

MFR

Subject: Type 1 Index Test Box (Contract No. W9127N-04-D-0009, dated 26 May 2004)
Operational Bench Testing

Bench testing of "best and final" hardware and software for the prototype index test box (ITB) was required to evaluate the suitability for installation and testing of same on Unit 9, at McNary Powerhouse. Bench testing was conducted at HDC using test bed located in GDACS Maintenance Team (GMT) offices, 8th floor RDP. The established schedule for bench testing was 5-9 Dec 05. The established schedule for field testing of the prototype ITB is 12-16 Dec 05.

By previous agreement, all software required for ITB was to be delivered via e-mail to HDC nlt 0800 Monday, 5 December.

A summary of bench testing activities, files received and problems encountered follows:

MONDAY, December 5:

3-D Cam files for the ITB PostProcessor program:

[Unit2NoScreen.csv](#)

[Unit2WithScreen.csv](#)

[Unit5NoScreen.csv](#)

[Unit5WithScreen.csv](#)

[Unit9NoScreen.csv](#)

[Unit9WithScreen.csv](#)

were received from Doug Albright via e-mail Monday, December 05, 2005 7:38 AM

Support files:

[wkLastCalFileUsed.dat](#)

[PreTestCalFileforMcNary.WKCal](#)

[LastLimitFileUsed.name](#)

[GateBladeXYVals.dat](#)

[DataHeader](#)

were received from Doug via e-mail Mon 12/5/2005 8:38 AM

Files were installed and communication between the ITB and GMT test bed was established.

The program was executed and after "backdoor" passwords were entered, the "Index Test" function was initiated. Simulated data (representing data encountered during index testing) was found to exceed initialized limits for defining steady state criteria. The "AutoLimit" and limit reset "RST" options were not functioning. This was communicated to Doug. After filtering limits were manually adjusted, simulated steady state data (representing data encountered during index testing) was successfully monitored and logged.

The "Start OPC" (OLE Process Controller) function was initiated and we discovered the PLC was not recognizing the blade offset signal from ITB. Review of PLC revealed blade perturbation program was not installed. Showin Fu installed the proper program correcting the problem.

The blade perturbation routine was found to not allow perturbations below 0 degrees (i.e. negative blade perturbations). This was communicated to Doug.

To allow for negative blade perturbations, a revised executable file:

[ITBRev1v31.executable](#)

was received from Doug via e-mail Mon 12/5/2005 2:10 PM

