WYLE TEST REPORT NO. T53781.01
APPENDIX A.7-1
TECHNICAL DATA PACKAGE REVIEW REPORT

One of the noted "**core voting system tests** in the VST LAP include[s 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).

The goal of Wyle 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:

> 1. a regular testing structure for both compliance and functional reviews,
> 2. tester competency requirements,
> 3. and 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 toke the necessary steps to complete the review competently.

Competency was achieved through:
> 1. personal experience and/or study,
> 2. The association with qualified individuals (e.g. project engineers),
> 3. and/or the retention of recognized professionally qualified individuals (e.g. security specialist contractors).

The Dominion Democracy Suite 4.0 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 identify areas where the TDP conflicted with the actual operation of the system. All noted discrepancies were reported to Dominion and tracked as test exceptions until they appeared adequately addressed.

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

A summary of some TDP issues is provided below. All the listed examples were resolved prior to the conclusion of the TDP qualification testing.

2.02 System Overview:

- Initially some information describing the Democracy Suite 4.0 Voting System was inconsistent with the devices that were submitted for certification testing (e.g. ballot marking, COTS USB-based printer)

- Documents cited information that was not included in the appropriate areas of the TDP package or that was missing.

2.03 System Functionality Description:

- Information in some of the Functionality documents was incomplete or just denoted by placeholder comments.

- Information included was inconsistent with other TDP documents such as the EMS System Operation Procedures or Users Guides.

2.04 System Hardware Specification:

- The hardware described was not consistent with the hardware configuration received for testing.

- Not all VVSG Requirements initially appeared adequately addressed (e.g. removable storage media).

2.05 Software and Design Specification:

- Not all VVSG requirements initially appeared adequately addressed.

- Document contained missing information or contained internal placeholder comments.

2.06 Security Specification:

- Some user role information needed clarification.

- Detailed information for all system components was not initially included.

2.07 System Test and Verification Plan:

- Incomplete information was initially submitted.

User Guides:

- Some of the individual user guides included information that conflicted with observations made during the functional testing (e.g., some screen shot information differed from the actual screens noted on the test equipment).

- Information concerning decision criteria and conditional operator functions was not included.

2.09 System Maintenance Procedures:

- Not all VVSG requirements initially appeared adequately addressed.

2.10 Personnel Training and Deployment:

- The suggested number of personnel and their skill level needed operate equipment was not initially included.

- Training requirements were not addressed.

2.11 Configuration Management Plan:

- Not all VVSG requirements initially appeared adequately addressed.

2.12 Quality Assurance Program:

- Documents included in the Technical Documentation set were not listed.

Test Cases:

- Incomplete test case information was initially submitted.

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