

To: Ross Hein, Voting Equipment Election Specialist, Government Accountability Board
From: Paul Malischke
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These comments are in regard to the March 24th, 2008 draft of EIBd 5, security of ballots and electronic voting systems.

The following six issues are not addressed in the March 24th draft and should be added. Perhaps other states can be surveyed for best practices.

1. Address security of Election Management Systems. According to the EAC glossary, such a system “defines, develops and maintains election databases, performs election definitions and setup functions, format ballots, count votes, consolidates and report results, and maintains audit trails.”
2. Clerks shall obtain assurances of reasonable security from vendors that print ballots or program ballot definition files.
3. Language must be added to specify actions to be taken if discrepancies in serial numbers are found.
4. GAB staff shall audit the EB-106 (Board of Canvassers) forms for the inspection in 5.05 (2).
5. GAB staff shall review the minutes of recounts to determine if the rule is being followed.
6. GAB staff shall provide an annual report to the Board on the extent and results of their auditing of whether the security requirements are being followed, and all follow-up actions if they are not being followed.

Below are comments on specific items in the draft:

In order for a system of numbered seals to provide optimum security, the record of the numbers must be kept separate from the actual seals. Adherence to this basic principle can be improved in 5.01 (6) and 5.03 (5) as follows.

5.01 (6) The March 24th draft states that at the time of a recount, the serial numbers of the seals on all ballot bags shall be compared to the ballot container certificates (EB-101). Since the seal and this record are together with the bag, someone with criminal intent could change the seal and forge a new ballot container certificate, perhaps using a new container.

This should be changed so that the ballot bag seal’s serial number is compared to the number on the EB-104 inspectors report. It is more likely that the inspector’s report is stored separately from the ballot bag. The best practice would be to compare both records (EB-104 and EB-101) and with the actual seal.

5.03 (5) The March 24th draft reads “Upon completion of the public test, the municipal clerk shall record the serial numbers on the Inspector’s statement (EB-104).”

The chief inspector has access to both the equipment and the EB-104, not only on Election Day, but sometimes for a few days before (“sleepovers”).

The draft should be changed to add that the serial number shall also be written in a log maintained by the clerk. Consider adding back from the January 28th draft 5.02(9), “The municipal clerk shall maintain a written log that records which memory cards and serialized tamper evident seals are assigned to particular voting stations or units.”

5.02 (1) The ad hoc clerks' committee felt that equipment that is strictly a ballot marking device (such as the AutoMark) should be exempt from the provisions. I agree, but this is not clear from the March 24th draft language, which uses the term "not limited to". Please add a clear statement to this effect, such as "Ballot marking devices are not subject to these requirements." The term "ballot marking device" is used by the EAC in the 2005 VVSG, in appendix A, while defining electronic voting system.

The March 24th draft establishes a weaker level of security for electronic ballot boxes (memory devices) than for ballot bags during the time they are between the polling place and the clerk's office. During this time, the ballots bags must have a serialized seal and the number recorded 5.01 (2).

5.04 (5) should be changed to add this same level of security to the memory cards during this critical time. See Iowa's rules 22.51 (10).

5.15 (2) (c) Add "The Board shall be notified of any action taken by the director to approve alternate security procedures." This is a small but important step towards public accountability.

The March 24th draft appears to delete 5.03 (4)(a) of the draft presented at the January 28 GAB meeting. This section should be restored. "Each electronic access port, including USB, serial, or modem ports, must be closed and locked using a tamper resistant seal which can be recorded using a unique serial number. The municipal clerk shall maintain a written record of such serial numbers." A recent report from the University of Connecticut Department of Computer Science demonstrated that malicious software could be installed on a voting machine through the serial port. See <http://www.acsac.org/2007/papers/159.pdf>, section 3.3

The recount instruction manual, checklist, and minutes template must be revised to add specific mention of items in this rule.

EB-106 (Board of Canvassers form) must be revised to add specific mention of any items in this rule. The inspection detailed in 5.05 (2) shall be recorded on this form, including which wards were inspected, and the results.

EB-101 (Ballot container certificate) must be revised to include a specific place for entry of serial numbers of seals.

EB-104 (Inspectors report) should be revised if necessary