White Paper Attachment to Pf4/5 Calculation: NSTXU-CALC-12-05-00.

Note 1: the integrity of the pf4/5 coils and the pf4/5 supports are addressed in this calculation for the NSTXU performance scenarios. Furthermore, the associated DCPS parameters/inputs are also addressed in this calculation. The scope of CA-1200 structural upgrades includes the pf4/5 supports only.

Note 2: for the NSTXU, it was cost prohibitive to remove/replace the existing pf4/5 coils. As such, project management accepted the risk of utilizing the existing pf4/5 coils which have a finite life. The life remaining in the existing pf4/5 coils is unknown and a risk accepted by the project.

Note 3: It is my understanding the project will implement mitigation activities to prevent coil and coil structural support failures. Some of these activities include routine inspections, DCPS and instrumentation implementation during initial operation and bench-marking of the NSTXU.
It is recommended that data gathered during this bench-mark phase be used to calibrate the DCPS input parameters to correlate the predicted vs the actual mechanical response, thus providing better protection. Also, it is recommended that specific instrumentation be used on the pf4/5 clamp slides to monitor slide binding / failure.

As COG for CA-1200, I accept the calculation NSTXU-CALC-12-05-00 as completed for the scenarios given in the calculation pertinent to validating the support structures of CA-1200.