.a	Receive and distribute status and control data of NAS subsystems.	D	DQT3	ALL	
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.1.b	Provide validation of status data and accomplishment of control functions.	D	DQT3.4	Operational Control	
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.1.c	Provide analysis of data for situation appraisal, decision analysis and failure effects.	D	DQT3.4	Operational Control	
NAS-SS-1000	3.2.1.1.8.1.1.d	Control input/output processing of data communications for man/machine interfaces.	A			
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.2.a	Provide input/output functions for control/display.	D	DQT3.4	Operational Control	

APPENDIX B: NAS-SS-1000 VOLUME V
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.2.b	Display of color graphics with windowing and zoom features.	D	DQT2.11	Windows	
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.2.c	Configuration of NAS facilities/ services within a predetermined area.	D			
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.3.a	Review, control, and verify subsystem data, performance information and certification parameters.	D	DQT3.6	Certification	
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.3.b	Provide information available at various predetermined levels of specificity.	A			
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.4	Provide status of NAS sub-systems, equipment, available resources, and available communications connectivities.	D	DQT3	ALL	
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.5	Provide configuration information required for performance of maintenance activities.	D	DQT3	ALL	

APPENDIX B: NAS-SS-1000 VOLUME V
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.6	Provide the capability to prioritize status and alarm information, and provide visual/ aural indications for status/ alarm data.	D	DQT3.7	Status/Alarm Handling	
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.7	Provide alarm/alert indications in sufficient detail to allow determination of effects on system integrity.	D	DQT3.7	Status/Alarm Handling	
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.8	Provide the capability to disable the reporting of an alarm or alert.	D	DQT3.4, DQT3.9	Operational Control, System Response Time	
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.9	Provide the capability to deactivate alarm/alert indications.	D	DQT3.7	Status/Alarm Handling	
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.10	Provide the capability to verify and acknowledge alarms/alerts.	D	DQT3.7	Status/Alarm Handling	

APPENDIX B: NAS-SS-1000 VOLUME V
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.15	Provide the capability to initiate diagnostics or certification tests and report the results of these tests to the specialists.	D	DQT3.6	Certification	
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.16	Provide access to all management information function capabilities of the RMMS.	D	DQT3.6	Certification	
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.18	Provide the capability for storage and retrieval of predetermined checklists.	X			1
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.19	Provide utilization menus and checklists for input/output alternatives to the specialist.	X			1
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.20	Provide high resolution color display with graphics capabilities.	D	DQT2	ALL	
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.21	Provide access to an erasable electronic scratchpad.	D			

1 - Checklists have not yet been implemented.

APPENDIX B: NAS-SS-1000 VOLUME V
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
NAS-SS-1000 VOLUME V	3.2.1.1.8.1.22	Provide the capability to request access to monitoring control and data management functions as authorized by administrative directive.	D	DQT3.4	Operational Control	
NAS-SS-1000 VOLUME V	3.2.1.1.8.3	Interface functionally and physically with MPS.	L	DQT3	ALL	
NAS-SS-1000 VOLUME V	3.2.7.1	Automatic data processing of NAS subsystems shall be protected.	D	DQT3.4	Operational Control	
NAS-SS-1000 VOLUME V	3.4	Documentation for the NAS system, elements, sub-elements, and subsystems, including interfaces, shall be prepared, processed, and controlled in accordance with applicable standards and specifications.	I			
NAS-SS-1000 VOLUME V	3.5	NAS subsystem equipment shall be provided spare parts and consumables necessary for maintaining subsystem readiness and subsystem component repair.	I			

APPENDIX B: NAS-MD-794
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
NAS-MD-794	1.1	Provide clear, concise displays of the current status of all facilities.	D	DQT3	ALL	
NAS-MD-794	1.2	Provide access to all monitored facility logs, alarm and certification history data, waivers, key performance and/or certification parameter trends.	D	DQT3.3, DQT3.6 DQT3.10	Simultaneous WS Operation Certification Reporting	
NAS-MD-794	1.3	Provide the capability of selectively disabling or enabling notification of status changes as they occur.	D	DQT3.7	Status/Alarm Handling	
NAS-MD-794	1.5	Provide priority-conditioned notification of all facility alarms.	D	DQT3.7	Status/Alarm Handling	
NAS-MD-794	1.6	Provide a means to rapidly verify and acknowledge assigned facility alarms and/or "return to normal" messages.	D	DQT3.7	Status/Alarm Handling	
NAS-MD-794	1.7	Provide sufficient current information regarding monitored facility performance.	D	DQT3.7	Status/Alarm Handling	

APPENDIX B: NAS-MD-794
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
NAS-MD-794	1.10	Provide the capability to enter pertinent maintenance as well as certification statements into a monitored facility log.	D	DQT3.10	Reporting	
NAS-MD-794	1.11	Provide access to relevant security information in order to verify whether the MCC specialist attempting to perform facility certification transactions possesses the appropriate certification credentials.	D	DQT3.3	Simultaneous WS Operation	
NAS-MD-794	2.2	Provide information regarding historical trends in key performance and/or certification parameters of specified monitored facilities.	D	DQT3.6	Certification	
NAS-MD-794	2.4	Provide information regarding the performance of routine scheduled maintenance at specified monitored facilities.	D	DQT3.6	Certification	

APPENDIX B: NAS-MD-794
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
NAS-MD-794	2.5	Provide information regarding the certification of specified monitored facilities.	D	DQT3.6	Certification	
NAS-MD-794	2.6	Provide a computer-generated checklist of all facilities which will require shutdown for performance of routine scheduled maintenance.	X			1
NAS-MD-794	2.7	Provide a computer-generated checklist of all facilities for which certification will be required within a specified time interval.	X			1
NAS-MD-794	2.8	Provide a computer-generated checklist of all facilities within its area of jurisdiction for which certifications are overdue.	X			1
NAS-MD-794	2.9	Provide a computer-generated list of appropriate points of contact within the AF and AT field organizations.	X			1

1 - Checklists have not yet been implemented.

APPENDIX B: NAS-MD-794
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
NAS-MD-794	2.11	Provide access to computer generated information concerning maintenance logistics within the MCC area of jurisdiction.	X			1
NAS-MD-794	3.1	Provide the capability to transmit various types of control messages to monitored facilities.	D	DQT3.4	Operational Control	
NAS-MD-794	3.2	Provide computer-generated menus or checklists for each facility.	X			2
NAS-MD-794	3.4	Provide positive feedback that control actions taken have indeed produced desired results.	D	DQT3.4	Operational Control	
NAS-MD-794	4.2.6	Provide the means to electronically archive all relevant facility logs, performance and control data for later use in an accident/ incident investigation.	D	DQT3.3	Simultaneous WS Operation	

1 - This requirement has been deferred.
2 - Checklists have not yet been implemented.

APPENDIX B: NAS-MD-794
TEST VERIFICATION REQUIREMENTS TRACEABILITY MATRIX (TVRTM)

Reference Document	Paragraph Number and Title	Requirement Description	Verification Method	Cross Reference GMCC DQT&E Test Procedures		Notes
				Test ID	Test Name	
NAS-MD-794	4.4.1	Provide the capability to provide status display of all facilities.	D	DQT3.4	Operational Control	
NAS-MD-794	5.1	Provide the means to enter data as appropriate into electronic storage files designated the "MCC log".	X			1
NAS-MD-794	5.2	Provide the capability to make pertinent entries into facility logs for all monitored facilities.	D	DQT3.10	Reporting	
NAS-MD-794	5.3	Provide an erasable "scratch pad" electronic data file.	X			1

1 - Not currently implemented.

APPENDIX C - TEST CONDUCT FORMS

Test Name: DQT1 - COMPONENT INSPECTION, INITIALIZATION, INTEGRATION AND CHECKOUT

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
STATUS DISPLAY INSPECTION		
1. DP: Inspect monitor, keyboard, floppy and disk drives for any physical damage.		
Physical damage to any File Server components?	____	____
WORKSTATION COMPONENT INSPECTION		
2. WS1: Inspect monitor, keyboard floppy and disk drives for any physical damage.		
Physical damages to any workstation components?	____	____
3. WS2: Inspect monitor, keyboard floppy and disk drives for any physical damage.		
Physical damages to any workstation components?	____	____
4. WS3: Inspect monitor, keyboard floppy and disk drives for any physical damage.		
Physical damages to any workstation components?	____	____
FILE SERVER INSPECTION		
5. FS: Inspect monitor, keyboard, floppy and disk drives for any physical damage.		

Comments/Notes:

Test Name: DQT1 - COMPONENT INSPECTION, INITIALIZATION, INTEGRATION AND CHECKOUT

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
Physical damage to any File Server components?	____	____

PRINTER COMPONENT INSPECTION

6. PRN: Inspect dot matrix printer and required cables for any physical damage.

Physical damage to any printer components?	____	____

LAN INSPECTION

7. LAN: Inspect Network Access Units (NAU), Hub, bridge, cabling and the power supply required for the Starlan network.

Physical damage to any LAN components?	____	____

STATUS DISPLAY INITIALIZATION

8. Install the monitor, keyboard and computer components onto the GNAS site.

9. DP: Power on the monitor and computer of the Display processing workstation.

Display processing workstation operating as required?	____	____

WORKSTATION INITIALIZATION

10. WS1: Install the monitor, keyboard and computer components onto the GNAS site.

Comments/Notes:

Test Name: DQT1 - COMPONENT INSPECTION, INITIALIZATION, INTEGRATION AND CHECKOUT

Test Date: _____ Time: _____

Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
11. WS1:	Power on the monitor and computer of the General Purpose Workstation.		
	General Purpose Workstation operating as required?	____	____
12. WS2:	Install the monitor, keyboard and computer components onto the GNAS site.		
13. WS2:	Power on the monitor and computer of the General Purpose Workstation.		
	General Purpose Workstation operating as required?	____	____
14. WS3:	Install the monitor, keyboard and computer components onto the GNAS site.		
15. WS3:	Power on the monitor and computer of the General Purpose Workstation.		
	General Purpose Workstation operating as required?	____	____

FILE SERVER INITIALIZATION

16.	Install monitor, keyboard and computer components of the File Server to GNAS site.		
17. FS:	Power on the monitor and computer of the File Server.		

Comments/Notes:

Test Name: DQT1 - COMPONENT INSPECTION, INITIALIZATION, INTEGRATION AND CHECKOUT

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
	File Server operating as required?	____	____
PRINTER INITIALIZATION			
18.	Install the Dot Matrix Printer with cabling to the GNAS site (Use a previously installed workstation, or File server as a interface to the printer).		
19.	Power on the printer and the required printing source.		
20. PRN:	Send a command from the printing source to the printer to operate as required.		
	Printer operating as required?	____	____
LAN INITIALIZATION			
21. LAN:	The Starlan unit should be initialized and installed after all of the other components of the GMCC are installed in the configuration required for proper operation of the GMCC.	____	____
STATUS DISPLAY INTEGRATION			
22. DP:	Integrate the LAN components into each Display Processing workstation required to operate on the Starlan network.	____	____

Comments/Notes:

Test Name: DQT1 - COMPONENT INSPECTION, INITIALIZATION, INTEGRATION AND CHECKOUT

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
WORKSTATION INTEGRATION		
23. WS: Integrate the LAN components into each workstation that will operate on the Starlan network.	____	____
FILE SERVER INTEGRATION		
24. FS: Integrate the LAN components into each File Server that will operate on the Starlan network.	____	____
PRINTER INTEGRATION		
25. PRN: Configure the printer to a port on the File Server and integrate any necessary LAN components so that the printer may operate on the Starlan network.		
26. GMCC: Power on all components of GMCC.		
GMCC: Adverse effects due to new configuration?	____	____

Comments/Notes:

Test Completion Date: _____ Time: _____

TEST CONDUCT

Test Name: DQT2.1 - Network Administration Test

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

			YES	NO
1.	SRV:	Log on to server as "ROOT".		
2.	SRV:	Type "face" (in lower case).		
		FACE Main Menu displayed?	____	____
3.	SRV:	Cursor to System Administration Menu and press enter or F3.		
		FACE sub-menu displayed?	____	____
4.	SRV:	Cursor to Stargroup Administration Menu and press enter or F3.		
5.	SRV:	Cursor to Machine Info and press enter of F3.		
		Server machine information displayed?	____	____
6.	SRV:	Press F6 (Cancel).		
		FACE submenu displayed?	____	____
7.	SRV:	Cursor to Network Services and press enter or F3.		
8.	SRV:	Cursor to LAN Manager and press enter.		
9.	SRV:	Cursor to Display Activity Monitor and press enter.		
		Client status displayed?	____	____
10.	SRV:	Press cancel.		

Comments/Notes:

Test Name: DQT2.1 - Network Administration Test

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
11. SRV: Cursor to Show Shared Directories and press enter.		
Directory information displayed?	____	____
12. SRV: Exit FACE.		

Comments/Notes:

Test Completion Date: _____ Time: _____

TEST CONDUCT

Test Name: DQT2.2 - Local Area Network Checkout

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

			YES	NO
1.	FS:	Initialize File Server (Power on).	____	____
2.	DPWS:	Initialize display processing workstation (Power on).	____	____
3.	PRN:	Initialize printer (Power on).	____	____
	NOTE:	**Steps 1 - 44 will be performed simultaneously at all workstations.**		
4.	GPWS:	Record workstation number: _____		
5.	GPWS:	Initialize workstation (Power on).		
		StarLan network software loaded automatically?	____	____
6.	GPWS:	Logon to network as DQE (press "Enter" for the password).		
		"Logon successful" message displayed?	____	____
	NOTE:	**The autoexec.bat has be designed to automatically load MS-Windows and link to the server.**		
		MS-Windows environment displayed?	____	____
7.	GPWS:	Select the FILE menu.	____	____
8.	GPWS:	Select EXIT to exit Windows. DOS environment displayed?	____	____

Comments/Notes:

Test Name: DQT2.2 - Local Area Network Checkout

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
NETPROGRAM COMMANDS		
9. GPWS: Change DOS directory to D:\LANMAN.DOS\NETPROG.	____	____
10. GPWS: List servers linked to by client by entering NET VIEW.	____	____
Server Name displayed?	____	____
Record Server Name: _____		
11. GPWS: Send a message to all WS's by entering: NET SEND * "THIS IS A TEST".	____	____
NOTE: The receiving workstation must be in the DOS environment to display the message.		
"Message successfully sent" displayed?	____	____
Message received by workstation(s)?	____	____
12. GPWS: Display server and user information by entering NET.		
NET screen displayed?	____	____
13. GPWS: Select View ("Alt"-"V").	____	____
14. GPWS: Select Network Servers.	____	____
Servers available on Network displayed?	____	____
15. GPWS: Select Done.	____	____

Comments/Notes:

Test Name: DQT2.2 - Local Area Network Checkout

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
16. GPWS: Select View.	____	____
17. GPWS: Select This Workstation.	____	____
Network Resources in Use... displayed?	____	____
Device LPT1, N: etc. displayed?	____	____
Note: Drive L: has not been created.	____	____
18. GPWS: Select Done.	____	____
19. GPWS: Select Message.	____	____
20. GPWS: Select Send.	____	____
21. GPWS: Send a message to a workstation of your choice.		
"Send a message" displayed in bottom left hand corner of screen?	____	____
WS of your choice received message?	____	____
22. GPWS: Exit NET.	____	____
23. GPWS: Link to server and create a virtual drive L: by entering the following:		
ql l: \\04800368.serve\dqe		
"Linked successfully" message displayed?	____	____
24. GPWS: Enter NET to display server and user information.	____	____

Comments/Notes:

Test Name: DQT2.2 - Local Area Network Checkout

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
25. GPWS: Select View.	____	____
26. GPWS: Select This Workstation.	____	____
Network resources in use displayed which lists: L: \\04800368.serve\dqe?	____	____
27. GPWS: Exit NET.	____	____
28. GPWS: Unlink virtual drive L: by entering the following:		
ql unlink l:		
"Unlinked successfully" displayed?	____	____
29. GPWS: Enter NET to display server and user information.	____	____
30. GPWS: Select View.	____	____
31. GPWS: Select This Workstation.		
Network resources in Use... display does not list virtual drive L:?	____	____
32. GPWS: Exit NET.	____	____

NETWORK MONITORING AND TUNING

33. GPWS: Run the Network Access Unit (NAU) Statistics Program by entering NETSTAT.

Comments/Notes:

Test Name: DQT2.2 - Local Area Network Checkout

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
	Network statistics displayed?	____	____
34. GPWS:	Press F2 (Status) for Local NAU Session Status. Local NAU Session Status displayed?	____	____
35. GPWS:	Press F9 (Cancel).	____	____
36. GPWS:	Press F3 (Name) to display NAU name. NAU name displayed?	____	____
37. GPWS:	Press F9 (Cancel).	____	____
38. GPWS:	Exit NETSTAT program by pressing F10 (Exit).	____	____

RECONFIG PROGRAM

39. GPWS:	Run the Reconfig program by entering RECONFIG. Main Menu displayed?	____	____
	NOTE: DO NOT MODIFY ANY OF THE PARAMETERS		
40. GPWS:	Select Reconfigure Installed Network Software.		
	Path requested?	____	____
41. GPWS:	Press Enter.		
42. GPWS:	Select Miscellaneous Parameters. Parameters Screen displayed?	____	____

Comments/Notes:

Test Name: DQT2.2 - Local Area Network Checkout

Test Date: _____ Time: _____

Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
43. GPWS: Press F9 (Cancel).	____	____
44. GPWS: Press F10 (Exit). DOS environment displayed?	____	____

Comments/Notes:

TEST CONDUCT

Test Name: DQT2.3 - MS-DOS Software Checkout

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO

NOTE:THIS TEST WILL BE PERFORMED FROM ALL GMCC WORKSTATIONS.

1. GPWS: Start from the MS-DOS prompt (C:\>).

2. GPWS: Take a directory of C: and N:

   Is the directory listing displayed? ____ ____

3. GPWS: Enter: CLS

4. GPWS: Display the system date by entering DATE.

   Is the date displayed? ____ ____

5. GPWS: Display the system time by entering TIME.

   Is the system time displayed? ____ ____

6. GPWS: Display the MS-DOS Version by typing VER.

   "MS-DOS Version 3.3" displayed? ____ ____

7. GPWS: Display the drive C volume label by typing VOL.

   Is the volume label or the "Volume in drive C has no label" message displayed? ____ ____

8. GPWS: Execute the CHKDSK on drive c: utility by entering CHKDSK.

   Are disk, and memory status displayed for drive C? ____ ____

Comments/Notes:

Test Name: DQT2.3 - MS-DOS Software Checkout

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
9. GPWS: Display the contents of all directories on drive C by entering TREE.		
Directories and files listed on screen?	____	____

Comments/Notes:

Test Completion Date: _____ Time: _____

TEST CONDUCT

Test Name: DQT2.4 - UNIX V Software Checkout

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
1.	Start from the DOS prompt (c:>).		
	Run MS-Windows		
2.	Enter: Win		
3.	GPWS: From the MS-Windows menu, access DOS by select the DOS prompt icon.		
4.	DOS prompt displayed?	____	____
	Run Kermit		
5.	GPWS: Switch to drive N: (Enter: N:\).		
6.	GPWS: Enter: Kermit		
	Kermit introductory messages and prompt displayed?	____	____
	Note: host-name (server): _____		
7.	GPWS: Set up communications link with the host/server computer:		
	Enter: set port net "host-name"		
	Network Active message and Kermit prompt displayed?	____	____
8.	GPWS: Connect to host (enter: "C").		
	Unix introductory messages and login prompt displayed?	____	____
9.	GPWS: Enter required login & password strings.		

Comments/Notes:

Test Name: DQT2.4 - UNIX V Software Checkout

Test Date: _____ Time: _____

Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
	Access to Unix system successful (Unix System V introductory messages should be displayed)?	____	____
10. GPWS:	Display current directory (enter: pwd).		
	Current working directory displayed?	____	____
11. GPWS:	Display the time and date (enter: date).		
	System date and time displayed?	____	____
12. GPWS:	Display users logged onto system (enter: who).		
	Your login name appears on the list?	____	____
	Login, terminal ID, and login time displayed?	____	____
13. GPWS:	Create a directory entitled "GNAS_TST" (enter: mkdir GNAS_TST).		
14. GPWS:	Display directory of present prompt (enter: ls).		
	"GNAS_TST" displayed in listing?	____	____
15. GPWS:	Move to "GNAS_TST" enter: cd GNAS_TST).		
16. GPWS:	Confirm present location (enter: pwd).		
	Move successful?	____	____

Comments/Notes:

Test Name: DQT2.4 - UNIX V Software Checkout

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
I/O Redirection		
17. GPWS: Sort the following names in alphabetically order (Enter: Sort).		
Blinking cursor displayed on blank line?	____	____
18. GPWS: Enter these names (press "Enter" after each name): ZACK, WILSON, JOE, APRIL		
19. GPWS: Execute (enter: "Ctrl"-"D")		
Name list repeated in alphabetical order?	____	____
20. GPWS: Redirect output from the command "who" to a file entitled "users".		
Enter: who > users		
21. GPWS: Display the contents of users (enter: cat users).		
Redirection of output successful?	____	____
Exit Unix		
22. GPWS: Enter "Ctrl"-"]", "C"		
Kermit prompt displayed?	____	____
23. GPWS: Type "Exit".		
MS-Windows menu displayed?	____	____

Comments/Notes:

Test Completion Date: _____ Time: _____

TEST CONDUCT

Test Name: DQT2.5 - Microsoft Excel Software Checkout

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
Logon account "DQE"		
1. GPWS: Reboot system. Logon as DQE (press "enter" for the password).		
2. GPWS: Start from the MS-Windows environment (window entitled "Program Manager").		
3. GPWS: Enter DOS shell from windows by selecting and running the "Dos Prompt" icon (within the Main window).		
DOS environment displayed?	____	____
4. GPWS: Switch to the "D:\LANMAN.DOS\NETPROG" directory.		
Directory change successful (type dir/p)?	____	____
Establish a link to server		
5. GPWS: Enter the following command line to link drive "M" to the server:		
ql M: \\04800368.serve\dqe		
GPWS: Link successful message displayed?	____	____
Return to MS-Windows		
GPWS: Type "Exit".		
GPWS: MS-Windows environment displayed?	____	____

Comments/Notes:

Test Name: DQT2.5 - Microsoft Excel Software Checkout

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
Run Excel		
6. GPWS: Select and run ("double click" the "Microsoft Excel" Icon within the application window "Tandem Appications".		
Excel menu screen showing with default file "sheet1" displayed?	____	____
7. GPWS: Select the "File" menu category and the "open" option.		
Dialog Box shown?	____	____
8. GPWS: Select and open the "Excel" directory with the mouse (double click on item)		
GPWS: Directory listing of Excel displayed?	____	____
9. GPWS: Select and open the "Excelcbt" directory with the mouse (double click on item)		
GPWS: Directory listing of Excelcbt displayed?	____	____
Select and Open "bluesky"		
10. GPWS: Scan through file list with the mouse/keyboard until the file entitled "bluesky" is located, highlight this file.		
11. GPWS: Open this file by pressing the "Enter" key or clicking the "OK" area with the mouse.		

Comments/Notes:

Test Name: DQT2.5 - Microsoft Excel Software Checkout

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
File "bluesky" displayed on the screen?	____	____
12. GPWS: Enter the following line in file "bluesky": This is an edited document.		
Save File (on server drive)		
13. GPWS: Select the "File" menu category and the "Save As" option.		
14. GPWS: Save file bluesky as "Exctst" on the server drive "M:".		
15. GPWS: Save successful?	____	____
Verify file creation		
16. GPWS: Using the "File Manager" window display the contents of drive "M".		
File "Exctst" exists on drive "M"?	____	____
Print file "Exctst"		
17. GPWS: Select the "File" menu category and the "Print" option.		
18. GPWS: Print from printer designated as "LPT1:".		
Print successful?	____	____
Close File		

Comments/Notes:

Test Name: DQT2.5 - Microsoft Excel Software Checkout

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
19. GPWS: With the mouse, select the tab in the upper left corner of the window for the file "Exctst".		
Menu shows "CLOSE" category?	____	____
20. GPWS: Select "CLOSE" category.		
Window for "Exctst" still displayed?	____	____
Exit Excel		
21. GPWS: Select the tab in the upper left corner of the window for Excel.		
Menu displays exit from Excel category?	____	____
22. GPWS: Select "Close" or "Exit".		
Excel window removed?	____	____

Comments/Notes:

Test Completion Date: _____ Time: _____

TEST CONDUCT

Test Name: DQT2.6 - MicroGate 6530 Emulator Checkout

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
1.	GPWS: Access Windows.	____	____
2.	GPWS: Select and display the "Tandem Applications" window.	____	____
3.	GPWS: Select and run the "Tandem MMS1" icon.	____	____
	MMS environment displayed?	____	____
4.	GPWS: Logon to system. Logon successful?	____	____
5.	GPWS: Logoff system by press F6 (LOG OFF).		
	MMS environment displayed?	____	____
6.	GPWS: Exit MMS1 environment (Type "Ctrl"-"End").		
	MS-Windows environment displayed?	____	____
7.	GPWS: Select and run the "Tandem MMS2" icon.		
	MMS environment displayed?	____	____
8.	GPWS: Logon to system. Logon successful?	____	____
9.	GPWS: Press F1 (GO TO MCS). IMCS Constant Monitor displayed?	____	____

Comments/Notes:

Test Completion Date: _____ Time: _____

TEST CONDUCT

Test Name: DQT2.6 - MicroGate 6530 Emulator Checkout

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
10. GPWS: Press F16 (Exit).	____	____
11. GPWS: Press SF16 to exit IMCS. Returns to MMS?	____	____
12. GPWS: Logoff system by pressing F6 (LOG OFF). MMS environment displayed?	____	____
13. GPWS: Exit MMS2 environment (Type "Ctrl"-"End"). MS-Windows environment displayed?	____	____
14. GPWS: Select and run the "Tandem TACL" icon. Tandem TACL prompt displayed?	____	____
15. GPWS: Logon to system (Enter: Logon name). Logon to successful?	____	____
16. GPWS: List files by typing FILES. Files listed?	____	____
17. GPWS: Display file information by typing FUP INFO *. File information displayed?	____	____
18. GPWS: Logoff system (Enter: Logoff). Logoff successful?	____	____

Comments/Notes:

Test Completion Date: _____ Time: _____

Test Name: DQT2.6 - MicroGate 6530 Emulator Checkout

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
19. GPWS: Exit from TACL (Type "Ctrl"-"End").		
MS-Windows environment displayed?	____	____

Comments/Notes:

Test Completion Date: _____ **Time:** _____

TEST CONDUCT

Test Name: DQT2.7 - Superbase 4 Software Checkout

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
1. GPWS: Start from the MS-Windows environment, from the window entitled "Program Manager".		
2. GPWS: Select and run the "Superbase 4" icon within the window entitled "Tandem Applications"		
Superbase 4 environment displayed with introductory screen showing?	____	____
3. GPWS: With the mouse/keyboard select the "File" menu category and the "Open" option. Dialog Box shown?	____	____

Select and Open "SB4MODEL"

4. GPWS: Scan through directory list until the directory entitled "SB4MODEL" is highlighted.		
5. GPWS: Display this directory by pressing the "Enter" key or clicking the "OK" area with the mouse.		
6. GPWS: Scan through listing. Highlight and display the "Inventory" directory as done in steps (4) - (5).		
Inventory directory displayed?	____	____

Open file "Product"

Comments/Notes:

Test Name: DQT2.7 - Superbase 4 Software Checkout

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
7. GPWS: Highlight and open the file entitled "Product" as done previously.		
File "Product" displayed on screen?	____	____
Scan file		
8. GPWS: Place mouse on the "single-arrow pointing right" button at the bottom of the window (located in the seventh box from the left)		
9. GPWS: Click mouse button (B1) to advance to the next record.	____	____
Next record displayed?	____	____
10. GPWS: Repeat the last step for the rest of file "Product".	____	____
"End of File" message displayed (bottom of screen) after the last record?	____	____
11. GPWS: Scan through "Product" in the opposite direction using the "single-arrow pointing left" button at the bottom of the window (fifth box from the left).		
Scan in opposite direction successful?	____	____
Pause Button		
12. GPWS: Place mouse on the first box at bottom left of screen.		

Comments/Notes:

Test Name: DQT2.7 - Superbase 4 Software Checkout

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
13. GPWS: Select button with mouse.		
Pause message displayed?	____	____
14. GPWS: Re-select the same button.		
Ready message displayed?	____	____
Display Record Key Menu		
15. GPWS: Select box with the "?" sign in it.		
Record key dialog box displayed?	____	____
16. GPWS: Select cancel.		
Display Filter Menu		
17. GPWS: Place mouse on and select the box with the "=" sign in it.		
"Filter dialog box" displayed?	____	____
18. GPWS: Select cancel.		
Close file "Product"		
19. GPWS: Select upper left corner tab in the window of file "Product".		
20. GPWS: Select close.		
Superbase 4 window removed?	____	____

Comments/Notes:

TEST CONDUCT

Test Name: DQT2.8 - PackRat Software Checkout

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
1. GPWS: Access WINDOWS.		
2. GPWS: Access Packrat.		
3. GPWS: Activate the "Help" menu with the mouse arrow (press button 1 to select).		
Submenu displays three help categories entitled "General", Context F1", and "About"?	____	____
4. GPWS: Select the "About" category.		
Is the following information displayed?	____	____
Packrat version number 2.0?	____	____
Serial number?	____	____
Number of users available?	____	____
5. GPWS: Select the "OK" button.		
"About" help window removed?	____	____
Exit Packrat		
6. Select the "File" menu category and the "Exit" option.		
GPWS: Packrat menu-window removed?	____	____

Comments/Notes:

Test Completion Date: _____ Time: _____

TEST CONDUCT

Test Name: DQT2.9 - Back-It Software Checkout

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
1. GPWS: Start from the MS-Windows environment, from the window entitled "Program Manager".		
2. GPWS: Display the window entitled "Non Windows Applications"		
3. GPWS: Select and run the icon entitled "Back-It".		
Menu screen with Back-It version number (3.1), manufacturer (Gazelle Systems), copyright date (1989), and the current time and date showing at the bottom of the screen?	____	____
Menu screen with eight categories (Backup, Restore,... Other) displayed at the top of the menu screen?	____	____
4. GPWS: Toggle the display of help instructions (on/off) (Press **F1** function key).		
Help information displayed when toggled?	____	____
Format Floppy		
5. GPWS: Highlight the "FORMAT" category (with arrow keys select "Other" then "FORMAT".		
6. GPWS: Select this category by pressing the return/enter key.		
"FORMAT" category selected?	____	____

Comments/Notes:

Test Name: DQT2.9 - Back-It Software Checkout

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
7.	GPWS: Enter drive (B:\) to format.		
8.	GPWS: Select formatting options for a 1.2 MB drive and 1.2 MB floppy disk (DSHD).		
9.	GPWS: When prompted insert the proper floppy into the specified floppy drive.		
	Correct options to format floppy specified?	____	____
10.	GPWS: Start format procedure by pressing the specified key.		
	Format in progress message displayed?	____	____
	NOTE: Statistics should be displayed on the screen during the format procedure (e.g. %Completion, files, etc.)		
	Statistics displayed during format?	____	____
	Confirmation message indicates a successful format?	____	____
11.	GPWS: Enter the DOS shell by pressing the "F2" key. DOS environment displayed?	____	____
12.	GPWS: Switch to drive "B:" by entering B: Drive accessibility accomplished?	____	____
	Return to Back-It's Main Menu		
13.	GPWS: Press the "Esc" or "Enter" key. Main Menu screen displayed?	____	____

Comments/Notes:

Test Name: DQT2.9 - Back-It Software Checkout

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO

Directory Backup to Floppy

14. GPWS: Select "BACKUP" (Press "Esc" first) category.

15. GPWS: Specify a backup from the "D:" drive to the floppy ("B:") drive.

16. GPWS: Select the "Directories" category (move cursor to and press "Enter").

17. GPWS: Mark directory D:\DIAG for back up on drive "B".

Directory marked? ____ ____

Start Backup

18. GPWS: Select category "Backup" and press "Enter" (twice).

Backup in progress message(s) displayed? ____ ____

Note: A backup completion message should be displayed when backup is complete.

Backup completion message displayed? ____ ____

Note: When backup completion message is displayed, note whether the floppy drive access light is on.

Floppy drive access light on? ____ ____

Verify Backup

Comments/Notes:

Test Name: DQT2.9 - Back-It Software Checkout

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
19. GPWS: Enter the DOS shell (press "F2" key).		
DOS environment displayed?	____	____
20. GPWS: Switch to "B" drive. Enter: B:		
21. GPWS: Enter: dir/w		
Directory listing shows files and time of backup?	____	____
22. GPWS: Type "Esc" to exit DOS shell.		
23. GPWS: Press the "F10" key to exit Back-It.		
DOS environment displayed?	____	____

Comments/Notes:

TEST CONDUCT

Test Name: DQT2.10 - Word for Windows Checkout

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
1.	GPWS: Start from the MS-Windows environment from the window entitled "Program Manager".		
2.	GPWS: Select the Tandem Application Window.		
3.	GPWS: Select and run the "Microsoft Word" icon.		
4.	GPWS: Select the "FILE" Menu.		
5.	GPWS: Select "Printer Setup".		
	Note: Ensure printer is set for AMTACEL-500 on LPT1.		
6.	GPWS: Select OK.		
7.	GPWS: Type "This is a test of the network printing cababilites" <enter><enter> "This text should be printed on the printer when it is requested from the workstation.		
8.	GPWS: Select File Menu.		
9.	GPWS: Select Print.		
	Text is printed?	____	____
10.	GPWS: Save Text as DQT_TEST on L: drive.		
	Text saved on drive L:?	____	____
11.	GPWS: Exit MS-Word.		

Comments/Notes:

TEST CONDUCT

Test Name: DQT2.11 - MS Windows Software Checkout

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO

NOTE: Requirements have been verified during DQT2.2 through DQT2.12 and DQT 3.11.

Comments/Notes:

TEST CONDUCT

Test Name: DQT3.1 - Full Service System State Initialization

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
PREPARE GMCC FOR FULL SERVICE SYSTEM STATE VERIFICATION		
1. Power down all General Purpose Workstations.		
2. Power down all Display Processing Workstations.		
3. Power down File Server.		
4. Power down Printer.		
GMCC: All power down procedures successful?	____	____
5. Configure General Purpose Workstations for required operation.		
6. Configure Display Processing Workstation for required operation.		
7. Configure the File Server for required operation.		
8. Configure Display Processing Workstation for required operation.		
9. Configure printer for required operation.		
10. Power on the GMCC.		
GMCC: Software Initialization process begun?	____	____

NOTE: RECORD ALL ERROR MESSAGES UPON SOFTWARE INITIALIZATION.

Comments/Notes:

TEST CONDUCT

Test Name: DQT3.2 - MPS Software Compatibility

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO

NOTE: REQUIREMENTS FOR THIS TEST ARE SATISFIED DURING THE CONDUCT OF DQT3.3 THROUGH DQT 3.11

Comments/Notes:

Test Completion Date: _____ Time: _____

TEST CONDUCT

Test Name: DQT3.2 - MPS Software Compatibility

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO

NOTE: REQUIREMENTS FOR THIS TEST ARE SATISFIED DURING THE CONDUCT OF DQT3.3 THROUGH DQT 3.11

Comments/Notes:

Test Completion Date: _____ Time: _____

TEST CONDUCT

Test Name: DQT3.3 - Simultaneous Workstation Operations

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

			YES	NO
	IMCS:	Configured as required?	____	____
1.		Configure an ATCBI-5 CD-1 RMS Simulator as BEN ATCBI.	____	____
2.		Configure the LM1 Protocol Analyzer to monitor and capture data for the RMS. Open a data file and name it DQT3_3	____	____
3.	GPWS:	Access Windows.	____	____
4.	GPWS:	Access the Tandem Applications window.	____	____
5.	GPWS:	Access MMS1.		
		MMS environment displayed?	____	____
6.	GPWS:	Log on to MMS by entering valid security parameters. Log on successful?	____	____
7.	GPWS:	Enter MCS in the GO TO field and press F1 (GO TO). Displays IMCS constant monitor screen?	____	____
		Displays active alarms of monitored facilities?	____	____

NON-SPECIFIC SITE MONITORING

Alarm Acknowledgement

8.	RMS:	To ensure at least 1 alarm is present, from the Main Menu, Press F4 (IFRM) then F1 (alarm) to induce an alarm.	____	____

Comments/Notes: GPWS is the GMCC General Purpose Workstation.

Test Name: DQT3.3 - Simultaneous Workstation Operations

Test Date: Time: _____
Test Configuration Figure: _____ Test Engineer: _____

			YES	NO
9.	GPWS:	Displays the alarm?	____	____
10.	LM-1:	Alarm observed on the data line?	____	____
11.	GPWS:	Tab to alarm and Press F5 (Alarm Ack).	____	____
12.	GPWS:	Enter valid security parameters (Sector Code, Technician's Initials, and Password) and press F5 (Alarm Ack).		
		"Alarm successfully acknowledged" displayed?	____	____
13.	GPWS:	Acknowledged alarm removed from the constant monitor screen after next screen update?	____	____
14.	RMS:	Press F1 (Alrm) to send a corresponding RTN for the ATCBI-5.	____	____
	LM-1:	RTN observed on the data line?	____	____
15.	GPWS:	Press F4 (Alarm List). Displays active alarms screen?	____	____
16.	GPWS:	Press F16 (Exit). Displays constant monitor screen?	____	____

Site Directory/Site Status Screens for Non-Specific Site

17.	GPWS:	Press F3 (Site Directory).		
		Displays site directory screen with all remote sites currently being monitored?	____	____
18.	GPWS:	Tab to the BEN ATCBI site.	____	____

Comments/Notes: GPWS is the GMCC General Purpose Workstation.

Test Name: DQT3.3 - Simultaneous Workstation Operations

Test Date: Time: _____
Test Configuration Figure: _____ Test Engineer: _____

			YES	NO
19.	GPWS:	Press F3 (Site Info). Displays Site Information Screen?	____	____
20.	GPWS:	Press SF13 (Exit). Returns to the Constant Monitor Screen	____	____
		All Status Command		
21.	GPWS:	Press F3 (Site Directory).	____	____
22.	GPWS:	Tab to the BEN ATCBI site and press F1 (Site Status) to access the Site Status Main Menu.	____	____
23.	GPWS:	Tab to SITE CONFIGURATION and press F1 (Site Status).	____	____
24.	GPWS:	Press F7 (Command) to access the Command List screen.	____	____
25.	GPWS:	Enter valid security parameters Sector Code, Technician Initials and Password.	____	____
26.	GPWS:	Press F1 (Retrieve Command List) to access the Command List screen.	____	____
27.	GPWS:	Tab to ALL STATUS command. Press F1 (Send Command).	____	____
	LM-1:	Command observed on the data line?	____	____
		Displays 'SENDING COMMAND TO SITE LOCATION', waits, and then responds with 'COMMAND RECEIVED BY SITE'?	____	____

Comments/Notes: GPWS is the GMCC General Purpose Workstation.

Test Name: DQT3.3 - Simultaneous Workstation Operations

Test Date: Time: _____
Test Configuration Figure: _____ Test Engineer: _____

			YES	NO
28.	RMS:	Returns Site Data Reports for all Logical Units which respond to a scheduled poll?	____	____
29.	GPWS:	Press F16 (Exit) to return to the Site Configuration Site Status screen.	____	____
		Updates status of DPs displayed?	____	____
Status Command				
30.	GPWS:	Press F7 (Command) to access the Command List screen.	____	____
31.	GPWS:	Enter valid security parameters and press F1 (Retrieve Command List) to access the Command List screen.	____	____
32.	GPWS:	Tab to the STATUS command and press F1 (Send Command).		
	LM-1:	Command observed on the data line?	____	____
		Displays 'SENDING COMMAND TO SITE LOCATION', waits and then responds with 'COMMAND RECEIVED BY SITE'?	____	____
33.	RMS:	Returns a SDR for LU 20?	____	____
34.	GPWS:	Press F16 (Exit) to return to the Site Configuration Site Status Screen.	____	____
		Updates the status of the LU20 data points on the Site Configuration status screen?	____	____

Comments/Notes: GPWS is the GMCC General Purpose Workstation.

Test Name: DQT3.3 - Simultaneous Workstation Operations

Test Date: Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
35.	GPWS: Press SF13 to return to the IMCS Constant Monitor Screen.	____	____

IMCS UTILITY SUBSYSTEM

36.	GPWS: Press F7 (UTILITY). Enter security parameters (Sector, Technicians Initials, and Password).		
	Utility Menu Screen displayed with the following submenus:		
	Data Base Enable	____	____
	Adapt Facilities	____	____
	Archive History		
	Archive User History		
37.	GPWS: Press F13 (Exit) to return to the MCS Constant Monitor Screen.	____	____

IMCS REPORT SUBSYSTEM

38.	GPWS: Press F8 (Report) to access the report function.		
	Report Menu Screen displayed with the following submenus:		
	Current Status		
	History	____	____
	User History	____	____
39.	GPWS: Press F1 (Current Status) to access the Current Status function.		

Comments/Notes:

Test Name: DQT3.3 - Simultaneous Workstation Operations

Test Date: Time: _____
Test Configuration Figure: _____ Test Engineer: _____

			YES	NO
		Displays Current Status Report Screen?	____	____
40.	GPWS:	Enter BEN ATCBI for site and type ID.	____	____
41.	GPWS:	Enter "2000" as the Starting LUID.	____	____
42.	GPWS:	Enter "2200" as the Ending LUID.	____	____
43.	GPWS:	Enter "$S.#DEFAULT" as Report Destination.	____	____
44.	GPWS:	Enter valid Technician Initials.	____	____
45.	GPWS:	Press F1 (Generate Report) to generate the report.		
		Message "REPORT INITIATED" displayed?	____	____
46.	PTR:	Prints the Current Status report for ATCBI-5?	____	____
47.	GPWS:	Press SF16 twice to exit IMCS. Returns to MMS Main Menu?	____ ____	____ ____

MMS OPERATIONS

48.	GPWS:	Log on to the MMS Main Menu.	____	____

Display Security Information

49.	GPWS:	Enter ADM in F1 = GO TO field and press F1.		
		MMS Administration Subsystem Menu Displayed?	____	____

Comments/Notes:

Test Name: DQT3.3 - Simultaneous Workstation Operations

Test Date: Time: _____
Test Configuration Figure: _____ Test Engineer: _____

			YES	NO
50.	GPWS:	Enter ACC in the F1 = GO TO field and press F1.		
		Displays the ACCESS ID MAINTENANCE screen?	____	____
51.	GPWS:	Enter data for SECTOR and INITIALS fields: SECTOR: _____ INITIALS: _____		
52.	GPWS:	Press F7 to retrieve this record. Displays information except PASSWORD?	____	____
53.	GPWS:	Press F4 to return to MMS main menu. MMS Main Menu displayed?	____	____
MMS LOGGING SUBSYSTEM				
54.	RMS:	Generate several alarm messages.	____	____
55.	GPWS:	Enter LRM in the GOTO field and press F1 (GO TO) to access the Acknowledge Alarms function.	____	____
		Displays the LRM log entry screen?	____	____
56.	GPWS:	Press F5 (ALARM) to access the Remote Alarms screen.	____	____
57.	GPWS:	Tab to an alarm to be acknowledged and press F1 (GO TO LRM) to have a log entry created.	____	____
58.	GPWS:	Enter valid data in the following fields:		

Comments/Notes:

Test Name: DQT3.3 - Simultaneous Workstation Operations

Test Date: Time: _____
Test Configuration Figure: _____ Test Engineer: _____

			YES	NO
		OPEN/START HH MM SS: HH_____ ACTION: O PASSWORD: (USER'S) COMMENTS: (Date and time of alarm)		
59.	GPWS:	Press F8 (ADD) to add the log entry. If necessary, press F8 (Add anyway) again.		
		Log entry is added?	____	____
60.	GPWS:	Record Log ID number which is displayed at the bottom of the screen. LOG ID NUMBER: _____		
61.	GPWS:	Press F1 (GOTO LRM) to access the LRM function.		
		Alarm is acknowledged?	____	____
62.	GPWS:	Press F1 (GO TO LRM).	____	____
63.	GPWS:	Press F7 (Retrieve).		
64.	GPWS:	Enter Log ID # and password and press F7 (Retrieve).		
		Log record retrieved?	____	____
			____	____
65.	GPWS:	Press SF10 to delete log entry. Delete successful?	____	____
66.	GPWS:	Press F4 (MMS MENU) to return to the MMS Main Menu.		

MMS REPORT SUBSYSTEM

Comments/Notes:

Test Name: DQT3.3 - Simultaneous Workstation Operations

Test Date: Time: _____
Test Configuration Figure: _____ Test Engineer: _____

			YES	NO
67.	GPWS:	Enter REP in the GOTO field and press F1 (GOTO to access the Report Generation function.		
		Displays Report Generation screen?	____	____
68.	GPWS:	Enter valid data in the following fields: Report Name: LOGALL Start Date: TODAYS DATE REGION: SO Sector: 56K		
69.	GPWS:	Press F10 (PRODUCE REPORT) to generate the report.	____	____
70.	GPWS:	Press F12 (REPORT STATUS) to access the Report Status screen.		
		Displays Report Status screen?	____	____
71.	GPWS:	Enter LOC #DEFAULT and press ENTER key to print the report.		
	LP:	Prints LOGALL report?	____	____
72.	GPWS:	Enter E and press ENTER key to return to the Report Generation screen.	____	____
73.	GPWS:	Press F4 (MMS MENU) to return to the MMS Main Menu screen.	____	____
74.	GPWS:	Press F6 to LOGOFF of MMS.	____	____

Comments/Notes:

Test Name: DQT3.3 - Simultaneous Workstation Operations

Test Date: Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
75.	GPWS: Press <CNTRL> <END> to return to windows.	____	____

Comments/Notes:

TEST CONDUCT

Test Name: DQT3.4 - GMCC Operational Control

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
	IMCS: Configured as required?	____	____
1.	Configure an ATCBI-5 CD-1 RMS Simulator as BEN ATCBI.	____	____
2.	Configure the LM1 Protocol Analyzer to monitor and capture data for the RMS. Open a data file and name it DQT3_4.	____	____
3.	GPWS: Access Windows.	____	____
4.	GPWS: Access the Tandem Applications window.	____	____
5.	GPWS: Access MMS1.	____	____
	MMS environment displayed?	____	____
6.	GPWS: Log on to MMS by entering valid security parameters.	____	____
	Log on successful?	____	____
7.	GPWS: Enter MCS in the GO TO field and press F1 (GO TO).		
	Displays IMCS constant monitor screen?	____	____
	Displays active alarms of monitored facilities?	____	____
8.	GPWS: Press F3 (Site Directory).	____	____
9.	GPWS: Tab to the BEN ATCBI site and press F1 (Site Status) to access the Site Status Main Menu.	____	____

Comments/Notes:

Test Name: DQT3.4 - GMCC Operational Control

Test Date: _____ Time:
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
ATCBI-5 SITE STATUS MONITORING		
ATCBI-5 Certification Parameters		
10. GPWS: Tab to ATCBI Certification Parameters and press F1 (Site Status). Displays Site Status screen for ATCBI Certification Parameters?	____	____
11. GPWS: Press F7 (Command) to access the Command List screen.	____	____
12. GPWS: Enter valid Sector Code, Technician Initials and Password.	____	____
13. GPWS: Press F1 (Retrieve Command List) to access the Command List screen.	____	____
14. GPWS: Tab to CHANNEL SELECT command and Press F1 (Send Command). Displays 790 Parameters screen for ATCBI CHANNEL SELECT command?	____	____
15. GPWS: Enter 1 (CH-1) and Press F1 (Send Command/Parameters). Displays 'SENDING COMMAND TO SITE LOCATION', waits, and then responds with 'COMMAND RECEIVED BY SITE"?	____	____
16. RMS: Indicates receipt of command?	____	____

Comments/Notes:

Test Name: DQT3.4 - GMCC Operational Control

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
17. GPWS: Press F16 twice (Exit) to return to the Certification Parameters Site Status screen.	____	____
18. GPWS: Updates the status of LU24 DP 58 (selected)?	____	____
19. GPWS: Press F16 (Exit) to return to Site Status screen.	____	____
Site Configuration		
20. GPWS: Tab to SITE CONFIGURATION and press F1 (Site Status).	____	____
21. GPWS: Press F7 (Command) to access the Command List screen.	____	____
22. GPWS: Enter invalid Sector Code, Technician Initials and Password.		
Message indicating invalid security access?	____	____
23. GPWS: Enter valid Sector Code, Technician Initials and Password.	____	____
24. GPWS: Press F1 (Retrieve Command List) to access the Command List screen)	____	____
25. GPWS: Tab to the STATUS command and press F1 (Send Command).		
Displays 'SENDING COMMAND TO SITE	____	____

Comments/Notes:

Test Name: DQT3.4 - GMCC Operational Control

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
	LOCATION', waits, and then responds with 'COMMAND RECEIVED BY SITE'?		
26. RMS:	Returns a SDR for LU 20?	____	____
27. GPWS:	Press F16 (Exit) to return to the Site Status screen.	____	____
28. GPWS:	Updates the status of the LU20 data points on the Site Configuration status screen?	____	____
29. GPWS:	Press F16 (Exit) to return to the Site Status Main Menu screen.	____	____
ATCBI-5 Channel 1 Status			
30. GPWS:	Tab to ATCBI-5 CHANNEL 1 STATUS and press F1 (Site Status).	____	____
31. GPWS:	Press F7 (Command) to access the Command List screen.	____	____
32. GPWS:	Enter valid Sector Code, Technician Initials and Password.	____	____
33. GPWS:	Press F1 (Retrieve Command List) to access the Command List screen.	____	____
34. GPWS:	Tab to the CH 1 STATUS command and press F1 (Send Command).		
	Displays 'SENDING COMMAND TO SITE LOCATION', waits then responds with 'COMMAND RECEIVED BY SITE'?	____	____

Comments/Notes:

Test Name: DQT3.4 - GMCC Operational Control

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
35. RMS: Indicates receipt of the command?	____	____
36. GPWS: Press F16 (Exit) to return to the Channel 1 Site Status screen.	____	____
37. GPWS: Updates the status of the ATCBI-5 Channel 1 Status screen?	____	____
38. GPWS: Press F16 (Exit to return to the Site Status Main Menu screen.		
ATCBI-2 Channel 2 Status		
39. GPWS: Tab to ATCBI-5 Channel 2 STATUS and press F1 (Site Status).	____	____
40. GPWS: Press F7 (Command) to access the Command List screen.	____	____
41. GPWS: Enter valid Sector Code, Technician Initials and Password.	____	____
42. GPWS: Press F1 (Retrieve Command List) to access the Command List screen.	____	____
43. GPWS: Tab to the CH2 STATUS command and press F1 (Send Command).		
Displays 'SENDING COMMAND TO SITE LOCATION', waits, and then responds with 'COMMAND RECEIVED BY SITE'?	____	____
44. RMS: Indicates receipt of the command?	____	____

Comments/Notes:

Test Name: DQT3.4 - GMCC Operational Control

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
45. GPWS: Press F16 (Exit) to return to the Channel 2 Site Status screen.	____	____
Updates the status of the ATCBI-5 Channel 2 Status screen?	____	____
46. GPWS: Press F16 (Exit) to return to the Site Status Main Menu screen.		
Common Digitizer 1 Status		
47. GPWS: Tab to COMMON DIGITIZER 1 STATUS and press F1 (Site Status).	____	____
48. GPWS: Press F7 (Command) to access the Command List screen.	____	____
49. GPWS: Enter valid Sector Code, Technician Initials and Password.	____	____
50. GPWS: Press F1 (Retrieve Command List) to access the Command List screen.	____	____
51. GPWS: Tab to the STATUS command and press F1 (Send Command).		
Displays 'SENDING COMMAND TO SITE LOCATION', waits, and then responds with 'COMMAND RECEIVED BY SITE'?	____	____
52. RMS: Returns an SDR for LU 28?	____	____
53. GPWS: Press F16 (Exit) to return to the CD-1 Site Status screen.	____	____

Comments/Notes:

Test Name: DQT3.4 - GMCC Operational Control

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
	Updates the status of the CD-1 Status screen?	____	____
54. GPWS:	Press F16 (Exit) to return to the Site Status Main Menu screen.	____	____
Azimuth Data Unit Status			
55. GPWS:	Tab to AZIMUTH DATA UNIT STATUS and press F1 (Site Status).	____	____
56. GPWS:	Press F7 (Command) to access the Command List screen.	____	____
57. GPWS:	Enter valid Sector Code, Technician Initials and Password.	____	____
58. GPWS:	Press F1 (Retrieve Command List) to access the Command List screen.	____	____
59. GPWS:	Tab to the STATUS command and press F1 (Send Command).		
	Displays 'SENDING COMMAND TO SITE LOCATION', waits, and then responds with 'COMMAND RECEIVED BY SITE'?	____	____
60. RMS:	Returns SDR for LU 29?	____	____
61. GPWS:	Press F16 (Exit) to return to the ADU Site Status screen.		
	Updates the status of the ADU Status	____	____

Comments/Notes:

Test Name: DQT3.4 - GMCC Operational Control

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
	screen?		
62. GPWS:	Press F16 (Exit) to return to the Site Status Main Menu screen.	____	____
Engine Generator Status			
63. GPWS:	Tab to ENGINE GENERATOR STATUS and press F1 (Site Status).	____	____
64. GPWS:	Press F7 (Command) to access the Command List screen.	____	____
65. GPWS:	Enter valid Sector Code, Technician Initials and Password.	____	____
66. GPWS:	Press F1 (Retrieve Command List) to access the Command List screen.	____	____
67. GPWS:	Tab to the STATUS command and press F1 (Send Command).		
	Displays 'SENDING COMMAND TO SITE LOCATION', waits, and then responds with 'COMMAND RECEIVED BY SITE'?	____	____
68. RMS:	Returns SDR for LU 22?	____	____
69. GPWS:	Press F16 (Exit) to return to the Site Status screen.	____	____
	Updates the status of the ENG GEN Status screen?	____	____

Comments/Notes:

Test Name: DQT3.4 - GMCC Operational Control

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
70. GPWS:	Press F16 (Exit) to return to the Site Status Main Menu screen.		
71. GPWS:	Tab to Engine Generator Status and press F1 (Site Status).	____	____
72. GPWS:	Press F7 (Command) to access the Command List screen.	____	____
73. GPWS:	Enter valid Sector Code, Technician Initials and Password.	____	____
74. GPWS:	Press F1 (Retrieve Command List) to access the Command List screen.	____	____
75. GPWS:	Tab to the EG1 START command and press F1 (Send Command).		
	Displays 790 parameters screen?	____	____
76. GPWS:	Enter 1 (ST on EQUIP) and press F1 (Send Command/Parameters).		
	Displays 'SENDING COMMAND TO SITE LOCATION', waits, and then responds with 'COMMAND RECEIVED BY SITE'?	____	____
77. RMS:	Indicates receipt of the command?	____	____
78. GPWS:	Press F16 twice (Exit) to return to the Site Status screen.		
	Updates Engine Generator Status screen, specifically LU22 data points 24 (running) and 25 (facility)?	____	____

Comments/Notes:

Test Name: DQT3.4 - GMCC Operational Control

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
79. GPWS: Press SF13 (Exit) to return to the Constant Monitor Screen.	____	____
SITE MONITORING CONTROL		
80. GPWS: Press F4 (Active Alarm). Displays Active Alarm Screen?	____	____
81. GPWS: Verify that the ATCBI-5 site is currently being monitored.	____	____
NOTE: If no active alarms, press F16 (Exit) and access Site Status Screen.		
82. GPWS: Tab to the BEN ATCBI Site ID and press F1 (Site Status) to access the Site Status Main Menu.	____	____
83. GPWS: Tab to ATCBI Site Configuration and press F1 (Site Status).		
Displays Site Status screen for ATCBI Site Configuration?	____	____
84. GPWS: Press F8 (Control).	____	____
85. GPWS: Enter valid Sector Code, Technician Initials and Password and press F5 (Unmonitor Site).	____	____
"Site successfully unmonitored" message displayed?	____	____

Comments/Notes:

Test Name: DQT3.4 - GMCC Operational Control

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
86.	GPWS: Press SF13 (Exit) to return to the Constant Monitor screen.	____	____
87.	GPWS: Press F4 (Active Alarm) to access the Active Alarm Screen.	____	____
88.	GPWS: ATCBI site is unmonitored and there is an entry on the Active Alarm Screen denoting this fact?	____	____
89.	GPWS: Press F1 (Site Status).	____	____
90.	GPWS: Enter Site and Type and press F1 (Site Status).	____	____
91.	GPWS: Tab to SITE CONFIGURATION and Press F1 (Site Status).	____	____
	All data points Unmonitored?		
92.	GPWS: Press F8 (Control).	____	____
93.	GPWS: Enter valid Sector Code, Technician Initials and Password and press F4 (Monitor).		
	Site successfully monitored is displayed?	____	____
94.	GPWS: Press SF13 (Exit) to return to the Constant Monitor screen.		
95.	GPWS: Press F4 (Active Alarm) to access the Active Alarm Screen.		
96.	GPWS: ATCBI site is now being monitored.	____	____

Comments/Notes:

Test Name: DQT3.4 - GMCC Operational Control

Test Date: _____ Time: _____

Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
DATA POINT CONTROL		
97. GPWS: Press F1 (Site Status).	____	____
98. GPWS: Enter site and type and press F1 (Site Status).	____	____
99. GPWS: Tab to SITE CONFIGURATION and press F1 (Site Status).	____	____
100.GPWS: Tab to a data point and mark it with an 'X.	____	____
101.GPWS: Press F8 (Control).		
102.GPWS: Enter valid security parameters for Sector Code, Technician Initials and Password and press F3 (Unmonitor Data Point). Displays 'Data Point successfulyy unmonitored'?	____	____
Selected data point is no longer being monitored?	___	____
103.GPWS: Mark unmonitored data point with an "X".		
104.GPWS: Press F8 (Control).		
105.GPWS: Enter valid security parameters and press F1 (Monitor Data Point).		
Selected data point is monitored?	____	____

Comments/Notes:

Test Name: DQT3.4 - GMCC Operational Control

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
106.GPWS: Press SF13 (Exit).		
Display returns to constant monitor screen?	____	____

Comments/Notes:

TEST CONDUCT

Test Name: DQT3.5 - GMCC Realtime Monitoring

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO

NOTE: ALL THE REQUIREMENTS IN THIS TEST HAVE BEEN DEFERRED. THEY REQUIRE ACCESS TO VARIOUS CHECKLISTS WHICH HAVE NOT YET BEEN IMPLEMENTED.

Comments/Notes:

TEST CONDUCT

Test Name: DQT3.6 - GMCC Certification

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
	IMCS: Configured as required?		
1.	Configure an ATCBI-5 CD-1 RMS Simulator as BEN ATCBI.	____	____
2.	Configure the LM1 Protocol Analyzer to monitor and capture data for the RMS.	____	____
3.	GPWS: Access Windows.	____	____
4.	GPWS: Access the Tandem Applications window.	____	____
5.	GPWS: Access MMS1. MMS environment displayed?	____ ____	____ ____
6.	GPWS: Log on to MMS by entering valid security parameters. Log on successful?	____ ____	____ ____
	MMS PM/CERT Task Glossary		
7.	GPWS: Enter PMS in the GOTO field and press F1 (GO TO) to access the PM/Certification function.	____	____
8.	GPWS: Enter PMT in the GOTO field nd press F1 (GO TO) to access the PM/CERT Task Glossary Update function. Displays the PMT Update screen?	____ ____	____ ____
9.	GPWS: Enter valid data in the following fields: Task Glossary Ref: UP420 Int: W Description: This is a PMT update test.		

Comments/Notes:

Test Name: DQT3.6 - GMCC Certification

Test Date: _____ Time: _____

Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
10. GPWS: Press F8 (Add) to add the PMT record. PMT record is added?	____	____
11. GPWS: Enter PMS in the GOTO field and press F1 (GO TO) to access the PM/Certification function.	____	____
12. GPWS: Enter PMT in the GO TO field and press F1 (GO TO) to access the PM/CERT Task Glossary Update function.	____	____
13. GPWS: Enter UP420 in the Task Glossary Reference field and press F7 (Retrieve) to retrieve the PMT record.		
PMT record is retrieved?	____	____
14. GPWS: Press F3 (PM Menu) to return to the PMS Subsystem menu screen.		
PMS Subsystem Menu displayed?	____	____
15. GPWS: Enter PMT in the GO TO field and press F1 (GO TO) to access the PM/Cert Task Glossary Update function.	____	____
16. GPWS: Enter UP420 in the Task Glossary Reference field and press F7 (Retrieve) to retrieve the PMT record.	____	____
17. GPWS: Press SF10 (Delete) twice to delete the PMT record.		
PMT record deleted?	____	____

Comments/Notes:

Test Name: DQT3.6 - GMCC Certification

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
18. GPWS: Press F4 (MMS Menu) to return to the MMS Main Menu screen.	____	____
IMCS Certification Commands		
19. GPWS: Enter MCS in the GO TO field and press F1 (GOTO).	____	____
20. GPWS: Press F1 (Site Status).	____	____
21. GPWS: Enter ATCBI Site and TYpe in SITE and TYPE fields.	____	____
22. GPWS: Press F1 (Site Status). Displays ATCBI Main Menu	____	____
23. GPWS: Tab to ATCBI Certification Parameters and press F1 (Site Status).		
Displays Site Status screen for ATCBI Certification Parameters?	____	____
24. GPWS: Press F7 (Command).	____	____
25. GPWS: Enter security parameters and press F1 (Retrieve Command List).		
Displays Command LIst screen for ATCBI Certification Parameters?	____	____
26. GPWS: Tab to ATCBI CH SELECT command and press F1 (Send command).		

Comments/Notes:

Test Name: DQT3.6 - GMCC Certification

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
	Displays 790 Parameters screen for ATCBI Certification Parameters?	____	____
27. GPWS:	Enter 2 (CH2) and press F1 (Send Command/Parameters).		
	Displays 'SENDING COMMAND TO SITE LOCATION', waits, and then responds with 'COMMAND RECEIVED BY SITE'?	____	____
	RMS Response: _____		
28. GPWS:	Press F16 (Exit) twice to return to the Site Status screen.	____	____
	Updates LU 25 DP 57?		
29. GPWS:	Press F16 to return to Site Status Main Menu.		
30. GPWS:	Tab to ATCBI CH SELECT command and press F1 (Send Command).		
	Displays 790 parameters screen for ATCBI Certification Parameters?	____	____
31. GPWS:	Enter 1 (CH1) and press F1 (Send Command/Parameters).		
	Displays 'SENDING COMMAND TO SITE LOCATION', waits, and then responds with 'COMMAND RECEIVED BY SITE MESSAGE'?	____	____
	RMS Response: _____		

Comments/Notes:

Test Completion Date: _____ Time: _____

Test Name: DQT3.6 - GMCC Certification

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
32. GPWS: Press F16 (Exit) to return to the Site Status screen. Updates the status of LU24 DP 58?	____	____

Comments/Notes:

Test Completion Date: _____ Time: _____

TEST CONDUCT

Test Name: DQT3.7 - Status and Alarm Handling

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
	IMCS: Configured as required?	____	____
1.	Configure an ATCBI-5 CD-1 RMS Simulator as NEIL ATCBI.	____	____
2.	Configure the LM1 Protocol Analyzer to monitor and capture data for the RMS.	____	____
3.	GPWS: Access Windows.	____	____
4.	GPWS: Access the Tandem Applications window.	____	____
5.	GPWS: Access MMS1.	____	____
	MMS environment displayed?	____	____
6.	GPWS: Log on to MMS by entering valid security parameters.		
	Log on successful?	____	____
7.	GPWS: Enter MCS in the GO TO field and press F1 (GOTO) to access MCS.		
	IMCS Constant Monitor Screen displayed?	____	____

Alarm Acknowledgement - Constant Monitor Screen

8.	RMS: From the Main Menu press F4 (IFRM) then press F1 (ALARM) to induce an alarm.		
	Displays the alarm?	____	____
9.	GPWS: Press F5 (Alarm Ack).		
10.	GPWS: Enter valid security parameters and press F5 (Alarm Acknowledge).		

Comments/Notes:

Test Name: DQT3.7 - Status and Alarm Handling

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
	Alarm Acknowledged is no longer displayed on the Constant Monitor screen?	____	____
11. GPWS:	Press F4 (Active Alarm) to access the Active Alarms screen.		
	The acknowledged alarms are still displayed on the Active Alarm screen.	____	____
12. GPWS:	Press F16 (Exit) to return to the Constant Monitor screen.	____	____
<u>Single Alarm Acknowledgement - Active Alarms Screen</u>			
13. RMS:	From the Main Menu, press F4 (IFRM), then press F1 (ALARM to induce an alarm.	____	____
14. GPWS:	Press F4 (Active Alarm) to access the Active Alarms screen. Displays alarm?	____	____
15. GPWS:	Tab to the alarm to be acknowledged and press F5 (Alarm Ack).	____	____
16. GPWS:	Enter valid Sector Code, Tech Initials and Password.	____	____
17. GPWS:	Press F5 (Alarm Ack). Alarm Acknowledged?	____	____
	Acknowledged alarm still displayed on the Active Alarm screen?	____	____

Comments/Notes:

Test Name: DQT3.7 - Status and Alarm Handling

Test Date: _____ Time: _____

Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
Multiple Alarm Acknowledgement-Active Alarms Screen			
18. RMS:	From the Main Menu, press F4 (IFRM), then press F1 (ALARM) twice to induce multiple alarms.		
	Active Alarms screen displayed multiple alarms?	____	____
19. GPWS:	Tab to and enter an X in front of each alarm to be acknowledged and press F5 (Alarm Ack).	____	____
20. GPWS:	Enter valid Sector Code, Tech Init, and Password.	____	____
21. GPWS:	Press F5 (Alarm Ack).		
	Alarms acknowledged?	____	____
	Acknowledged alarms are still displayed on the Active Alarm screen?	____	____
22. GPWS:	Press F16 (Exit) to return to the Constant Monitor screen.	____	____
Single Alarm Acknowledgement - Site Status Screen			
23. RMS:	From the Main Menu, press F4 (IFRM), then press F1 (ALARM) to induce an alarm.	____	____
24. GPWS:	Press F1 (Site Status).	____	____
25. GPWS:	Enter proper SITE and TYPE , and press F1 (Site Status) to access the Site Status Main Menu.	____	____

Comments/Notes:

Test Name: DQT3.7 - Status and Alarm Handling

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
26. GPWS: Tab to ATCBI Certification parameters and press F1 (Site Status).	____	____
27. GPWS: Page through the Site Status screen to find the alarm. Displays the alarm?	____	____
28. GPWS: Tab to the alarm to be acknowledged and press F5 (Alarm Ack).	____	____
29. GPWS: Enter valid Sector Code, Tech Init, and Password and Press F5 (Alarm Ack).		
Alarm Acknowledged?	____	____
Acknowledged alarm is still displayed on Site Status Screen?	____	____
Exit		
30. GPWS: Return to the Constant Monitor Screen.	____	____

Comments/Notes:

Test Completion Date: _____ Time: _____

TEST CONDUCT

Test Name: DQT3.8 - Non-Facility Information Monitoring

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO

NOTE: **THE REQUIREMENTS LISTED IN THE TEST PLAN FOR DQT3.8 HAVE BEEN TESTED IN DQT3.3 (SIMULTANEOUS WORKSTATION OPERATIONS) AND DQT3.6 (CERTIFICATION).**

Comments/Notes:

TEST CONDUCT

Test Name: DQT3.9 - Full Service System State Response Time Verification

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
	IMCS: Configured as required?	____	____
1.	Configure an ATCBI-5 CD-1 RMS Simulator. RMS Site ID: _____		
2.	Configure the LM1 Protocol Analyzer to monitor and capture data for the RMS.	____	____
3.	GPWS: Access Windows.	____	____
4.	GPWS: Access the Tandem Applications window.	____	____
5.	GPWS: Access MMS1.	____	____
	MMS environment displayed?	____	____
6.	GPWS: Log on to MMS by entering valid security parameters.		
	Log on successful?	____	____
7.	GPWS: Enter MCS in the GO TO field and press F1 (GOTO) to access MCS.		
	IMCS Constant Monitor Screen displayed?	____	____

Alarm Acknowledgement - Constant Monitor Screen

8.	RMS: From the Main Menu press F4 (IFRM) then press F1 (ALARM) to induce an alarm and start an external timer.	____	____
9.	LM1: Record the elapsed time when the Alarm message is seen on the data line and on	____	____

Comments/Notes:

Test Name: DQT3.9 - Full Service System State Response Time Verification

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
	the IMCS Constant Monitor Screen.		
	Data Line Time: _____		
	MPS Presentation Time: _____		
10. GPWS:	Press F5 (Alarm Ack).		
	Alarm acknowledged within 2 seconds?	____	____
	Alarm Acknowledged are no longer displayed on the Constant Monitor screen?		
11. GPWS:	Return to the Constant Monitor Screen.	____	____
12. GPWS:	Initiate a state change and start and external timer.	____	____
13. LM1:	Record the elapsed time when the State Change message is seen on the data line and on the MPS.	____	____
	Data Line Time: _____		
	MPS Presentation Time: _____		
14. GPWS:	Induce an alarm to Logical Unit 24 Data Point 21 and start an external timer.	____	____
LM1:	Record the elapsed time when the Alarm message is seen on the data line and on the IMCS Constant Monitor screen.		
	Data Line Time: _____		
	MPS Presentation Time: _____		

Comments/Notes:

Test Name: DQT3.9 - Full Service System State Response Time

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
15. GPWS:	Press F4 (Active Alarm) to access the Active Alarm screen.	____	____
16. GPWS:	Tab to the ATCBI Site ID and press F1 (Site Status) to access the Site Status Main Menu.	____	____
17. GPWS:	Tab to ATCBI Site Configuration and press F1 (Site Status).	____	____
	Displays Site Status screen for ATCBI Site Configuration?	____	____
18. GPWS:	Tab to data LU24 DP21 and mark it with an X.	____	____
19. GPWS:	Press F8 (Control) and enter valid Sector Code, Technician Initials and Password.		
	Displays Control Security Screen?	____	____
20. GPWS:	Press F3 (Unmonitor Data Point).		
21. GPWS:	Press SF16 (Exit) to return to the Constant Monitor screen.	____	____
22. GPWS:	Press F4 (Active Alarm) to access the Active Alarm Screen.	____	____
	Selected data point is no longer being monitored?	____	____
23. GPWS:	Return to the Control screen (F8).	____	____

Comments/Notes:

Test Name: DQT3.9 - Full Service System State Response Time

Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
24. GPWS: Press F1 (Monitor Data Point) to again monitor the data point.	____	____
25. GPWS: Return to the Constant Monitor screen and verify that the data point is again being monitored and the alarm is still active.	____	____
26. GPWS: Acknowledge the alarm by pressing F5 (Alarm Ack).	____	____

Comments/Notes:

Test Completion Date: _____ **Time:** _____

TEST CONDUCT

Test Name: DQT3.10 - GMCC Reporting

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
	IMCS: Configured as required?	____	____
1.	Configure an ATCBI-5 CD-1 RMS Simulator. RMS Site ID: _____	____	____
2.	Configure the LM1 Protocol Analyzer to monitor and capture data for the RMS.	____	____
3.	GPWS: Access Windows.	____	____
4.	GPWS: Access the Tandem Applications window.	____	____
5.	GPWS: Access MMS1. MMS environment displayed?	____ ____	____ ____
6.	GPWS: Log on to MMS by entering valid security parameters. Log on successful?	____	____
7.	GPWS: Access the FSEP Subsystem Menu by typing FSE into the GO TO field and pressing F1 (GO TO). Displays the FSEP Subsystem Menu screen?	____	____
8.	GPWS: Enter FFA in the GO TO FIELD and press F1 (GO TO). Displays FACILITY/SERVICE FILE UPDATE screen	____	____
9.	GPWS: Enter valid data in the following fields:		

Comments/Notes:

Test Name: DQT3.10 - GMCC Reporting

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO

FACILITY TYPE: CCC
LOCATION IDENTIFIER: ZME
STATUS: A
STATUS DATE: TODAYS DATE
FAC CODE: 266AB
FAC CLASS: G
RESPONSIBILITY CODE: A
REGION: SO
COST CENTER: 0856A
LOCATION: MEMPHIS
STATE: TN
GSA ADDRESS: 47AP

10. GPWS: Press F8 (Add).
Displays OPERATION IN PROGRESS message? ____ ____
Displays TRANSFER IN PROGRESS message? ____ ____

Delete MMS FACILITY/SERVICE FILE UPDATE Record

11. GPWS: Enter valid data in the following fields:
FACILITY TYPE: CCC
LOCATION IDENTIFIER: ZME

12. GPWS: Press F7 (Retrieve).
Appropriate record appears? ____ ____

13. GPWS: Press SF10 (Delete) and verify that a check message appears, ARE YOU SURE YOU WANT TO DELETE THIS RECORD, SF10 = YES, F1 = NO. ____ ____

14. GPWS: Press SF10 (Yes) and verify the OPERATION SUCCESSFUL message appears at the bottom of the screen. Verify that the record is not there by doing another retrieve. (F7) ____ ____

Comments/Notes:

Test Name: DQT3.10 - GMCC Reporting

Test Date: _____ **Time:** _____
Test Configuration Figure: _____ **Test Engineer:** _____

	YES	NO
Displays THIS RECORD DOES NOT EXIST IN FILES?	____	____

15. GPWS: Exit MMS.

Comments/Notes:

Test Completion Date: _____ **Time:** _____

TEST CONDUCT

Test Name: DQT3.11 - GMCC Load Test

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

		YES	NO
	NOTE: THIS TEST WILL BE CONDUCTED IN CONFIGURATION 2. AFTER COMPLETING 1 TEST SEQUENCE ON 1 WORKSTATION, ADD A SECOND WORKSTATION AND PERFORM THE SAME SERIES OF STEPS ON WS1 AND WS2. THEN ADD A THIRD WORKSTATION AND PERFORM THE SAME SERIES OF STEPS ON WS1 AND WS2 AND WS3.		
1.	IMCS: Configured as required?	____	____
2.	Configure two RMS Simulators, one as BEN ATCBI and the other as NEIL ATCBI.	____	____
3.	GPWS: Access Windows.	____	____
4.	GPWS: Access the Tandem Applications window.	____	____
5.	GPWS: Access MMS1. MMS environemnt displayed?	____	____
6.	GPWS: Log on to MMS by entering valid security parameters. Log on successful?	____	____
7.	GPWS: Enter MCS in the GO TO field and press F! (GO TO). Displays active alarms of monitored sites?	____	____
8.	GPWS: Reduced the MMS1 window.	____	____
9.	GPWS: Access MMS2 and perform steps 6 and 7. Constant Monitor screen displayed?	____	____
10.	GPWS: Reduce the MMS2 window so both MMS1 and MMS2 can be viewed.	____	____

Comments/Notes:

Test Name: DQT3.11 - GMCC Load Test

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
11. GPWS: Access TACL Prompt from Windows. Tandem TACL displayed?	____	____
12. GPWS: Reduce the 3 windows so all 3 can be viewed.	____	____
13. GPWS: Log on to system.	____	____
Log on successful?	____	____
14. RMS: Generate random alarms at both the BEN ATCBI site and the NEIL ATCBI site.	____	____
Alarms displayed on MMS windows?	____	____
NOTE: WHILE THE RMS IS IN AN ALARM STATE, PERFORM STEPS 14 - 16.		
15. GPWS: Activate the TACL window.	____	____
16. GPWS: List files by typing FILES.		
Files listed?	____	____
MMS1 and MMS2 still monitoring alarms?	____	____
17. GPWS: Display file information by typing FUP INFO *.		
File information displayed?	____	____
MMS2 and MMS2 still monitoring alarms?	____	____
18. GPWS: Activate the MMS1 window.	____	____

Comments/Notes:

Test Completion Date: _____ **Time:** _____

Test Name: DQT3.11 - GMCC Load Test

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO
19. GPWS: Tab to an alarm and press F5 (Alarm Ack).	____	____
20. GPWS: Enter valid security parameters and press F5.		
Acknowledged alarm removed from the constant monitor screen?	____	____
MMS1 and TACL still running?	____	____
21. GPWS: Activate the MMS2 window.	____	____
22. GPWS: Tab to an alarm and press F5 (Alarm Ack).	____	____
23. GPWS: Enter valid security parameters and press F5.		
Acknowledged alarm removed from the constant monitor screen?	____	____
MMS1 and TACL still running?	____	____

Comments/Notes:

Test Completion Date: _____ Time: _____

TEST CONDUCT

Test Name: DQT4 - Reduced Service System State Verification

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO

NOTE: DQT4 (REDUCED SERVICE SYSTEM STATE VERIFICATION IS TBD AND WILL BE COMPLETED WHEN MORE INFORMATION IS AVAILABLE.

Comments/Notes:

Test Completion Date: _____ **Time:** _____

TEST CONDUCT

Test Name: DQT5 - Reconfigured System State Verification

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO

NOTE: DQT5 (RECONFIGURED SYSTEM STATE VERIFICATION IS TBD AND WILL BE COMPLETED WHEN MORE INFORMATION IS AVAILABLE.

Comments/Notes:

Test Completion Date: _____ **Time:** _____

TEST CONDUCT

Test Name: DQT5.1 - Reduced Operations Mode

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO

NOTE: DQT5.1 (REDUCED OPERATIONS MODE) IS TBD AND WILL BE COMPLETED WHEN MORE INFORMATION BECOMES AVAILABLE.

Comments/Notes:

Test Completion Date: _____ **Time:** _____

TEST CONDUCT

Test Name: DQT5.2 - Augmented Operations Mode

Protocol Analyzer File Name: _____ GNAS Time: _____
Test Date: _____ Time: _____
Test Configuration Figure: _____ Test Engineer: _____

	YES	NO

NOTE: DQT5.2 (AUGMENTED OPERATIONS MODE) IS TBD AND WILL BE COMPLETED WHEN MORE INFORMATION BECOMES AVAILABLE.

Comments/Notes:

Test Completion Date: _____ **Time:** _____