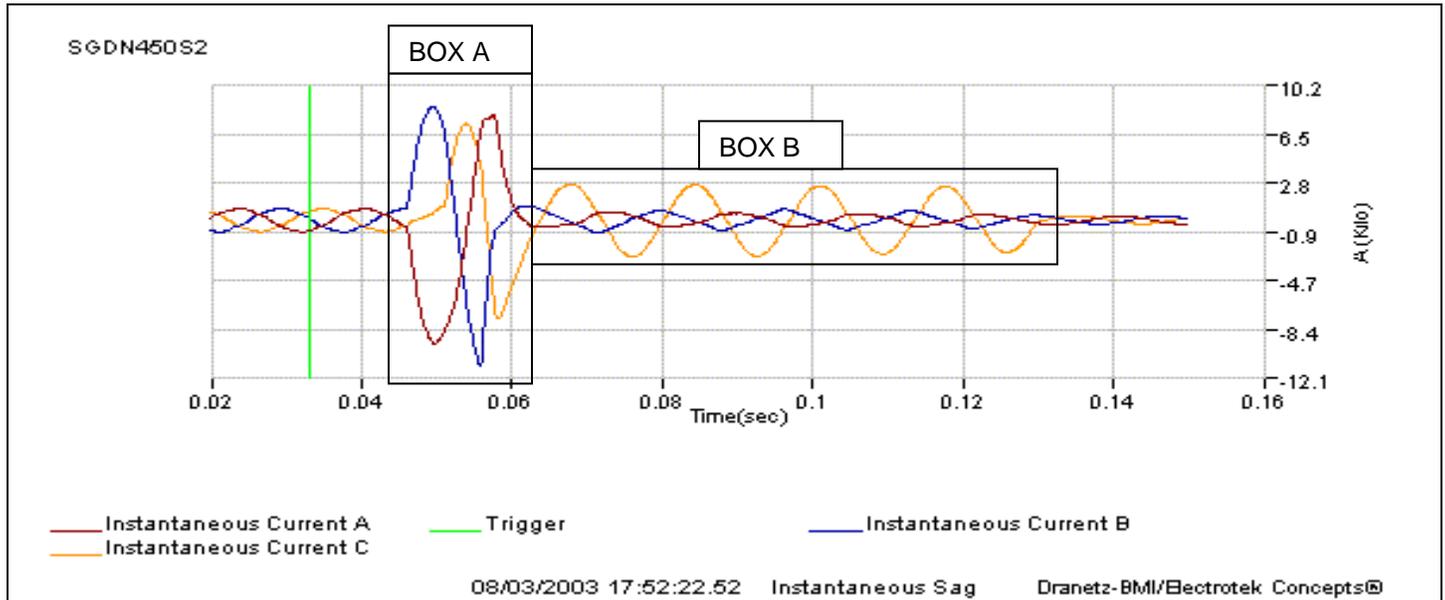
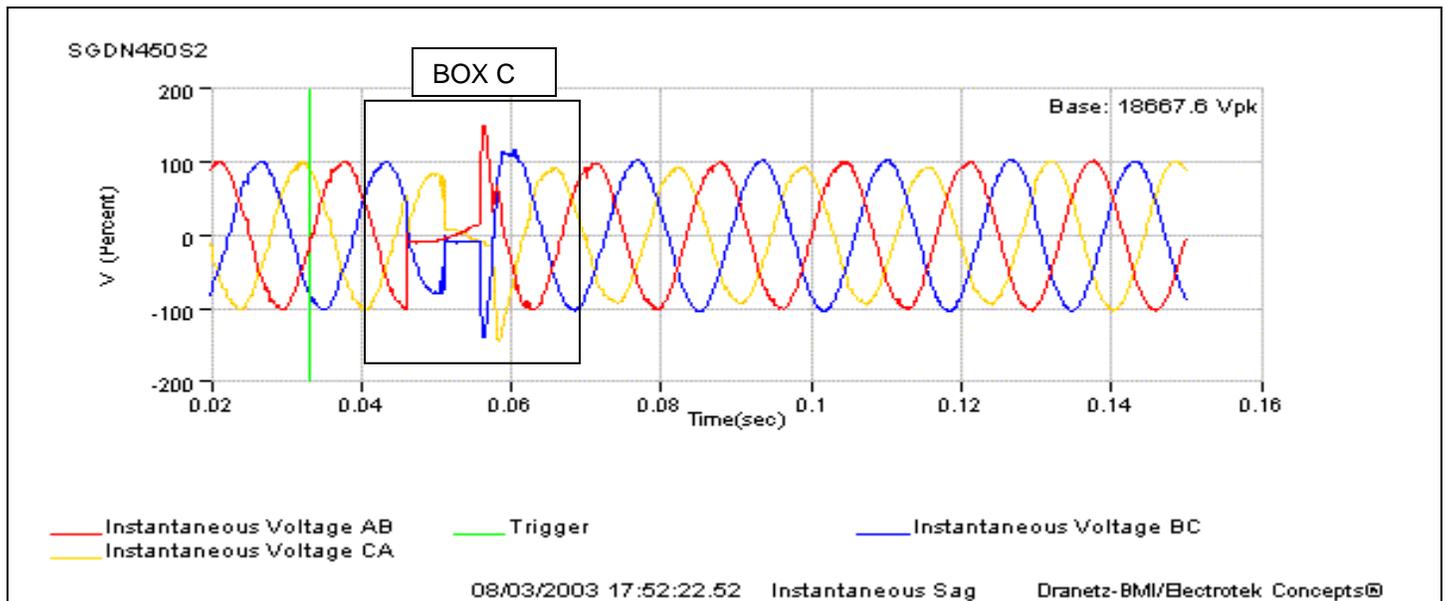


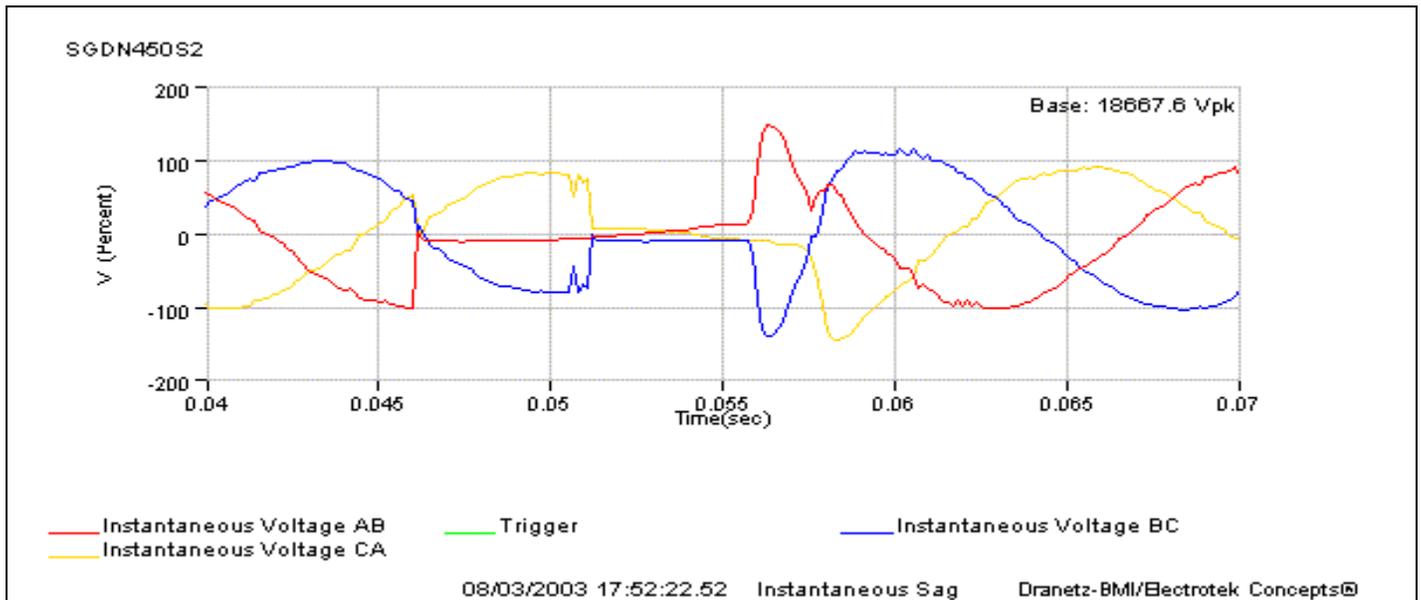
Shown below are the waveforms captured from the SG-U3 13.2kV switchgear, CB-S2 main breaker Dranetz 5500 Series power monitoring system.



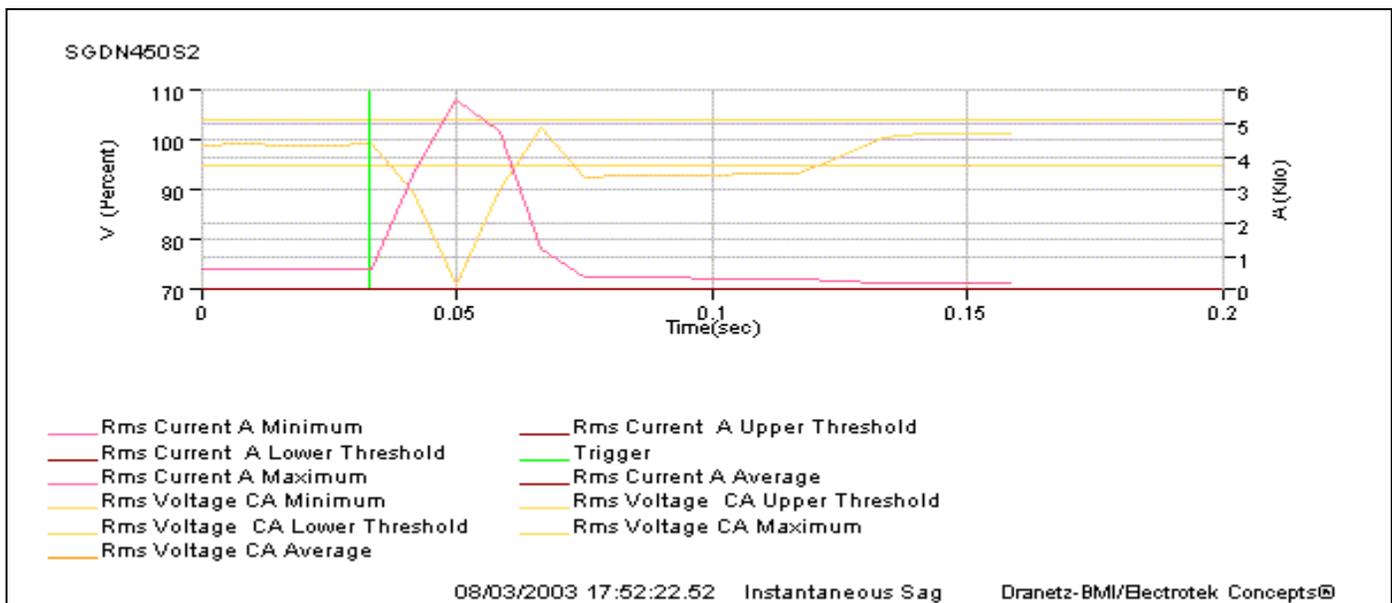
The above waveforms show the phase to phase fault starting on A & B phases then including C phase (BOX A). After 1 cycle, the A & B phase fuses blow leaving only the C phase line energized and arcing to ground (BOX B). After 4 cycles the CB-M8, SCOR overcurrent relay, protecting the SG-R3 switchgear (the RF switchgear) tripped, de-energizing the line to all the RF stations. The cause of the fault is unknown but a lightning strike was reported at the same time as the event... coincidence?



The above waveforms show the voltage on the SG-U3, S2, 13.2kV bus in building 450. BOX C is shown zoomed in the next figure.



Zoomed waveforms of the 13.2kV bus during the short circuit fault on A & B phases from the previous page (BOX C)



Worst case RMS values of the voltage and current on the 13.2kV bus on SG-U3 S2 side.

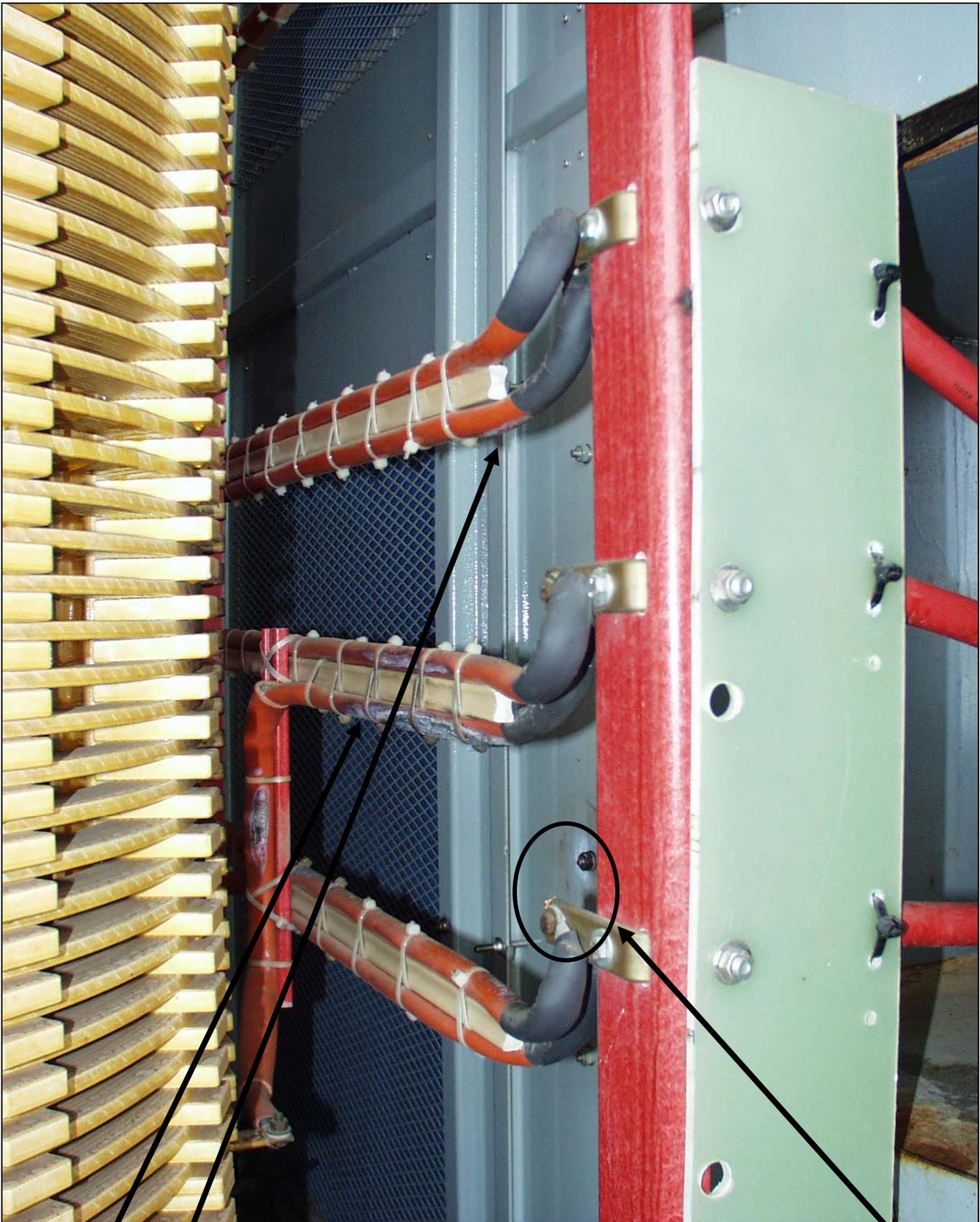


Figure showing the inside of the RF2 Matching Transformer

Note damaged 15kV interconnect cabling
Suspected Phase to Phase fault occurred here

Note damage to bolt and cable termination
Phase to Ground fault occurred here

APS POWER SINGLE LINE DIAGRAM

