

Document Transmittal Form

TO : NRC C/O PINCKNEY, DAVID
DOCUMENT CONTROL DESK
WASHINGTON, DC 20555

ID : EPIP059

Date : 6/18/03

Please update your controlled set of documents with the following documents:

Document ID	Revision	Status	Quantity	Format	RecNo
PRC NC.EP-EP.ZZ-0201 000	6	A	1	H	169190
PRC EPIP-TOC-COMMON 000	31	A	1	H	169233

ALL PAGES of this acknowledgement receipt must be returned to:

**Document Management
PSEG Nuclear
PO Box 236
Hancocks Bridge, NJ 08038**

MC N04

Your signature below verifies that:

(1) the above documents have been filed and superseded documents have been removed and destroyed or clearly marked as obsolete.

(2) the mailing address and copyholder information are correct or corrections have been identified on this transmittal.

Place checkmark here to be removed from controlled distribution

Signature: _____ Date: _____

A045

**PSEG NUCLEAR
ON-SITE IMPLEMENTING PROCEDURES
June 18, 2003**

**CHANGE PAGES FOR
REVISION #31**

The Table of Contents forms a general guide to the current revision of each section of the Onsite EPEPs. The changes that are made in this TOC Revision #31 are shown below. Please check that your revision packet is complete and remove the outdated material listed below:

ADD			REMOVE		
<u>Page</u>	<u>Description</u>	<u>Rev.</u>	<u>Page</u>	<u>Description</u>	<u>Rev.</u>
ALL	TOC	31	ALL	TOC	30
NC.EP-EP.ZZ-0201		06	All	NC.EP-EP.ZZ-0201	05

PSEG NUCLEAR LLC
EMERGENCY PLAN ONSITE IMPLEMENTING PROCEDURES
TABLE OF CONTENTS
June 18, 2003

PSE&G
CONTROL
COPY # EPIP059

STATION PROCEDURES

		<u>Revision Number</u>	<u>Number Pages</u>	<u>Effective Date</u>
NC.EP-EP.ZZ-0101 (Q)	ACTIONS REQUIRED AT UNAFFECTED STATION	02	15	01/31/2003
NC.EP-EP.ZZ-0102 (Q)	EMERGENCY COORDINATOR RESPONSE	05	22	10/11/2002
NC.EP-EP.ZZ-0201 (Q)	TSC - INTEGRATED ENGINEERING RESPONSE	06	25	06/18/2003
NC.EP-EP.ZZ-0202 (Q)	OPERATIONS SUPPORT CENTER (OSC) ACTIVATION AND OPERATIONS	05	28	01/31/2003
NC.EP-EP.ZZ-0203 (Q)	ADMINISTRATIVE SUPPORT/ COMMUNICATION TEAM RESPONSE - TSC	04	17	01/31/2003
EPIP 204H	EMERGENCY RESPONSE CALLOUT/PERSONNEL RECALL	58	28	03/12/2003
EPIP 204S	EMERGENCY RESPONSE CALLOUT/PERSONNEL RECALL	58	28	03/12/2003
HC.EP-EP.ZZ-0205 (Q)	TSC - POST ACCIDENT CORE DAMAGE ASSESSMENT	03	39	02/06/2002
SC.EP-EP.ZZ-0205 (Q)	TSC - POST ACCIDENT CORE DAMAGE ASSESSMENT	03	82	01/31/2003
HC.EP-EP.ZZ-0301 (Q)	SHIFT RADIATION PROTECTION TECHNICIAN RESPONSE	03	21	01/31/2003
SC.EP-EP.ZZ-0301 (Q)	SHIFT RADIATION PROTECTION TECHNICIAN RESPONSE	04	35	01/31/2003

**PSEG NUCLEAR LLC
EMERGENCY PLAN ONSITE IMPLEMENTING PROCEDURES
TABLE OF CONTENTS
June 18, 2003**

		<u>Revision Number</u>	<u>Number Pages</u>	<u>Effective Date</u>
NC.EP-EP.ZZ-0302 (Q)	RADIOLOGICAL ASSESSMENT COORDINATOR RESPONSE	05	19	07/03/2002
NC.EP-EP.ZZ-0303 (Q)	CONTROL POINT - RADIATION PROTECTION RESPONSE	02	25	07/03/2002
NC.EP-EP.ZZ-0304 (Q)	OPERATIONS SUPPORT CENTER (OSC) RADIATION PROTECTION RESPONSE	07	26	01/31/2003
NC.EP-EP.ZZ-0305 (Q)	POTASSIUM IODIDE (KI) ADMINISTRATION	02	10	01/31/2003
NC.EP-EP.ZZ-0306 (Q)	EMERGENCY AIR SAMPLING	01	12	01/31/2003
NC.EP-EP.ZZ-0307 (Q)	PLANT VENT SAMPLING	02	13	07/03/2002
NC.EP-EP.ZZ-0308 (Q)	PERSONNEL/VEHICLE SURVEY AND DECONTAMINATION	00	16	02/29/2000
NC.EP-EP.ZZ-0309 (Q)	DOSE ASSESSMENT (MIDAS) INSTRUCTIONS	05	40	10/04/2002
NC.EP-EP.ZZ-0310 (Q)	RADIATION PROTECTION SUPERVISOR - OFFSITE AND FIELD MONITORING TEAM RESPONSE	05	43	10/04/2002
NC.EP-EP.ZZ-0311 (Q)	CONTROL POINT - CHEMISTRY RESPONSE	03	18	01/31/2003
NC.EP-EP.ZZ-0312 (Q)	CHEMISTRY SUPERVISOR - CP/TSC RESPONSE	04	26	01/31/2003
NC.EP-EP.ZZ-0313 (Q)	ADVANCED DOSE ASSESSMENT (MIDAS) INSTRUCTIONS	02	34	10/04/2002

PSE&G
CONTROL
COPY # EPIPO59

USE CATEGORY: II

REVISION SUMMARY:

Biennial Review Yes ___ No ___ N/A X

Added role for TSC Ops. Advisor in Step 4 of Attachment 1 and added Attachment 12 to give instructions to the TSC Ops Advisor. (NUTS 8005146, Activity 90)

Added steps 3 and 4 to Technical Support Supervisor Checklist of Attachment 1 Salem only portion to address ventilation issues during a LOCA event that were improperly removed in previous revision. (NUTS 80057796, Activity 20; EP96-006)

Added "Task Priority Number" column to TSC Engineering Task Assignment Log (Attachment 3). (NUTS 8005146, Activity 90)

Clarified steps 3 and 4 of Attachment 8 concerning checking diesel fuel oil tank status and monitoring Fuel Oil Storage Tanks.

Revised step 10 of Attachment 9 to access Operation Status Board information on SPDS that incorporates changes to SPDS. (CRCA 70029606, Activity 0030; DCP 80013111)

Added statement to step 10 of Attachment 9 to allow the TSS to modify update of the Ops. Status Board frequency to make this procedure consistent with ECG Attachment 8.

Clarified step 3 Salem only portion of Attachment 9 for monitoring Spent Fuel Pool.

Deleted step 6 of Attachment 9 to request SPDS Engineer to download SPDS memory. No longer required due to changes in SPDS. (CRCA 70029606, Activity 0030, NUTS 80054695, Activity 50; DCP 80013111)

Added 7.1.5 for additional reference concerning Auxiliary Building Ventilation.

Editorial changes to step 5 of Attachment 9 and step 15 of Attachment 1.

IMPLEMENTATION REQUIREMENTS

Effective Date 6-18-2003

APPROVED: [Signature] EP Manager 5/29/03 Date

APPROVED: [Signature] Director - Operations 6/03/03 Date

TSC – INTEGRATED ENGINEERING RESPONSE**TABLE OF CONTENTS**

<u>Section</u>	<u>Title</u>	<u>Page</u>
1.0	PURPOSE.....	2
2.0	PREREQUISITES.....	2
2.1.	Prerequisites To Be Followed Prior To Implementing This Procedure	2
2.1.1	Implement this procedure at:	2
3.0	PRECAUTIONS AND LIMITATIONS	2
3.1.	Precautions and Limitations To Be Followed Prior To Implementing This Procedure:.....	2
4.0	EQUIPMENT REQUIRED	2
5.0	PROCEDURE	3
5.1.	The Technical Support Supervisor (TSS) Should Perform The Following:	3
6.0	RECORDS	3
7.0	REFERENCES.....	3
7.1.	References	3
7.2.	Cross-References.....	3

ATTACHMENTS

ATTACHMENT 1	TECHNICAL SUPPORT SUPERVISOR CHECKLIST	4
ATTACHMENT 2	TURNOVER LOG - TECHNICAL SUPPORT SUPERVISOR (TSS) ...	7
ATTACHMENT 3	TSC ENGINEERING TASK ASSIGNMENT LOG	8
ATTACHMENT 4	TSC TECHNICAL SUPPORT TRACKING FORM.....	9
ATTACHMENT 5	POST ACCIDENT LOW PRESSURE INJECTION MONITORING (SALEM ONLY).....	10
ATTACHMENT 6	ADVERSE CONTAINMENT MONITORING (SALEM ONLY).....	15
ATTACHMENT 7	DIESEL GENERATOR LOAD MONITORING (SALEM ONLY).....	16
ATTACHMENT 8	MAINTENANCE OF FUEL OIL TO SALEM EDG (SALEM ONLY)	17
ATTACHMENT 9	TECHNICAL SUPPORT TEAM LEADER CHECKLIST	19
ATTACHMENT 10	TURNOVER LOG - TECHNICAL SUPPORT TEAM LEADER	23
ATTACHMENT 11	CORE THERMAL HYDRAULICS ENGINEER CHECKLIST	24
ATTACHMENT 12	OPERATIONS ADVISOR CHECKLIST	25

1.0 PURPOSE

This procedure provides guidance to emergency response personnel for administration of TSC Integrated Engineering Response during an emergency at Hope Creek or Salem Nuclear Generating Stations.

2.0 PREREQUISITES**2.1. Prerequisites To Be Followed Prior To Implementing This Procedure**

2.1.1 Implement this procedure at:

- The discretion of Technical Support Supervisor (TSS), Technical Support Team Leader (TSTL), or Technical Support Team Member (TSTM).
- Upon staffing of your Emergency Response Facility.

3.0 PRECAUTIONS AND LIMITATIONS**3.1. Precautions and Limitations To Be Followed Prior To Implementing This Procedure:**

3.1.1 It is recommended that initials be used in the place keeping sign-offs, instead of checkmarks.

3.1.2 Personnel who implement this procedure shall be trained and qualified IAW the Emergency Plan.

4.0 EQUIPMENT REQUIRED

As provided in the Emergency Response Facility.

5.0 **PROCEDURE**

NOTE:
 The EDO or TSS may require Engineering support prior to TSC activation. Precautionary **MANNING** of the TSC with key engineering support personnel does **NOT** require **ACTIVATION** of the TSC.

Initials

5.1. **The Technical Support Supervisor (TSS) Should Perform The Following:**

5.1.1 DIRECT the TSTL to implement Attachment 9, TSTL Checklist. _____

5.1.2 IMPLEMENT Attachment 1, TSS Checklist. _____

6.0 **RECORDS**

Forward all completed procedures, forms and attachments to EP Manager.

7.0 **REFERENCES**

7.1. **References**

7.1.1 PSEG Nuclear Emergency Plan

7.1.2 EP 96-02 post-OBE spent fuel pool rack gap evaluation

7.1.3 EP 99-01 Monitor the spent fuel pool temperature

7.1.4 EP 96-01 Monitoring Salem diesel generator fuel oil

7.1.5 EP 96-06 Placing ABV System charcoal adsorber in service |

7.2. **Cross-References**

None

ATTACHMENT 1
Page 1 of 3

TECHNICAL SUPPORT SUPERVISOR CHECKLIST

The Technical Support Supervisor (TSS) shall:

NOTE

Should the EDO/ERM be unable to fulfill the duties of Emergency Coordinator (EC) for any reason (e.g., sudden illness, accident, etc.) the Technical Support Supervisor (TSS) or Site Support Manager (SSM) may assume the duties and responsibilities of EC until another qualified EDO/ERM arrives at the facility. The TSS or SSM position must be filled by another individual.

NOTE

SALEM – Refer to page 3 of this attachment for additional actions required at Salem Station

- | | <u>Initials</u> |
|---|-----------------|
| 1. ASSUME Command and Control of the TSC facility until relieved by the EDO. | _____
TSS |
| 2. ASSUME Supervision of the Technical Support Team. | _____
TSS |
| 3. INITIATE and maintain a chronological log of your activities. | _____
TSS |
| 4. DIRECT the TSC Ops Advisor to implement Attachment 12, Operations Advisor Checklist. | _____
TSS |
| 5. NOTIFY the EDO when staffing is adequate to perform the technical support functions. Request the Admin. Support Supervisor to callout additional personnel as required. | _____
TSS |
| 6. PROVIDE assistance to the Emergency Duty Officer (EDO) in plant status and direction, Event Classification, Protective Action Recommendations (PARs) and any other activities as required. | _____
TSS |
| 7. COMPLETE the Task Assignments using Attachment 4, TSC Technical Support Tracking Form, and provide to the TSTL for implementation. | _____
TSS |
| 8. REVIEW all completed Attachment 4, TSC Technical Support Tracking Forms. Forward to the EDO for review. | _____
TSS |

ATTACHMENT 1
Page 2 of 3

Initials

9. REVIEW as appropriate, procedures being implemented by the Control Room and periodically brief the EDO and the TSTL on:

- Support that may be required by the OS.
- Any projected problems or areas of concern.
- Overall direction in which the Control Room is proceeding.
- Status of the Control Room implementation of EOP, AOP, and IOPs.
- Status of engineering recommendations provided to the OS.

TSS

10. IF a radiological release is imminent or in progress, THEN place the TSC Emergency Ventilation System in service in the pressurized mode:

HOPE CREEK

SALEM

Place the TSC Mode Control Switch (HS-9764) to PRESS (local Panel 10N211 at Central Alarm Station).

Direct a TSTM to place the TSC Ventilation System in Emergency Operation, IAW SC.OP-SO.TSC-0051 Section 5.3, Operation During High Radiation Conditions.

TSS

11. IF smoke or toxic gases are detected in the TSC air supply, THEN place the TSC Emergency Ventilation System in service in the recirculation mode:

HOPE CREEK

SALEM

Place the TSC Mode Control Switch (HS-9764) to RECIRC (local Panel 10N211 at Central Alarm Station).

Direct a TSTM to place the TSC Ventilation System in Emergency Operations IAW SC.OP-SO.TSC-0051 Section 5.4, Operation During Chemical Release.

TSS

12. WHEN the TSC Emergency Filtration System is no longer required, THEN request operations to return the TSC ventilation to normal alignment IAW:

HOPE CREEK

SALEM

HC.OP-SO.GR-0001(Z)

SC.OP-SO.TSC-0051

TSS

ATTACHMENT 1
Page 3 of 3

Initials

- 13. ESTABLISH communications with the Site Support Manager (SSM) at the EOF and provide periodic updates on the plant status. TSS
- 14. IF vendor assistance is required, THEN direct the TSTL to contact the Technical Support Manager at the EOF and request they provide the necessary support. TSS
- 15. Implement Severe Accident Management Guidelines (SAMG/SAG) and/or Supplemental Severe Accident Management Guidelines (SSAMG) as required based on degrading plant conditions. TSS
- 16. COMPLETE Attachment 2, Turnover Log - TSS Checklist when being relieved. TSS
- 17. AT the conclusion of the event, THEN insure that the TSC area is returned to ready status and all paperwork related to the event is collected and forwarded to the Emergency Preparedness Manager. TSS

SALEM ONLY

- 1. IF R44A or R44B Dose Rate is $\geq 1.0E+04$ R/Hr, THEN Implement Adverse Containment Monitoring in accordance with Attachment 6 of this procedure. TSS
- 2. WHEN the plant is placed in the "Recirculation Mode"(i.e., RHR suction is aligned to the containment sump) THEN direct the TSTL to implement Attachment 5 of this procedure, Post Accident Low Pressure Injection Monitoring. TSS
- 3. IF LOCA conditions exist, THEN contact the Control Room and request that the Auxiliary Building Ventilation (ABV) System Charcoal adsorber be placed in service within two hours of the LOCA in accordance with the appropriate procedure. (EP96-006) TSS
- 4. IF the Control Area Air Conditioning System (CAACS) is in emergency mode of operation for more than 12 hours, THEN a temporary fan must be installed in the security 125VDC battery room. This room is located in southwest corner of Unit 1 4160v switchgear area & 1C battery room at 64' elevation. TSS

ATTACHMENT 2

Page 1 of 1

TURNOVER LOG - TECHNICAL SUPPORT SUPERVISOR (TSS)

Date: ____ / ____ / ____

1. [UE] [A] [SAE] [GE] was declared @ _____ hrs. on ____ / ____ / ____

Due to: _____

2. The present classification, [A] [SAE] [GE] was declared @ _____ was declared _____ hrs. on ____ / ____ / ____

3. The Emergency Coordinator (EC) is _____ name in the [EOF] [TSC]

4. The Oncoming and Offgoing TSS should:

Initials
 On / Off

A. DISCUSS current conditions. Include any problems encountered or anticipated, and any ongoing, or expected actions. _____ / _____

B. REVIEW all applicable documentation including procedures, logs, etc., ensuring they are completed, correct and signed. _____ / _____

C. DISCUSS the TSC's priorities, personnel requirements and any support or material needs. _____ / _____

D. DISCUSS any Radiological, Safety, or Environmental concerns. _____ / _____

E. INSURE that technical support assignments are completed or reassigned as necessary. _____ / _____

F. NOTIFY the TSTL and the EDO of the change in command of the TSS. Update plant status and priorities as applicable. _____ / _____

G. As soon as possible, the oncoming TSS shall hold a briefing with the oncoming TSTL and TSTM's to insure a smooth transition between the oncoming and off going TSC personnel. _____ / _____

 Oncoming TSS signature Time Offgoing TSS signature

ATTACHMENT 3 Page 1 of 1 TSC ENGINEERING TASK ASSIGNMENT LOG					
DATE: _____			PAGE _____ OF _____		
TASK #	TASK PRIORITY #	TASK ASSIGNMENT TITLE (BRIEF DESCRIPTION)	ASSIGNED TO (NAME)	COMMENTS/REMARKS/PROBLEMS	CHECK APPROPRIATE STATUS
					<input type="checkbox"/> HOLD <input type="checkbox"/> FORWARD <input type="checkbox"/> IN PROGRESS <input type="checkbox"/> COMPLETE
					<input type="checkbox"/> HOLD <input type="checkbox"/> FORWARD <input type="checkbox"/> IN PROGRESS <input type="checkbox"/> COMPLETE
					<input type="checkbox"/> HOLD <input type="checkbox"/> FORWARD <input type="checkbox"/> IN PROGRESS <input type="checkbox"/> COMPLETE
					<input type="checkbox"/> HOLD <input type="checkbox"/> FORWARD <input type="checkbox"/> IN PROGRESS <input type="checkbox"/> COMPLETE
					<input type="checkbox"/> HOLD <input type="checkbox"/> FORWARD <input type="checkbox"/> IN PROGRESS <input type="checkbox"/> COMPLETE
					<input type="checkbox"/> HOLD <input type="checkbox"/> FORWARD <input type="checkbox"/> IN PROGRESS <input type="checkbox"/> COMPLETE

NOTE: TSTL – maintain this roster as a formal document of engineering Assignments and keeping others informed of activities in progress.

ATTACHMENT 4
Page 1 of 1
TSC TECHNICAL SUPPORT TRACKING FORM

<u>TASK ASSIGNMENT: (DESCRIPTION, BRIEF)</u>					<u>TASK #</u>
<u>REQUESTED BY: (CIRCLE ONE)</u> TSTL/SSM		<u>ASSIGNED TO:</u>		<u>TIME/DATE:</u>	
<u>ENGINEERING RESPONSE/RECOMMENDATION:</u>					
<u>REVIEW:</u> TIME: INITIALS:	TSTL*	TSS	EDO	OS**	DISPOSITION <input type="checkbox"/> Implement <input type="checkbox"/> Hold <input type="checkbox"/> Reject

* RETAIN A COPY OF THIS DOCUMENT FOR FUTURE REFERENCE

**ALL CORRECTIVE ACTIONS IMPLEMENTED IN THE PLANT MUST BE APPROVED BY THE OS.

ATTACHMENT 5
Page 1 of 5

POST ACCIDENT LOW PRESSURE INJECTION MONITORING (SALEM ONLY)

1. Action Level

RHR lined up for suction from the Containment Sump in a post accident situation.

2. Action Statements

THE TECHNICAL SUPPORT TEAM LEADER SHALL:

2.1 Request the OS to have the ECCS Pump Performance Analysis Log (Attachment 5, page 2), completed hourly and provided (FAXED) to the TSTL for review.

Initials

TSTL

2.2 Evaluate data (see pump curves in Attachment 5) and inform TSS of any unsatisfactory pump performance and any recommended corrective actions.

TSTL

SALEM UNIT # _____
ECCS PUMP PERFORMANCE ANALYSIS LOG

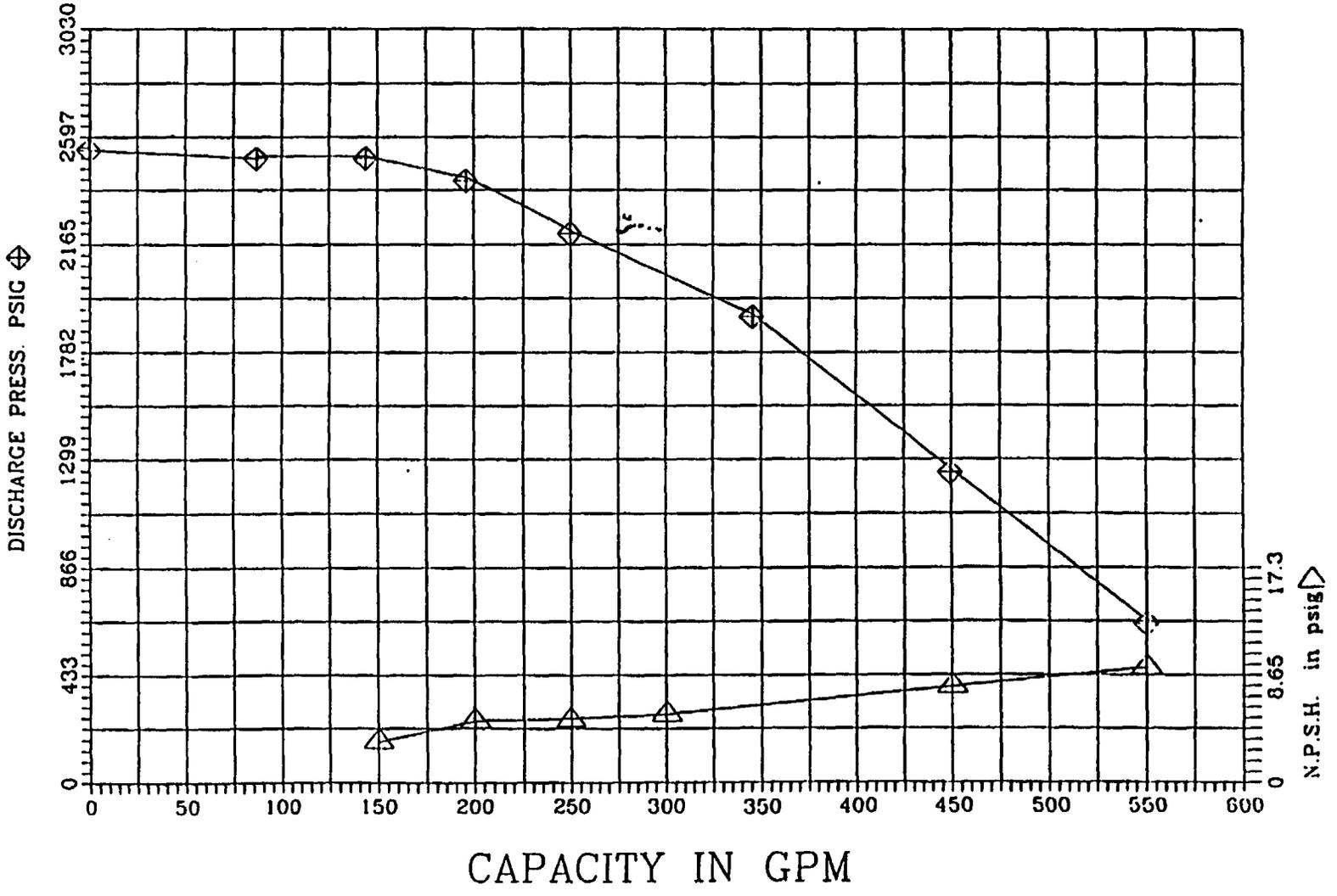
NOTE: CIRCLE ALL UNSATISFACTORY INDICATIONS AND NOTIFY THE TSS/EDO.

DATE: _____

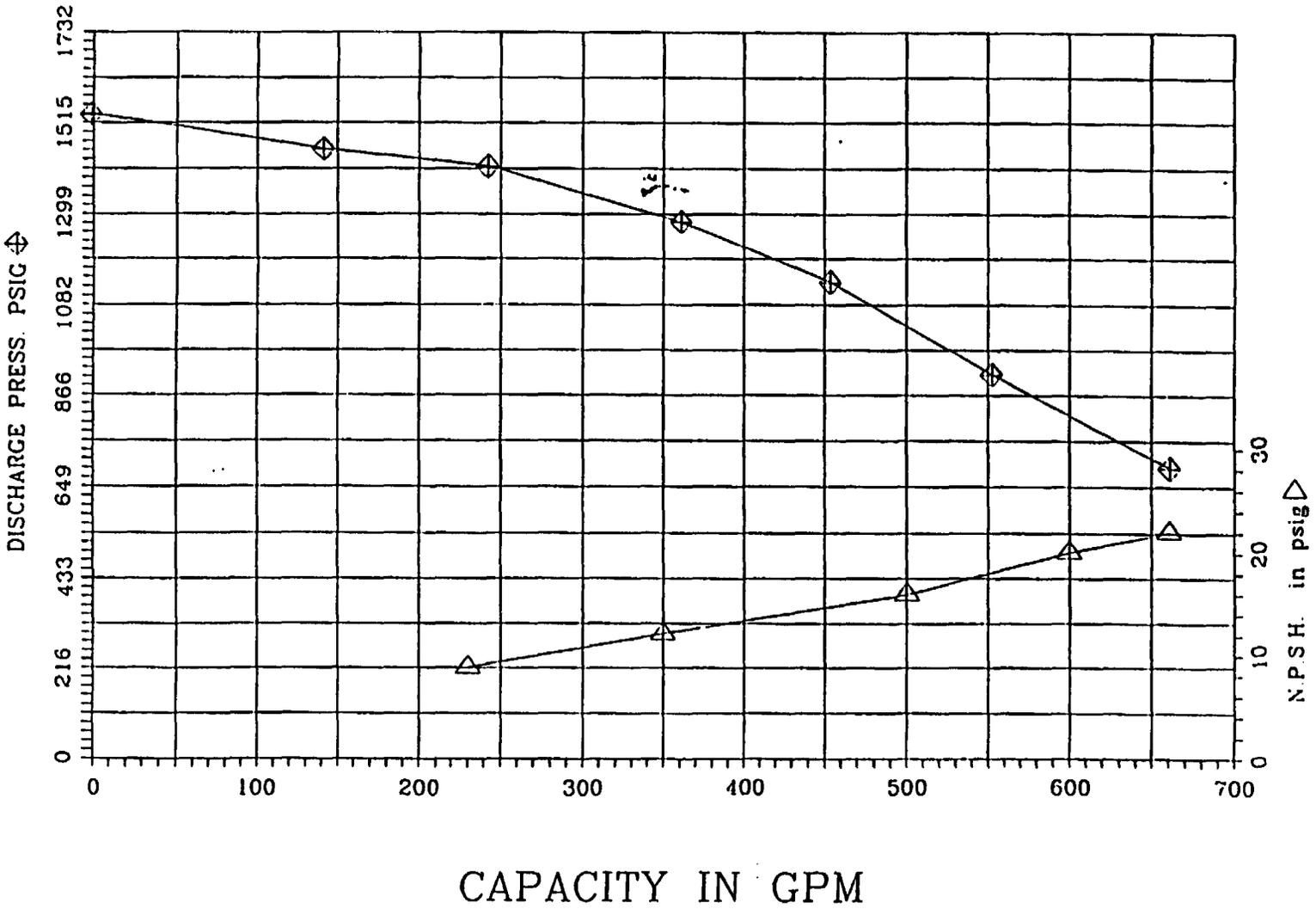
INSTRUMENT NO.	INDICATIONS (HOURLY)			TIME						
	PARAMETER	MIN	MAX							
LA 2445	CONT. SUMP LEVEL (%)	41	86							
PA 5511	CONT. PRESSURE (PSIG)	-3	+47							
PI 942	BIT PRESSURE (PSIG)	440 (1 PUMP)	2500 (2 PUMPS)							
IA 5310	#1 CH. PUMP AMPS	49	84							
IA 5311	#2 CH. PUMP AMPS	49	84							
FI 917	CH. PUMP FLOW (TOTAL) (GPM)	0 (1 PUMP)	780 - 830 (2 PUMPS)							
FI 128b	SEAL INJECTION FLOW (GPM)	0	78							
PI 923	#1 SI PUMP DISH PRESS	770	1500							
PI 919	#2 SI PUMP DISH PRESS	770	1500							
IA 5432	#1 SI PUMP AMPS	28	56							
IA 5433	#2 SI PUMP AMPS	28	56							
FI 922	#1 SI PUMP FLOW (GPM) (COLD LEG)	0 (CL)	650 (CL)							
FI 918	#2 SI PUMP FLOW (GPM) (COLD LEG)	0 (CL)	650 (CL)							
PI 635	#1 RHR PUMP DISH PRESS	130	190							
PI 647	#2 RHR PUMP DISH PRESS	130	190							
IA 5001	#1 RHR PUMP AMPS	28	55							
IA 5002	#2 RHR PUMP AMPS	28	55							
FI 946	#1 RHR PUMP FLOW (GPM)	0	5000							
FI 947	#2 RHR PUMP FLOW (GPM)	0	5000							

- NOTES:**
1. REFERE TO ATTACHED PUMP CURVES FOR CAPACITY VS TOTAL HEAD.
 2. VALIDATE ABNORMAL INDICATIONS BY CORRELATING ALL AVAILABLE DATA.
 3. X-OUT - INDICATIONS FOR NON-RUNNING PUMPS.
 4. CONTROL ROOM STAFF SHOULD TRANSMIT THIS DATA HOURLY TO THE TSS IN THE TSC.

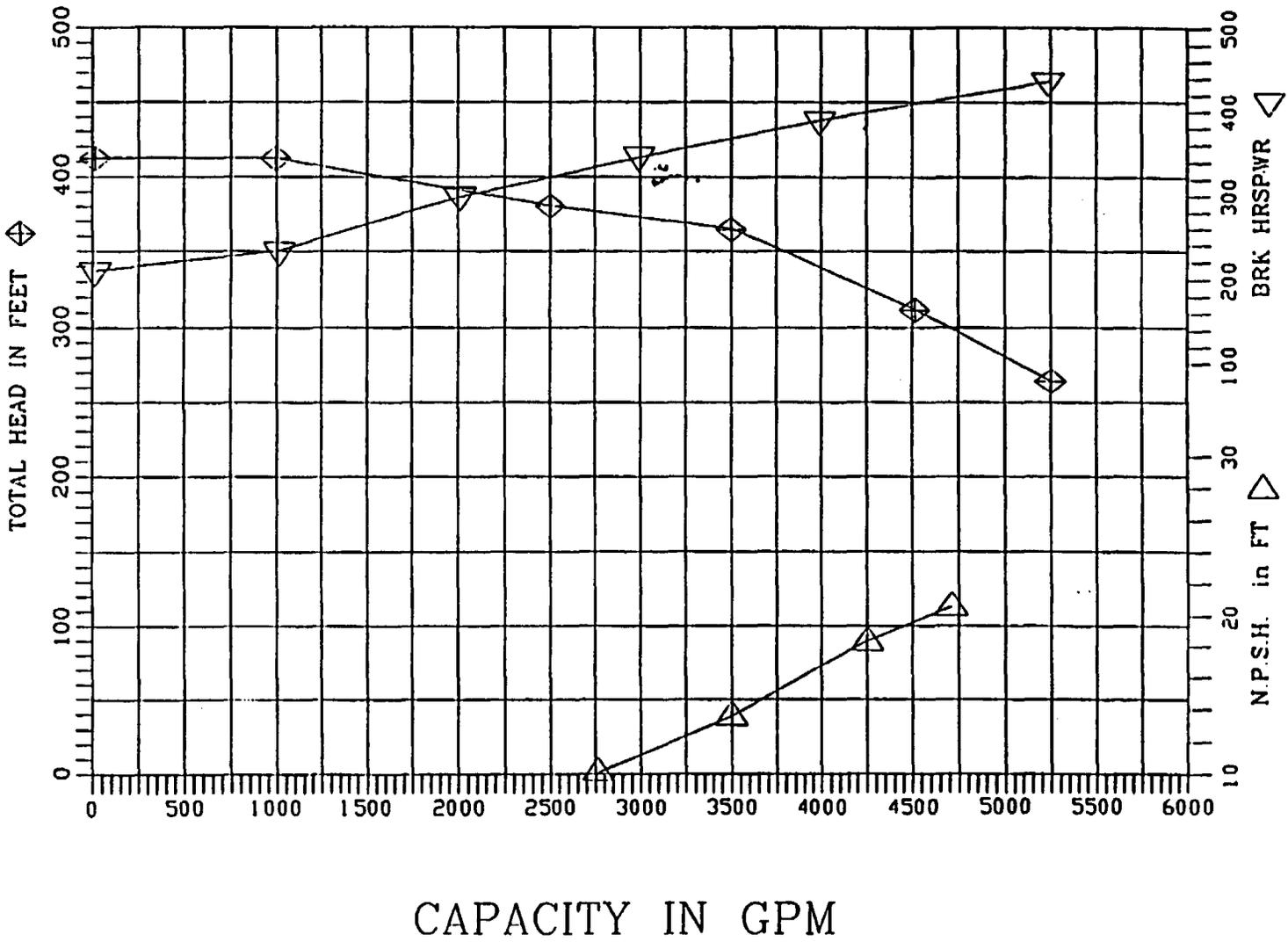
Centrifugal Charging Pump



Safety Injection Pump



Residual Heat Removal Pump



ATTACHMENT 6

Page 1 of 1

ADVERSE CONTAINMENT MONITORING (SALEM ONLY)

TECHNICAL SUPPORT SUPERVISOR (TSS) SHALL:

1. Monitor (at least once every 30 minutes) the Integrated Dose and Dose Rate in the containment as indicated on Radiation Monitor Locations Display on SPDS and perform the following:

Initial/Time

- a. **IF** the Dose Rate, as indicated by R44A or R44B, is greater than or equal to 1E5 R/HR (>100,000 R/HR) **AND** the Integrated Dose as indicated by R44A or R44B is less than 1E6 R, (<1,000,000 R),

THEN

Contact the STA with the above information and inform that Adverse Containment Condition due to high radiation **DOES NOT** exist and he/she should refer to EOP-CFST-1 for actions required.

 /
TSS / Time

- b. **IF** the Integrated Dose as indicated by R44A or R44B is greater than or equal to 1E6 R (>1,000,000 R),

THEN

Contact STA and notify of the Integrated Dose value and that Adverse Containment Conditions due to high radiation **DO** exist and he/she should refer to EOP-CFST-1 for action required.

 /
TSS / Time

ATTACHMENT 7
Page 1 of 1

DIESEL GENERATOR LOAD MONITORING (SALEM ONLY)

1. EVALUATED loading of any and all running Emergency Diesel Generators against the "Excessive Load Chart" below:

EXCESSIVE LOAD CHART

<i>TIME LIMIT</i>	<i>MAX KW RATING</i>	<i>ASSUMED PF</i>	<i>MAX KVAR RATING</i>	<i>MAX KVA RATING</i>
1/2 HOUR	3100	.8	2325	3875
2 HOURS	2860	.8	2145	3575
2000 HOURS	2750	.8	2063	3438
CONTINUOUS	2600	.8	1950	3250

2. IF the MAXIMUM LOAD RATING IN KW, KVAR, or KVA is exceeded, recommend to the TSS, using a TSC Technical Support Tracking Form (Attachment 4) of this procedure, that unnecessary loads be secured until the load is less than maximum rating.
3. EVALUATE the cumulative loading effects by performing the following calculation:
- $$N1/8000 + N2/2000 + N3/730 + N4/.5 = X(\text{effect factor})$$
- Where: (run time in hours)
- N1* = Run time \geq the continuous rating
N2 = Run time \geq 2000 hour rating
N3 = Run time \geq 2 hour rating
N4 = Run Time \geq 1/2 hour rating
4. IF the effect factor (X above) is approaching or above 1.0, THEN recommend to the TSS, using TSC Technical Support Tracking Form (Attachment 4) of this procedure, that unnecessary loads be secured. Emergency Diesel Inspection or Overhaul should be considered per manufacture guidance.
5. DISCONTINUE this attachment if no Emergency diesel generators are powering a vital bus.

ATTACHMENT 8

Page 1 of 2

MAINTENANCE OF FUEL OIL TO SALEM EDG (SALEM ONLY)

EP96-001

Initials

1. REVIEW available MAJOR EQUIPMENT AND ELECTRICAL STATUS sheets ELECTRICAL STATUS section and determine current Emergency Diesel Generator (EDG) use.

TSTL

2. EVALUATE plant conditions and determine if EDG operations will be required for > 4 hours.

TSTL

3. IF EDG operations ARE NOT required for > 4 hours, THEN notify the TSM that EDG fuel oil maintenance is not required at this time. Continuously monitor plant conditions for changes that may require re-evaluation of step 2 above.

TSTL

4. IF EDG operations ARE required for >4 hours, THEN complete a "TSC Technical Support Tracking Form" and request that the OS determine of the status of the 20,000 Barrel Fuel Oil storage Tank (FOST) and associated transfer piping used to fill the Diesel Fuel Oil Storage Tanks (DFOSTs)

TSTL

A. IF plant conditions preclude Operations Dept. routine checks of DFOST levels at the prescribed frequency (e.g. radiological or higher priority concerns), THEN request the OS to direct the OSCC to assemble and dispatch a team to evaluate DFOST inventory.

B. IF normal fuel oil transfer capability DOES exist, THEN request the OS to ensure DFOSTs levels are maintained greater than Tech Spec limits IAW Normal Operating Procedures.

C. IF normal fuel oil transfer capability DOES NOT exist, THEN request the TSM (NETS 5007) to develop an action plan for alternative EDG fueling methods per TSC Technical Support Tracking Form (Attachment 4) and inform the OS that you have requested EOF Technical Support.

ATTACHMENT 8 (cont.)

Page 2 of 2

NOTE

Maplewood Lab should be contacted to provide onsite support for fuel oil sampling.

Initials

5. **WHEN** requested to develop an action plan for alternative EDG fueling methods to the DFOSTs,
THEN implement the following actions:

TSTL

- A. **COORDINATE** with the EOF Purchasing Support to procure and deliver fuel oil, see note below, from an offsite source and fill the DFOST from the Emergency fill Connection.

NOTE

The following diesel fuel oil suppliers and transport companies have current enforceable contracts with PSE&G for emergency fuel oil supply:

Fuel suppliers

Fuel transport companies if supplier cannot transport

Amerada Hess Corp.

Dana transport Inc.

Coastal Oil NY

Marshall Service Inc.

Ross Fogg Oil Corp

S. J. Transportation Inc.

- B. **IF** needed as a backup to action "A" above, **THEN** assemble temporary hoses and pumps to transfer fuel oil from the FOST to the DFOST Emergency Fill Connection.
6. **COMPLETE** and forward the selected action plan for alternative EDG fueling methods on a "TSC Technical Support Tracking Form."

TSTL

ATTACHMENT 9
Page 1 of 4

TECHNICAL SUPPORT TEAM LEADER CHECKLIST

NOTE

SALEM – Refer to page 3 of this attachment for additional actions required at Salem Station

- | | <u>Initials</u> |
|--|-----------------|
| 1. REPORT to the TSS and obtain a briefing. | _____
TSTL |
| 2. INITIATE and maintain a chronological log of your activities. | _____
TSTL |
| 3. BRIEF team members on the plant and emergency status. | _____
TSTL |
| 4. DIRECT Core Thermal Hydraulics Engineer to implement Attachment 11. | _____
TSTL |
| 5. DIRECT TSTM(s) to verify SPDS and/or CRIDS availability. | _____
TSTL |
| 6. DIRECT a TSTM to monitor plant activities on the OSC Radio Monitor. | _____
TSTL |
| 7. WHEN staffing is adequate to perform the technical support functions, THEN inform the TSS. Request the Administrative Support Supervisor to callout additional personnel as required. | _____
TSTL |
| 8. ASSIGN TSTM(s) specific tasks using TSC Technical Support Tracking Form (Attachment 4) of this procedure. | _____
TSTL |
| 9. DOCUMENT all assigned tasks using Attachment 3, TSC Engineering Task Assignment Log of this procedure. | _____
TSTL |

(Attachment continued on the next page.)

ATTACHMENT 9

Page 2 of 4

Initials

10. ENSURE the engineer's OPERATIONAL STATUS BOARD is updated every 15 minutes (TSS may modify the frequency or data list as appropriate.):

TSTL**HOPE CREEK****SALEM**

- a. Obtain the operational information by requesting the TSC Communicators to provide the information from VAX LA 120 printer, Menu Option #2 or from the Control Room Communicators.

- a. Obtain the information from SPDS by the following:
- Go to the top menu bar and select "Top Level Display" on the drop down menu or select the "Top Level Display" icon.
 - Select the "REPORTS" button on the screen.
 - Select the "STATUS BOARD PARAMETERS" on the screen.
 - Click "OK" on printer dialog box to print all of the Operational Status Board parameters in order.
 - Update the Operational Status Board.

OR

- b. Obtain the information from CRIDS PAGE DISPLAY #232.

OR

- b. IF SPDS is not available THEN Request the TSC Communicators to obtain the information from the Control Room Communicators and update the Operational Status Board every 15 minutes or as determined by the TSS.

11. ENSURE the engineer's MAJOR EQUIPMENT & ELECTRICAL STATUS SHEET is reviewed once per event or upon any significant change in plant status.

TSTL

12. ESTABLISH communications with the Technical Support Manager (TSM) at the EOF. Provide an update on engineering activities and request engineering support, if required.

TSTL

(Attachment continued on the next page.)

ATTACHMENT 9

Page 3 of 4

Initials

- 13. REVIEW and forward all Attachment 4, TSC Technical Support Tracking Forms to the TSS. (Retain a copy for formal documentation).
- 14. COMPLETE Attachment 10, Turnover Log - Technical Support Team Leader, when being relieved.
- 15. AT the conclusion of the event, THEN insure that the team's area is returned to ready status and that all paperwork related to the event is turned over to the TSS.

TSTL

TSTL

TSTL

SALEM ONLY

- 1. IF any Vital Bus is powered from an emergency diesel generator, THEN direct staff member to implement Attachment 7, "DG Load Monitoring", of this procedure.
- 2. IF Salem has experienced an Operating Basis Earthquake (OBE), THEN coordinate implementation of the spent fuel rack inspection IAW SC.DE-TS.ZZ-4406(Q), Evaluation of Post-OBE Rack-to-Rack and Rack-to-Wall Gaps. (EP96-002)
- 3. IF Spent Fuel Pool (SPF) temperature increases past 125° F, THEN MONITOR the SPF Temperature (local indication). (EP99-001)
 - a. IF the temperature reaches 149° F., THEN COORDINATE through the EDO to have Operations restore one SFP Cooling Pump and one Heat Exchanger to cool down the SFP IAW S1(2).OP-SO.SF-0002(Q), SPENT FUEL COOLING SYSTEM OPERATION.
 - b. ASSURE this action is taken in sufficient time to prevent exceeding the pool design temperature of 180° F. (It should take approximately 18 hours to reach 180° F.)
 - c. MONITOR the SFP temperature until it returns to < 125° F.
- 4. MONITOR the status of Emergency Diesel Generator (EDG) fuel oil availability by implementing Attachment 8, Maintenance of Fuel Oil to Salem Emergency Diesel Generators, as appropriate. (EP96-001)

TSTL

TSTL

TSTL

TSTL

(Attachment continued on the next page.)

ATTACHMENT 9

Page 4 of 4

Initials

5. IF both SI pumps have been running for > 24 hours, THEN monitor SI pump room temperatures (P250 and/or local monitoring) at least every 12 hours. If room temperature exceeds 120°F, then complete a TSC Technical Support Tracking Form (Attachment 4) which recommends the following to the OS:
- a. Stop one of the two running SI pumps.
 - b. Stop the SI pump room cooler fan, if running.
 - c. If room temperature continues to increase above 120°F, then request Site Protection in the OSC to put together temporary ventilation to the SI pump room if the area is accessible.

TSTL

ATTACHMENT 10

Page 1 of 1

TURNOVER LOG - TECHNICAL SUPPORT TEAM LEADER

Date: ____ / ____ / ____

1. [UE] [A] [SAE] [GE] was declared @ _____ hrs. on ____ / ____ / ____

Due to: _____

2. The present classification, [A] [SAE] [GE] was declared @ _____ was declared
 _____ hrs. on ____ / ____ / ____

Due to: _____

3. The Emergency Coordinator (EC) is _____
 in the [EOF] [TSC] _____ name

4. The Oncoming and Offgoing TSTL shall:

Initials
 On / Off

A. DISCUSS current conditions. Include any problems encountered or anticipated, and any ongoing, or pending technical support assignments. _____ / _____

B. REVIEW all applicable documentation including procedures, logs, etc., ensuring they are completed, correct and signed. _____ / _____

C. DISCUSS the team's priorities, personnel requirements and any support or material needs. _____ / _____

D. DISCUSS any Radiological, Safety, or Environmental concerns. _____ / _____

E. INSURE that technical support assignments are completed or reassigned prior to TSTM(s) being relieved or dismissed. _____ / _____

F. NOTIFY the TSS and the EDO of the change in command of the TSTL. Update plant status and priorities as applicable. _____ / _____

 Oncoming TSTL signature time Offgoing TSTL signature

ATTACHMENT 11
Page 1 of 1

CORE THERMAL HYDRAULICS ENGINEER CHECKLIST

The Core Thermal Hydraulics Engineer (CTHE) shall:

- | | <u>Initials</u> | | |
|--|--|---|--|
| 1. REPORT to TSTL upon arrival and receive assignment. | _____
CTHE | | |
| 2. ANALYZE core thermal hydraulic parameters to determine current conditions of the core. | _____
CTHE | | |
| 3. DEVELOP recommendations concerning plant operations to maintain safe core conditions. | _____
CTHE | | |
| 4. PROVIDE support to the Control Room staff on core reactivity conditions such as shutdown margin, boration requirements, control rod movements or patterns, etc. | _____
CTHE | | |
| 5. EVALUATE fuel damage based on core thermal conditions, rad monitoring, and/or specific chemistry sample results: | _____
CTHE | | |
| <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> HOPE CREEK
IAW HC.EP-EP.ZZ-0205,
"TSC – Post Accident Core
Damage Assessment". </td> <td style="width: 50%; vertical-align: top;"> SALEM
IAW SC.EP-EP ZZ-0205,
"TSC – Post Accident Core
Damage Assessment". </td> </tr> </table> | HOPE CREEK
IAW HC.EP-EP.ZZ-0205,
"TSC – Post Accident Core
Damage Assessment". | SALEM
IAW SC.EP-EP ZZ-0205,
"TSC – Post Accident Core
Damage Assessment". | |
| HOPE CREEK
IAW HC.EP-EP.ZZ-0205,
"TSC – Post Accident Core
Damage Assessment". | SALEM
IAW SC.EP-EP ZZ-0205,
"TSC – Post Accident Core
Damage Assessment". | | |
| 6. COORDINATE fuel damage assessments with the TSC Chemistry Supervisor and inform TSTL of results. | _____
CTHE | | |
| 7. FORWARD all procedures, forms, etc., to the TSTL when the emergency is terminated. | _____
CTHE | | |

ATTACHMENT 12

Page 1 of 1

OPERATIONS ADVISOR CHECKLIST

The Technical Support Center Operations Advisor (TSC OPS ADV) shall:

Initials

1. REPORT to the TSS upon arrival.

OPS ADV

2. OBTAIN the Ops Advisor headset and setup as follows:

- To Answer: Select the TALK button  and ensure you are connected.
- To Make A Call: Select the TALK button and ensure you get a dial tone, dial the number you want. Remember – this phone line is your NETS line.
- To Dial A Stored Number: SELECT the TALK button.... SELECT the MEMORY button.... SELECT the number (1 thru 5), and it will dial for you.
- To End A Call: Select the TALK button.

OPS ADV

3. ESTABLISH communications with the Control Room Ops Advisor and obtain as a minimum the following:

- Fission product boundary integrity
- Major equipment availability (especially ECCS equipment)
- Electrical system line up and power sources (Vital buses, diesel generator loading, group buses status)
- Radiation Monitoring System parameters (SPDS, RM-11)
- Implementation of Emergency, Abnormal or Integrated Operating Procedures
- ECG escalation criteria that the Control Room is monitoring

OPS ADV

4. RELAY the above information to the TSS and keep the TSS informed whenever any of these conditions change.

OPS ADV

5. IF a transition to the Severe Accident Management Guidelines (SAMG) is required, THEN assist the TSS in evaluation of SAMGs.

OPS ADV