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Your ref: Project Number 740
Our ref: DCP/NRC1778

September 21, 2006

Subject: AP1000 COL Standard Technical Report Submittal

In support of Combined License application pre-application activities, Westinghouse is submitting Revision 0 of AP1000 Standard Combined License Technical Report Number 71B. This report completes and documents, on a generic basis, activities required for COL Information Item 14.4-3 for "Conduct of Test Program" in the AP1000 Design Control Document (DCD). Changes to the DCD identified in Technical Report Number 71B are intended to be incorporated into FSARs referencing the AP1000 design certification or incorporated into the design certification using supplemental rulemaking if Part 52 is revised to permit revision of the design certification. This report is submitted as part of the NuStart Bellefonte COL Project (NRC Project Number 740). The information included in this report is generic and is expected to apply to all COL applications referencing the AP1000 Design Certification.

The purpose for submittal of this report was explained in a March 8, 2006 letter from NuStart to the U.S. Nuclear Regulatory Commission.

Pursuant to 10 CFR 50.30(b), APP-GW-GLR-038, Revision 0, "AP1000 Conduct of Test Programs," Technical Report Number 71B, is submitted as Enclosure 1 under the attached Oath of Affirmation.

It is expected that when the NRC review of Technical Report Number 71B is complete, COL Information Item 14.4-3 will be considered complete for COL applicants referencing the AP1000 Design Certification.

D079

Questions or requests for additional information related to the content and preparation of this report should be directed to Westinghouse. Please send copies of such questions or requests to the prospective applicants for combined licenses referencing the AP1000 Design Certification. A representative for each applicant is included on the cc: list of this letter.

Very truly yours,

Monte D Bartley FOR

A. Sterdis, Manager
Licensing and Customer Interface
Regulatory Affairs and Standardization

/Attachment

1. "Oath of Affirmation," dated September 21, 2006

/Enclosure

1. APP-GW-GLR-038, Revision 0, "AP1000 Conduct of Test Programs," Technical Report Number 71B, dated August 2006.

cc:	S. Bloom	-	U.S. NRC	1E	1A
	S. Coffin	-	U.S. NRC	1E	1A
	G. Curtis	-	TVA	1E	1A
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	P. Hastings	-	Duke Power	1E	1A
	C. Ionescu	-	Progress Energy	1E	1A
	D. Lindgren	-	Westinghouse	1E	1A
	A. Monroe	-	SCANA	1E	1A
	M. Moran	-	Florida Power & Light	1E	1A
	C. Pierce	-	Southern Company	1E	1A
	E. Schmiech	-	Westinghouse	1E	1A
	G. Zinke	-	NuStart/Entergy	1E	1A

ATTACHMENT 1

"Oath of Affirmation"

ATTACHMENT 1

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

In the Matter of:	)
NuStart Bellefonte COL Project	)
NRC Project Number 740	)

APPLICATION FOR REVIEW OF
"AP1000 GENERAL COMBINED LICENSE INFORMATION"
FOR COL APPLICATION PRE-APPLICATION REVIEW

W. E. Cummins, being duly sworn, states that he is Vice President, Regulatory Affairs & Standardization, for Westinghouse Electric Company; that he is authorized on the part of said company to sign and file with the Nuclear Regulatory Commission this document; that all statements made and matters set forth therein are true and correct to the best of his knowledge, information and belief.

W. E. Cummins
Vice President
Regulatory Affairs & Standardization

Subscribed and sworn to
before me this 21st day
of September 2006.

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Debra McCarthy, Notary Public
Monroeville Boro, Allegheny County
My Commission Expires Aug. 31, 2009
Member, Pennsylvania Association of Notaries

Notary Public

ENCLOSURE 1

APP-GW-GLR-038, Revision 0

AP1000 Conduct of Test Program

Technical Report Number 71B

AP1000 DOCUMENT COVER SHEET

TDC: _____ Permanent File: _____ APY: _____

RFS#: _____ RFS ITEM #: _____

AP1000 DOCUMENT NO.	REVISION NO.		ASSIGNED TO
APP-GW-GLR-038	0	Page 1 of 26	

ALTERNATE DOCUMENT NUMBER: WORK BREAKDOWN #: GW

ORIGINATING ORGANIZATION: Westinghouse Electric Company

TITLE: **AP1000 CONDUCT OF TEST PROGRAM**

ATTACHMENTS:	DCP #/REV. INCORPORATED IN THIS DOCUMENT REVISION:
APP-GW-GBY-600 Rev 0	
CALCULATION/ANALYSIS REFERENCE:	

ELECTRONIC FILENAME	ELECTRONIC FILE FORMAT	ELECTRONIC FILE DESCRIPTION
COL038 Rev 0.doc	Microsoft Word	

ORIGINATOR S. W. Long	SIGNATURE/DATE Stewart W. Long 8-04-06	
REVIEWERS V. Shkolnik	SIGNATURE/DATE 8-4-06	
VERIFIER L. R. Perea	SIGNATURE/DATE 8/4/06	VERIFICATION METHOD Page by page
AP1000 RESPONSIBLE MANAGER F. L. Carpentino	SIGNATURE* 	APPROVAL DATE 8-4-06

* Approval of the responsible manager signifies that document is complete, all required reviews are complete, electronic file is attached and document is released for use.

APP-GW-GLR-038
Revision 0

August 2006

AP1000 Standard Combined License Technical Report

AP1000 CONDUCT OF TEST PROGRAM
Revision 0

Westinghouse Electric Company LLC
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AP1000 CONDUCT OF TEST PROGRAM

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Purpose

The purpose of this document is to close combined license (COL) item 14.4-3 for "Conduct of Test Program." This COL item is listed in Section 14.4 of Design Control Document (DCD).

In DCD (Reference 1) Section 14.4.3, COL item "Conduct of Test Program" requires the COL applicant to provide administration procedures and requirements that govern the activities associated with the plant initial test program. This is information item 14.4-3 and FSER (Reference 2) COL action item 14.4-3.

> COL Information Item 14.4-3
>
> "The Combined License application is responsible for a startup administration manual (procedure) which contains the administration procedures and requirements that govern the activities associated with the plant initial test program, as identified in Section 14.2.3."

1.2 Detailed Scope for COL Action Item 14.4-3

"Conduct of Test Program" is the sole focus of this technical report. This item consists of a Program Management Description which outlines requirements for the Site Administrative Startup Manual.

1.3 Closure of COL Item 14.4-3

This technical report:

(1) does not result in any regulatory impacts
(2) does not affect severe accident criteria
(3) will not alter security requirements.

The NRC will have the option to review the AP1000 Startup Site Administrative Manual once it is completed at a later date. However, based on review of the Program Management Description contained in this report, the NRC is requested to consider this COL item closed.

2.0 TECHNICAL BACKGROUND

2.1 Conduct of Test Program

The COL applicant is responsible for a Site Administrative Startup Manual which contains the administration procedures and requirements that govern the activities associated with the plant initial test program, per COL Item 14.4-3. Appendix A provides Program Management Description document which includes a summary overview of the program administrative process and program controls to be utilized in the conduct of the AP1000 Site Startup Test Program at a licensed AP1000 operational plant site.

Program Management Description document in Appendix A outlines the programmatic requirements and responsibilities for the plant groups involved in the startup and testing organization for the specified licensed operational power facility. Further, this document encompasses scope, responsibilities and authority for interfaces and controls to be implemented between the Plant Owner (Licensee), Westinghouse Electric Corporation (WEC), the Architect Engineer, and significant supportive organizational groups.

The Program Management Description also provides input to the eventual development of the AP1000 Startup Administrative Manual.

3.0 REGULATORY IMPACT

3.1 Applicable Sections of the NRC's Final Evaluation Analysis Report

Section 14.4.3 is the portion of the NRC's FSER related to the COL Action covered by this report. However, this section is not impacted by COL Action closure.

3.2 Severe Accident Change Criteria

There are no changes that have an impact on the Severe Accident Criteria and there are no proposed departures from Tier 2 that would affect resolution of a severe accident issue identified in the DCD. Therefore no license amendment is required.

3.3 Security

The closure of this COL Information Item will not alter barriers or alarms that control access to protected areas of the plant. The closure of this COL Information Item will not alter requirements for security personnel. Therefore, the closure of this COL Information Item does not have an adverse impact on the security assessment of the AP1000.

4.0 REFERENCES

1. APP-GW-GL-700, Revision 15, AP1000 Design Control Document.

2. NUREG-1793, Final Safety Evaluation Report Related to Certification of the AP1000 Standard Design, September 2004.

5.0 DCD MARKUP

The following DCD markups identify how the AP1000 DCD will be modified.

Revise Section 14.4.3 as follows:

14.4.3 Conduct of Test Program

Completed. The Combined License applicant is responsible for a startup administration manual (procedure) which contains the administration procedures and requirements that govern the activities associated with the plant initial test program, as identified in subsection 14.2.3. **Conduct of the test program is outlined in Reference 1.**

Add new Section 14.4.7 and Reference 1 as follows:

14.4.7 References

1. APP-GW-GLR-038, "AP1000 Conduct Of Test Program," August 2006.

APPENDIX A

AP1000 STARTUP SITE ADMINISTRATIVE MANUAL - PROGRAM MANAGEMENT DESCRIPTION

(19 pages including this page)

AP1000 DOCUMENT COVER SHEET

TDC: _____ Permanent File: _____ S _____

RFS#: _____ RFS ITEM #: _____

AP1000 DOCUMENT NO.	REVISION NO.		ASSIGNED TO W - Long
APP-GW-GBY-600	Rev. 0	Page 1 of 18	

ALTERNATE DOCUMENT NUMBER: N/A WORK BREAKDOWN #:

ORIGINATING ORGANIZATION: Westinghouse Electric Company LLC

TITLE: **AP1000 Startup Site Administrative Manual – Program Management Description**

ATTACHMENTS:	
CALCULATION/ANALYSIS REFERENCE: N/A	

ELECTRONIC FILENAME	ELECTRONIC FILE FORMAT	ELECTRONIC FILE DESCRIPTION
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☐ WESTINGHOUSE PROPRIETARY CLASS 2

☒ WESTINGHOUSE CLASS 3 (NON PROPRIETARY)

ORIGINATOR Mark A. Edmonds	SIGNATURE/DATE Mark A. Edmonds 8/4/06	
REVIEWERS Val Shkolnik	SIGNATURE/DATE 8/4/06	
REVIEWERS	SIGNATURE/DATE	
VERIFIER Mark.G. Williams	SIGNATURE/DATE Mark G. Williams 8/4/06	VERIFICATION METHOD Technical Review, 3-Pass Method
AP1000 RESPONSIBLE MANAGER Stewart W. Long	SIGNATURE* Stewart W. Long	APPROVAL DATE 8-04-06

*Approval of the responsible manager signifies that document is complete, all required reviews are complete, electronic file is attached and document is released for use.

AP1000 STARTUP SITE ADMINISTRATIVE MANUAL
PROGRAM MANAGEMENT DESCRIPTION

NO.: APP-GW-GBY-600
REV. 0

Westinghouse Proprietary Class 3

REVISION HISTORY

RECORD OF CHANGES

Revision	Revision Made By	Description	Date
0	Mark A. Edmonds	Original Issue for Use	August 2006

TABLE OF CONTENTS

1.0 PURPOSE

The purpose of this AP1000 Startup Program Site Administrative Manual – Program Management Description is to provide a summary overview of the program administrative process and program controls to be utilized in the conduct of the AP1000 Site Startup Test Program at a licensed AP1000 operational plant site.

This document outlines the programmatic requirements and responsibilities for the plant groups involved in the Startup and testing organization for the specified licensed operational power facility. Further, this document encompasses scope, responsibilities and authority for interfaces and controls to be implemented between the Plant Owner (Licensee), Westinghouse Corporation (WEC), the Architect Engineer and significant supportive organizational groups.

This Program Management Description also provides input to the eventual development of the AP1000 Startup Administrative Manual.

2.0 SCOPE AND OBJECTIVES

2.1 SCOPE

2.1.1 The scope of this Startup Program Management Description is to identify the programmatic responsibilities, activities, authority and interfaces between the organizational groups employed in the conduct of the Startup test program for the specified licensed power facility.

2.2 OBJECTIVES

2.2.1 The document presents an outline of the basic functional relationships, responsibilities, activities, authority and principles of conduct for the Joint Test Working Group, and other organizational groups such as the Site Plant Owner Organization, Westinghouse, and the Architect Engineer, involved in the AP1000 Site Startup Test Program. Formal descriptions and functions of the Construction and Installation organizations are beyond the scope of this document, however, construction and installation functions are referred to in the interface description portion of this Startup Program Description.

2.2.2 This document presents general and informative description of responsibilities and activities related to the testing of power plant equipment in the period between system turnover (completion of construction) until plant acceptance (warranty testing completion).

3.0 ORGANIZATIONAL STRUCTURE

3.1 JOINT TEST WORKING GROUP

3.1.1 The Joint Test Working Group (JTWG) will consist of an organizational group of authorized representative personnel from the Site Plant Owner's (Licensee) operations and support group functions, Westinghouse Electric Company (WEC), Architect Engineer and other test support groups as identified in this document.

3.1.2 The Westinghouse Startup Manager will have the overall responsibility and authority for technical direction of the Startup Test Program and will act as the JTWG Chairman.

3.1.3 The JTWG Chairman will report to the Chairman of the Plant Owner's Operations Review Committee (PORC) for matters of Startup test authority and acceptance.

3.1.4 The JTWG will provide the following administrative oversight activities associated with the Startup Test Program:

3.1.4.a Review, evaluate and approve Startup Test Program administrative and test procedures.

3.1.4.b Oversee the implementation of the Preoperational Test Program and the Startup Test Program, including planning, scheduling and performance of all Preoperational and Startup testing.

3.1.4.c Review and evaluate Construction, Preoperational and Startup test results and test turnover packages.

3.1.5 At a minimum, the JTWG will be composed of qualified voting members provided from the following organizations:

- Licensee's Operations Group
- Licensee's Maintenance Group
- Site Startup Test Group
- Site Preoperational Test Group

- Licensee's Corrective Action Organization
- Westinghouse Site Engineering Group
- Licensee's Health Physics/Chemistry Group
- Licensee's Quality Assurance Group

3.2 SITE CONSTRUCTION GROUP (ARCHITECT ENGINEER)

3.2.1 The Site Construction Group will consist of the following, as necessary to support the Site Startup Test Program:

- Construction BOP Engineering Group
- Construction Services Group
- Construction Services Procurement Group
- Construction Services Quality Group
- Construction Services Training Group

3.2.2 The Site Construction Group will perform the following functions and scope of work, as necessary to support the Site Startup Test Program:

3.2.2.a Construction Installation and Testing, including management of construction testing documentation.

3.2.2.b Construction and Installation activities required to support Preoperational and Startup Test Programs.

3.2.2.c Vendor interface and procurement associated with supporting testing activities.

3.2.2.d Provide manpower and labor as needed to support all testing activities.

3.2.2.e Turnover of Construction and Installation tested equipment, systems and testing documentation to the Site Preoperational Test Group.

3.3 SITE PREOPERATIONAL TEST GROUP

3.3.1 The Site Preoperational Test Group will consist of the following, as necessary to support the Site Startup Test Program:

3.3.1.a Westinghouse Engineering Leads

3.3.1.b Preoperational Test Teams

3.3.2 The Site Preoperational Test Group will perform the following functions and scope of work, as necessary to support the Site Startup Test Program:

3.3.2.a Coordinate Tagging and maintenance prior to turnover to the Startup Group to support system acceptance testing (i.e. hot-functional system testing).

3.3.2.b Accept systems for turnover from the installation organization.

3.3.2.c Plan, scope and schedule plant systems for test to support plant Preoperational Test program.

3.3.2.d Manage and oversee the testing of plant systems to support plant hot-functional test program.

3.3.2.e Resolve open items and exceptions identified during implementation of the Preoperational Test Program.

3.3.2.f Accept and turn over Preoperational Test Packages to the Site Licensee (support completion of hot-functional testing program).

3.3.2.g Coordinate other support tasks required during Startup Testing activities with responsible groups (e.g., Licensee's Organization, Architect Engineer Organization).

3.4 SITE STARTUP TEST GROUP

3.4.1 The Site Startup Test Group will consist of the following, as necessary to support the Site Startup Test Program:

3.4.1.a Westinghouse Engineering Leads

3.4.1.c Startup Test Teams

3.2.2 The Site Startup Test Group will perform the following functions and scope of work, as necessary to support the Site Startup Test Program:

3.2.2.a Coordinate Tagging and maintenance prior to System Turnover to the Licensee to support system and equipment acceptance testing (i.e., power ascension testing).

3.2.2.b Accept systems from Preoperational Test Group.

3.2.2.c Plan, scope and schedule plant systems and equipment for test, to support Plant Startup.

3.2.2.d Manage and oversee the testing of plant systems and equipment to support plant power ascension test program.

3.2.2.e Resolve open items and exceptions identified during implementation of the Startup Test Program.

3.2.2.f Accept and turn over Startup Test Packages to the Site Licensee.

3.2.2.g Coordinate other support tasks required during Startup Testing activities with responsible groups (e.g., Licensee's Organization, Architect Engineer Organization).

4.0 FUNCTIONAL RESPONSIBILITIES and INTERFACES

4.1 FUNCTIONAL RESPONSIBILITIES ASSOCIATED WITH THE TEST PROGRAM TO BE PERFORMED DURING INITIAL STARTUP OF AN AP1000 PLANT.

4.1.1 Initial Plant Test Program

4.1.1.a The initial plant test program consists of a series of tests categorized as Construction and Installation, Preoperational, and Startup Tests. These tests are the responsibility of the AP1000 Combined License Holder (Licensee).

4.1.1.b The overall objective of this test program is to demonstrate that the plant has been constructed as designed, the systems perform consistent with the plant design, and activities culminating in operation at full licensed power are performed in a controlled and safe manner.

4.1.1.c As identified in Section 3.0 above, the Licensee will delegate the implementation and technical direction of this program to the Joint Test Working Group and its Chairman (Westinghouse Startup Manager).

4.1.2 Construction and Installation Tests

4.1.2.a Construction and Installation tests are performed to determine that plant structures, components and systems have been constructed or installed correctly and are operational.

4.1.2.b On a system basis, successful completion of this testing program demonstrates the system is ready for Preoperational testing.

4.1.2.c The scope of this testing includes the following, at a minimum:

- Cleaning and flushing
- Hydrostatic testing
- Checks of electrical writing and equipment
- Valve testing
- Energization and operation of equipment
- Calibration of instrumentation and test equipment

4.1.3 Preoperational Tests

4.1.3.a Preoperational tests are performed after installation and construction tests, prior to initial fuel loading, and demonstrate that equipment and systems perform in accordance with design criteria.

4.1.3.b These tests demonstrate the capability of plant systems to meet performance criteria so that initial fuel loading, initial criticality and subsequent power operation can be safely undertaken.

4.1.3.c Preoperational Tests at elevated pressure and temperature are also referred to as pre-core hot functional tests (PCHFT).

4.1.3.d The scope of this testing includes the following, at a minimum:

- Demonstrate that essential plant components and systems, including alarms and indications, meet appropriate design criteria.
- Provide documentation of the performance and condition of equipment and systems.
- Provide baseline test and operating data on equipment and systems for future use and reference.
- Operate equipment for a sufficient period to demonstrate performance.
- Demonstrate that plant systems operate on an integrated basis.

4.1.4 Startup Tests

4.1.4.a Startup tests begin with initial fuel loading after the Preoperational Testing has been successfully completed and are performed to demonstrate the capability of individual systems, as well as the integrated plant, to meet performance requirements during initial plant power ascension.

4.1.4.b Startup Tests are grouped into four broad categories:

- Initial Fuel Loading and Precritical Tests.
- Initial Criticality Tests.
- Low Power Tests.
- Power Ascension Tests.

4.1.4.c The scope of this testing includes the following, at a minimum:

- Install nuclear fuel into the reactor vessel in a controlled and safe manner.
- Verify the reactor core and components, equipment and systems required for control and shutdown have been assembled according to design and meet specified performance attributes.
- Achieve initial criticality and operation at power in a controlled and safe manner.
- Verify the operating characteristics of the reactor core and associated control and protection equipment are consistent with design requirements and accident analysis assumptions.
- Obtain the required data and calibrate equipment used to control and protect the plant.
- Verify the plant is operating within the limits imposed by the Technical Specifications.

- Provide the plant operating staff the opportunity to obtain practical experience in the use of normal and abnormal operating procedures while the plant progresses through heatup, criticality and power operations.

4.2 INTERFACE CONTROL

4.2.1 The AP1000 Startup Program Site Administrative Manual will provide direction for interface control of internal and external transfer of information, design data, test results, documents, etc., from one AP1000 operating site organization to another.

4.2.2 The Administrative Manual and its supporting procedures will define and document the responsibilities and authority for overall control of the transfer of information between organizations (and within each organization) for:

- Design data
- Test specifications
- Test procedures
- Test packages and test results control
- Correspondence
- Equipment control processes required for support of test execution
- Execution of tests
- Equipment status and capability
- Turnover of systems and equipment from one responsible group to another
- Reporting and correction of identified defects
- Qualification and certification of test personnel

4.2.3 Interface controls provided in the Administrative Manual will include definition of the functional and physical interface controls involving structures, systems and components.

4.2.4 Interface controls also assure that the scope and depth of Startup Test Program will provide clear well documented objective evidence that the tests have satisfied the requirements of:

- Validity of analytical design bases
- Compatibility with technical specifications
- Compatibility with specified sequence for implementation
- Plant equipment capability and reliability

4.2.5 Information associated with the Startup Test Program will be transmitted across interfaces in a controlled manner, which will identify the status of the information or document provided and will further identify any incomplete items which require further evaluation, review or approval.

4.2.6 Where it is necessary to initially transmit information orally or by other informal means, the transmittal will be confirmed promptly by a controlled document.

4.3 STARTUP ADMINISTRATIVE MANUAL AND PROCEDURES USED FOR PROGRAM CONTROL

4.3.1 Startup Administrative Manual and administrative procedures will provide detailed requirements that govern the execution of activities associated with the conduct of the initial test program, including the organization, structure and functional relations of the Joint Test Working Group and the Startup Organization.

4.3.2 The Startup Administrative Manual will, at a minimum, include sections addressing the following:

4.3.2.a Organization and functional relations of the JTWG (Joint Test Working Group)

Procedures will be established for the JTWG and its make up. Use and responsibilities of personnel from the utilities operation and maintenance groups supplemented with vendor and construction personnel will be defined.

4.3.2.b Startup administrative and test procedures preparation, review, approval, revision and change

Detailed procedures will be established for preparation of the administration and test procedures, including their review, approval, revision and change.

4.3.2.c Planning, preparation and performance of startup tests

Detailed procedures will be established for planning and timely performance of the startup tests.

4.3.2.d Startup test evaluation and approval

Procedures will be established for the startup test evaluation and approval. Such procedures will address the responsibility for preparation, conduct, and on-shift evaluation and subsequent review by the JTWG.

4.3.2.e Process controls for turnover of systems from Westinghouse and the Architect Engineer of construction tests to the JTWG for additional testing, operation and maintenance

Procedures will be established to assure proper review of the post construction and installation prerequisite testing of all components prior to the turnover to the startup organization for subsequent preoperational testing. The test results are reviewed not only by the responsible staff organization, but also by the JTWG.

4.3.2.f Work permits and system tagging

Procedures will be prepared to assure that proper work permits are established and tracked to ensure work completion and system and component condition and status are documented at all times.

4.3.2.g Reporting and elimination of defects during startup

Procedures that delineate the reporting, tracking and methods used to assure elimination of defects will be established. The details of these procedures are dependent on the systems, type, and level of the defect.

4.3.2.h JTWG document control

Procedures will be developed to assure proper recording, documenting and control of all Startup related documents. This includes the transfer of information between organizations and within each organization associated with Startup activities (i.e., interface controls).

4.3.2.i Control of keys/electrical jumper/lifted lead/mechanical jumper and blind flange

Procedures will be established to assure proper control of keys/electrical jumpers/lifted leads/mechanical jumpers and blind flanges. These procedures include sign in and out and summary of system conditions with requirements regarding tagging and removal of tags.

4.3.2.j On-site short term startup test scheduling and authorization

Procedures will be established which deal with the process of establishing personnel responsibility for short-term scheduling and authorization. The scope of this responsibility will depend upon the nature of the test schedule and its impact. Requirements and authority for moving beyond selected milestones within a given test phase will be established.

4.3.2.k Test configuration control

Procedures will be established for implementation of methods used to monitor the as-tested status of each system and any modifications, including retest requirements deemed necessary for systems undergoing testing or that have already been completed tested.

4.3.2.l Certification of Test Personnel

Procedures will be prepared to ensure that all test personnel have adequate training, qualification and certification. Records will be kept for extent of experience, involvement in procedure and test development, training programs, and level of qualification.

4.3.3 Controls for the format, generation, approval, issuance and use of specific Test Specifications and Test Procedures will, at a minimum, include the following for each phase of Startup test procedures and/or test specifications:

- Objectives for performing the test.
- Test prerequisites.
- Initial test conditions.
- Precautions required for personnel and equipment safety.
- Test performance directions.
- Data requirements including documentation.
- Criteria for test results evaluation.
- Reconciliation methods and analysis as required.
- Test approval and distribution to affected groups.

5.0 TEST ACCEPTANCE AUTHORITY

5.1. TEST ACCEPTANCE AUTHORITY INCLUDES:

5.1.1 The AP1000 COL Licensee (Plant Site Organization) is responsible for the final review and acceptance for individual tests performed.

5.1.2 The Licensee is responsible for review of overall test results and for review of selected milestones or hold point within the test phases (Construction, Preoperational and Startup).

5.1.3 Test records will be retained in accordance with USNRC Regulatory Guide 1.28.

6.0 REFERENCES

6.1 USNRC Regulatory Guide 1.28, Quality Assurance Program Requirements (Design and Construction), Rev. 3

6.2 APP-GW-GL-700, Revision 15, AP100 Design Control Document (DCD), Tier 2, Chapter 14, Initial Test Program

6.3 USNRC Regulatory Guide 1.68, Initial Test Programs for Water-Cooled Nuclear Power Plants, Rev. 2