

NIST Conformity Assessment Activity under the Help America Vote Act

Under Section 231 of the Help America Vote Act (HAVA), the Director of the National Institute of Standards and Technology (NIST) is required to conduct an evaluation of independent, non-Federal laboratories and to submit to the Election Assistance Commission (EAC) a list of those laboratories that the Director proposes to be accredited to carry out the testing, certification, decertification, and recertification provided for under the Act.

NIST has chosen to carry out its conformity assessment responsibilities under HAVA by accrediting laboratories that test voting system hardware and software for conformance to requirements established by HAVA and the EAC through the National Voluntary Laboratory Accreditation Program (NVLAP), which is administered by NIST.

NVLAP is a voluntary, fee-supported program to accredit laboratories that are found competent to perform specific tests or calibrations, or types of tests or calibrations. The program was established by NIST in 1976 to serve the needs of the government and private sector (industry, consumers, and other stakeholders) by fostering and promoting a uniformly acceptable base of professional and technical competence in the laboratory community, and to facilitate the acceptance of calibration and test results between countries to avoid barriers to trade. The program provides an unbiased third party evaluation and recognition of performance, as well as expert technical guidance to upgrade laboratory performance. NVLAP procedures are codified in the Code of Federal Regulations (CFR, Title 15, Part 285).

Simply stated, laboratory accreditation is formal recognition that a laboratory is competent to carry out specific tests or calibrations. Expert technical assessors conduct a thorough evaluation of all aspects of laboratory operation that affect the production of test data, using recognized criteria and procedures. General criteria are based on the international standard ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*, which is used for evaluating laboratories throughout the world. Laboratory accreditation bodies use this standard specifically to assess factors relevant to a laboratory's ability to produce precise, accurate test data, including the technical competency of staff, validity and appropriateness of test methods, testing and quality assurance of test and calibration data. NVLAP includes this standard in NIST Handbook 150: *NVLAP Procedures and General Requirements*. Laboratory accreditation programs usually also specify field-specific technical criteria that laboratories must meet, in addition to demonstrating general technical competence. For the NVLAP voting system testing program the technical criteria is contained in NIST Handbook 150-22: *NVLAP Voting System Testing*.

Laboratory accreditation thus provides a means of evaluating the competence of laboratories to perform specific types of testing, measurement and calibration. It also allows a laboratory to determine whether it is performing its work correctly and to appropriate standards.

Laboratories seeking accreditation to test voting system hardware and software are required to meet the NVLAP criteria for accreditation which include: NIST Handbooks 150 and 150-22, the 2002 Voting System Standards (VSS), the 2005 Voluntary Voting Systems Guidelines (VVSG), and any other criteria deemed necessary by the EAC. Laboratories are required to complete the NVLAP application process and pay applicable fees. Rigorous onsite assessments must be conducted and laboratories undergoing assessment must resolve any identified nonconformities before accreditation can be granted.

To be accredited by NVLAP as a voting systems testing laboratory, a laboratory must perform a core set of voting system testing in-house. Testing is specified in the VSS 2002 and VVSG 2005. Of these tests the core test methods include: technical data package review, physical configuration audit, source code review, functional configuration audit, system integration test, volume tests, and security tests. The non-core test methods may be subcontracted to other labs accredited for testing in: electromagnetic compatibility, telecommunications, environmental, electrical, acoustical, and cryptographic modules.

To ensure continued compliance, all NVLAP-accredited laboratories undergo an onsite assessment before initial accreditation, during the first renewal year, and every two years thereafter to evaluate their ongoing compliance with specific accreditation criteria.

On June 23, 2004, NIST published a Federal Register Notice announcing that any laboratory wishing to conduct testing under HAVA should contact NVLAP for further information. NVLAP conducted a public workshop on August 17, 2004 with interested laboratories to review its accreditation criteria, as well as receive comments and feedback from the participating laboratories and other interested parties. Workshop documents are available at http://vote.nist.gov/nvlap_workshop2004.htm.

After the workshop, NVLAP began finalizing specific technical criteria for testing laboratories and started making the necessary logistical arrangements to begin the actual assessment of the laboratories. NVLAP then identified, contracted, and trained technical expert assessors to perform the on-site assessments.

A June 17, 2005 Federal Register notice invited interested laboratories to submit an application for accreditation by August 16, 2005. The first group of applicant laboratories was given the opportunity to undergo the first round of pre-assessments. A pre-assessment benefits both the laboratory and the accrediting body. Although not a requirement, it is used to prepare the laboratory for the on-site assessment and is particularly useful in a new accreditation program. It gives the laboratory the chance to see how close they are to performing to the accreditation requirements and also gives the

accreditation body the opportunity to fine tune the process and improve the technical checklist. Three laboratories applied in time to qualify for this first series of pre-assessments. The last of these three pre-assessments was conducted this past June. As a result one of these laboratories decided not to continue with the accreditation process; the other two decided to pursue accreditation for voting system testing.

Since these initial applications were received, NVLAP has received applications from four additional laboratories. Thus there are six labs currently in the NVLAP voting system accreditation program. Each of these new labs will receive a pre-assessment visit by NVLAP before the actual on-site assessment is conducted. To date one of these new laboratories has also been pre-assessed and remains in the accreditation program.

Operating concurrently to the pre-assessments are the official on-site assessments. NVLAP completed its first on-site assessment under the voting system testing program on September 22, 2006. The laboratory was evaluated for competence to test to both VSS 2002 and VVSG 2005. The laboratory has 30 days to respond to NVLAP with corrective actions for any nonconformity found during the on-site assessment. This means that the labs must either correct the non-conformity or submit a correction plan within 30 days of the assessment. The corrections will be reviewed by a NVLAP evaluation panel, which will determine whether the lab's responses are sufficient to meet the accreditation criteria. Only after a laboratory has met all NVLAP criteria for accreditation will it be presented to the Election Assistance Commission for its approval to test voting systems. The EAC may impose requirements on the laboratories in addition to NVLAP accreditation.

NVLAP anticipates conducting the on-site assessment of a second laboratory before the end of this year and completing the remaining pre-assessments in the first two months of 2007.

NIST is aware of the how important it is for voters to have trust and confidence in voting systems and will work diligently to ensure that voting system laboratories are competent to conduct the required testing.

Thank you for the opportunity to provide testimony about the work of the National Voluntary Laboratory Accreditation Program and its role with the EAC in accrediting laboratories.