

**Catts, Michelle**

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**From:** Cataldo, Paul C  
**Sent:** Wednesday, May 04, 2011 10:21 AM  
**To:** Catts, Michelle  
**Subject:** FW: 95332 con ed results

**Attachments:** 95332 Follow-up 04162011.docx

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**From:** Braun, Charles  
**Sent:** Wednesday, May 04, 2011 7:49 AM  
**To:** Cataldo, Paul C  
**Subject:** 95332 con ed results



95332 Follow-up  
04162011.docx ...

Paul

Here is a summery of the results

With the 3 phase secondary currents applied to the Buchanan 95332 CT circuits, the flexi test switch was opened multiple times and each time it properly created a make before break action and did not imbalance the HCB relay. Therefore the relays did not initiate a trip during the recreation of the actions that were taken at the time of the tripout on 3/1/11.

We also confirmed that all the fault detectors properly supervise the trip to the 86 (LOR) as per design. We also confirmed the fault detectors were in specification and target mechanism operated satisfactory.

We found no other problems with the circuit.

Our view is that the operation of the switch at the time of the tripout on 3/1/11 wiped the electrical contact clean. We simulated the scenario again with three phase currents but this time we also inserted an insulating medium on the shorting heel-toe connection on the flexi test switch to simulate a high resistance contact. This resulted in the misoperations of the HCB and the neutral fault detector. Both the HCB relay and one of the fault detectors are required to operate to trip the feeder. This proved that with sufficient contact resistance the misoperation would occur.

As a precaution and a corrective measure we replaced the flexi test switch with a replacement switch in new condition.

Charles Braun

A handwritten signature in black ink, appearing to read 'AHO' with a stylized flourish.