UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

September 15, 1992

Docket No. 50-400

LICENSEE: CAROLINA POWER & LIGHT COMPANY

FACILITY: SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1

SUBJECT: SUMMARY OF AUGUST 20, 1992, MEETING REGARDING HIGH-HEAD SAFETY INJECTION OPERABILITY (TAC NO. M84220)

A meeting was held on August 20, 1992, in Rockville, Maryland, with Carolina Power & Light Company (CP&L or the licensee) to discuss the operability of the subject high-head safety injection (HHSI) system documented in Licensee Event Report (LER) 91-008, as well as the staff concerns described in the NRC's August 14, 1992, letter regarding the operability of the alternate minimum flow (AMF) system. These concerns were based on findings resulting from an NRC inspection team that was sent to Shearon Harris Nuclear Power Plant (SHNPP) during the week of August 2, 1992, to review the effects and circumstances pertaining to the event described in the LER. The licensee has committed to provide the staff with a written response to the August 14, 1992, NRC letter by September 4, 1992.

During the meeting, the licensee provided the staff with a brief background on the design basis for the alternate minimum flow (AMF) system, and discussed, among other things, the facts, conclusions and corrective actions pertaining to each sequence of events that led to the failure of the HHSI on April 13, 1991, and reported in LER 91-08 on May 3, 1991, as supplemented May 15, 1991. The licensee then discussed their bases for the 1991 operability determination and the current operability determination for the AMF system, as well as their planned actions to further address the NRC concerns on the HHSI operability issue.

Due to damaged relief valves in their AMF system (see LER 91-008), the licensee reiterated that they had determined the 1991 degraded HHSI to be a highly significant operational event. The licensee considered their corrective actions implemented in 1991 and their requirement for periodic testing of the AMF system to be adequate to ensure operability for the both HHSI and AMF systems. In addition, the licensee indicated that they had recently performed other evaluations, and the results also confirmed the AMF system operability.

The four questions in the staff's August 14, 1992, letter were discussed in detail. These included (1) the absence of licensee's analysis on piping integrity, (2) the issue of water hammer downstream of relief valves, (3) the potential for valve chatter/setpoint drift, and (4) the issue regarding operator ability to detect and mitigate an event.

DFO1
1/1
Memo 4

During the meeting, the licensee stated that existing plant emergency operating procedures (EOP's) and past operator training provides them the confidence that a loss of HHSI would be mitigated should the event occur. The licensee's future activities for ensuring HHSI system operability include the following:

(1) to continue with their requirements for quarterly testing of the AMF to ensure the piping is filled and to keep the relief valve's setpoint from drifting,

(2) to conduct additional flow testing on the AMF line to verify its proper operation during the upcoming unit refueling outage (RFO-4), and

(3) to investigate alternative designs to eliminate the use of the relief valve to prevent charging pumps from deadheading during reactor repressurization during post-LOCA.

Following the meeting presentation, the staff concluded that the licensee's initial corrective actions, as implemented during the 1991 refueling outage, were inadequate to assure operability of the alternate minimum flow system. However, the licensee's temporary compensatory measures, which include quarterly removal of air from the piping and operator response training, appear to be adequate to assure plant safety through the current operating cycle.

Details of the licensee presentation are attached as Enclosure 1 and Enclosure 2 is a list of meeting attendees.

ORIGINAL SIGNED BY:

Ngoc B. Le, Project Manager
Project Directorate II-I
Division of Reactor Projects I/II

Enclosures:

1. Licensee Handout
2. Attendance list

cc w/enclosures:
See next page

OFC	PDII-1/LA	PDII-I/PM	PDII-I/D	
NAME	PAnderson	TLe	EAdensam	
DATE	9/14/92	9/14/92	9/15/92	

OFFICIAL RECORD COPY
DOCUMENT NAME: HAR84220.MTS

During the meeting, the licensee stated that existing plant emergency operating procedures (EOP's) and past operator training provides them the confidence that a loss of HHSI would be mitigated should the event occur. The licensee's future activities for ensuring HHSI system operability include the following:

(1) to continue with their requirements for quarterly testing of the AMF to ensure the piping is filled and to keep the relief valve's setpoint from drifting,

(2) to conduct additional flow testing on the AMF line to verify its proper operation during the upcoming unit refueling outage (RFO-4), and

(3) to investigate alternative designs to eliminate the use of the relief valve to prevent charging pumps from deadheading during reactor repressurization during post-LOCA.

Following the meeting presentation, the staff concluded that the licensee's initial corrective actions, as implemented during the 1991 refueling outage, were inadequate to assure operability of the alternate minimum flow system. However, the licensee's temporary compensatory measures, which include quarterly removal of air from the piping and operator response training, appear to be adequate to assure plant safety through the current operating cycle.

Details of the licensee presentation are attached as Enclosure 1 and Enclosure 2 is a list of meeting attendees.

ORIGINAL SIGNED BY:

Ngoc B. Le, Project Manager
Project Directorate II-I
Division of Reactor Projects I/II

Enclosures:

1. Licensee Handout
2. Attendance list

cc w/enclosures:
See next page

OFC	PDII-I/LA	PDII-I/PM	PDII-I/D	
NAME	PAnderson	TLe	EAdensam	
DATE	9/14/92	9/14/92	9/15/92	

OFFICIAL RECORD COPY
DOCUMENT NAME: HAR84220.MTS

Mr. R. A. Watson
Carolina Power & Light Company

Shearon Harris Nuclear Power Plant,
Unit 1

cc:

Mr. H. Ray Starling
Manager - Legal Department
Carolina Power & Light Company
P. O. Box 1551
Raleigh, North Carolina 27602

Resident Inspector/Harris NPS
c/o U. S. Nuclear Regulatory Commission
Route 1, Box 315B
New Hill, North Carolina 27562

Mr. Gerald E. Vaughn, Vice President
Harris Nuclear Project
Harris Nuclear Plant
P. O. Box 165
New Hill, North Carolina 27562

Mr. H. A. Cole
Special Deputy Attorney General
State of North Carolina
P. O. Box 629
Raleigh, North Carolina 27602

Public Service Commission
State of South Carolina
P.O. Drawer 11649
Columbia, South Carolina 29211

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta Street
Suite 2900
Atlanta, Georgia 30323

Mr. C. S. Hinnant
Plant General Manager
Harris Nuclear Plant
P. O. Box 165
New Hill, North Carolina 27562

Mr. Dayne H. Brown, Director
Division of Radiation Protection
N. C. Department of Environmental,
Commerce & Natural Resources
P. O. Box 27687
Raleigh, North Carolina 27611-7687

Mr. R. B. Starkey
Vice President
Nuclear Services Department
Carolina Power & Light Company
P. O. Box 1551
Raleigh, North Carolina 27602

DISTRIBUTION
Docket File
NRC & Local PDRs
T.Murley/F. Miraglia
J. Partlow
S. Varga 14-E-4
G. Lainas 14-H-3
E. Adensam
P. Anderson
N. Le
NRC Participants w/o enclosure 1
A. Chaffee 11-A-1
OGC 15-B-18
E. Jordan MNBB-3701
ACRS (10)
J. Wechselberger, EDO 17-G-21
~~ACRS (10)~~
E. Merschoff RII
PD21 Rdg File

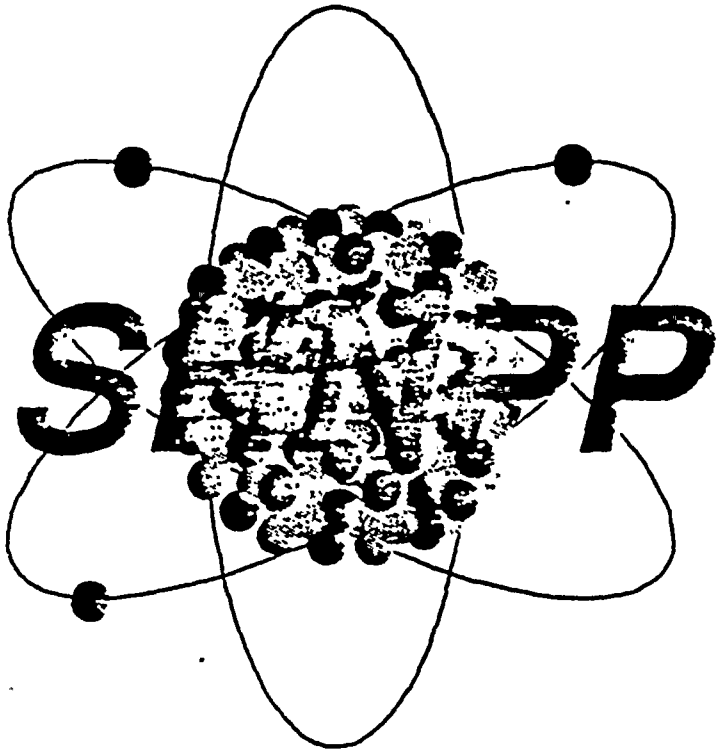
210015

DF01
111

ENCLOSURE 1

HARRIS NUCLEAR PROJECT

HIGH HEAD SI ALTERNATE MINIFLOW OPERABILITY MEETING



CAROLINA POWER & LIGHT

AUGUST 20, 1992

MEETING OBJECTIVES

- ADDRESS THE SPECIFIC NRC QUESTIONS IN YOUR AUGUST 14TH LETTER.
- PROVIDE BACKGROUND ON THE DESIGN BASIS FOR THE ALTERNATE MINIFLOW SYSTEM.
- DISCUSS THE CORRECTIVE ACTIONS TAKEN FOR PRECURSOR EVENTS.
- PROVIDE JUSTIFICATION FOR CONTINUED OPERABILITY OF THE HIGH HEAD SAFETY INJECTION SYSTEM.

PRESENTATION OUTLINE

• INTRODUCTION	VAUGHN VICE-PRESIDENT HARRIS NUCLEAR PROJECT
• DESIGN BASIS FOR ALTERNATE MINIFLOW SYSTEM	GALENBUSH WESTINGHOUSE
• SEQUENCE OF EVENTS	HINNANT GENERAL MANAGER HARRIS NUCLEAR PLANT
• FACTS, CONCLUSIONS, AND CORRECTIVE ACTIONS FOR EACH EVENT	HINNANT
• BASIS OF 1991 OPERABILITY DETERMINATION	HINNANT
• BASIS OF CURRENT OPERABILITY DETERMINATION	
- ANALYSIS OF SYSTEM PIPING INTEGRITY - WATER HAMMER DOWNSTREAM OF RELIEF VALVES - POTENTIAL FOR VALVE CHATTER AND SETPOINT DRIFT	VAN METRE MANAGER HARRIS DESIGN ENGINEERING
- OPERATOR ABILITY TO DETECT AND MITIGATE EVENT	HINNANT
• PLANNED ACTIONS	HINNANT
• SUMMARY	HINNANT
• CP&L/NRC MANAGEMENT COMMENTS	

KEY POINTS

- CP&L MANAGEMENT CONSIDERS THE 1991 DEGRADED HHSI ALTERNATE MINIMUM FLOW SYSTEM EVENT (DAMAGED RELIEF VALVE) TO BE A HIGHLY SIGNIFICANT OPERATIONAL EVENT.

- PRECURSOR EVENTS WERE ADDRESSED INDIVIDUALLY USING FACTS KNOWN AT THE TIME. THESE EVENTS COLLECTIVELY WERE INSTRUMENTAL IN DETERMINING THE ROOT CAUSE AND CORRECTIVE ACTION FOR THE 1991 EVENT.

- CORRECTIVE ACTIONS IMPLEMENTED IN 1991 AND PERIODIC TESTING HAVE ENSURED OPERABILITY OF HHSI ALTERNATE MINIFLOW SYSTEM.

- RECENT EVALUATIONS HAVE CONFIRMED THE OPERABILITY OF THE ALTERNATE MINIFLOW SYSTEM.

ALTERNATE MINIFLOW HISTORY

- PRIOR TO TMI-2
  - ORIGINAL MINIFLOW DESIGN WAS ACCEPTABLE
  - RELIANCE ON OPERATOR ACTION
- POST TMI-2
  - NRC BULLETIN 79-06A IDENTIFIED NEW CRITERIA REGARDING OPERATOR ACTION
  - WESTINGHOUSE REVIEWED SI TERMINATION CRITERIA AND REVEALED A POTENTIAL CONCERN
  - NRC ISSUED NRC BULLETIN 80-18
- ALTERNATE MINIFLOW WAS DESIGNED TO ADDRESS ISSUES IDENTIFIED IN NRC BULLETIN 80-18
- OTHER ALTERNATES CONSIDERED INCLUDED:
  - USE OF PORV's
  - MODIFY PUMPS
  - LOWER RCS MAXIMUM PRESSURES
  - OTHER RELIEF SYSTEMS
- CURRENT MODIFICATIONS SELECTED BASED ON
  - MAINTENANCE AND TESTING REQUIREMENTS
  - MOST COST EFFECTIVE

CHARGING/SAFETY INJECTION PUMP ALTERNATE MINIFLOW

- **THE ALTERNATE MINIFLOW WAS DESIGNED TO PROTECT THE CSIP's FOR THE FOLLOWING SET OF CONDITIONS:**
  - **REACTOR COOLANT PUMPS OPERATING**
  - **DISSIMILAR CSIP's CURVES**
  - **TWO CSIP's OPERATING**
  - **SECONDARY SIDE HELB**

ALTERNATE MINIFLOW DESIGN BASIS

- ALL CSIP's SHALL BE PROTECTED FROM DEADHEADING (60 GPM)
- OPERATOR ACTION PRECLUDED FOR FIRST 30 MINUTES
- RANGE OF CSIP's PERFORMANCE CURVES ASSUMED
- CONSIDERATION FOR RELEASE OF RADIOACTIVITY
- THE MODIFICATION SHALL MINIMIZE EFFECT ON SI SYSTEM PERFORMANCE
- THE MODIFICATION SHALL NOT AFFECT CHARGING SYSTEM OPERABILITY, RELIABILITY AND MAINTAINABILITY

SEQUENCE OF EVENTS

- AUGUST 6, 1984 - ANOTHER PLANT EXPERIENCED A COMPLETE SEVERANCE OF THE 2 INCH AUXILIARY LETDOWN CROSS-CONNECTION BETWEEN RHR AND CVCS AT A SOCKET WELD CONNECTION.

- JUNE 11, 1985 INPO ISSUES SER 27-85 DESCRIBING THE CAUSE OF THE FAILURE.

- NOVEMBER 15, 1985 IE BULLETIN NO. 85-03 ON MOV COMMON MODE FAILURE.

- JANUARY 17, 1986 TECHNICAL SUPPORT ENGINEER EVALUATED SER 27-85 AND PROVIDED RECOMMENDATIONS TO PREVENT EVENT AT HARRIS.

- AUGUST 7, 1986 ALTERNATE MINIFLOW SYSTEM VIBRATION/WATER HAMMER EXPERIENCED DURING MOV STROKE TESTING WITH HIGH DIFFERENTIAL PRESSURE.

- NOVEMBER 7, 1987 - INADVERTENT SI.

- MARCH 15, 1990 - DRAIN LINE WELD LEAKAGE.

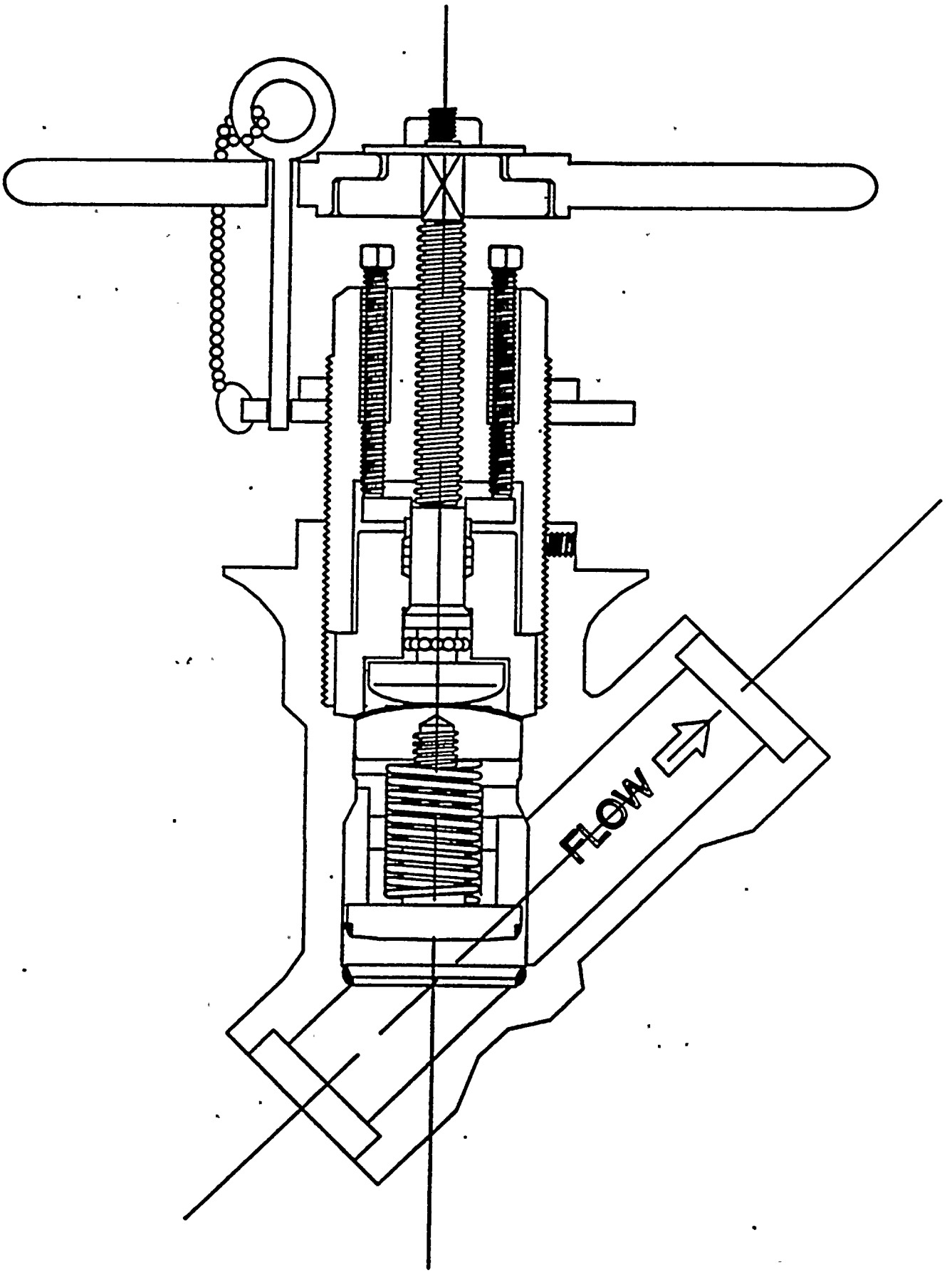
- APRIL 3, 1991 - POTENTIAL COMMON CAUSE FOR ALTERNATE MINIFLOW DAMAGE. IDENTIFIED

SER 27-85
AUX. LETDOWN CROSS-CONNECT PIPE SOCKET WELD FAILURE

EVENT: 2-INCH PIPE FAILED AT A SOCKET WELD DUE TO A FATIGUE - INDUCED CRACK AND SUBSEQUENT WATER HAMMER

CAUSE: " THE CAUSE OF THE WELD FAILURE WAS FATIGUE INDUCED BY VIBRATION WITHIN THE SYSTEM. THE ISOLATION BLOCK VALVES IN THE CROSS-CONNECTION BETWEEN THE RHR AND CICS SYSTEM ARE GLOBE VALVES THAT ARE OPEN/SHUT ONLY AND CANNOT CONTROL FLOW DUE TO THEIR DESIGN. THE VALVES HAVE A TENDENCY TO CHATTER AND CYCLE OPEN/CLOSE RAPIDLY WHEN FLOW IS INTRODUCED IN THE REVERSE DIRECTION." (INPO SER 27-85)

FACT: HARRIS TECHNICAL SUPPORT ENGINEER EVALUATED THIS OPERATIONS EXPERIENCE FEEDBACK ITEM AND RECOMMENDED HARRIS ACTIONS TO PREVENT REOCCURRENCE.


FLOW

ALTERNATE MINIFLOW MOV TEST AUGUST 7, 1986

FACTS:

- **REQUIRED BY IE BULLETIN 85-03.**
- **TEST PROCEDURE EPT-010T WAS RUN 8-7-86.**
- **ATTEMPTED TO TEST 1CS-746 AND 1CS-745 USING "B" CSIP WITH FLOW IN REVERSE DIRECTION THROUGH KEROTEST VALVE.**
- **OBSERVED LINE VIBRATION AND NOISE WHEN MOV 1CS-746 WAS FIRST STROKED ELECTRICALLY. STOPPED TEST AND REVISED PROCEDURE TO USE "C" CSIP TO PREVENT REVERSE FLOW THROUGH KEROTEST VALVE.**
- **VALVE 1CS-746 WAS MANUALLY STROKED OPEN FOR THE SECOND TRY WITH NO UNUSUAL NOISE.**
- **VALVES 1CS-745 AND 1CS-746 WERE ELECTRICALLY STROKED AND TIMED WITH NO UNUSUAL NOISE.**
- **"B" TRAIN VALVE 1CS-752 WAS MANUALLY STROKED PARTIALLY OPEN CAUSING MINOR VIBRATION AND FLOW NOISE. VALVE WAS CLOSED AND CONTROL ROOM CONSULTED. ON SECOND MANUAL OPENING NO UNUSAL VIBRATIONS WERE OBSERVED.**
- **VALVES 1CS-752 AND 1CS-753 WERE ELECTRICALLY STROKED AND TIMED WITH NO UNUSUAL NOISE.**

ALTERNATE MINIFLOW MOV TEST CONTINUED

CONCLUSIONS:

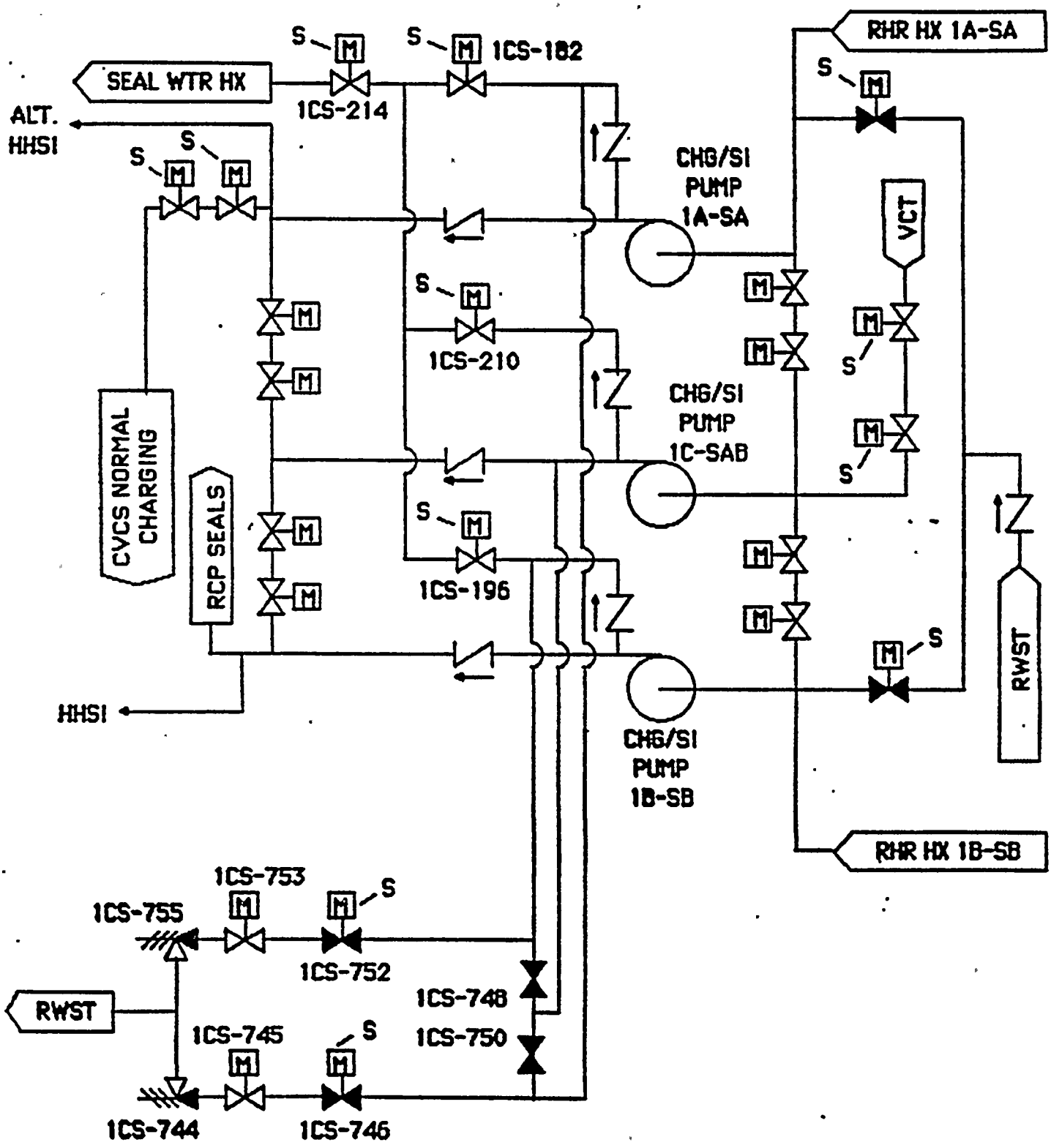
- SINCE HIGH VIBRATIONS WERE OBSERVED WHILE ATTEMPTING TO BACK FLOW THROUGH KEROTEST VALVE, THE ENGINEER WHO HAD PREVIOUSLY PROVIDED THE SER 27-85 REVIEW, BELIEVED THIS ABNORMAL FLOW PATH WAS THE CAUSE OF THE VIBRATIONS.

- ONCE AIR WAS FLUSHED FROM THE "A" AND "B" LINES FLOW WAS ESTABLISHED NORMALLY WHILE STROKE TESTING MOV's WITHOUT RELIEF VALVE CHATTER.

CORRECTIVE ACTIONS:

- LINES WERE WALKED DOWN FOR SIGNS OF PIPE OR HANGER DAMAGE, NONE IDENTIFIED.

- NO RELIEF VALVE DAMAGE WAS SUSPECTED.


SEAL WTR HX
ALT. HHSI
1CS-214
1CS-182
RHR HX 1A-SA
CHG/SI PUMP 1A-SA
VCT
1CS-210
CHG/SI PUMP 1C-SAB
CVCS NORMAL CHARGING
RCP SEALS
1CS-196
RWST
HHSI
CHG/SI PUMP 1B-SB
RHR HX 1B-SB
1CS-753
1CS-755
1CS-752
1CS-748
1CS-750
RWST
1CS-745
1CS-744
1CS-746

INADVERTENT SAFETY INJECTION NOVEMBER 7, 1987

FACTS:

- **SI SIGNAL ON LOW STEAM LINE PRESSURE DUE TO IMPROPERLY ADJUSTED STEAM DUMP CONTROLLER DURING PLANT START-UP IN MODE 2.**
- **THERE WERE NO PERSONNEL NEAR THE ALTERNATE MINIFLOW RELIEF VALVES AND NO REPORTS OF WATER HAMMER OR VIBRATION.**

CONCLUSIONS:

- **NO FACTS AT THE TIME FOCUSED ATTENTION ON NEED TO INSPECT ALTERNATE MINI-FLOW PIPING OR VALVES.**

CORRECTIVE ACTIONS:

- **FOCUSED ON RESOLVING AND PREVENTING THE CAUSE OF THE SI.**

FAILURE OF HHSI ALTERNATE MINIFLOW APRIL 3, 1991

FACTS:

- DURING THE OUTAGE IN APRIL 1991, BOTH RELIEF VALVES FAILED THE NORMAL SURVEILLANCE TEST.
- WELD FAILURE OCCURRED ON A DRAIN LINE.
- POTENTIAL FOR THESE EVENTS HAVING A COMMON CAUSE AND THE AFFECT THIS HAD ON HHSI OPERABILITY WAS IDENTIFIED AND REPORTED.

CONCLUSIONS:

- THESE FAILURES WERE CAUSED BY SOME FORM OF PIPE VIBRATION OR WATER HAMMER.

CORRECTIVE ACTION:

- DAMAGED COMPONENTS WERE REPAIRED.
- EVENT WAS THOROUGHLY INVESTIGATED.
- OPERATORS WERE TRAINED ON THIS EVENT.
- ADDITIONAL CORRECTIVE ACTIONS WERE INITIATED TO ENSURE HHSI WAS OPERABLE.

OPERABILITY OF HHSI
APRIL 1991

ACTIONS TAKEN:

- SYSTEM PIPING AND HANGER WALKDOWN.
- DRAIN LINES REPAIRED AND SUPPORTED.
- RELIEF VALVES REPAIRED AND TESTED.
- CONFIRMED WITH WESTINGHOUSE THAT INSTALLED RELIEF VALVES WOULD NOT EXPERIENCE CHATTER.
- PROCEDURE WRITTEN TO FILL AND VENT PIPING AFTER RELIEF VALVE INSTALLATION.
- PROCEDURE WRITTEN TO REQUIRE FILLING AND VENTING PIPING FOLLOWING ANY MAINTENANCE WHICH COULD DRAIN PIPING.
- QUARTERLY TESTS PERFORMED TO ENSURE PIPING IS FILLED AND VALVE SETPOINT IS VERIFIED.

CONCLUSION:

BASED ON THESE CORRECTIVE ACTIONS, WE HAD CONFIDENCE THE RELIEF VALVES AND PIPING WOULD NOT BE DAMAGED BY INITIATION OF A SAFETY INJECTION AND THAT THE ALTERNATE MINIFLOW SYSTEM WOULD FUNCTION AS REQUIRED.

ANALYSIS OF SYSTEM PIPING INTEGRITY

- SYSTEM DESIGN MEETS INDUSTRY REQUIREMENTS.

- DUE TO VALVE OPENING TIME AND SMALL LINE SIZE, SIGNIFICANT WATER HAMMER LOADS TO CHALLENGE PIPE INTEGRITY ARE NOT LIKELY

- PIPING / HANGER INSPECTION

  - LIQUID PENETRANT 70 PIPE WELDS
    - NO DEFECTS DETECTED

  - VISUAL INSPECTION 25 HANGERS
    - NO DAMAGE DUE TO TRANSIENTS

- STATE OF THE ART TRANSIENT ANALYSIS WOULD BE LESS CONCLUSIVE THAN INSPECTION

- SYSTEM OPERABLE - NO FURTHER ANALYSIS REQUIRED.

WATER HAMMER DOWNSTREAM OF RELIEF VALVES

- DETAILED INSPECTION OF DOWNSTREAM PIPING - NO DAMAGE
- PROGRESSIVELY LARGER PIPING DOWNSTREAM OF RELIEF VALVES
- OPEN DISCHARGE PATH TO RWST

POTENTIAL FOR VALVE CHATTER / SETPOINT DRIFT

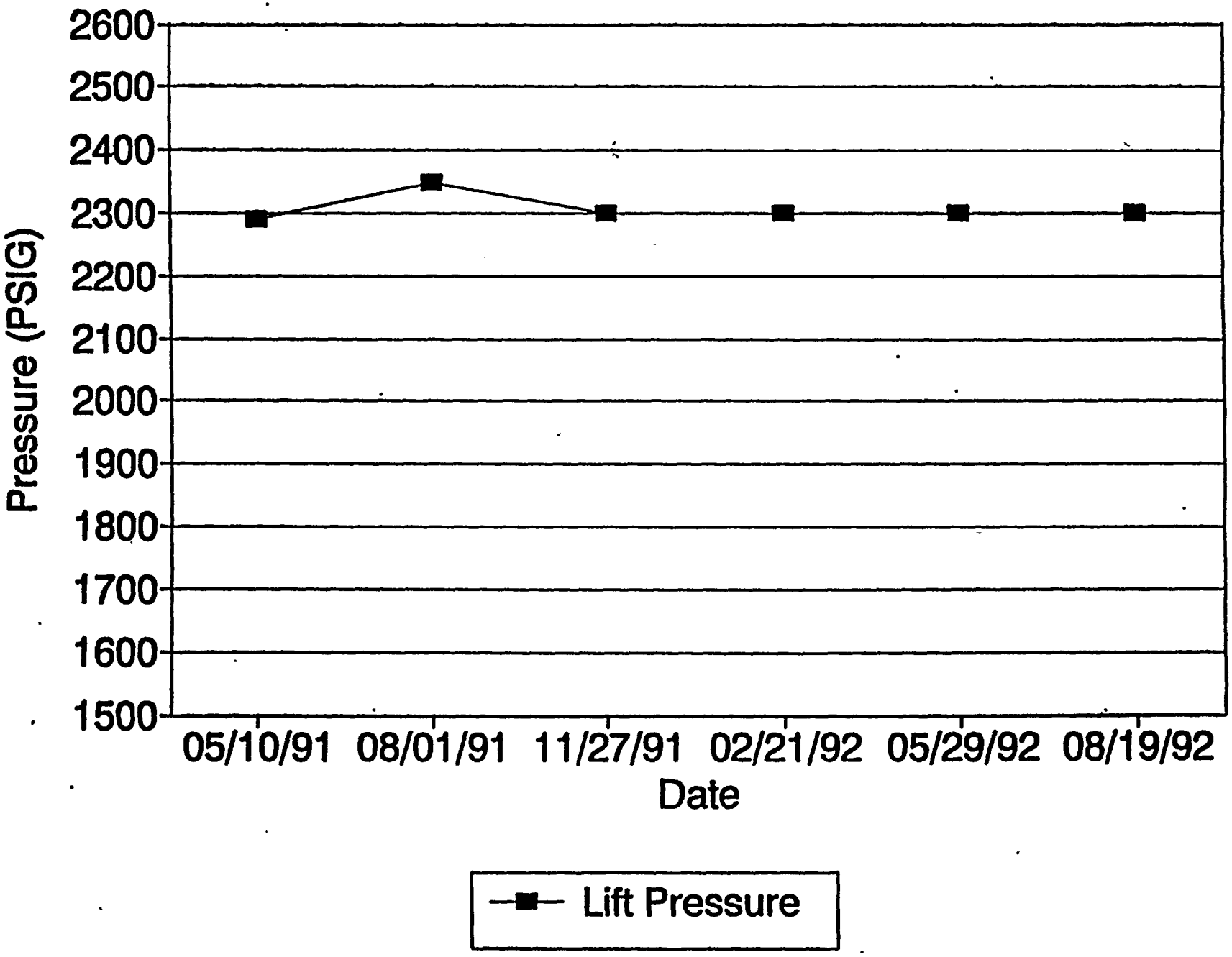
VALVE CHATTER

- DESIGN EVALUATION - CHATTER NOT PREDICTED
- RELIEF VALVE OPENS GRADUALLY VICE INSTANTANEOUSLY
- VALVE SIZED TO OPEN AND REMAIN OPEN UNDER SECONDARY BREAK WITH RCS RE-PRESSURIZED - NO CHATTER
- FULL FLOW THROUGH VALVE IN EPT-010T- NO CHATTER

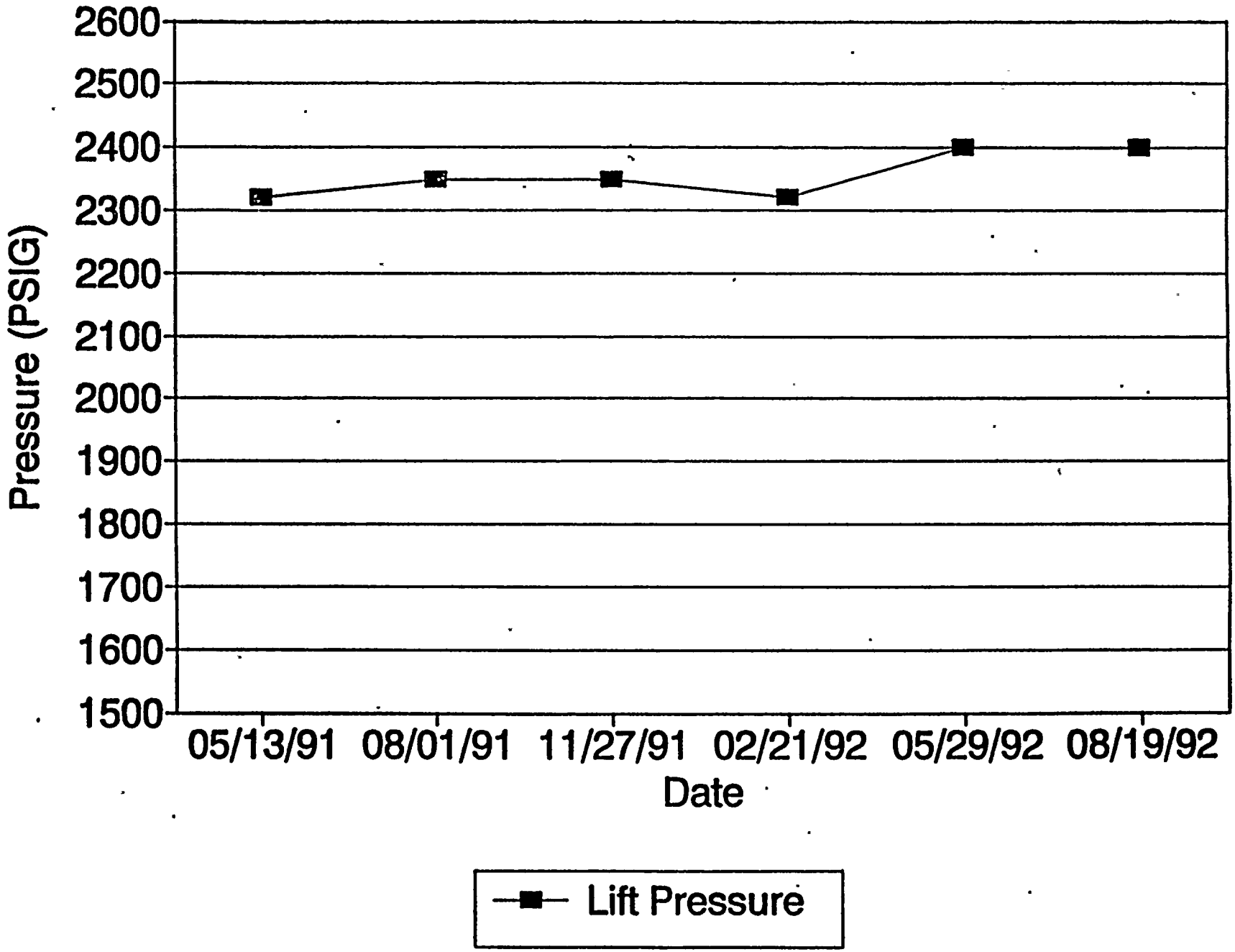
SETPOINT DRIFT

- VALVE DESIGNED TO PRECLUDE SETPOINT DRIFT
- TRENDED QUARTERLY - NO DRIFT OBSERVED

Valve 1CS-755 Lift Pressure



Valve 1CS-744 Lift Pressure



OPERATOR ABILITY TO DETECT AND MITIGATE EVENT

- EMERGENCY OPERATING PROCEDURES

  - SYMPTOM BASED PROCEDURES WOULD RESPOND TO INADEQUATE HHSI REGARDLESS OF CAUSE:
    * PATH PROCEDURES - IMMEDIATE ACTIONS AND DIAGNOSIS OF EVENT.
    * EPP's - EVENT RELATED.
    * FRP's - MONITOR CRITICAL SAFETY FUNCTIONS AND INITIATES COMPENSATORY ACTIONS.
  - EVENT DISCUSSED AT WOG MEETING AND CURRENT WOG GUIDELINES ARE APPROPRIATE.
  - CURRENT PROCEDURES ARE ADEQUATE TO MITIGATE THIS EVENT.

- EVENT SPECIFIC

  - OPERATOR TRAINING ON EVENTS AND POTENTIAL OPERATOR ACTIONS.
  - USER'S GUIDE PROVIDES DISCUSSION OF ALTERNATE MINIFLOW AND POTENTIAL FOR DEGRADED SI FLOW.
  - USER'S GUIDE REFERENCES PUMP CURVES FOR DETERMINING WHETHER RELIEF VALVE FAILED TO RESEAT.

PLANNED ACTIONS

- CONTINUE QUARTERLY TEST TO ENSURE PIPING IS FILLED AND TO VERIFY RELIEF VALVE SETPOINT.

- FLOW TEST OF THE ALTERNATE MINIFLOW LINE IN RFO-4 TO VERIFY PROPER SYSTEM OPERATION.

- EVALUATE ALTERNATE DESIGNS TO ELIMINATE USE OF RELIEF VALVES.

SUMMARY

- GENERICALLY, SYSTEM MAY BE SUSCEPTIBLE TO PROBLEMS IF NOT OPERATED AND MAINTAINED CORRECTLY.
- WE RECOGNIZED AND REPORTED THE SAFETY SIGNIFICANCE OF THE COMPONENT FAILURES.
- WE HAVE TAKEN PRUDENT CORRECTIVE ACTIONS.
- WE HAVE SHARED OUR EXPERIENCE WITH THE NRC AND INDUSTRY.
- BASED ON RECENT ADDITIONAL INSPECTIONS AND EVALUATIONS, WE REMAIN CONFIDENT IN THE ABILITY OF THE ALTERNATE MINIFLOW SYSTEM TO PERFORM ITS REQUIRED FUNCTION.
- ADDITIONAL TESTING TO CONFIRM PROPER SYSTEM AND COMPONENT OPERATION DURING THE NEXT RFO.
- EXISTING EOP's AND OPERATOR TRAINING PROVIDE CONFIDENCE THAT A LOSS OF HHSI EVENT WOULD BE MITIGATED SHOULD IT OCCUR.

ENCLOSURE 2

ATTENDEES LIST

NRC/CAROLINA POWER AND LIGHT COMPANY MEETING

August 20, 1992

NAMES	ORGANIZATIONAL/TITLES
Tommy Le	NRC/NRR/Project Manager
G. Lainas	NRC/NRR
Ernie Rossi	NRC/NRR
Brian Grimes	NRC/NRR/DRIS
R. Benedict	NRR/DOEA
Stacey Rosenberg	NRR/DREP
Horace K. Shaw	NRR/EMEB
Jeff Shakelford	NRC/RII
Jeff Jacobson	NRC/DRIS
T. A. Peebles	NRC/RII
Robert Jones	NRC/NRR/SRXB
Frank Orr	NRC/NRR/SRXB
Fred Paulitz	NRC/NRR/SICB
Fred Manning	NRC/AEOD/ROAB
Brian McFeaters	CP&L, Nuc. Gen Group Analyst
J. Wermiel	NRC/NRR/DLPQ/LHFB
Chu-yu Liang	NRC/NRR/DST/SRXB
David Gamberoni	NRC/NRR/DOEA/OEAB
Robert Schaaf	NRC/NRR/DRPW/PDIV-2
Karen Marcus	NRC/NRR/DOEA/OEAB
Loren Plisco	NRC/NRR/DLPQ/LPEB
Sheri Peterson	NRC/NRR/DRPW/PDIV-1
Peter Koltay	NRR/SIB
Fred Hebdon	NRR/PDII-4
Renee Pedersen	NRC/Office of Enforcement
W. Beckner	NRC/NRR/PRAB
G. Hammer	NRC/NRR/EMEB
M. Webb	NRC/NRR/DRPE/PDII-1
Kamal Manoly	NRC/NRR/DET/EMEB
Y. Huang	NRC/NRR/DET/EMEB
Brian Holian	NRC/PDIV-2
Suzanne Black	NRC/NRR/PDIV-2
E. G. Adensam	NRC/NRR/DRPE

NRC/CAROLINA POWER AND LIGHT COMPANY MEETING (cont'd.)

August 20, 1992

Tom Cleary	Northeast Licensing Utilities
Walton Jensen	NRC/DST/SASG
Lloyd Zerr	STS
Mel Shannon	NRC/Harris/RI
H. D. Christensen	NRC/RII/DRP
R. W. Prunty	CP&L/Mgr. SHNPP Licensing
S. S. Galembush	Westinghouse
M. R. Hamby	CP&L/Project Spec. Harris
R. B. Van Metre	CP&L/Mang Harris Design Eng
D. C. McCarthy	CP&L/Mgr. Nuclear Licensing
Ashley M. Lucas	CP&L V.P. Nuclear Services
G. B. Vaughn	CP&L V.P. Harris Plant
R. B. Starkey, Jr.	CP&L V.P. Nuclear Services
R. A. Watson	CP&L SVP Nuc. Generation
S. Varga	NRR/DRPE
W. Haass	NRR/DRIS/VIB
J. A. Norberg	NRR/DET/EMEB