

- Training since Problem? *Guidance changed about to be Reset*
 - SWGW trouble Alarms from other Division
 - *2 alarms versus 1, Low Pressure in header.*
 R4-A3
 Mark Holmes, SM

Time Validation of Loss of 125VDC A from 100% Power with SWGW Cross-tied

Conditions:

- Got permission from CRS to use his new NLO and his RO. I told him why and informed him not to tell his operators anything except to work with me.
- Used newly qualified NLO (qualified ~3 months)
- Used on watch RO. I told him I would be calling him in the future time validating a scenario and he would need to tell me what he would do.
- Informed NLO that we would be performing a time validated scenario and that we would be simulating. He would need to point to anything he would be looking at and I would tell him what he sees. If he would be contacting other people, he would let me know who and what he would ask and I would talk to them.
- Time validation started from the relief crew office.
- I told him initial conditions of Reactor Scram, the Turbine has tripped, a lot of lights are out and the Control Room has just called you and informed you of a SWGW trouble alarm on the B side.
- The Control Room would also have had low bearing water flow alarms on the B and D pumps at this point (**this information was not given**).
- Time started when he understood.

Could take up to 30 minutes to find alarm. Worst Case Sequence.

- Scram
- Turbine Trip
- Loss of D.C.

- 1405 - left relief crew office
- 1407 - in SW Pump room (did not run)
- 1407 - asked which alarms were in on SWGW panel
- 1407 - NLO pulled alarm card
- 1408 - NLO verified SW-MO-2129 open
- 1409 - NLO asked values of SWGW pressure and flows. I told him 0.
- 1410 - NLO completed looking for obvious leaks per alarm card.
- 1411 - I called the control room per NLO guidance and told the RO the noted conditions in the SWP room. **At this point, with A SW deenergized and B SW Pumps with no gland water, the control room would have dispatched additional assistance to the SWP Room. It would likely be an additional NLO on backshift and weekends, and available Licensed Operator and or NLOs from the Work Control Center during the week.**
- 1412 - RO gave the order to check the lineup back to 2129 and report status.
- 1421 - NLO walked down piping and found SW-V-28 closed (simulated).
- 1422 - I talked to Control Room per NLO guidance and told them I found SW-V-28 closed and that it was the gland water supply from the SW Loop B.
- 1422 - Control Room order was to open the supply valve and check and close the cross connect valves. NLO did not know what valves they were and asked for more guidance.
- 1423 - Guidance from Control Room was to check closed SW-V-1479 and SW-V-1480 and then open SW-V-28. NLO repeated back to me.
- 1425 - SW-V-1479 and 1480 simulated closed

- 1426 – SW-V-28 open, gland water restored.

Scenario presented by Mark Holmes assumed 30 minutes to perform the activity. It took 21 minutes with one of the newest qualified NLOs. A more experienced NLO would have done in much quicker due to more familiarity with operating the system. The RO was a senior RO and it may have taken a little more time with a new RO, but the new RO may have quickly asked for help from CRS or other RO if he was having difficulty. A small amount of time was added due to me being a third party in all of the communications (~1 minute). A small amount of time was added by the NLO having to ask me what he saw instead of him seeing what he saw and moving on (~1 minute).

This time validation was performed by Mike Tackett, Operations Supervisor on 2-18-04.

Ressee's Loss of SWB counteragent
SWA

CCDP 4E-5 w/o Recovery

$\Delta CDF \approx 2.4 \times 10^{-6}$ ←