

WYLE TEST REPORT NO. T59087.01

APPENDIX A.7-1

TECHNICAL DATA PACKAGE REVIEW REPORT

One of the noted “**core voting system tests** in the VST LAP includes the Technical Data Package review” (NIST Handbook 150-22, 1.5.3). “Both formal documentation and notes of the vendor’s system development process shall be submitted for **qualification tests**” (VVSG-2005, Volume II, Section 2). If another version of the system was previously certified, the TDP would also include appropriate system change notes (VVSG-2005, Volume II, Section 1.5).

The goal of Wyle Laboratories was to manage a TDP “*qualifications tests*” that delivered a credible measure of the TDP’s “completeness and accuracy in describing the system” and “evaluates the extent to which” documents “conform to the requirements outlined in Volume I, Section 8 and 9 for vendor and quality assurance practices” (VVSG-2005, Volume II, Section 1.3.1.5). The TDP *qualifications tests* included:

- A regular testing structure for a compliance review
- A regular testing structure for a functional review
- Tester competency requirements
- Test documentation and reporting procedures.

Established tester competency requirements assured that all TDP reviewers were aware of, understood, and correctly employed the recognized methods and techniques necessary to develop and communicate credible results; had the requisite knowledge to test specific TDP topics; or took the necessary steps to complete the review competently.

Competency was achieved through:

- Personal experience and/or study,
- Association with qualified individuals (e.g. project engineers),
- Retention of a recognized qualified individuals (e.g. security specialist)

The EVS5000 Voting System Technical Data Package (TDP) was reviewed for compliance, accuracy, and completeness to the Voluntary Voting System Guides (VVSG). In addition, the TDP documentation served as the basis for the design and development of functional testing. Functional testing was then in turn used to help identify areas where the TDP conflicted with the actual operation of the system. All noted discrepancies were reported to ES&S and tracked as test exceptions until they were sufficiently addressed.

The TDP review results were tracked in a spreadsheet that provided pass/fail compliance to each applicable VVSG requirement. ES&S subsequently revised their documentation as needed to resolve issues and then resubmitted the relevant documents for re-review. This process continued until the TDP issues were sufficiently addressed.

Throughout the EVS5000 testing campaign Wyle tracked a total of 769 TDP issues on the spreadsheet (some of these issues involved multiple concerns). All of these issues were resolved prior to the conclusion of the TDP qualification testing.

Representative samples of these issues are listed below.

00 Preface

- Content columns did not reflect the TDP content.

01 System Overview

- The reported functionality conflicted with that listed in the SOP.

- Information concerning voting features conflicted with information in the System Functionality Description

02 System Functionality Description

- The features were listed that were not part of the defined system.
- Information was missing about trouble shooting numeric codes.

03 System Hardware Specification

- The precinct tabulator was reported to include telecommunications capabilities.
- The central tabulator was reported to use undefined equipment.

04 Software Design and Specification

- Limits on election tapes were not clearly defined.
- Incorrect firmware version numbers were listed.

05 System Test and Verification Specification

- There were references to unsupported functionality.

06 Security Specifications

- Administrative policies were missing concerning the proper control of election media.
- Administrative policies were missing concerning the disposal of election media

07 System Operations Procedure

- Commentary concerning listed voting processes was missing.
- There were missing references to listed files.

08 System Maintenance Procedure

- System limits were stated that did not match the results of functional testing.
- Tabulator functionality was included that was not part of this system.

09 Personnel Training and Deployment

- The subset of the TDP was completely overhauled during testing.
- Document formatting was incorrect in some of the originally submitted documents.

10 Configuration Management Plan

- There were formatting issues with erroneous table of content listings

11 Quality Assurance Program

- There was an outdated third party document included in the QA TDP.

12 System Change Notes

- N/A

The TDP Review Cross-Reference Matrix is provided in Appendix A.7-2.