wyle laboratories

ENGINEER CHANGE ORDER ANALYSIS FORM	DATE: 4/27/2011

CUSTOMER: ES & S

WYLE JOB NO: T58286.02

ECO NO: ECO 000819

SUBMISSION DATE: 4/15/2011 **NOTIFICATION BY:** Sue Mckay

PRODUCT: DS200 Emergency Bin

HARDWARE REV LEVEL: 1.0

ECO DESCRIPTION: Modify Emergency Bin to improve ballot stacking

REASON FOR CHANGE: Redesigned the ballot diverter bracket to direct ballots into the bin. Revised drawing to increase opening size. Created a field upgrade kit.

ENGINEERING ANALYSIS: De Minimis

ENGINEERING RECOMMENDATION (MODIFICATION TESTING REQUIRED):

The changes documented in this ECO, along with the analysis, are detailed below:
NOTE: Items 1 and 3 are made to correct identified ballot jam issues. When testing was performed, Wyle inspected all resulting data (zero report, results tape, and audit log) to verify that no ballot jams were encountered.

1. The ballot diverter mounting bracket has been modified to include a curved edge to direct ballots into the bin, to add rigidity to the mounting of the diverters, and to better secure the barrier.
ANALYSIS: This issue was described in Section 1.5 of the ES&S Engineering Analysis Report for New York City (Reference attached excerpt) and includes corrective measures to be taken to prevent jams, one of which is the redesign of the E-bin "fingers". A field upgrade kit was created to incorporate the modified bracket on existing units. Internal testing was performed by ES&S to test the new design. This testing consisted of performing ES&S test case "Verification of Redesigned Ballot Deflector". NO ADDITIONAL TESTING REQUIRED.

2. The opening of the emergency bin is being made wider to allow better access for the poll workers hand.
ANALYSIS: Drawing 01-059-94307, Rev. D and Rev. E were compared to verify that the grab opening in the bin was increased to 115.0mm. NO TESTING REQUIRED.

3. A field upgrade kit was created to make changes.
ANALYSIS: The instructions for the field upgrade were provided in ES&S Doc. 01-097-00198. NO TESTING REQUIRED.

Additionally, the changes to the ballot diverter mounting bracket resulted in revisions to drawings and BOMs. NO TESTING REQUIRED.

Attached to this ECO form are the following documents:
Original ECO from ES&S
ES&S Test Case "Volume and High Temp Tests on Combined System"
ES&S Test Case "Verification of Redesigned Ballot Deflector
ES&S Document No. 01-097-00198, Rev. A, "ASSY MECH M200 Retrofit Kit E-Bin Divider"
ES&S Drawing No. 01-017-00109, Rev. A
ES&S Drawing No. 01-059-94307, Rev. D and Rev. E

ENGINEER: Wendy Owens 4/27/11
Wendy Owens

APPROVER: Frank Padilla 4-27-11
Frank Padilla

TRANSMITTED: YES ☑ NO ☐ **TRANSMITTED TO:** Sue McKay

CUSTOMER APPROVAL: Sue McKay 4/27/11

VSTL APPROVAL: Jack Cobb 4/27/11