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VIA E-MAIL

January 1, 2013

Hillary Hall
Boulder County Clerk and Recorder
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Suzanne Staiert
Deputy Secretary of State
Colorado Department of State
1700 Broadway
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Re: Document titled **“Demonstration/Testing Bell and Howell Mail Ballot Sorter, Suggest Testing Plan Created by: Mike Lyons 12/14/12”**.

Dear Deputy Secretary Staiert: & Boulder County Clerk, Hillary Hall

As you may recall I attended and testified at the December 26, 2012 hearing in relation to HAVA complaint # **“SOS-HAVA-07-12-0001”**. At that hearing I described **only a few** of the malfunctions and failures I had observed and documented during seven different days of Citizen Poll Watching in the Ballot Processing Center at the Boulder County Clerks Facility. I also observed malfunctions on two other days while I was in the Ballot Processing Center working as a Reconciliation Judge. All nine days of my observations were before the 2012 General Election. I know that other authorized watchers from various parties and issue committees also observed some of these same problems in addition to their observations of other problems on other days when I was not present.

I assert that I have observed and documented more malfunctions of the “Mail Ballot Component” of the Boulder County “Voting System” than any other person in Boulder County. An exception may be various members of the Boulder County Election Staff including Bell & Howell Staff although I doubt if any of them have documented any malfunctions. If they did document any problems your offices should have copies of their reports as I believe are required per election laws and rules.

I have worked over 40 years as an engineer in the Aerospace field, primarily in various test related activities. I believe that it has been my many years of “test” related experience that has allowed me to perceive when problems have occurred where most less experienced people may

not have even known a malfunction occurred. After reading the above referenced document, I cannot apply the word “Test” in any relation to it. Below are my professional observations regarding the referenced document and its author.

1. I question the qualifications of the author, Mike Lyons in relation to this Demonstration/Testing activity.
 - a. I understood at the introduction at the hearing that he is from Douglas County. I took that introduction to mean he is a county employee. Is that the case?
 - b. I have not been provided nor can I find any credentials for him that supports his ability to develop a valid test plan or any other test documents. As a hired consultant to the State, his credentials should be public record.
 - c. I understand that he may have been involved in selecting products and vendors for parts of the “Voting System” for Douglas. I contend there may be a conflict of interest where he may attempt to justify his past actions in Douglas County in relation to election equipment/systems for Boulder County.
 - d. I contend he may be well qualified to participate in the development of a “Voting System Requirements Document” but that is far removed from developing a test plan

2. In entities like Boulder and Douglas Counties, I would assume the process begins with the establishing requirements as a minimum before any request for proposals are generated. I mention Douglas County here because the author of the Demo plan may have been involved in establishing Requirements of at least part of their voting system. A Request for Proposal may suffice for the Requirements documentation if it specifically identifies functional and performance requirements of the system to be purchased or leased. Then the various vendors would submit proposals, which would include design, functional and performance specifications in some form.

3. Then, and only then, can a Test Plan be created! The test plan would also include definition of accept/reject criteria for all test results. To better understand how extensive a Test Plan might need to be, see the attached “Software Test Plan Example” and the model (Template) for test plans as developed by the CDC “CDC_TEST_PLAN_TEMPLATE”

4. Then the adoption of the Test Plan is followed with development of a detailed Test Procedure. The execution of an approved Test Procedure would include testing of all elements of a system which include but are not limited to
 - a. Hardware,
 - b. Software,
 - c. Firmware,
 - d. Electronics,
 - e. Optics,
 - f. Operation procedures,
 - g. Operator interfaces,
 - h. Interface to other modules,
 - i. Development of real world test data,
 - j. Maintenance support if not provide by an outside source,
 - k. Test witnessing by others than the test conductor,
 - l. Protection against attempts to breach security and introduced malware.

5. Then and only then can a system be certified if it is shown to be in 100% compliance with pre-established acceptance criteria?
6. If procedures in the referenced document are to be pursued unmodified, I request any reference to “TEST” to be removed so there is no way anyone can misinterpret this “DEMO” as being a test.
7. The author of the referenced document states in his Overview that “**Boulder County has already performed significant load tests, as well as acceptance testing and this plan should in no way reflect on those previous tests.**”. Where are the product requirements, the product functional and performance requirements and the test plan, along with the applicable test procedure(s) used for these tests? If it has been tested, why has it not already been certified? Why was the Canvass Board denied access to these tests? The Electorate of Boulder County will be better served by simply rerunning the previous set of tests Mr. Lyons mentioned in his Overview.
8. In summary,
 - a. Based on my decades of experience in the field of testing of high technology systems and in the best interest of the Boulder County Electorate, I request that I be included in all phases of Test Plan and Test Procedure development and execution for any and all parts of the Mail Ballot Component of the Boulder County’s Voting System. This would also include any demonstrations of the Mail Ballot Component.
 - b. Or, I would suggest that the SOS contract with some company that currently provides professional testing services for high technology systems. This includes all phases of Test Plan and Test Procedure development and execution for any and all parts of the Mail Ballot Component of the Boulder County’s Voting System. Possible companies, which I know are qualified and could provide their services without any conflict of interest, are Ball Aerospace in Boulder and Lockheed-Martin in Denver area.

James August

cc Al Kolwicz
Russ Boehm
Jim Remmert
Dan Martin
Mary Eberle
Marilyn Marks

Attached

Software Test Plan Example
CDC_TEST_PLAN_TEMPLATE