CHAPTER 1

CERTIFICATION

Introduction

The Federal Election Commission (FEC) adopted the first formal set of voluntary Federal standards for computer-based voting systems in January 1990. No national program or organization existed to test and certify such systems to the standards. However, in 1994, the National Association of State Election Directors (NASED) stepped up to fill this void. NASED is an independent, nongovernmental organization of State election officials. This organization formed the Nation's first national program to test and qualify voting systems to the new Federal standards. The organization worked, on a strictly voluntary basis, for more than a decade to help ensure the reliability, consistency, and accuracy of voting systems fielded in the United States. In late 2002, Congress passed the Help America Vote Act of 2002 (HAVA). HAVA created the U.S. Election Assistance Commission (EAC) and assigned to this Commission the responsibility for both setting voting system standards and providing for the testing and certification of voting systems. This mandate represented the first time the Federal government provided for the voluntary testing, certification, and decertification of voting systems nationwide. In response to this HAVA requirement, the EAC developed the Voting System Testing and Certification Program (Certification Program).

HAVA requires that the EAC certify and decertify voting systems. Section 231(a)(1) of HAVA specifically requires the EAC to "… provide for the testing, certification, decertification and recertification of voting system hardware and software by accredited laboratories." The EAC has the sole authority to grant certification or withdraw certification at the Federal level, including the authority to grant, maintain, extend, suspend, and withdraw the right to retain or use any certificates, marks, or other indicators of certification.

Pursuant to the authority granted under HAVA, the EAC has developed and promulgated the EAC Voting System Testing and Certification Program Manual which provides the procedural requirements of the EAC Certification Program. Although participation in the program is voluntary, adherence to the program's procedural requirements is mandatory for participants.

The primary purpose of the EAC Testing and Certification Program Manual is to provide clear procedures to Manufacturers for the testing and certification of voting systems to specified Federal standards consistent with the requirements of HAVA Section 231(a)(1). The program, however, also serves to do the following:

- ★ Support State certification programs.
- ★ Support local election officials in the areas of acceptance testing and pre-election system verification.
- ★ Increase quality control in voting system manufacturing.
- ★ Increase voter confidence in the use of voting systems.

EAC Testing and Certification Program Manual

The Testing and Certification Program Manual is a comprehensive presentation of the EAC Certification Program. It is intended to establish all of the program's administrative requirements. (The manual may be accessed in its entirety at **http://www.eac.gov/docs/Voting%20System%20Testing%20and%20Certification%20Program%20Manual–Final%20–120506.pdf**)

The contents of the manual serve as an overview of the program itself and contain the following chapters:

- *Manufacturer Registration*. Manufacturer registration is the process by which voting system Manufacturers make initial contact with the EAC and provide information essential to participate in the EAC Certification Program. Before a Manufacturer of a voting system can submit an application to have a voting system certified by the EAC, the Manufacturer must be registered. This process requires the Manufacturer to provide certain contact information and agree to certain requirements of the Certification Program. After successfully registering, the Manufacturer receives an identification code.
- *When Voting Systems Must Be Submitted for Testing and Certification*. An EAC certification signifies that a voting system has been successfully tested to identified voting system standards adopted by the EAC. Only the EAC can issue a Federal certification. Ultimately, to receive this certification, systems must be submitted for testing and certification under this program. Systems will usually be submitted when (1) they are new to the marketplace, (2) they have never before received an EAC certification, (3) they are modified, or (4) the Manufacturer wishes to test a previously certified system to a different (newer) standard. This chapter also discusses the submission of de minimis changes, which may not require additional testing and certification, and provisional, pre-election emergency modifications, which provide for pre-election, emergency waivers.
- *Certification Testing and Review*. This chapter discusses the procedural requirements for submitting a voting system to the EAC for testing and review. The testing and review process requires an application, employment of an EAC-accredited testing laboratory, and technical analysis of the laboratory test report by the EAC. The result of this process is an Initial Decision on Certification by the Decision Authority, the EAC Executive Director.
- *Grant of Certification*. The grant of certification is the formal process through which the EAC acknowledges that a voting system has successfully completed conformance testing to an appropriate set of standards or guidelines. The grant of certification begins with the Initial Decision on Certification by the Decision Authority. This decision becomes final after the Manufacturer confirms that the final version of the software, which was certified and will be delivered with the certified system, has been subject to a trusted build, placed in an EAC-approved repository, and can be verified using the Manufacturer's system identification tools. After a certification is issued, the Manufacturer is provided a Certificate of Conformance, and relevant information about the system is added to the EAC Web site. Manufacturers with certified voting systems are responsible for ensuring that each system they produce is properly labeled as certified.
- *Denial of Certification*. If the Decision Authority issues an Initial Decision denying certification, the Manufacturer has certain rights and responsibilities. The Manufacturer may request an opportunity to cure the defects identified by the Decision Authority. In addition, the Manufacturer may request that the Decision Authority reconsider the Initial Decision after the Manufacturer has had the opportunity to review the record and submit supporting written materials, data, and the rationale for its position. Finally, in the event reconsideration is denied, the Manufacturer may appeal the decision to the Appeal Authority.
- *Decertification*. Decertification is the process by which the EAC revokes a certification previously granted to a voting system. It is an important part of the Certification Program because it ensures that the program requirements are followed and that certified voting systems fielded for use in Federal elections maintain the same level of quality as those presented for testing. Decertification is a serious matter and will significantly affect Manufacturers, State and local governments, the public, and the administration of elections. As such, the process for Decertification is complex. It is initiated when the EAC receives information that a voting system may not be in compliance with the applicable voting system standards or the procedural requirements of this manual. Upon receipt of such information, the program director may initiate an Informal Inquiry to determine the credibility of the information. If the information is credible and suggests the system is non-compliant, a Formal Investigation will be initiated. If the Formal Investigation results demonstrate non-compliance, the Manufacturer will be given a Notice of Non-Compliance. Before a Final Decision on Decertification is made, the Manufac-

turer will have the opportunity to remedy any defects identified in the voting system and present information for consideration by the Decertification Authority. A decertification of a voting system may be appealed in a timely manner.

★ *Quality Monitoring Program*. The quality of any product, including a voting system, depends on two specific elements: (1) the design of the product or system and (2) the care and consistency of the manufacturing process. The EAC testing and certification process focuses on voting system design by ensuring that a representative sample of a system meets the technical specifications of the applicable EAC voting system standards. This process, commonly called "type acceptance," determines whether the representative sample submitted for testing meets the requirements. Type acceptance does not explore whether variations in manufacturing may allow production of non-compliant systems. Generally, manufacturing quality is the responsibility of the Manufacturer. After a system is certified, the vendor assumes primary responsibility for compliance of the products produced. This level of compliance is accomplished by the Manufacturer's configuration management and quality control processes. The EAC's Certification Quality Monitoring Program, as outlined in this chapter, however, provides an additional layer of quality control by allowing the EAC to perform manufacturing site reviews, carry out fielded system reviews, and gather information on voting system anomalies from election officials. These additional tools help ensure that voting systems continue to meet the requirements of EAC's voting system standards as the systems are manufactured, delivered, and used in Federal elections. These aspects of the program enable the EAC to independently monitor continued compliance of fielded voting systems.

★ *Requests for Interpretations*. A Request for Interpretation is a means by which a registered Manufacturer or Voting System Test Laboratory (VSTL) may seek clarification on a specific EAC voting system standard (VVSG or VSS). An Interpretation is a clarification of the voting system standards and guidance so Manufacturers or VSTL can properly evaluate conformance to it. Suggestions or requests for modifications to the standards are provided by other processes. This chapter outlines the policy, requirements, and procedures for submitting a Request for Interpretation.

★ *Release of Certification Program Information*. Manufacturers participating in the Certification Program are required to provide a variety of documents to the EAC. Generally, these documents are releasable to the public. Moreover, in many cases, the information provided is affirmatively published by the EAC. In limited cases, however, documents may not be released if they include trade secrets, confidential commercial information, or personal information. Although the EAC is ultimately responsible for determining which documents Federal law protects from release, Manufacturers must identify the information they believe is protected and ultimately provide substantiation and a legal basis for withholding. This chapter discusses EAC's general policy on the release of information and provides Manufacturers with standards, procedures, and requirements for identifying documents as trade secrets or confidential commercial information.

Program Methodology

The EAC Certification Program is but one part of the overall conformity assessment process; the Certification Program includes companion efforts at the State and local levels.

Federal and State Roles. The process to ensure that voting equipment meets technical requirements is a distributed, cooperative effort by Federal, State, and local officials in the United States. Working with voting equipment Manufacturers, these officials each have unique responsibility for ensuring that the equipment a voter uses on Election Day meets specific requirements.

★ The EAC Certification Program has primary responsibility for ensuring that voting systems submitted under this program meet Federal standards established for voting systems.

★ State officials are responsible for testing voting systems to ensure that they support the specific requirements of each individual State. States may use EAC VSTLs to perform testing of voting systems that are unique to State requirements while the systems are being tested to Federal standards. The EAC will not, however, certify voting systems to State requirements.

★ State or local officials are responsible for making the final purchase choice of voting equipment. They

are responsible for deciding which system offers the best fit and total value for their specific State or local jurisdiction.

- State or local officials are also responsible for acceptance testing to ensure that the equipment delivered is identical to the equipment certified at the Federal and State levels, is fully operational, and meets the contractual requirements of the purchase.
- State or local officials should perform pre-election logic and accuracy testing to confirm that equipment is operating properly and is unmodified from its certified state.

Conformity Assessment, Generally. Conformity assessment is a system to ensure that a product or service meets the requirements that apply to it. Many conformity assessment systems exist to protect the quality and ensure compliance with requirements of products and services. All conformity assessment systems attempt to answer the following questions:

- *What specifications are required of an acceptable system?* For voting systems, the EAC VVSG and VSS address this issue. States and local jurisdictions also have supplementing standards.
- *How are systems tested against required specifications?* The EAC Certification Program is a central element of the larger conformity assessment system. The program, as set forth in the manual, provides for the testing and certification of voting systems to identified versions of the VVSG. The Certification Program's purpose is to ensure that State and local jurisdictions receive voting systems that meet the requirements of the VVSG.
- *Are the testing authorities qualified to make an accurate evaluation?* The EAC accredits VSTLs, after the National Institute of Standards and Technology's (NIST) National Voluntary Lab Accreditation Program (NVLAP) has reviewed their technical competence and lab practices, to ensure these test authorities are fully qualified. Furthermore, EAC technical experts review all test reports from accredited laboratories to ensure an accurate and complete evaluation. Many States provide similar reviews of laboratory reports.
- *Will Manufacturers deliver units within manufacturing tolerances to those tested?* The VVSG and this manual require that vendors have appropriate change management and quality control processes to control the quality and configuration of their products. The Certification Program provides mechanisms for the EAC to verify Manufacturer quality processes through field system testing and manufacturing site visits. States have implemented policies for acceptance of delivered units.