WYLE TEST REPORT NO. T56285-01

APPENDIX A.1

NOTICES OF ANOMALY

11 pages including cover page

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ORIGINAL **NOTICE OF ANOMALY** | DATE: 12 May 2009

NOTICE NO: 1 P.O. NUMBER: 001834 CONTRACT NO: N/A

CUSTOMER: ILTS/Unisyn WYLE JOB NO: T56285

NOTIFICATION MADE TO: Chris Ortiz NOTIFICATION DATE: 4 May 2009

NOTIFICATION MADE BY: Wendy Owens VIA: Phone

CATEGORY: [X] SPECIMEN [ ] PROCEDURE [ ] TEST EQUIPMENT DATE OF ANOMALY: 4 May 2009

PART NAME: OpenElect Voting System PART NO. UNI000001

TEST: Lightning Surge I.D. NO. N/A

SPECIFICATION: Voting System Performance Guidelines (2005) PARA. NO. 4.1.2.7

REQUIREMENTS:

Vote scanning and counting equipment for paper-based systems, and all DRE equipment, shall be able to withstand, without disruption of normal operation or loss of data, surges of:

± 2 kV AC line to line

± 2 kV AC line to earth

DESCRIPTION OF ANOMALY:

The OpenElect Voting System was operated in a simulated voting configuration, the ballot reader was in a shoeshine mode and the audio option was active. A +2 kV lightning pulse at 0°, line to line, was applied to the OpenElect Voting System. As the +2 kV lightning pulse was applied the UPS would switch to battery backup, the ballot reader would stop the shoeshine mode and audio would cut on and off.

DISPOSITION • COMMENTS • RECOMMENDATIONS:

The results were documented and the customer informed of the anomaly. The customer informed Wyle Laboratories that they are sending a UPS with a higher surge rating to resume testing.

Safety Related ☐ YES ☑ NO Potential 10 CFR Part 21 ☐ YES ☐ NO ☑ N/A

RESPONSIBILITY TO ANALYZE ANOMALIES AND COMPLY WITH 10 CFR PART 21: ☐ CUSTOMER ☐ WYLE

CAR Required: ☐ YES ☐ NO CAR No.

VERIFICATION: PROJECT ENGINEER: W. Bush 5/12/09

TEST WITNESS: N/A PROJECT MANAGER: Rahul Chaudhary 5/12/09

REPRESENTING: N/A INTERDEPARTMENTAL COORDINATION:

QUALITY ASSURANCE: Brenda Morse 5/12/09

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ORIGINAL **NOTICE OF ANOMALY** DATE: 12/02/09

NOTICE NO: 2 P.O. NUMBER: 001834 CONTRACT NO: N/A

CUSTOMER: ILTS/Unisyn WYLE JOB NO: T56285

NOTIFICATION MADE TO: Chris Ortiz NOTIFICATION DATE: 10/28/09

NOTIFICATION MADE BY: W. Owens VIA: verbally

CATEGORY: [√] SPECIMEN [ ] PROCEDURE [ ] TEST EQUIPMENT DATE OF ANOMALY: (see below)

PART NAME: OpenElect Voting System PART NO. (see below)

TEST: Temperature and Power Variation I.D. NO. (see below)

SPECIFICATION: EAC 2005 VVSG PARA. NO. 4.7.1

REQUIREMENTS:

The EUT shall not demonstrate any signs of operational failure or degradation of performance when subjected to a Temperature and Power Variation Test in accordance with section 4.7.1 of Volume II of the VVSG. The purpose of this test is to evaluate system operation under various environmental conditions. The duration of the test is 163 hours, with 48 hours in the environmental test chamber. For the remaining hours, the equipment may be operated at room temperature. This test is similar to the low temperature and high temperature tests of MIL-STD-810-D, Method 502.2 and Method 501.2.

To perform the test, the EUT shall be placed inside an environmental walk-in test chamber and connected to a variable voltage power source. The temperature inside the chamber and the voltage supplied to the hardware shall be varied from 40°F to 100°F and from 105 VAC to 129 VAC. During test performance, the operational functions shall be continuously exercised by the scanning of ballots and the generation of ballots via audio voting. A minimum of 100 ballots per hours shall be scanned.

The following EUT serial numbers shall be tested:

EUT 1	EUT 2	EUT 3*	EUT 4
OVO UNI000004	OVO UNI000002	OVO UNI000003	OVO UNI000001
OVI UNI150006	OVI UNI150004	OVI UNI150005	OVI UNI150003

*configured to generate audio ballots only

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NOTICE OF ANOMALY	DATE: 12/02/09

NOTICE NO:	2	P.O. NUMBER: 001834	CONTRACT NO: N/A
CUSTOMER:	ILTS/Unisyn	WYLE JOB NO:	T56285
NOTIFICATION MADE TO:	Chris Ortiz	NOTIFICATION DATE:	(see below)
NOTIFICATION MADE BY:	W. Owens	VIA:	verbally

DESCRIPTION OF ANOMALY:

Anomalies occurred during the first three test runs of the Temperature/Power Variation Test. Summaries of each run are provided below.

Run 1

Testing commenced on 8/5/09. During test performance it was discovered that multifeeds and ballot misfeeds had ocuured causing the machine totals to be incorrect. The test was restarted with no modifications made to the EUT configurations. However, tighter controls were added to the voting procedures exercised during test performance to control ballot handling.

Run 2

Testing commenced on 9/9/09. During test performance it was discovered that multifeeds had ocuured causing the machine totals to be incorrect. The test was halted due to the failures.

Run 3

Testing commenced on 10/9/09. The test was inadvertently halted due to an unexpected "Special Handling Required" notification received by the tester.

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NOTICE OF ANOMALY	DATE: 12/02/09

NOTICE NO: 2 P.O. NUMBER: 001834 CONTRACT NO: N/A
CUSTOMER: ILTS/Unisyn WYLE JOB NO: T56285
NOTIFICATION MADE TO: Chris Ortiz NOTIFICATION DATE: (see below)
NOTIFICATION MADE BY: W. Owens VIA: verbally

DISPOSITION • COMMENTS • RECOMMENDATIONS:

The test was successfully completed following the fourth test run. A summary of the test is provided below.

Run 4

Testing commenced on 10/20/09. Prior to test initiation, a specially designed gate was installed on each OVO to prevent multifeeds. A ballot handling error was experienced by the tester on EUT 3. This unit was quarantined due to suspect data. The test was extended to 84 hours to compensate for the reduction in the number of units being tested. The test was completed with no anomalies. Testing did continue on the suspect machine to ensure that tester error had been the cause of the anomaly.

Safety Related ☐ YES ☒ NO Potential 10 CFR Part 21 ☐ YES ☐ NO ☒ N/A

RESPONSIBILITY TO ANALYZE ANOMALIES AND COMPLY WITH 10 CFR PART 21: ☐ CUSTOMER ☐ WYLE

CAR Required: ☐ YES ☒ NO CAR No.

VERIFICATION:

TEST WITNESS: ----

REPRESENTING: ----

QUALITY ASSURANCE: 12/4/09

PROJECT ENGINEER: Wendy Owens 12/2/09

PROJECT MANAGER: 12/

INTERDEPARTMENTAL COORDINATION:

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NOTICE OF ANOMALY

DATE: 12/03/09

NOTICE NO: 3 P.O. NUMBER: 001834 CONTRACT NO: N/A

CUSTOMER: ILTS/Unisyn WYLE JOB NO: T56285

NOTIFICATION MADE TO: Chris Ortiz NOTIFICATION DATE: 8/14/09

NOTIFICATION MADE BY: Wendy Owens VIA: verbally

CATEGORY: [x] SPECIMEN [ ] PROCEDURE [ ] TEST EQUIPMENT DATE OF ANOMALY: 8/14/09

PART NAME: OVI PART NO. UNI150003

TEST: Acoustic Level and Hearing Aid Compatability I.D. NO. ---

SPECIFICATION: EAC 2005 VVSG, Volume I PARA. NO. Sec. 3.2.2.2

REQUIREMENTS:

The machine shall provide an adjustable volume control from 20 to 100 dB SPL in 10 dB increments with the initial volume level set between 40 to 50 dB, and shall reproduce frequencies over the audible speech range of 315 Hz to 10KHz.

DESCRIPTION OF ANOMALY:

The initial volume level was measured to be greater than the maximum accepted level of 50 dB.

DISPOSITION • COMMENTS • RECOMMENDATIONS:

ILTS was notified of the anomaly and performed a source code revision to adjust the initial volume setting. The test was then repeated and the initial volume setting was measure to be 47.2 dBA, which is within the allowable range.

Safety Related ☐ YES ☒ NO Potential 10 CFR Part 21 ☐ YES ☐ NO ☒ N/A

RESPONSIBILITY TO ANALYZE ANOMALIES AND COMPLY WITH 10 CFR PART 21: ☐ CUSTOMER ☐ WYLE

CAR Required: ☐ YES ☒ NO CAR No.

VERIFICATION:

PROJECT ENGINEER: Wendy Owens 12/3/09

TEST WITNESS: ---

PROJECT MANAGER: [illegible] 12/3/09

REPRESENTING: ---

INTERDEPARTMENTAL COORDINATION:

QUALITY ASSURANCE: [illegible] 12/4/09

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ORIGINAL **NOTICE OF ANOMALY** DATE: 12/16/09

NOTICE NO: 4 (Rev. A) P.O. NUMBER: 001834 CONTRACT NO: N/A

CUSTOMER: ILTS/Unisyn WYLE JOB NO: T56285

NOTIFICATION MADE TO: Chris Ortiz NOTIFICATION DATE: 11/13/09

NOTIFICATION MADE BY: Jack Cobb VIA: verbally

CATEGORY: [X] SPECIMEN [ ] PROCEDURE [ ] TEST EQUIPMENT DATE OF ANOMALY: 10/30/09 & 11/13/09

PART NAME: OpenElect Voting System PART NO. ---

TEST: Volume and Stress I.D. NO. ---

SPECIFICATION: EAC 2005 VVSG, Volume II PARA. NO. 6.2.3

REQUIREMENTS:

For all systems, the total number of ballots to be processed by each precinct counting device during these tests shall reflect the maximum number of active voting positions and the maximum number of ballot styles that the TDP claims the system can support.

DESCRIPTION OF ANOMALY:

At the conclusion of voting during test performance, the system failed to tally 10,000 ballots with maximum write-ins. A source code revision was performed and the test was restarted. During voting, it was noted that candidate counts were not being counted accurately Engineering analysis was performed and it was determined that the ballot was invalid. A total of 47,510 ballots were processed on the OVO unit without issues. A

DISPOSITION • COMMENTS • RECOMMENDATIONS:

An engineering analysis was performed to determine that the write-in images were being stored in the system memory causing a failure to tally error. A source code revision was performed to no longet store the write-in images. The test was repeated with no anomalies.

Note: This is a revision to NOA No. 4 dated 12/03/09. This revision corrects grammatical errors and typos.

Safety Related ☐ YES ☒ NO Potential 10 CFR Part 21 ☐ YES ☐ NO ☒ N/A

RESPONSIBILITY TO ANALYZE ANOMALIES AND COMPLY WITH 10 CFR PART 21: ☐ CUSTOMER ☐ WYLE

CAR Required: ☐ YES ☒ NO CAR No.

VERIFICATION: PROJECT ENGINEER: Jack Cobb 12-17-09

TEST WITNESS: PROJECT MANAGER: [illegible] 12-17-09

REPRESENTING: INTERDEPARTMENTAL COORDINATION:

QUALITY ASSURANCE: [illegible] 12/17/09

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ORIGINAL

NOTICE OF ANOMALY

DATE: 12/03/09

NOTICE NO: 5 P.O. NUMBER: 001834 CONTRACT NO: N/A

CUSTOMER: ILTS/Unisyn WYLE JOB NO: T56285

NOTIFICATION MADE TO: Chris Ortiz NOTIFICATION DATE: ongoing

NOTIFICATION MADE BY: Jack Cobb VIA: e-mail

CATEGORY: [x] SPECIMEN [ ] PROCEDURE [ ] TEST EQUIPMENT DATE OF ANOMALY: 11/20/08 through 12/03/09

PART NAME: OpenElect Voting System PART NO. ----

TEST: Source Code Review I.D. NO. Wyle Review Summaries

SPECIFICATION: EAC 2005 VVSG, Volume I PARA. NO. Section 5

REQUIREMENTS:

Software used in voting systems shall meet the essential design and performance characteristics detailed in Section 5 of the EAC 2005 VVSG.

DESCRIPTION OF ANOMALY:

Review of the submitted source code modules comprising the OpenElect Voting System revealed deviations from the standard as well as issues with the commenting. These anomalies are documented in detail in the Wyle generated source code review reports on file as raw data.

DISPOSITION • COMMENTS • RECOMMENDATIONS:

A technical summary report of all identified standards violations was sent to the Unisyn for resolution. Unisyn then corrected all standards violations and re-submitted the source code for re-review. This process was repeated as many times as necessary, until all identified standards violations were corrected.

Safety Related ☐ YES ☒ NO Potential 10 CFR Part 21 ☐ YES ☐ NO ☒ N/A

RESPONSIBILITY TO ANALYZE ANOMALIES AND COMPLY WITH 10 CFR PART 21: ☐ CUSTOMER ☐ WYLE

CAR Required: ☐ YES ☒ NO CAR No.

VERIFICATION: PROJECT ENGINEER: 12-4-09

TEST WITNESS: ---- PROJECT MANAGER: 12-4-09

REPRESENTING: ---- INTERDEPARTMENTAL COORDINATION:

QUALITY ASSURANCE: 12/4/09

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ORIGINAL

NOTICE OF ANOMALY

DATE: 12/10/09

NOTICE NO: 6 P.O. NUMBER: 001834 CONTRACT NO: N/A

CUSTOMER: ILTS/Unisyn WYLE JOB NO: T56285

NOTIFICATION MADE TO: Chris Ortiz NOTIFICATION DATE: ongoing

NOTIFICATION MADE BY: Jack Cobb VIA: e-mail

CATEGORY: [x] SPECIMEN [ ] PROCEDURE [ ] TEST EQUIPMENT DATE OF ANOMALY: 11/20/08 through 12/03/09

PART NAME: OpenElect Voting System PART NO. ---

TEST: Functional Configuration Audit (FCA) I.D. NO. Wyle Mantis Reports

SPECIFICATION: EAC 2005 VVSG, Volume II PARA. NO. Section 6.7

REQUIREMENTS:

A Functional Configuration Audit (FCA) of the OVS shall be performed in accordance with Section 6.7 of Volume II of the VVSG. The purpose of the FCA is to verify that the OVS performs as documented in the Unisyn-supplied technical documentation during pre-voting, voting, and post-voting activities and that it meets the requirements of the VVSG.

To perform the FCA, the OVS shall be subjected to a series of tests to simulate Election Day activities. These tests are performed to ensure compatibility of voting machine functions at the precinct level using the referenced firmware.

DESCRIPTION OF ANOMALY:

During performance of the FCA, issues were noted related to system functionality.

DISPOSITION • COMMENTS • RECOMMENDATIONS:

A report of all identified issues was sent to Unisyn for resolution. Unisyn then corrected all noted issues and the tests were repeated with no anomalies.

Safety Related ☐ YES ☒ NO Potential 10 CFR Part 21 ☐ YES ☐ NO ☒ N/A

RESPONSIBILITY TO ANALYZE ANOMALIES AND COMPLY WITH 10 CFR PART 21: ☐ CUSTOMER ☐ WYLE

CAR Required: ☐ YES ☒ NO CAR No.

VERIFICATION:

TEST WITNESS: ----

REPRESENTING: ----

QUALITY ASSURANCE: 12/15/09

PROJECT ENGINEER: Wendy Overo 12/10/09

PROJECT MANAGER: 12/10/09

INTERDEPARTMENTAL COORDINATION:

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NOTICE OF ANOMALY

DATE: 12/15/09

NOTICE NO: 7 P.O. NUMBER: 001834 CONTRACT NO: N/A

CUSTOMER: ILTS/Unisyn WYLE JOB NO: T56285

NOTIFICATION MADE TO: Chris Ortiz/Jens Jensen NOTIFICATION DATE: ongoing

NOTIFICATION MADE BY: W. Owens VIA: e-mail

CATEGORY: [x] SPECIMEN [ ] PROCEDURE [ ] TEST EQUIPMENT DATE OF ANOMALY: 11/20/08 through 12/15/09

PART NAME: OpenElect Voting System PART NO. ---

TEST: TDP Review I.D. NO. ---

SPECIFICATION: EAC 2005 VVSG, Volume I PARA. NO. Section 2

REQUIREMENTS:

The Unisyn Voting Solutions, Inc., OpenElect Voting System (OVS) Technical Data Package (TDP) shall be reviewed for accuracy, completeness, and compliance to the 2005 VVSG.

DESCRIPTION OF ANOMALY:

Review of the submitted documentation revealed discrepancies between the TDP and the VVSG requirements. Functional testing also identified text in the TDP that conflicted with the actual operatio of the system. Each anomaly is documented in detail in the Wyle-generated TDP review reports on file as raw data.

DISPOSITION • COMMENTS • RECOMMENDATIONS:

The review results were recorded in a worksheet that provided the pass/fail compliance to each applicable VVSG requirement. Unisyn corrected each nonconformance observation and resubmitted the associated documents for review. This process continued until the TDP complied with all applicable requirements.

Safety Related ☐ YES ☒ NO Potential 10 CFR Part 21 ☐ YES ☐ NO ☒ N/A

RESPONSIBILITY TO ANALYZE ANOMALIES AND COMPLY WITH 10 CFR PART 21: ☐ CUSTOMER ☐ WYLE

CAR Required: ☐ YES ☒ NO CAR No.

VERIFICATION:

PROJECT ENGINEER: Wendy Owens 12/15/09

TEST WITNESS: ---

PROJECT MANAGER: Frank McPadd 12/15/09

REPRESENTING: ---

INTERDEPARTMENTAL COORDINATION:

QUALITY ASSURANCE: 12/16/09

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ORIGINAL

NOTICE OF ANOMALY

DATE: 12/16/09

NOTICE NO: 8, Rev. A P.O. NUMBER: 001834 CONTRACT NO: N/A

CUSTOMER: ILTS/Unisyn WYLE JOB NO: T56285

NOTIFICATION MADE TO: Chris Ortiz NOTIFICATION DATE: ongoing

NOTIFICATION MADE BY: Jack Cobb VIA: e-mail

CATEGORY: [x] SPECIMEN [ ] PROCEDURE [ ] TEST EQUIPMENT DATE OF ANOMALY: 11/20/08 through 12/03/09

PART NAME: OpenElect Voting System PART NO. ---

TEST: Usability and Accessibility I.D. NO. ---

SPECIFICATION: EAC 2005 VVSG, Volumes I and II PARA. NO. Sections 3 and 6.5

REQUIREMENTS:

Usability and Accessibility Testing of the OVS shall be performed in accordance with Section 3 of Volume I and Section 6.5 of Volume II of the VVSG. The purpose of this testing is to assess the quality of interacting between the voter and the voting system and the effectiveness with which the system provides a comfortable and efficient voting session that provides confidence to the voter that their votes are cast correctly. A

DESCRIPTION OF ANOMALY:

During test performace, ten issues were noted to usability of the voting system. Of these issues, two were related to text, seven were considered minor, and one was considered major. A

DISPOSITION • COMMENTS • RECOMMENDATIONS:

A report of all issues was sent to Unisyn for resolution. Unisyn either corrected the issue or the issue was able to be resolved with no retesting required. When testing was required, no anomalies were noted. A

Note: This is a revision to NOA No. 8 dated 12/15/09. This revision corrects grammatical errors and typos.

Safety Related ☐ YES ☒ NO Potential 10 CFR Part 21 ☐ YES ☐ NO ☒ N/A

RESPONSIBILITY TO ANALYZE ANOMALIES AND COMPLY WITH 10 CFR PART 21: ☐ CUSTOMER ☐ WYLE

CAR Required: ☐ YES ☒ NO CAR No.

VERIFICATION:

TEST WITNESS: ----

REPRESENTING: ----

QUALITY ASSURANCE: 12/18/09

PROJECT ENGINEER: Wendy Avers 12/17/09

PROJECT MANAGER: 12/17/09

INTERDEPARTMENTAL COORDINATION: