OFFICE OF INSPECTOR GENERAL

U.S. Election Assistance Commission

AUDIT OF THE U.S. ELECTION ASSISTANCE COMMISSION'S TESTING AND CERTIFICATION PROGRAM

Report No. P22HQ0018-23-05
March 10, 2023

HIGHLIGHTS

AUDIT OF EAC'S TESTING AND CERTIFICATION PROGRAM

Report No. P22HQ0018-23-05 March 10, 2023

What OIG Audited

The Office of Inspector General audited the U.S. Election Assistance Commission's testing and certification program. The Help America Vote Act (HAVA) established requirements for EAC to provide for the "testing, certification, decertification, and recertification of voting system hardware and software by accredited laboratories."

The **objectives** of the audit were to describe

(1) The process for accrediting voting system test laboratories and certifying voting systems; and

(2) The factors that affect EAC's testing and certification program.

Why We Did This Audit

In 2022, the OIG hotline received an increase in inquiries related to the accreditation of labs and certification of voting systems. Due to this and other increases in public interest, as well as the importance of voting systems to the nation's elections, OIG performed this audit to provide the public, lawmakers, and other stakeholders with additional information on EAC's process for lab accreditation and testing and certifying voting systems.

What OIG Found

The Office of Inspector General found that EAC has a robust lab accreditation program and voting system certification process.

However, there are significant factors that impact the testing and certification program. Specifically, the audit identified opportunities to improve (1) stakeholder coordination, (2) program implementation related to policies, procedures, communication, and staffing, and (3) the assessment of program risks.

What OIG Recommended

OIG made seven recommendations:

1. Establish regular coordination with NIST and review the accreditation procedures for voting system test labs.
2. Develop policies to ensure periodic meetings with labs and manufacturers occur and the non-sensitive meeting minutes are published.
3. Assess the policies and procedures used by the program and establish, identify, and update them as needed.
4. Improve the organization and quality of materials on the EAC website.
5. Update the records disposition schedule for the program.
6. Utilize federal guidance to conduct a staffing assessment for the program.
7. Identify, measure, and assess risks related to the program.

OFFICE OF THE INSPECTOR GENERAL
US Election Assistance Commission
633 3rd Street, NW, Suite 200
Washington, DC 20001

DATE: March 10, 2023

TO: U.S. Election Assistance Commission, Executive Director, Steven Frid

FROM: U.S. Election Assistance Commission, Inspector General, Brianna Schletz

SUBJECT: Audit of the U.S. Election Assistance Commission's Testing and Certification Program (Report No. P22HQ0018-23-05)

This memorandum transmits the final report on the U.S. Election Assistance Commission's (EAC's) testing and certification program. Our audit objectives were to describe (1) the process for accrediting voting system test laboratories and certifying voting systems and (2) the factors that affect EAC's testing and certification program. In finalizing the report, we considered your comments on the draft and included them in their entirety in Appendix B.

The report contains seven recommendations. After reviewing your response to the draft report, we agree with the management decisions on all seven recommendations and consider them open pending completed action. Please keep us informed on progress, as we will track the status of their implementation.

We appreciate the assistance you and your staff provided to us during this audit.

cc: Commissioner Christy McCormick, Chair
Commissioner Benjamin W. Hovland, Vice Chair
Commissioner Donald L. Palmer
Commissioner Thomas Hicks

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Background

With every federal election in the United States, millions of Americans cast their ballots to collectively decide the future leadership of the country. The Help America Vote Act (HAVA) was passed in 2002 and set election administration requirements, provided grants to states, and established the U.S. Election Assistance Commission (EAC). EAC is an independent federal entity, under the direction of a four-person bipartisan commission, with a mission to help election officials improve the administration of elections and help Americans participate in the voting process.

A voting system is the "combination of mechanical, electromechanical, and electronic equipment (including the software, firmware, and documentation required to program, control, and support the equipment) used to define ballots; cast and count votes; report or display election results; connect the voting system to the voter registration system; and maintain and produce any audit trail information."

Source: EAC Voting System Testing and Certification Program Manual 2.0

HAVA also established requirements for the country's voting systems. Sometimes referred to as the baseline HAVA requirements, the Section 301 requirements, shown in Figure 1 below, are mandatory and not subject to revision by EAC.

Figure 1. Baseline Requirements for Voting Systems

- Allow the voter to verify and, if necessary, correct the ballot before it is cast.
- Notify the voter if they are about to overvote.
- Protect the privacy and confidentiality of the ballot.
- Meet alternate language accessibility requirements under the Voting Rights Act of 1965.
- Meet federal standards for acceptable error rates.
- Have at least one voting machine equipped to serve voters with disabilities at each polling place.

Source: Help America Vote Act of 2002, Section 301.

The baseline HAVA requirements are separate from EAC's Voluntary Voting System Guidelines (VVSG). VVSG provides a set of specifications and requirements against which voting systems can be tested, including basic functionality, accessibility, and security capabilities. HAVA mandates that EAC establish and maintain these technical guidelines.

However, adherence to VVSG is generally voluntary, unless a jurisdiction has elected to adopt it as mandatory. Some state legislatures have required their voting systems to meet some or all of the specifications and requirements in VVSG, and other states have not. Some states require their voting systems to be tested to federal standards in federally-accredited laboratories, but do not go as far as requiring full certification. According to EAC analysis, 16 states require baseline HAVA requirements be met, and 12 require full federal certification. The rest fall somewhere in the middle, with some states falling into more than one category.

EAC Testing and Certification Program

HAVA Section 231 states that EAC, "shall provide for the testing, certification, decertification, and recertification of voting system hardware and software by accredited laboratories." It requires the National Institute of Standards and Technology (NIST) to recommend and provide continual monitoring of laboratories and outlines requirements for EAC's accreditation of testing laboratories upon considering NIST suggestions. Requirements related to accreditation and certification are included in Figure 2 below.

Figure 2. Accreditation and Certification Requirements for EAC in HAVA

HAVA Section	Requirement
Section 231(a)1	Provide for the testing, certification, decertification, and recertification of voting system hardware and software by accredited laboratories.
Section 231(b)2	The Commission shall vote on the accreditation of any laboratory taking into consideration the recommendation list submitted by NIST. No laboratory may be accredited unless its accreditation is approved by a vote of the Commission.
Section 231(b)2	The Commission shall publish an explanation for the accreditation of any laboratory not included in the list submitted by NIST.
Section 231(c)1	In cooperation with the Commission and consultation with the Standards Board and the Board of Advisors, NIST shall monitor and review, on an ongoing basis, the performance of the laboratories accredited by the Commission, and shall make appropriate recommendations with respect to continuing accreditation or recommendations to revoke the accreditation of a laboratory.
Section 231(c)2	The accreditation of a laboratory may not be revoked unless the revocation is approved by a vote of the Commission.
Section 209	The Commission shall not have any authority to issue any rule, promulgate any regulation, or take any other action which imposes any requirement on a state or unit of local government, except to the extent permitted under Section 9(a) of the National Voter Registration Act of 1993.

To meet the requirements in HAVA, EAC established a testing and certification program. The purpose of the program is to assist state and local election officials by providing voting system testing and certification. As of February 2023, the program operated with a director, three senior election technology specialists and one election technology specialist.[1]

The program maintains and operates manuals for administering the testing and certification program, the Voting System Test Laboratory Program Manual Version 2.0 (VSTL Manual) and the Testing and Certification Program Manual Version 2.0 (Program Manual).[2] An updated version of both manuals had been approved but was not operational during our audit fieldwork.

[1] In September 2022, the program operated with a director, senior election technology specialist, and two vacancies.

[2] EAC, Voting System Test Laboratory Program Manual, Version 2.0 (eac.gov); Testing and Certification Program Manual, Version 2.0 (eac.gov).

Audit Objectives

The objectives of the audit were to describe:

1. The process for accrediting voting system test laboratories and certifying voting systems.
2. The factors that affect EAC's testing and certification program.

EAC Has a Robust Lab Accreditation and Voting System Certification Process

To become EAC-accredited, a lab must demonstrate compliance with hundreds of requirements. For a manufacturer to have its voting system certified to EAC standards, it must undergo testing that can take over a year and, after completing the comprehensive certification process, the manufacturer may need to undergo additional testing to meet specific state requirements before the product can be used. These processes are described in detail below.[3]

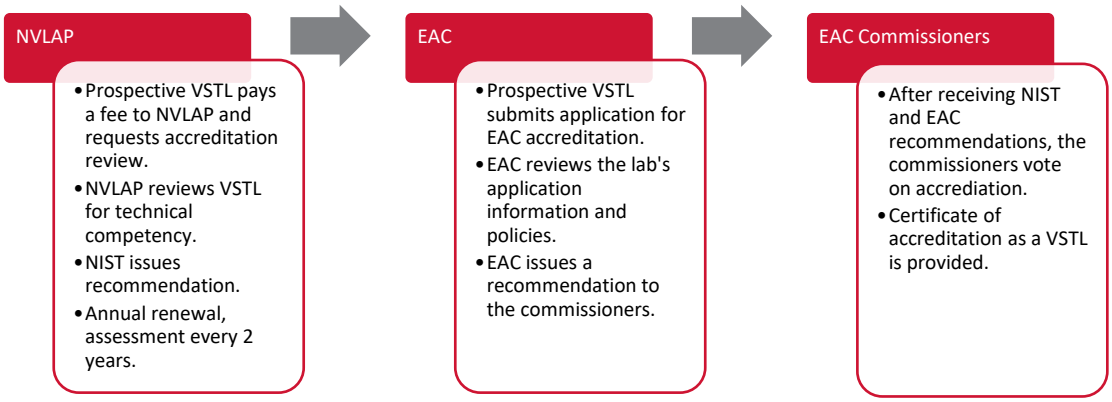
Accreditation of Voting System Test Laboratories

Voting system test laboratories (VSTLs) are labs accredited by EAC to test voting systems to meet EAC-approved voting system standards. The accreditation process begins with the prospective VSTL requesting and paying a fee for National Voluntary Lab Accreditation Program (NVLAP) accreditation. This process is done via a National Institute of Standards and Technology (NIST) review, which uses NIST Handbook 150,[4] NIST Handbook 150-22,[5] and ISO/IEC 17025[6] and focuses primarily on reviewing technical competencies. After receiving an accreditation from NVLAP, NIST issues a recommendation for EAC accreditation. NVLAP accreditation must be renewed annually with assessments conducted every 2 years, except for the first assessment, which is conducted after only 1 year.

Once a lab has received a NIST recommendation, it is invited by EAC to apply for VSTL status. The prospective lab submits a letter of application to the EAC Testing and Certification Director and includes information and documents to demonstrate that lab policies are in place. According to the EAC VSTL Manual, EAC reviews the lab's application information to identify any nonconformities or deficiencies in areas related to conflict of interest, record maintenance, and financial stability. Upon completion of the review, the EAC Testing and Certification Director issues a recommendation to EAC's Commissioners, who then vote on the accreditation of the laboratory and issue it a certificate of accreditation as a VSTL. The VSTL accreditation process is summarized in Figure 3 below. As of October 2022, there were two accredited VSTLs; one was originally accredited in 2007 and the other in 2015.

[3] Information regarding specific EAC-certified systems is available on EAC's website, along with many of the associated program documents (e.g., a list of registered manufacturers, test plans, test reports, certifications, denials, and EAC program manuals that guide the process).
[4] NIST Handbook 150, "NVLAP Procedures and General Requirements."
[5] NIST Handbook 150-22, "NVLAP Voting System Testing."
[6] ISO/IEC 17025, General requirements for the competence of testing and calibration laboratories.

Figure 3. Process for VSTL Accreditation



Source: OIG analysis of interviews and documentation.

NVLAP Monitoring and Recommendations for Revocation. HAVA states that NIST shall monitor and review the performance of EAC-accredited labs on an ongoing basis and make recommendations to continue or revoke accreditation, as appropriate. According to NVLAP, assessments are done every 2 years. If NIST recommends revoking accreditation, per HAVA, a vote of the EAC Commissioners is still required.

EAC Monitoring and Certification Expiration. HAVA does not require EAC to monitor VSTLs, but the EAC VSTL Manual does outline a compliance management program that calls for the team to conduct biennial, onsite lab reviews to verify that policies, procedures, and competencies meet accreditation requirements. According to EAC staff and documentation, the biennial review is not recertification, but rather serves as a monitoring exercise. The EAC testing and certification program initially included expiration dates on certificates to VSTLs after onsite visits, but in July 2021, EAC issued a notice of clarification that the expiration date listed on the certificate relates to the EAC program requirement to reassess VSTLs periodically and will be tracked separately from the certificate. [7] As seen in the pictures below, EAC no longer includes expiration dates on the Certificate of Accreditation and states, "Accreditation remains effective until revoked by a vote of the EAC."


United States Election Assistance Commission

Certificate of Accreditation

Pro V&V, Inc.
Huntsville, Alabama

is recognized by the U.S. Election Assistance Commission for the testing of voting systems to the 2005 and 2015 Voluntary Voting Systems Guidelines (VVSG 1.0 & 1.1) under the criteria set forth in the EAC Voting System Testing and Certification Program and Laboratory Accreditation Program. Pro V&V is also recognized as having successfully completed assessments by the National Voluntary Laboratory Accreditation Program for conformance to the requirements of ISO/IEC 17025 and the criteria set forth in NIST Handbooks 150 and 150-22.

Original Accreditation Issued on: 2/24/2015

Accreditation remains effective until revoked by a vote of the EAC pursuant to 52 U.S.C. § 20971(b)(3).

Mona Harrington
Executive Director, U.S. Election Assistance Commission

Date: 2/1/21

EAC Lab Code: 1501

United States Election Assistance Commission

Certificate of Accreditation

SLI Compliance
Division of Gaming Laboratories International, LLC
Wheat Ridge, Colorado

is recognized by the U.S. Election Assistance Commission for the testing of voting systems to the 2005 and 2015 Voluntary Voting Systems Guidelines (VVSG 1.0 & 1.1) under the criteria set forth in the EAC Voting System Testing and Certification Program and Laboratory Accreditation Program. SLI Compliance is also recognized as having successfully completed assessments by the National Voluntary Laboratory Accreditation Program for conformance to the requirements of ISO/IEC 17025 and the criteria set forth in NIST Handbooks 150 and 150-22.

Original Accreditation Issued on: 2/28/2007

Accreditation remains effective until revoked by a vote of the EAC pursuant to 52 U.S.C. § 20971(b)(3).

Mona Harrington
Executive Director, U.S. Election Assistance Commission

Date: 2/1/21

EAC Lab Code: 0701

Photos of EAC Certificates of Accreditation with no expiration date.

[7] EAC Notice of Clarification, NOC 21-01: VSTL Accreditation Status, NOC 21.01_VSTL Accreditation Status (eac.gov).

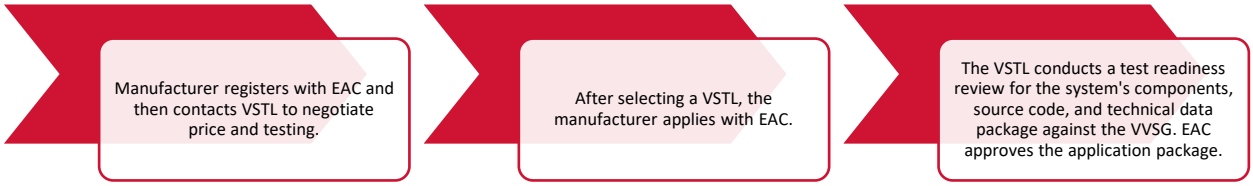
Emergency Accreditation. HAVA authorizes EAC to accredit labs without a NIST recommendation. However, the EAC VSTL Manual states EAC will accredit laboratories without a NIST recommendation only if the criteria for an emergency action are met and after the laboratory has been properly assessed, in accordance with international standards and applicable NIST guidance. Additionally, the VSTL Manual states any accreditation provided by EAC through its emergency action authority will be provisional in nature and limited in scope. All emergency accreditations must expire on a specified date.

Certification of Voting Systems

The voting system certification process begins when a voting system manufacturer registers with EAC by providing basic information and agreeing to certain testing and certification program requirements. Once registered with EAC, a manufacturer will contact one—or both—of the two accredited VSTLs to inquire about the certification process.[8] Before signing a final contract, the VSTL and manufacturer agree on the fees, the system to be tested, and the VVSG requirements to be tested against.[9]

A manufacturer then submits to EAC a voting system application package that includes which VSTL the manufacturer will use. The application also includes information on the voting system model, a brief description of the system, and if it is a new system or a modification. First, the lab will conduct a test readiness review. The purpose of the test readiness review is to ensure that a manufacturer is submitting a complete, finished product prior to the start of regular testing. The Program Manual requires that VSTLs check—among other aspects—the submitted voting system's components, source code, and technical data package against the VVSG. EAC will then approve the application package. According to EAC data, application approvals generally are returned in 1 day.

Figure 4. Initial Steps for Manufacturer to Begin Voting System Certification



Test Plan Approval. Following the completion of the test readiness review, VSTL submits a test plan to EAC for approval. The Program Manual and VSTL Manual outline the requirements and format of a voting system test plan, as shown in Figure 5 below.[10] These test plans are living documents that define the strategy and information regarding test methods for testing a voting system or component to ensure it meets all requirements. EAC publishes the test plan for each certified voting system on its website.

[8] According to some manufacturers, factors that contributed to selection included their existing relationship with a lab, the lab already having the manufacturer's equipment on site, availability, and cost. Manufacturers may use a different lab for state certifications.

[9] According to EAC, it does not currently have the legal authority to collect money from voting system manufacturers to pay for the testing of voting systems. (Sec 31 U.S.C. §3302(b), Miscellaneous Receipts Act).

[10] A manufacturer can submit a voting system for testing or a modification to a certified system. According to the VSTL Manual, the format for a voting system modification test plan is to concisely detail sections of the guidance applicable to the modification that requires testing.

Figure 5. Voting System Test Plan Attributes

Component	Description
Testing responsibilities	This may include a project schedule with owner assignments, test case and procedure development and validation, third party tests, and EAC and manufacturer dependencies defined.
Evaluation description	The evaluation descriptions include: • System overview • Block diagram • System limits • Supported languages • Voting supported functionality (e.g., general election, closed primary, early voting, split precincts, etc.) • Standard VVSG functionality • Manufacturer extensions
Pre-certification testing and issues	An evaluation of prior VSTL and non-VSTL testing, including the reason for testing and any known issues uncovered during field operations.
Materials required	The material required for testing are defined: • Software • Equipment • Test and deliverable materials
Test specifications	The test specifications include: • Mapping of requirements to the equipment type and features, including the rationale for why any requirements are not applicable. • Hardware configuration and design. • Software system functions. • Test case designs for hardware mapping and environmental tests, software module and functional test case design and data, and system level test case design. • Security functions. • System technical data package evaluation. • Source code review. • Quality assurance and configuration management system review.
Test data	This includes data recording, test data criteria, and test data reduction.
Test procedure and conditions	Data on the test facility requirements, test set-up, and test sequence.

The EAC Testing and Certification team cross-references the submitted plan against the requirements set forth in the VVSG and the Program Manual. EAC also confirms if the VSTL is testing the appropriate components and processes. The test plan approval is an iterative process and can take approximately 14 days, according to EAC data.

Testing the System. After approval of the test plan, the VSTL will develop test cases—a system specific, step-by-step test procedure for trained lab personnel to conduct and produce repeatable results. Once testing of the voting system begins, the VSTL generally holds weekly status meetings with EAC and the manufacturer over the course of the testing campaign. During these calls, the VSTL updates EAC and the

manufacturer on testing progress and if any issues have been discovered. The VSTL conducts testing pursuant to the test plan.[11] If any failures or anomalies are discovered, the VSTL will generally notify both the manufacturer and EAC. If necessary, the manufacturer alters the voting system to eliminate the issues and submits it for retesting. Voting systems currently under test are published on the EAC website.

Recommendation for Certification. After a voting system has been successfully tested, the VSTL will send a test report to EAC. In its report, the VSTL will include whether it recommends the system for certification. The EAC Testing and Certification team then conducts a technical review of the test report and the program director recommends the system for certification to EAC's Executive Director, who issues an initial decision granting certification. After the manufacturer confirms the certified system has been delivered in an EAC-approved repository, the EAC Executive Director will grant final certification and publish a Certificate of Conformance.

Varying State Requirements. Some states have requirements beyond those outlined in VVSG that manufacturers are required to also test. The system is built to state needs and states can pass or adjust laws based on what manufacturers are able to provide.

As of September 2022, EAC had 11 registered manufacturers, six of which have a certified system.[12] The totality of the state specifications and laws, timing, and cost of certification could be a barrier to new entrants in the market and iterations to improve products. Stakeholders reported that the entire process can take from 6 months to over a year depending on the system being tested. Minor modifications can take 1 to 4 months depending on the changes made. The cost of the testing can also be prohibitive since a manufacturer may not be able to sell the product until it has undergone the certification process.

Stakeholder Coordination is a Significant and Persistent Factor Impacting the Program

The EAC testing and certification program has many stakeholders interested in ensuring its success. HAVA explicitly calls for EAC to coordinate with many stakeholders and states EAC must consider NIST's recommendation for testing and certification in its lab accreditation program. Additionally, HAVA states NIST shall monitor and review the labs on an ongoing basis, in cooperation with EAC and consultation with a Standards Board (composed of state and local election officials from a mix of political parties) and a Board of Advisors (composed of members appointed by a variety of national associations).

Additionally, EAC must coordinate with the labs and manufacturers involved in the certification program. Federal standards for internal control in the government emphasize the importance of coordinating and communicating externally to meet the entity's overall responsibilities and to allow the entity to both communicate and receive information from external stakeholders. Management selects

[11] Both VSTLs currently outsource some hardware testing to a third party, though the VSTLs remain responsible for the test plans, results, and overall process. Examples of outsourced hardware testing requirements include testing for a system's ability to withstand electrical power disturbances, magnetic fields, and certain temperatures.
[12] A manufacturer can be registered with EAC but not yet have a certified voting system. There may also be voting system manufacturers that chose not to register with EAC.

appropriate methods to communicate externally, considering factors such as audience, nature and availability of information, cost, and legal or regulatory requirements that impact communication.

Federal coordination. While EAC coordinates regularly with the NIST Information Technology Laboratory, Software and Systems Division, NIST NVLAP and EAC accreditation processes happen largely simultaneously but sometimes without coordination between the two entities. According to EAC and NIST, the EAC accreditation assessment happens independently from the NIST accreditation assessment, and the two processes are not dependent on each other. According to NVLAP, the program is primarily focused with evaluating technical competencies. According to EAC, it is primarily evaluating lab policies and procedures. Despite the stated differences in intent, the two evaluations still overlap in their scope and execution, with both EAC and NVLAP evaluating a lab's conformity against NIST Handbook 150-22 and ISO/IEC 17025, and both typically requiring a two-person team to visit the lab for a few days. Interviewees reported that, at times, the similarities in assessment procedures demonstrate a lack of major differences between the two reviews. One noted consistency in NIST reviews and variability in EAC reviews. According to EAC, coordination is further complicated when labs are not prepared and because the NVLAP application prevents it from sharing the results of its reviews with EAC.

Federal coordination is challenging, particularly when responsibilities are not always clear, information sharing is hampered, or leadership and policy changes occur. While the reviews may be effective, any lack of coordination invites missed opportunities, the potential duplication of efforts, and the risk that agencies are not using resources most efficiently.[13]

Lab and manufacturer communication. The level and manner of communication between manufacturers, labs, and EAC has varied over the history of the Commission. According to interviewees, during the voting system certification process, EAC, the cognizant lab, and the manufacturer participate in a weekly status meeting that spans the length of the project and noted the level of communication was appropriate. However, interviewees felt the current level of communication, with respect to the overall program, could be improved. Specifically, they stated that the historical practice of holding joint meetings between EAC, all manufacturers, and both labs was helpful for transparency and ensuring everyone was hearing the same information.

According to EAC, the meetings were cancelled due to the Government in the Sunshine Act[14] and the perception that the meetings were closed to certain individuals. However, EAC resumed the meetings in November 2022 and prevented potential violations by having Commissioners listen but not participate or make policy decisions during the meetings. Without EAC policies in place to ensure meetings continue, there is a risk of the meetings being discontinued if leadership changes occur. Due to the sensitive nature of elections and heightened public interest, the transparency of communication is particularly critical for ensuring confidence in the program. Furthermore, coordination during times of change is particularly important as stakeholders navigate the new VVSG 2.0 and associated manuals.

[13] GAO Federal Standards for Internal Control state, "effective operations produce the intended results from operational processes, while efficient operations do so in a manner that minimizes the waste of resources."
[14] The Government in the Sunshine Act provides that meetings of government agencies shall be open to the public unless covered under an exemption. Pub. L. No. 94-409 (1976).

Opportunities Exist to Improve Program Implementation

Internal control is an essential piece of the processes management uses to guide program implementation. According to federal standards for internal control in the government, management is responsible for designing policies and procedures to fit an entity's circumstances and for integrating them into the entity's operations. Those standards emphasize the importance of management using quality information and effective communication to achieve program objectives. Additionally, management is to continually assesses the entity's knowledge, skills, and ability needs so its workforce has the required knowledge, skills, and abilities to achieve organizational goals.[15] We identified policies, procedures, communication, and staffing challenges that may be exacerbated with the transition to VVSG 2.0.

Policies, procedures, and communication. Some stakeholders felt that program policies, or transparency around them, were lacking, which could lead to inconsistency in EAC's certification reviews and stakeholder confusion concerning the process. For example:

- Two stakeholders highlighted inconsistency in program management.
- One interviewee noted it is unclear how EAC handles complaints received from the public, and how they determine whether the response is made public.
- One interviewee noted inconsistency in how voting systems get evaluated and the level of detail required in the test plans and test reports required for certification.
- Two interviewees noted displeasure about how EAC made and communicated a policy change to remove expiration dates on lab accreditation.
- Three stakeholders mentioned the EAC website had an inconsistent or unhelpful presentation of information.

Information on the testing and certification program is not obviously available on the main EAC website homepage. The public must first click a menu sidebar to get to it or use the search function. Yet, if you search "testing and certification" the program page is the fourth result. The first result is related to an EAC certified manufacturer, and all the links are broken. Much of the testing and certification program information is located on a FOIA Reading Room website page that is not accessible from the testing and certification program page. Additionally, the program has a blog post with the purpose of keeping everyone informed on the progress of voting systems being tested, but there are only three entries in the last 3 years.

Moreover, almost every stakeholder we spoke to expressed concerns with the process, timing, or transition to VVSG 2.0. EAC received extensive public feedback on these standards before labs were accredited to them.[16] However, some stakeholders noted concerns with the process; specifically, a lack of communication, concerns that all feedback was not incorporated, and that the process was rushed despite it taking years. According to EAC, during the 90-day public comment period, they received "77 sets of comments and a total of 1,660 comments."

[15] 5 CFR 250 also requires agencies to conduct formal workforce planning.

[16] The two EAC-accredited labs were accredited to test voting systems to the new VVSG 2.0 standards in November and December of 2022.

Staffing. EAC has not formally assessed staffing needs for the program considering increased demands and the transition to VVSG 2.0. While some stakeholders believe EAC's current staffing is appropriate, others noted concerns with the level of expertise and number of staff members. Several stakeholders noted turnover at EAC as a contributing factor to the inconsistent policies and procedures noted above. Others mentioned concerns that the small pool of staff were poached from the already limited industry. In addition to these concerns, we noted that with a small team, if only one person conducts a review of submitted documents, there is no segregation of duties, and it is difficult to ensure that the tasks are repeatable, documented, and free from error. There may also be a risk of inconsistency in how things are reviewed, responded to, or the length of time that a review takes.

Regarding the transition to VVSG 2.0, many stakeholders anticipated that the VVSG 2.0 standards would lead to a significant number of required clarifications and Requests for Interpretation (RFIs). The EAC website has 26 notices of clarification and 49 RFIs for previous iterations of VVSG. Stakeholders anticipated more would be required for VVSG 2.0 and noted responding to RFIs would place a substantial demand on the EAC staff. Some noted that no manufacturer wants to be first to certify to VVSG 2.0, and that new manufacturers may enter the market and EAC may not be staffed appropriately to meet an increase in manufacturers. Stakeholders expressed uncertainties around the timeline, including how long it will take for state laws to be changed and aligned with VVSG 2.0. These variables may significantly impact EAC team resources.

In 2008, the Government Accountability Office (GAO) issued two reports on the testing and certification program.[17] The reports resulted in several recommendations addressed to EAC, most of which the Commission agreed with and took action to close. However, we noted some recommendations may require further examination. GAO recommended EAC:

- Establish requirements for the adequate maintenance of records related to the VSTL accreditation program. In response to this recommendation, EAC updated the VSTL program manual to include language that records shall be retained or disposed of consistent with federal statutes and regulations. In implementing this, EAC established a commission-wide Records Management & Retention Policy in May 2022, but individual divisions do not yet have updated records disposition schedules.[18] This is vital to the testing and certification program due to the heightened interest in the program and historical turnover in the office.
- Establish detailed procedures to ensure that voting system testing and certification review activities are conducted thoroughly, consistently, and verifiably. EAC reported creating internal procedures to address noted deficiencies; however, based on stakeholder feedback during our audit, this may still be an area of concern.
- Establish transparent requirements for the qualifications of accreditation reviewers. EAC responded to GAO that it was confusing NIST and EAC roles, and stated EAC performs a non-technical role after NIST that does not require specialized qualifications. However, this may not be consistent with current practice and could lead to the perception of technical skills gaps.

[17] GAO, *Federal Programs for Accrediting Laboratories That Test Voting Systems Need to Be Better Defined and Implemented* (GAO-08-770), September 2008. GAO, *Federal Program for Certifying Voting Systems Needs to Be Further Defined, Fully Implemented, and Expanded* (GAO-08-814), September 2008.

[18] A records disposition schedule is approved by the National Archives and Records Administration and provides the authority for final disposition of temporary and permanent records.

According to EAC, in the past, the Commission and the program have been underfunded. With the 2023 increased appropriation, EAC can thoughtfully plan for the program's expansion and establish strong and transparent policies and procedures to provide clarity to staff and stakeholders and mitigate the perception of inequality. A lack of periodic review and changes in staff can lead to internal procedures that are not operating as intended or require improvements.

Communication has been hampered by misinformation and disinformation, and EAC recognizes pitfalls in the operability of its website. The 2022 budget justification stated that increased funding would be used to revamp EAC's website and streamline how information is organized. The website redesign project is still ongoing. We acknowledge that the industry is limited, and it is difficult to recruit and retain staff; however, EAC has an opportunity to formalize the program and technical needs using federal workforce planning guidance.

EAC Has Not Formally Assessed Program Risks

OMB Circular No. A-123, "Management's Responsibility for Enterprise Risk Management and Internal Control," requires federal agencies to integrate risk management into the strategic planning process. "While agencies cannot respond to all risks related to achieving strategic objectives and performance goals, they must identify, measure, and assess risks related to mission delivery." Agencies are required to maintain a risk profile with appropriate options for addressing significant risks. For example, federal standards for internal control acknowledge that a smaller entity faces greater challenges in segregating duties, but management can respond to the increased risk by adding levels of review for key processes, or randomly reviewing selected transactions and their supporting documentation.[19]

Audit fieldwork identified significant risk areas associated with EAC's testing and certification program related to coordination, policies, communication, and staffing; but EAC has not conducted a formal risk assessment or established an enterprise risk management program. EAC has established some program contingencies related to a lack of quorum, emergency accreditations, and provisional modifications. However, with an evolving program, EAC needs to strategically consider program risks and opportunities in a more formal manner.

For example, EAC's quality monitoring program is responsible for ensuring systems used in elections are identical to those certified by EAC and monitoring the performance of tested voting systems used in Federal elections. However, some of the responsibility is outside of EAC's control or reactive because once EAC-certified equipment reaches the field it is secured and operated by the municipality. Some election administrators may lack technical expertise or have limited experience operating voting equipment. OIG received a hotline complaint alleging EAC stickers being used on non-certified equipment, but other than reaching out to the manufacturer or municipalities, EAC does not currently have the capacity to ensure this is not happening elsewhere. Historically and currently, stakeholders desire EAC to do more in detecting or responding to anomalies in the field as part of the quality monitoring program.

Despite regulatory limitations, the EAC's testing and certification program is evolving with increased demands and attention to new areas. Without a thorough assessment of risk, EAC may not be adequately prepared to address the upcoming demands of VVSG 2.0 or other scenarios. A formal risk

[19] GAO, *Standards for Internal Control in the Federal Government*, September 2014.

management process, following federal guidance, would ensure that forward-looking risks and opportunities are considered.

Recommendations

To address the described items, OIG recommends that EAC:

1. Establish regular coordination with NIST and review the accreditation procedures for voting system test labs to reduce potential areas of duplication or identify efficiencies.

2. Develop policies to ensure periodic meetings with voting system test laboratories and voting system manufacturers occur and the non-sensitive meeting minutes are published.

3. Assess the policies and procedures used by its testing and certification program and establish, identify, and update them as needed.

4. Improve the organization and quality of testing and certification materials on the EAC website.

5. Update the records disposition schedule for the testing and certification program.

6. Utilize federal guidance to conduct a staffing assessment for the testing and certification program. As part of this, consider what technical competencies are required for the team and if any are already covered with the NIST review.

7. Identify, measure, and assess risks related to its testing and certification program, ideally as part of a broader enterprise risk management program.

Evaluation of Management Comments

We provided our draft report to EAC on February 7, 2023. On March 7, 2023, we received their response, which is included in Appendix B of this report.

The report included seven recommendations. We acknowledge management decisions on all seven recommendations. Our detailed evaluation of management comments follows.

Recommendation 1. EAC agreed with this recommendation and will work with NIST to coordinate regularly, share information, and schedule permitting, will conduct lab assessments at the same time. Target date for completion is June 2024.

Recommendation 2. EAC agreed with this recommendation and will develop a policy to facilitate meetings with voting system test labs and voting system manufacturers at least once per year, and to publish non-sensitive meeting minutes. Target date for completion is September 2023.

Recommendation 3. EAC agreed with this recommendation and reported it is drafting standard operating procedures to ensure continuity of operations. Target date for completion is December 2023.

Recommendation 4. EAC agreed with this recommendation and reported it is in the process of redesigning the agency website. As part of the process, EAC will make information easier for stakeholders and the public to find. Target date for completion is December 2023.

Recommendation 5. EAC agreed with this recommendation and will create a records disposition schedule consistent with the EAC Records Management and Retention Policy. Target date for completion is September 2023.

Recommendation 6. EAC agreed with this recommendation and the testing and certification division will conduct a formal staffing assessment following federal guidance to ensure the division has sufficient staff with appropriate technical skills. Target date for completion is September 2023.

Recommendation 7. EAC agreed with this recommendation and will conduct a formal risk assessment for the testing and certification division. Target date for completion is December 2023.

Appendix A. Scope and Methodology

Scope

The objectives of this audit were to (1) describe the process for accrediting voting system test laboratories and certifying voting systems, and (2) describe the factors that affect EAC's testing and certification program. We conducted our work from July 2022 to January 2023.

The audit scope focused on the testing and certification program at EAC as of July 2022. As part of that scope, we also included programs and agencies that interact with EAC, including NIST, VSTLs, and manufacturers. Our audit fieldwork was primarily conducted remotely with virtual interviews; however, we conducted in-person site visits to VSTLs in Alabama and Colorado in September 2022. For the second objective, our scope considered any factors impacting the program, irrespective of timing.

Although recertification and decertification are outlined as EAC responsibilities in HAVA, decertification is extremely rare and, according to EAC staff, would only occur in limited circumstances. Recertification would only occur if a system was decertified and then applied to be recertified. Documentation indicated recertification and decertification processes had not occurred within our scope. As a result, we did not conduct testing on these processes.

We generally excluded analyzing the development of VVSG 2.0 and its related program manuals in answering the first objective since it was not applicable, given our scope. For the second objective, we did consider VVSG 2.0 and related manuals as a factor affecting the current testing and certification program and the impact on future resources.

We did not audit the NIST NVLAP accreditation process.

Methodology

EAC OIG conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions in accordance with our audit objective. We believe that the evidence obtained provides that reasonable basis.

In planning and performing the audit, we first obtained an understanding of the audit environment through interviews with EAC, and by reviewing documents, reviewing HAVA and other federal requirements, and conducting background research. We also assessed internal controls, data reliability, and the risk of fraud in developing our audit procedures.

To answer the audit objectives, we collected and reviewed relevant manuals, checklists, standard operating procedures, and documents that affect the testing and certification program. After reviewing initial documentation, we held interviews with current and former EAC staff, NIST, voting system manufacturers, and VSTLs. We also attempted to conduct interviews with 4 of 11 voting system manufacturers. We selected the manufacturers using a judgmental sample that included the manufacturer with the most recent certification (at the time of selection), the manufacturer with the most certifications, and two randomly selected using a random number generator. One manufacturer did not respond to our requests for an interview and was replaced using the random number generator.

The replacement manufacturer also did not respond for an interview. We determined that the information collected from 3 of 11 manufacturers was sufficient, after also visiting both EAC-accredited VSTLs. During our site visits with the VSTLs in September 2022, we held interviews and collected manuals, standard operating procedures, and checklists that relate to the testing and certification program that each VSTL maintained.

We analyzed the information from interviews and documentation to generate a description of the process for accrediting VSTLs and certifying voting systems. To answer the second objective, we analyzed the data from interviews and documentation to determine the most significant factors affecting the testing and certification program. We also attempted to sample three states to get a singular perspective on EAC's testing and certification program and factors that impact the program. For this sample, we selected states that represented three broad categories in voting system law. We selected one state that requires full EAC certification, one that requires some, but not all, federal certification standards, and one that requires baseline HAVA requirements. The states did not initially respond to our request for interviews, so we collected data from publicly-available sources to understand the differences in state laws.

Appendix B. Management Comments

TESTING AND CERTIFICATION DIVISION
US ELECTION ASSISTANCE COMMISSION
633 3rd St. NW, Suite 200
Washington, DC 20001

Date: March 7, 2023

To: U.S. Election Assistance Commission, Inspector General Brianna Schletz

From: U.S. Election Assistance Commission, Testing and Certification Director Jonathon Panek

Subject: Draft Report: Audit of the U.S. Election Assistance Commission's Testing and Certification Program

This memorandum provides written responses to the draft report for the Office of the Inspector General's Audit of the U.S. Election Assistance Commission's Testing and Certification program. For each of the seven recommendations, information is provided herein regarding: 1) agreement or disagreement with the recommendation, 2) planned corrective action, and 3) target completion date.

The objectives of the audit were to describe:

1. The process for accrediting voting system test laboratories and certifying voting systems.
2. The factors that affect EAC's testing and certification program.

The following seven items were recommendations from the audit. Responses are included as individual bullet points under each recommendation:

1. Establish regular coordination with NIST and review the accreditation procedures for voting system test labs to reduce potential areas of duplication or identify efficiencies.

    - Agree with this recommendation.

    - Testing and Certification Division staff have conveyed to NISTs National Voluntary Lab Accreditation Program (NVLAP) that a greater degree of coordination between the EAC and NVLAP in advance of accreditation assessments is desirable and would improve the quality of the process. This coordination should regularly occur prior to scheduled biennial on-site assessments and will include consideration of target areas for each organization as well as developing a plan for sharing findings and corrective actions. EAC and NVLAP assessments are intended to be conducted independently, therefore duplication of assessment areas may not be entirely avoidable. However, that does not preclude the possibility that the assessments may be conducted at the same time, scheduling permitting.

As the test labs have recently completed their latest assessments in November and December 2022, the next assessments will be scheduled for July through September 2024.

- Target date for completion of this corrective action is Q2 2024.

2. Develop policies to ensure periodic meetings with voting system test laboratories and voting system manufacturers occur and the non-sensitive meeting minutes are published.

    - Agree with this recommendation.

    - Testing and Certification Division staff will develop a policy to facilitate meetings with voting system test laboratories and voting system manufacturers at least once per year, and to publish non-sensitive meeting minutes. This policy shall comply with the Government in the Sunshine Act.

    - Target date for completion of this corrective action is Q3 2023.

3. Assess the policies and procedures used by its testing and certification program and establish, identify, and update them as needed.

    - Agree with this recommendation.

    - Testing and Certification Division staff is in the process of drafting standard operating procedures to ensure continuity of operations. Staff will also review and revise the Testing and Certification Program Manual and Voting System Test Laboratory Program Manual (program manuals) more frequently than in the past. The current version of the program manuals went into effect in November 2022. The prior version went into effect in May 2015. Future revisions to the program manuals will be posted for public comment prior to publishing so stakeholders are made aware of changes and have an opportunity to provide comments for consideration before they are made effective.

    - Target date for completion of this corrective action is Q4 2023.

4. Improve the organization and quality of testing and certification materials on the EAC website.

    - Agree with this recommendation.

    - The EAC is currently in the process of redesigning the agency website. As part of this process, testing and certification documentation and information will be completely reorganized. This should make it easier for stakeholders and the public to find information pertinent to the program. Division documentation will be readily accessible from the agency home page. Broken links will be removed.

    - Target date for completion of this corrective action is Q4 2023.

5. Update the records disposition schedule for the testing and certification program.

- Agree with this recommendation.
- The Testing and Certification Division will create a records disposition schedule consistent with the commission-wide Records Management & Retention Policy.
- Target date for completion of this corrective action is Q3 2023.

6. Utilize federal guidance to conduct a staffing assessment for the testing and certification program. As part of this, consider what technical competencies are required for the team and if any are already covered with the NIST review.
    - Agree with this recommendation.
    - The Testing and Certification Division has added three new staff members in the fall of 2022 and is in the process of hiring more. A formal staffing assessment following federal guidance will be conducted to ensure the Division has or plans to hire sufficient staff with appropriate technical skills.
    - Target date for completion of this corrective action is Q3 2023.
7. Identify, measure, and assess risks related to its testing and certification program, ideally as part of a broader enterprise risk management program.
    - Agree with this recommendation.
    - The Testing and Certification Division will conduct a formal risk assessment.
    - Target date for completion of this corrective action is Q4 2023.

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U.S. Election Assistance Commission
Office of Inspector General
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