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March 6, 2006

Chairman Gilles Burger
Maryland State Board of Elections
P. O. Box 6486
151 West Street, Suite 200
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Dear Chairman Burger:

Thank you for your letter of February 28 in which you discuss our mutual concerns about the security of Maryland's voting system for the 2006 elections. The recent testing of the Diebold source code has raised legitimate issues about the conduct of any election absent the safeguard of a paper ballot. After careful review of your letter, I strongly offer the following recommendations to the State Board of Elections:

1. In light of the experience in California, I recommend that the Board of Elections refer the Diebold AccuVote-TS voting unit and the AccuBasic source code to the Independent Testing Authority and also to an independent qualified security expert to determine whether existing security flaws can be mitigated;
2. To instill essential public confidence in the conduct of the 2006 elections, I recommend that the State Board of Elections endorse the legislative proposal of the Ways and Means Chair, Delegate Sheila Hixson, and Delegate Elizabeth Bobo to require that the State lease an optical scan voting system to replace the Diebold touchscreens for the primary and general elections to ensure that this election is conducted with the opportunity for a "paper trail" in Maryland; and
3. If the State Board of Elections was truly opposed to the early voting bill as expressed in your letter and if you are also interested in representing the concerns of local board administrators who believe that implementing early voting threatens the accuracy and integrity of the 2006 elections, I recommend that the State Board of Elections aggressively and publicly

advocate in favor of Senate Bill 942 and House Bill 1580 that would defer the implementation of early voting until 2008.

My rationale for making these recommendations is outlined below.

Recommendation 1: That the State Board of Elections refer the Diebold AccuVote-TS voting unit and the AccuBasic source code to the Independent Testing Authority and also to an independent qualified security expert to determine whether existing security flaws can be mitigated.

On December 20, 2005, the California Secretary of State referred the Diebold AccuVote TSx (AV-TSx) touch screen voting machines (a newer and enhanced version of the Diebold TS (AV-TS) voting machine purchased by Maryland in 2001) and the Diebold AccuVote-OS (AV-OS) optical scan voting machines (which Maryland uses for the counting of absentee ballots) to two separate security investigators because he discovered that the Diebold source code stored on the memory cards had never been subjected to independent testing. The findings of both studies are now available and raise serious concerns about Maryland's system and our ability to conduct a secure election in 2006.

In light of these findings, we question the statements in your letter and in recent testimony by the State Administrator before legislative committees that the Diebold AccuVoteTS (AV-TS) voting systems are fully tested and certified to federal standards. In fact, the source code on the memory card was not tested until it was subjected to the recent thorough evaluation ordered by the California Secretary of State. Moreover, the California independent analysis of the AccuBasic Interpreter (referred to herein as the "Wagner, Jefferson and Bishop analysis") determined that interpreted code such as that used in the AccuBasic language is banned by the 2002 FEC Voting System Standards.

We had hoped that your response of February 28th would have offered insights into the testing controversy and its implications for Maryland. One focus of the national debate on "black-box" voting (voting on electronic machines which don't print paper ballots) is whether undetectable hacking can occur and this question has been asked of your staff at legislative hearings. The Wagner, Jefferson and Bishop analysis determined that tampering of vote totals through memory card attacks are a significant threat to the Diebold voting systems. This study confirmed the potential for the "Hursti hack" - the demonstration in Leon County, Florida, by Harri Hursti that vote totals could be manipulated by modifying the scripts on the memory card in a process that would be impossible to detect during the vote canvass. The study also found numerous interpreter bugs (16 security vulnerabilities in the AV-OS source code and 10 in the AV-TSx) that are "classic security flaws" and would allow vote tampering as well as the lack of "high assurance development methods" in the interpreter language. While the study describes these vulnerabilities as "easily fixable," it requires that Diebold rewrite the source code and resubmit it for additional testing. Moreover, the study finds that even if the interpreter bugs are fixed, the Hursti attacks are still possible.

More troubling from our perspective is the study's criticism of the AV-TSx touchscreen system's cryptographic protections against memory card attacks. The study infers that the implementation of the cryptographic protection is flawed and has not been corrected over the last two and one-half years. In fact, the AV-TSx is claimed by Diebold to have a more enhanced security protection system than the earlier model – the AV-TS – which is used in Maryland. For these reasons, it is critical that the State Board of Elections submit the AV-TS for additional testing in light of the new security findings in the California testing. If Maryland's AV-TS machines have similar cryptographic protection implementation problems, it raises questions as to whether the vulnerabilities identified by the security report produced by Science Applications International Corporation (SAIC) on September 2, 2003 were ever addressed by Diebold.

The State Board of Elections should have been more aggressive in protecting the interests of Maryland's citizens in securing a fair and efficient election through a quick referral of the AV-TS system to greater scrutiny and evaluation once the California Secretary of State raised new concerns about the voting system. The problems of these security vulnerabilities are magnified by the fact that Maryland may implement an early voting plan that will require opening and closing the machines and storing the memory cards for a period of eight days instead of operating the system on a single Election Day. We are spending too much time protecting the status quo instead of evaluating Maryland's current election system from an objective and unbiased perspective.

Recommendation 2: To instill essential public confidence in the conduct of the 2006 elections, I recommend that the Board of Elections endorse the legislative proposal by the House Ways and Means Chair, Delegate Sheila Hixson, and Delegate Elizabeth Bobo to require that the State lease an optical scan voting system to replace the Diebold touchscreens for the primary and general elections to ensure that this election is conducted with the opportunity for a "paper trail" in Maryland.

Your letter's significant reliance on California's "conditional certification" as creating a level of comfort that the testing controversy will have limited implications for Maryland omits one critical element. In California, the state legislature has mandated that all touchscreen electronic voting devices have a voter verified paper audit trail (VVPAT). Maryland does not have that requirement. In fact, the Diebold AV-TS used in Maryland is currently incapable of being outfitted with VVPAT.

The Wagner, Jefferson and Bishop analysis repeatedly states that successful memory card attacks can only be detected by examining the paper ballots. The industry standard for touchscreen electronic voting devices is rapidly becoming a required VVPAT and a mandatory manual recount of one percent of the paper ballots to ensure vote authenticity and to determine any electronic system problems, whether intentional

(fraudulent activity) or unintentional (malfunctioning hardware or software system). Despite the laudatory statements about our system's accuracy in your letter, Maryland's lack of a paper trail means we are no longer a national leader in election systems and that our equipment is susceptible to system failures under which we would be technically unable to recreate election results because we have no paper ballots.

It is inexcusable for us to not be prepared for a catastrophic system failure in the 2006 cycle, and a VVPAT is the only way to fully assure public confidence. Therefore, the proposal offered by Delegates Hixson and Bobo in House Bill 244 offers the best potential for Maryland to conduct the primary and general elections with certainty in vote authenticity and a means to verify vote results should there be any systematic problems with the election apparatus.

Recommendation 3: If the State Board of Elections was truly opposed to the early voting bill as expressed in your letter and if you are also interested in representing the concerns of local board administrators who believe that implementing early voting threatens the accuracy and integrity of the 2006 elections, I recommend that the State Board of Elections aggressively and publicly advocate in favor of Senate Bill 942 and House Bill 1580 that would defer the implementation of early voting until 2008.

I agree with your letter that the State Board of Elections' comments on early voting are well documented – but to the members of the Maryland General Assembly those well-documented comments are in support of implementing an early voting program for the 2006 elections – not in opposition. Consider:

- On February 24, 2005, at the Senate Education, Health and Environmental Affairs hearing for Senate Bill 478 that proposed an early voting program, the State Administrator opened her testimony with the following statement, “I wholeheartedly support Senator Miller’s bill.”
- At the same hearing, the written testimony from the State Board of Elections supported the bill with comments such as the State Board “supports any bill that will result in shorter lines at the polls on Election Day,” and that this bill “would ease some of the burdens and stresses election judges face on Election Day.” Conversely, there is nothing in the State Board’s testimony citing detrimental effects of early voting even though the Maryland Association of Election Officials, the Maryland Association of Counties and two counties submitted written testimony expressing concerns over staffing, administrative challenges, security of the voting equipment and voter fraud.
- In January 2006, prior to the override debate on SB 478, the Deputy Administrator provided by email to the Senate President’s staff a set of rebuttal “talking points” to counter voter fraud and administrative

concerns for implementing early voting. While these have been justified as being for “informational” purposes, they imply approval by the State Board of Elections in favor of early voting, especially by the absence of any “informational” statements to members of the Maryland General Assembly that the correct position of the State Board of Elections was one of opposition to early voting.

- During the floor debate in the House and Senate, members of the Maryland General Assembly called from the floor to the State Board of Elections staff and were reassured that early voting can be conducted within existing resources, without additional administrative burdens and without creating widespread opportunities for voter fraud. In fact, at one point in the floor debates, Chairman Hollinger incorrectly announced that the State Board already has the electronic polls books, thus inferring that the costs of implementation and the potential for voter fraud would both be minimal.

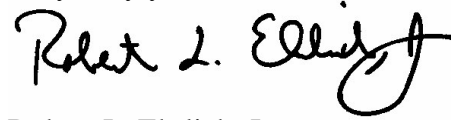
In light of this barrage of support from the State Board of Elections for early voting, it is hard to fathom the proposition in your letter that one appearance by you before the Beall Commission has set the record straight. To the contrary, depending upon the audience, the staff has stated that the State Board supported or took no position on early voting, but never that it opposed this legislation. On March 30, 2005, the State Administrator (even though she had “wholeheartedly” endorsed early voting less than a month earlier) stated to the Governor, the Comptroller and the State Treasurer that the State Board of Elections had no position on early voting. And as recently as February 9, 2006, the Deputy Administrator testified to the Senate EHE committee that the State Board of Elections never took a position on early voting.

You also infer in your letter that it would now be inappropriate to advocate a position on early voting because the issue has become “partisan.” Elections by their nature are partisan and I surely hope that the Board does not intend to shirk its responsibilities because of the partisan undercurrents of elections. In fact, one document in the bill file for SB 478 (the same bill file that contains the Deputy Administrator’s rebuttal email), contains a list of “talking points” in support of Senator Miller’s bill. As justification for passing early voting, the one-pager includes statements like “increases in turnout are generally beneficial to Democrats. That is certainly the case in a state like Maryland, where Democratic registration outnumbers Republicans 2-to-1” and early voting “is almost always advantageous to Democrats, whose membership statistically votes less frequently than Republicans.” The debate on early voting always had partisan overtones to it – and the members of the General Assembly rely on the State Board of Elections to offer the unbiased, independent position to help guide their deliberations on pending legislation. Sadly, that is not being done.

We have an increasingly short timeframe to work with the General Assembly to set the foundation for fair and accurate elections in 2006. As I stated in my February 15th letter to you, forging ahead with electronic pollbooks may repeat our mistakes of the past

in placing too much reliance on electronic fixes when the technology is not fully tested and secure. I hope that you will join with me in ensuring that every ballot cast by the citizens of Maryland will be accurately and efficiently counted.

Very truly yours,

A handwritten signature in black ink that reads "Robert L. Ehrlich, Jr." The signature is written in a cursive style with a large, stylized initial 'R' and a long, sweeping tail on the 'h'.

Robert L. Ehrlich, Jr.
Governor

cc: The Honorable William Donald Schaefer, Comptroller
The Honorable Nancy K. Kopp, State Treasurer
The Honorable Thomas V. Mike Miller, Jr., President of the Senate
The Honorable Michael E. Busch, Speaker of the House
Members, Governor's Commission on the Administration of Elections
Cecilia Januszkiewicz, Secretary of Budget and Management