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 RECIP. NAME      RECIPIENT AFFILIATION  
 TESTA, E.      Region 2, Ofc of the Director

SUBJECT: Forwards FN Victor 871111 final rept on emergency preparedness exercise, covering control room area. Excessive prompting by controller observed. No public address announcements made from control room.

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EXTERNAL:	LPDR	1 1	NRC PDR	1 1
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NOTES:		1 1		

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December 29, 1987

Mr. Eldan Testa  
U. S. Nuclear Regulatory Commission  
Region II  
101 Marietta St.  
Suite 3100  
Atlanta, GA 30303

Dear Eldan:

OCONEE EXERCISE, NOVEMBER 11, 1987

Enclosed is the final report of Frank N. Victor who was the Pacific Northwest Laboratory (PNL) participant during the subject exercise. Only minor changes have been made to the draft given to you prior to his leaving the site. The area covered by Mr. Victor was the Control Room.

If you have any questions regarding this report, please contact me on FTS (509) 375-3782.

Sincerely,

J. D. Jamison  
Technical Leader  
Emergency Preparedness Group  
Health Physics Technology Section  
HEALTH PHYSICS DEPARTMENT

JDJ/chb

Enclosure

cc: DB Matthews, w/enclosure

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F PDR

## OCONEE EMERGENCY PREPAREDNESS EXERCISE

November 11, 1987

- A. Name: Frank N. Victor
- B. Assignment: Control Room
- C. Site Personnel Contacted: C. Jennings, EP Coordinator; D. Coyle, Control Room Lead Controller; G. Ridgeway, Control Room Controller; P. Stovell, Simulator Instructor; B. Horton, Shift Supervisor; E. Payseur, Shift Engineer (STA); D. Green, Unit SS; M. McIntyre, SRO; D. Smith, RO; R. Bosse, RO; R. Strickland, RO; T. Coutu, Operating Engineer; B. Ayers, Communicator; G. Baumgarner, Spare NEO; C. Watts, RO Unit 2; K. McMurray, RO Unit 2; L. Lee, Shift Supervisor Unit 2.
- D. Positive Findings
- Using the simulator control room provided a unique opportunity to evaluate player reaction to dynamically changing plant conditions. Players can actually demonstrate those actions they would take to cope with an emergency in the plant. Use of the simulator provided an extremely high degree of realism for this exercise and its use in subsequent Emergency Response exercises should receive serious consideration.
- E. Negative Findings
- Excessive prompting by the controller was observed. At times, controllers were prompting the players by providing more information than the situation required. For example when the Operating Engineer (OE) was trying to obtain information from the TSC/OSC concerning which side of IMS-98 was ruptured, he was told by the Controller that the hole

was on the feedpump side. Also at one point, the Controller reminded the Operating Engineer that he needed a report of the status of IMS-98 as soon as possible. When the Controller was asked if the alarm on R-40 was valid with the "B" S/G isolated, he responded by stating "It was not a valid alarm, you have isolated the correct generator".

- There were no PA announcements made or simulated from the CR. For example, an announcement concerning a reactor trip/turbine trip should have been made (simulated).
- Watch standers in the CR were not informed when the Site Area Emergency (SAE) was declared (i.e., no announcement) nor were they informed when the TSC was manned and had assumed Emergency Coordination responsibilities.
- The CR Operator's log was not adequately maintained during the drill. Between the start of the drill at 0730 and the completion of the drill at 1130 only one entry had been logged. After the drill was completed four additional items were added-all at time 0745.
- Not all phone messages were preceded by the caveat "This is a drill." After the Shift Supervisor (SS) received a call stating that someone at the World of Energy was suffering chest pains, it was necessary to make an additional phone call to determine if this was an actual condition or part of the drill. After being told it was part of the drill, the SS took no further action to obtain medical assistance.

#### F. Chronology

<u>Time</u>	<u>Observation</u>
0703	Handed out message 1E, initial conditions.
0740	Watch assumed in simulator: 3 ROs, 1 SRO, 1 USS, 1 SS. Also

<u>Time</u>	<u>Observation</u>
	present were the Shift Engineer (STA), Operations Engineer (OE), Unit 2 OE, at least six auxiliary equipment operators and the Unit 2 SS. PRESTAGING.
	No initial entry in log book for operators to initial signifying they are either ready to or have assumed the watch.
0745	Low vacuum alarm. Reactor trip - turbine trip. Consulting procedure EP-1 (EP/1/A/1800/01).
0748	Started second CCP for HP injection.
0749	Complete loss of vacuum. NOTE: No PA announcements, reactor trip or turbine trip.
0750	Stopped two RCPs - reported no alarms on R-16, 17.
0755	Phone call reported steam leak to Unit SS.
0800	Relief on "B" S/G cycling. Trying to determine which generator has leak.
0802	Started all vacuum pumps.
0803	Using EP-1 to isolate both S/G. Did not complete operation.
0805	OE believes SGTR from charging and pressurizer level indication.
0806	Unit SS wants to cooldown. No condenser so can't use turbine bypass; can't send operator to manually control ARV because of steam leak. He wants to send operator to Hot Shutdown panel to operate ARV - stopped by controller.
0811	Chemistry notified of SGTR.
0812	Secured vacuum pump - hole too big.
0818	OE and Unit SS discussing RCS feed and bleed to cooldown.

<u>Time</u>	<u>Observation</u>
	(Controller subsequently failed RC-4 to prevent this.)
	The OE informed the CR Controller that the TB Controller would not let the plant operator get the barn door (1MS98) shut.
	Problem corrected - drawing vacuum.
0825	SRO informed that "A" S/G appeared to be the only S/G being fed (i.e., level in "B" maintained without feed flow).
0829	Fire reported near ARVs in turbine building. OE calling OSC to have operator report if vacuum break on FW pump side or condenser side. Controller stated that break was on the FW pump side of barn door. The Controller told the OE that he needed a report on 1MS98 as soon as possible.
0834	1MS98 reported shut. Started vacuum pumps.
0835	Unit SS requesting S/G samples.
0839	Started cooldown on bypass valves.
0840	Control room received a report that nine fire fighters are contaminated from fighting the nonfire (actually steam not smoke).
0840	OE recommending shifting to one then the other S/G after reaching 542°F.
0844	Spray valve won't open.
0845	Unit SS states "B" S/G appears to be SGTR. No feed - increasing level.
0850	Isolating "B" S/G.
0906	SS ordered that the breakers for Core Flood Tanks 1 and 2 be closed.
0908	Controller was asked if R-40 was a valid alarm with "B" S/G

TimeObservation

isolated. The Controller said no it was not a valid alarm and they had isolated the correct generator.

0915 Cooling down at approximately 100°F/hr.  
RCS Temp 491°F  
RCS Pressure 1054 psig  
Subcooling 35°F.

0921 OE suggests steaming the "B" S/G to reduce the amount of contamination being released.

0935 Man with chest pains at the World of Energy reported to SS. The SS had to make a subsequent phone call to determine if it was a real emergency or just a drill. No action from control room.

0945 CF 1 and 2 isolated. Depressurizing CF tanks.

0950 Steam line break identified on "B" steam line.

1005 RC-4 is shut. Operator did not notice valve was shut and could not open the valve.

1008 Request breakers for head vent be energized. Need 1" or greater vent path per TS before going below 325°F.

1018 Chemistry reported S/G samples taken. Starting to take RC samples.

1030 Operators lining up to switch over from S/G cooldown to RHR cooldown.

1130 Exercise terminated.

NOTE: No PA announcements made by control room. No announcement made to operator when TSC assumed Emergency Coordinator duties. No announcement made on declaring Site Area Emergency.

The following were added after the exercise was over.

<u>Time</u>	<u>Observation</u>
0745	Low vacuum S/A received.
0745	Reactor trip on low vacuum.
0745	EHC emergency trip.
0745	Both FDWPT trip. EFDW auto initiated.