

1. b Interpret/Diagnose Scenario 3/Event 5

Expected - As SRO Recognize Sth,
EHC Pp Did Not Start
+ Direct Manual Start

Actual Actions -

NRC • Applicant Started Sthby EHC Pp

- NRC believes Applicant Thought Pp Did Not Auto Start

- Applicant Did Not Know Why?

Applicant

- Recognize EHC Pp Trp

- Directed AR P Review Prior To Alarm Coming In

- Directed EHC Pp Start

1b Scenario 3, Event 5

Questions

- Why did she actually start

pretty

SVE

Started

because

1 running pump

would BE needed

NOT because of

failure to

Auto start

stop

the second pump + do we know why? Was it specifically stated?

- Was she asked the setpt? ^{not directly}

- Did EHC L. Press Alarm Annunciate? NO

think about

- Did examiners consider that diagnosis of pump trip + actions lead to a +1?

- IS there sim data captured? NO

1.1b Interpret / Diagnosis - Ensure Accuracy
Scenario 3 / Event >

Expected Response - SRO directs
low static line pressure SI Block when
 $RCS < 2000^{\#}$

Applicant Response -
Requested it at 2007[#], early.
SI was successfully Blocked.
on 2nd attempt

Questions

- Was simulator verified ^{think so} operating correctly, >
- Where was requirement to verify
RLL? Skill of craft...
- How is transitioning from SCOA ^{but no error occurred} to
SI/SLI Block Significant? <sup>Butes: Creates
error likely situation</sup>

- Check IF other crews
verified P-11 before Bypassing
SI/SLI ~~NO Haven't done~~

no other
crews got
a "hit"
so they did
check
pull or
waited or
got luck

- How does Vogtle train on this,
what is Ops Expectation? (check
indicator then act? or check P-11
+ other channels?)

Don't know

would have to call Vogtle

Maybe we don't care

1. C Interpret / Diagnose - Understanding Scenario 3 / Event 4 - PT-455 ↑

Expected Action - Recognize PT-455
failure → Gain control in manual
pressurizer press control, swap
channels ⇒ Auto

Applicant - Stayed in Manual →
Never went to auto

Questions?

- Was there a "real" issue w/
the loss of L/D + going to Rtb? ↗ since LPT was 75% NRC event timing OK
- Sufficient time between events? 30 min OK
- Gave order... not followed + no follow
up... correct competency?

Was PT-455 event initiated

Somewhat
Lpr was
still hi

while recovering from previous

- Event?
- Procedure Error... Directs Htrs To On?
- When did level deviation situation

I think we have it may not need it
Need Sim Data

clear?

May not be relevant

Sim data should be/is available

- Was pressure and level stable at any point in time prior to Event 5? Pz & Level Dev Clear?

- Is there a "better" error — MPC to Auto

yes not per procedure... directed w/o verifying previous steps complete? Comp 5b?

Surrogate

- Did BOP Per Check Anything?

- Did Waftown Get Error For B/v to On

I. C Interpret Diagnose

Scenario 6, Event 4

Expected Response - SRO understand

LT-459 Failure \Rightarrow FIC 0121 to Manual.

Applicant - Changing to manual \rightarrow Select Unaffected Channel \rightarrow Selected Auto... Control Not Sufficient \rightarrow Back To Manual

Questions -

- What Indications are on CONTROLLER That it may Saturated?

No saturated indications on controller

What did other crew do? Validation Issues?

Another crew hit by gains to AUTO early

Other Crews YES

- Was it unreasonable for her to place FIC-121 back in auto when she did?

Yes
caused
another
incident
with alarms
too

- She did follow procedure?

Yes ... as did RD ...

- What exactly did applicant say to show misunderstanding?

We have this on 303 ...

3a Control Board Manips

Locate + Manipulate

Scenario 7, Event 1

Expected Action - Maintain $T_{AVE}/T_{RF} \leq 2^{\circ}F$

Applicant Action - 40min \rightarrow Trended to $2.3^{\circ}F$

Questions

\nearrow pulled 1 step asked twice \rightarrow "Think" so

• Did applicant request to pull rods
+ told by CRS - No wait? 

NO

• Is $2.3^{\circ}F$ Low an alarm condition
or of safety significance?

Don't
know

• Is SRC Signed Stmt Accurate? \nearrow Comp 4/6?

• What procedure directs $\pm 2^{\circ}F$ Dev?

• How was SFO Graded? \nearrow Yes error

3a. CONTROL Board Operations Locate + Manipulate

Scenario 3, Event 6

Expeded Response - RO to know where to
isolate RWST leak.

Applicant Response - She Did Not

Questions -

- Was RO directed to monitor ~~for~~ or
focus on reactivity?

- Who else had errors on what

many others
did NOT
know where
HIs were
+ got
RF hits

Competencies Others

- What were follow up questions? **No**

3c. Control Board Ops - Manual
Scenario 7 Event 3 - Loss of Cooling
To Letdown Hx

Expected Response - Diagnose TV-0130
Failure & Control in Manual

Applicant - Misdiagnosed - Wrong Actions
Eventually Controlled In Wrong
Direction

No Questions

Check $\Delta RO + RO$
No errors writeup
for either

Comms

Q-

- For ~~46~~ FIL-0121 -

Scenario Event 4, Did

she say manual, manual, auto,
manual... was
enough time given to self
correct.

- Scenario 7, Event 7 -

Was SRO a surrogate?

Is there second error?

- For 46 - Did she ever keep
someone outside CR informed?
1 → 2?

- Scenario 6 Event 1 -

Was this "information" required to be repeated back?

• Was the SENDER ALSO Hit for not ensuring comm received?

Errors + RF Summary (except comms)

- #1 EHC pump trip 1.b
- #2 SI Block with P-11 lit No error
- #3 PT fails PZR failure; Heaters end up 2.0 5.6 didn't direct 2235 AND continued on understanding still?
in Manual (B/U A) ~~maybe more than one procedure hit??~~
ONE procedure hit 1.c 5.b
- #4 LPR failure + returning FLC 121 to AUTO 1.c 5.b
- #5 Power ↑ Tave goes 2.3°F low No error
- #6 RWSI leak 25 minutes to close valves No error
- #7 PORV ops, takes H/S wrong direction 3.9
(not contested)
- #8 Letdown HX TE failure, Doesn't promptly take manual control + presses wrong button 3.c 1.c

Make sure to integrate with original ES-303
[ie "non contested" errors must be included!]

Error #1 as SRO

ETC Pump trip

Applicant believes stby pump
should have auto-started

Correct RF? Y (Assigned I.b)

Error Y or N?		
Don	Dave	Chris
Y	Y	Y

Follow up? Did diagnose initial trip correct consider "point back"

Error #2 as SRO

Directs blocking SI with

P-11 lit < 2000#

Correct RF? (Ass. I.b)

Error Y / N?		
Don	Dave	Chris
N	N	N

Follow up? Directing ops could have used other
operator to block SI while 1st
operator was hold steam dump switches

Error #3 as SRO

Error Y or N?

Understanding Ppr controls Auto/Manual

- Ppr hrs left in Manual by RO

Dun	Dave	Chris
✓	✓	✓
✓	✓	✓
	?	

Correct RF? (Assigned 1c)

① Didn't follow procedure why not adj to 2735 in manual before solis + auto why didn't she direct this? (2c)

Follow-up? ② Even when RO told take hrs → Auto RO takes B/U A → ON (Sb)

Error #4 as SRO LT Failure

Error Y or N?

Understanding Charging flow control / FIC-0121

Saturated controller FCV 121 goes full closed

When taken back to AUTO w/ Lpr on program

Dun	Dave	Chris
(1c) ✓	✓	✓
(Sb) ✓	✓	✓

Correct RF? (Ass. 1c) Based on F/UG thinks FIC-121 failed

Follow-up (Sb) also she initiates another transient by going to auto on FIC-0121 w/ PT-508 failure comes in

No caution at actual procedure Step going back to auto maybe up-front

Check sim data inches Lpr actual

Check other crews problem w/ saturated controller

Check full procedure for Caution a "saturation"

Error # 5 as OATC

During power ↑ Tave goes low out of band ($\pm 2^\circ\text{F}$) to $\approx 2.3^\circ\text{F}$ below Tref

Corr. RF? (ass. 3a) ~~Not~~ 3a 1a perhaps or 4b

Follow-up? Check other crabs did Tave go out of band? we have lost SRO saying > 1 times asked to pull rods

Error Y or N

Don	Dave	Chris
NO	NO	NO

MC 500
* Examiners
can't recall
Tave comes

Error #6 as OATC

During RWST leak doesn't recommend taking sludge valve(s) handswitches to closed. H/s in sim / control room back panel

Corr. RF? (ass. 3a)

Follow-up?

Error Y or N?

Don	Dave	Chris
N	N	N

Error #7 as OATC

NOT CONTESTED BY APPLICANT

During P22r failure operates PORV in wrong direction, corrected by SRO (hits operators switch in wrong direction)

Error Y or N?

Don	Dave	Chris
Y	Y	Y

Corr RF? (assigned 3a) ^{3a correct}

Follow up? Make sure closing PORV not critical ^{A-2 says NO But not stopping a LOCA perhaps a critical by Westinghouse guidance}

Error #8 as OATC

During Letdown HX TE-0130 failure does NOT ID Manual control available AND then hits wrong button (wrong one was up arrow) on controller

Error Y or N?

Don	Dave	Chris
3Y	3Y	3Y
1Y	1Y	1Y

Correct RF? (assigned 3c) ^{Two hits?? 1c maybe}

Follow up? ^{where is TEC (TIC) 130 controller in relation to being able to monitor Sk, Tave ...}

Check SRO / VO write-ups too