

United States Nuclear Regulatory Commission Official Hearing Exhibit	
In the Matter of:	Charlissa C. Smith (Denial of Senior Reactor Operator License)
	ASLBP #: 13-925-01-SP-BD01
	Docket #: 05523694
	Exhibit #: NRC-033-00-BD01
	Admitted: 7/17/2013
	Rejected:
Other:	Identified: 7/17/2013
	Withdrawn:
	Stricken:

NRC-033
Submitted: May 31, 2013

RATING FACTOR 1.B.: INTERPRETATION/DIAGNOSIS, ENSURE ACCURACY

1. Examiner comment on 303 form p. 8 of 32, related to Scenario 3, Event 5

A. FACTUAL SEQUENCE OF EVENTS

- During the simulator scenario, at time 11:30:49, event 5 was initiated with a trip of the running EHC pump.
- The trip of the EHC pump caused alarm ALB33-B07, 480V SWGR 1NB02 TROUBLE, to annunciate.
- At time 11:31:57, Carla directed the [REDACTED], as Reactor Operator (RO), to dispatch a field operator to investigate the condition.
- As Senior Reactor Operator (SRO), Carla directed the BOP operator (not an applicant, a surrogate) to reference the ARP for alarm ALB20-D05 HYD FLUID LO PRESS. Note that this alarm never annunciated during this event.
- In accordance with the ARP actions for ALB20-D05, Carla directed the BOP operator to manually start the standby EHC pump. This pump was started at time 11:32:20, approximately 1 minute and 31 seconds after the initial trip of the running EHC pump.
- Carla did not solicit EHC pressure values or trends before directing the standby pump to be manually started.
- Annunciator ALB20-D05 did not actually annunciate during the event, because the standby pump was manually started before EHC pressure lowered to the setpoint of 1500 psig. Of note, the auto-start of the standby EHC pump is set at 1400 psig. If EHC pressure were to continue to lower to 1100 psig, an automatic turbine trip signal would be generated. For this event, the lowering EHC pressure was only due to the pump trip and not a leak or rupture in the EHC system.
- At time 11:34:17, Carla called Clearance and Tagging (C&T) to direct them to investigate a potential failure of the auto-start feature on the standby EHC pump.

During post-scenario follow-up questions, the examiner asked Carla “did the standby [EHC] pump automatically start?” Carla responded no, that it had not. The examiner then asked Carla “should it [the standby EHC pump] have automatically started?” Carla responded yes, the standby pump should have started. Note that in accordance with Scenario 3 ES-D-2 p. 21, it was verified by the NRC team during prep week that ALB20-D05 would annunciate “after several minutes.”

B. EXAMINER EVALUATION AND COMMENTS

Based upon these observations, the examiner determined that the applicant had mis-diagnosed that the standby EHC pump had failed to automatically start. The principal element in this mis-diagnosis was that the applicant did not obtain any EHC pressure values or trends before ordering the standby pump to be manually started. In accordance with this assessment, the examiner determined that the correct rating factor to place this deficiency was 1.b., which states: "Did the applicant ensure the collection of CORRECT, ACCURATE, and COMPLETE information and reference material on which to base diagnoses?"

Along with the evaluation of this root cause deficiency, the examiner recognized that there were also weaknesses relating to Competency 5, Direct Shift Operations, which were also displayed during this particular event. Furthermore, there are also weaknesses related to rating factor 4.b., in that Carla passed incorrect information to C&T regarding plant status. Finally, there is another weakness relating to rating factor 1.a., in that Carla failed to recognize that the failure of the annunciator to alarm meant that the standby pump had not received an automatic start signal; furthermore, there was nothing preventing her from moving closer to the EHC pressure gage to better recognize the plant status upon which to base her diagnosis.

In Carla's request for appeal, during her description of this event, she states that she directed the appropriate actions to be taken. This is correct; the examiner did not dispute that correct actions were taken. The reason she was downgraded for diagnosis is that the [correct] actions that she directed were based on an erroneous diagnosis. Furthermore, Carla states that the distance from the SRO position to the EHC meter on the BOP panels prevented her from precisely determining an exact EHC pressure from the gage. However, she had an opportunity to either walk over to the gage to get a closer reading; or she could have directed the BOP operator to report EHC pressure values and trends. Moreover, because the ALB20-D05 alarm had not actually annunciated, this was an additional verification to her that EHC pressures had not actually dropped below 1500 psig.

Appendix D

Required Operator Actions

Form ES-D-2

Op-Test No.: 2012-301

Scenario No.: 3

Event No.: 5

Event Description: Main Turbine EHC pump 1 trips and the standby pump fails to automatically start on low pressure. The UO will refer to ARP-17033-1 for corrective actions. The standby pump will be manually started to prevent a turbine trip on low EHC pressure.

Time	Position	Applicant's Action or Behavior
	UO	Diagnoses trip of EHC pump: <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <u>Alarms:</u> ALB33-B07 480V SWGR 1NB02 TROUBLE ALB20-D05 HYD FLUID LO PRESS (after several minutes) </div> <u>Indications:</u> EHC pump 1 (HS-6539): Red - OFF Amber - ON Green - ON EHC pressure (PI-6338) <1600 psig and lowering. EHC Pump 1 amps (II-40073) drop to 0 amps.
	UO	Refers to ARP 17033-1 for Window B07. (480V SWGR 1NB02 TROUBLE)

Appendix D **Required Operator Actions** **Form ES-D-2**

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Event No.: 5

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Time	Position	Applicant's Action or Behavior
	UO	<p><u>ARP 17033-1 WINDOW B07</u></p> <p>1.0 <u>PROBABLE CAUSE</u></p> <ol style="list-style-type: none"> 1. One of the breakers on Switchgear 1NB02 tripped due to a fault. 2. Bus ground fault. 3. Potential transformer/fuse failure. 4. Loss of bus voltage from Switchgear 1NA04. 5. Transformer 1NB02X winding high temperature. 6. Loss of 125V DC control power from Panel 1ND21. 7. Loss of power to transformer temperature monitor. <p>2.0 <u>AUTOMATIC ACTIONS</u></p> <p>NONE</p>

POST SCENARIO

Q: T.S. FLOW ON ALL EVENTS

E1
SGT A: 3.3.1 FU 13 Cond 'E'
3.3.2 FU 6b Cond 'D'

Sc Cond 'I' ←

She got this in questioning

IT WAS IDENTIFIED LEAKAGE.

P2R P CONTROL PT-455

A: 3.3.1 FU 6 OTAT Cond 'E'

8a Per P 6 Cond 'M'

8b Hi Per P Cond 'E'

3.4.1 DNB Spec

3.3.2 FU 8 Cond L

SGTL

A: 3.4.13 Cond A

Q: Are you required to cover TS in your Briefs?

A: Only need to cover them if they are limiting. It would have been a good idea.

E4: P2R P Channel PT-455 Failed High

Q: Walk me through the discussions about pressurizer heaters.

A: Ex 4p → P2R L was high → Has an ^{concerns} Uncomfortable taking heaters to auto because they were high in the band. She wanted P lower prior to going to auto.

Q: 17011-1 Window Cdl P2R CONTROL HI LEVEL DEV AND HTRS ON

Step 4

Q: Walk me through the performance of this step.

A: She used this to control heaters.

E5: EHC Pump

Q: Did the S13 auto start? Should it have? Did you Q it?

No

Yes

Explains why she later called out to have it look at auto start feature

Carla
Fly Q: Are you registered to cover TS in your briefs?

11:00:57
01:33
02:04
02:37
08:29
10:22
14:20
17:45
19:02
24:46
26:10
28:36
30:49
32:20

Alarms R: IOAs
R: IOAs done
A-C: We did enter DN3 Spec
C: X 18001-C Section C
C-R: "I do not think heaters are operating properly"
↳ Taking heaters back to auto may not be what we want.
C-R: ~~We are~~ Go ahead and take Per heaters to on.
R-C: I am maintaining P.
C-R: Now we can take htrs to auto ^{Did not do}
↳ R: Placed in ^{3rd Group A on} ~~auto~~ (NO COMMUNICATION)
C-R
17011-1 Window CDI PER CONTROL HI LEVEL
DEV AND HEATERS ON
↳ she used step 4 to ~~stop~~ Rodney to adjust P?
↳ This step is for ~~what?~~

Fly Q
PER HTRS
X

(Rodney Does Not place HTRS in Auto)
SPD actually directed it, but he did not do it.

Fly Q
X

(*) Carla did not get permission from SS for placing PER P Control to auto.

Fly Q
X

C-C/F: Makes notifications
C: Pulls TS Book
M(C) did not write down TS 3.3.2 FU Id Cond D.
C: Brief → Carla did not mention T.S. again in his brief.
Seal Inj. Flow is < 8 gpm procedural limit (~17 gpm)

HYD Fluid to P

Alarms R-C: Trip of ETHC Pp. C-F: pull Panel 20 (D-5)
C-F: Start ETHC Pp B'
↳ During prep week it was several minutes to see P decay

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Time	Position	Applicant's Action or Behavior
1131.08	UO	Diagnoses trip of EHC pump: <u>Alarms:</u> <input checked="" type="checkbox"/> ALB33-B07 480V SWGR 1NB02 TROUBLE ALB20-D05 HYD FLUID LO PRESS (after several minutes) <i>S->u Pull D05 ARP</i> <u>Indications:</u> EHC pump 1 (HS-6539): Red - OFF Amber - ON Green - ON EHC pressure (PI-6338) <1600 psig and lowering. EHC Pump 1 amps (II-40073) drop to 0 amps. <i>1131.57 S->A Dispatch Ao to investigate</i>
	UO	Refers to ARP 17033-1 for Window B07. (480V SWGR 1NB02 TROUBLE)

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Time	Position	Applicant's Action or Behavior
	<p style="text-align: center;">UO</p>	<p><u>ARP 17033-1 WINDOW B07</u></p> <p>1.0 <u>PROBABLE CAUSE</u></p> <ol style="list-style-type: none"> 1. One of the breakers on Switchgear 1NB02 tripped due to a fault. 2. Bus ground fault. 3. Potential transformer/fuse failure. 4. Loss of bus voltage from Switchgear 1NA04. 5. Transformer 1NB02X winding high temperature. 6. Loss of 125V DC control power from Panel 1ND21. 7. Loss of power to transformer temperature monitor. <p>2.0 <u>AUTOMATIC ACTIONS</u></p> <p>NONE</p>

1132.54 s.u. start STBY Pump

